

FROST & ADAMS CO.

CATALOGUE

**ARTISTS
MATERIALS**



**MATHEMATICAL
INSTRUMENTS**

*37 CORNHILL,
BOSTON, MASS.*



PYROGRAPHY • Poker Painting or Burnt Wood Etching

is the art of Decorating Wood, Leather or Cardboard by burning the design into the article to be decorated

The origin of this unique scheme of decoration is not as obscure as might at first sight be supposed: in the days when art and conviviality went hand in hand in the Low Countries, and when in England the tavern was a club-house, it was the wont of artists who gathered over pipe and pot of a winter evening, to exercise their passing inspirations on the walls around them, as mementos of the festive occasion. A poker heated red in the fire-place was their tool. With it they sketched upon the wall the creations of their fancy, and the subject suggested by discussion—a memory of a scene of nature, an idea of a new style of ornament, and often portraits of each other

Pyrography is now executed by using a Platinum Point. Platinum being a perfect metal, on which no single acid has any effect, is the only metal suitable for the pyrographic point, as it has the peculiar property of absorbing the benzoline gas used for heating, and of feeding upon the vapor forced to the point by the rubber bellows. The interior arrangement of the point consists of a small platinum sheath, partially inclosing a fine coiled platinum wire, which, extending some way beyond it, is again inclosed by the outer and larger sheath of the same metal. This is the "point" from which the heat is conveyed direct to the wood. The process may be applied not only to pictorial effects on wood, but to the ornamentation of leather, furniture, picture frames, screens, toilet articles, the covers of books, and many other things which will suggest themselves with practice and experiment. The owner of a country house in England has had the "Legend of Sleepy Hollow" done in pyrography on the woodwork of a fire-place, the rich sepia tints lending themselves beautifully to the poetic work. The panels of doors may be adorned with cupids and flowers, or any fancy design, the purity and delicacy of outline giving a charming appearance. Tables, chairs and screens are suitable for the exercise of taste and skill. Teaching, aside from practice, is of no avail in this simple art. Purchase the necessary outfit and with suggestions go to work; no more is needed as it depends on the student

We carry a Full Line of all Pyrography Requisites

FROST & ADAMS CO.

37 CORNHILL
BOSTON . . .

DESCRIPTIVE CATALOGUE

1914

ESTABLISHED
1843



INCORPORATED
1895

FROST & ADAMS CO.

Importers and Dealers in

ARTISTS' MATERIALS

Architects'
Engineers'
Draughtsmen's

Supplies

Mathematical Instruments

AND

Pyrography Requisites

CORNHILL

BOSTON, MASS., U.S.A.

HERBERT C. GARDNER, Pres. & Treas.

JOSEPH H. PEACOCK, Vice Pres.

HAROLD GARDNER, Clerk

DIRECTIONS

PARTIES unknown to us should accompany their orders with the money, or give us convenient and satisfactory references as to their financial standing

When goods are forwarded by express with C. O. D. bill the Express Company's charge for collecting money and returning same will be added to said bill

Merchandise not injurious to the mails and not exceeding eleven pounds in weight, can be forwarded to any part of the United States on prepayment of postage, at the ruling rates of Parcel Post which you can get by inquiring at your home Post Office

Liquids and oil colors can be sent by mail

The best and surest way of remitting money is by bank draft or Post Office order, made payable to us

Goods will be packed with the utmost care for mail, express, freight or otherwise; but all packages must be at the risk of the purchaser after leaving our hands except by special agreement

FROST & ADAMS CO.

N. B. The American Express Co. Money Order System is one of the best means of remitting

TC IP 96-133051

WINSOR & NEWTON'S

ARTISTS' OIL-COLORS



The world-wide circulation which has long been a distinguishing feature of WINSOR & NEWTON'S OIL COLORS testify convincingly to the repute in which they are held, and renders a description of their characteristics somewhat superfluous. In the production of these colors no pains or expense is spared to insure that the pigments used are the most brilliant and durable that can be manufactured, and that the oils in which the pigments are ground are of the purest and most perfect quality

Grinding colors by machinery was first introduced by WINSOR & NEWTON in 1840, special apparatus being invented by them for the purpose. Since that period many further improvements have been made in the original Mills; and it is believed that at present there exists no machinery which, for power and precision, combined with great cleanliness in working, can at all compare with that invented, perfected, and now used by them in the production of their *Artists' Oil Colors*

Exhaustive tests which are constantly being made at the NORTH LONDON COLOR WORKS, in which WINSOR & NEWTON'S OIL COLORS are examined in conjunction with those of other makers, invariably establish the fact that, alike in *power and brilliancy of Color, perfection of grinding, excellence of consistency*, and — most important of all — in *durability under varying conditions*, WINSOR & NEWTON'S OIL COLORS occupy a pre-eminent position

COMPOSITION OF PIGMENTS

PREPARED BY WINSOR & NEWTON

And used by them in the manufacture of their Oil and Water Colors

<i>Alizarin Carmine</i> <i>Alizarin Crimson</i> <i>Alizarin Scarlet</i>	{	Lakes prepared from artificial Alizarin. The lakes prepared from this coloring matter do not approach in beauty of color those obtained from the genuine Madder Root
<i>Alizarin Green</i> <i>Alizarin Orange</i> <i>Alizarin Yellow</i>	{	These new pigments resemble the preceding in being Lakes prepared from Coal Tar dyes of similar origin. Alizarin Green is similar in color to the pigment known as "Sap Green" by the old painters, for which, as it is much more permanent, it forms a valuable substitute
<i>Antwerp Blue</i>		A weak variety of Prussian Blue containing Alumina
<i>Asphaltum</i>		Mineral Pitch obtained from Egypt
<i>Aureolin</i>		Double Nitrite of Cobalt and Potassium. This color, originally introduced by us, has always been a specialty of ours
<i>Aurora Yellow</i>		An opaque and brilliant variety of Sulphide of Cadmium introduced by us in 1889, and peculiar to ourselves. It vies with genuine Ultramarine in its combination of exquisite beauty with unflinching durability. Aurora Yellow is of much denser body than the ordinary Cadmiums, and a better drier in Oil. Artists are invited to match it as nearly as possible — say on a china palette — with Chrome Yellow (the only other yellow approaching it in brightness and opacity) and then to compare the two after a few months' exposure
<i>Azure Blue</i>		A synonym for Cobalt
<i>Bistre</i>		A brown soot obtained from Wood, and used only in Water Color
<i>Bitumen</i>		Synonymous with Asphaltum
<i>Black Lead</i>		Prepared Graphite
<i>Blue Black</i>		A variety of Carbon Black, prepared by charring woody tissue
<i>Bone Brown</i>		Charred Bone Dust

A Book giving full descriptions of all Colors will be furnished on application.

Composition of Pigments, W. & N. — continued from page 4

<i>Brilliant Ultramarine</i>	The finest brand of French Ultramarine obtainable
<i>Bronze</i>	A mixed Chrome Green, used only in Water Color
<i>Brown Madder</i>	Lake prepared from the Madder Root
<i>Brown Ochre</i>	Native Earth. This color is valued for its rough appearance by water-color artists
<i>Brown Pink</i>	Lake made from Quercitron Bark
<i>Burnt Carmine</i>	A color obtained by charring Cochineal Carmine
<i>Burnt Lake</i>	Formerly obtained by heating Crimson Lake; a more permanent variety is now prepared from Madder Lake
<i>Burnt Roman Ochre</i>	Calcined Native Earth
<i>Burnt Sienna</i>	Calcined Raw Sienna
<i>Burnt Umber</i>	Calcined Raw Umber
<i>Cadmium Yellow, extra Pale</i>	Different varieties of Sulphide of Cadmium. They differ from Aurora Yellow in possessing a certain amount of transparency
<i>Cadmium Yellow, Pale</i>	
<i>Cadmium Yellow, Middle</i>	
<i>Cadmium Yellow, Deep</i>	
<i>Cadmium Orange</i>	
<i>Caledonian Brown</i>	The original Caledonian Brown being no longer obtainable, a close imitation is prepared from Sienna and Vandyke Brown
<i>Cappagh Brown</i>	A native earth containing Manganese in notable quantity. Many years ago the mine was exhausted and the whole of the market was bought up at the time by Messrs. Winsor & Newton, who now hold a large and valuable stock of this magnificently-drying color
<i>Carmine</i>	{ Lakes prepared from Cochineal
<i>Carmine No. 2</i>	
<i>Cassel Earth</i>	Synonymous with Vandyke Brown
<i>Cerulean Blue.</i>	Stannate of Cobalt
<i>Charcoal Gray.</i>	The composition of this color is expressed by its name

Composition of Pigments, W. & N. — continued from page 5

<i>Chinese Blue</i>	Synonymous with Prussian Blue
<i>Chinese Orange</i>	Synonymous with Alizarin Orange
<i>Chinese Vermilion</i>	The genuine article imported from China
<i>Chinese White</i>	A specially dense variety of Oxide of Zinc, used only in Water Color. Chinese White was first introduced by us and is still one of our great specialties. It should be noted that ordinary Zinc White is often sold as Chinese White; buyers should therefore test it for covering power on a piece of black paper
<i>Chrome Greens</i>	Preparations of Chrome Yellow and Prussian Blue
<i>Chrome Lemon</i>	A combination of Chromate and Sulphate of Lead
<i>Chrome Yellow</i>	Normal Chromate of Lead.
<i>Chrome Deep</i> <i>Chrome Orange</i> <i>Chrome Red</i>	} Chromates of Lead, more or less basic. Our Chromes are specially distinguished by the capital way in which they keep their color on exposure
<i>Cinnabar Greens</i>	Similar in composition to Chrome Greens; but a deeper variety of Chrome Yellow is employed
<i>Citron Yellow</i>	Chromate of Zinc
<i>Cobalt Blue</i>	Alumina tintured with Oxide of Cobalt. Our Cobalt Blue is unusually free from a tendency to become greenish on exposure
<i>Cobalt Green</i> <i>Cobalt Green, No. 2</i>	} Zinc Oxide tintured with Oxide of Cobalt
<i>Cobalt Violet</i>	A new pigment with a Cobalt base
<i>Cobalt Yellow</i>	Synonymous with Aureolin
<i>Cologne Earth</i>	Calcined Vandyke Brown
<i>Constant White</i>	Barium Sulphate. Used only in Water Color
<i>Cork Black</i>	A variety of Carbon Black, obtained by charring cork
<i>Cremnitz White</i>	Basic Carbonate of Lead
<i>Crimson Lake</i>	A Lake prepared from Cochineal
<i>Crimson Madder</i>	A Lake prepared from the Madder Root
<i>Cyanine Blue</i>	A synonym for Leitch's Blue

COMPOSITION OF WINSOR & NEWTON'S VEHICLES

Amber Varnish. Genuine Amber dissolved in drying oil, and thinned with turpentine. "Pale Amber Varnish" is prepared with a special view to paleness of color, but is otherwise similiar in composition

Oil Copal Varnish. Prepared as above, with Copal in place of Amber. No guarantee, however, is given as to which of the many varieties of Copal are used. A very elastic and durable, but rather slow in drying Varnish

Picture Copal Varnish. A pale "Oil Copal Varnish" manufactured specially for Artists, and guaranteed to be made only with the finest Sierra Leona Copal. Dries much more rapidly than "Oil Copal"

N.B. — "Oil Copal" is thought to be the best for mixing with colors, and "Picture Copal" for varnishing finished pictures. "Picture Copal" is also very largely used for the former purpose, but requires caution in using, as it is more liable to crack than Oil Copal when it enters too largely into the composition of the painting medium

Mastic Varnish. A solution of genuine Gum Mastic in purified turpentine, made of the proper consistency for making Megilp when mixed with an equal volume of "Pale Drying Oil," but is too strong for varnishing pictures

Picture Mastic Varnish. A thinner variety of the preceding. It is of the right strength for varnishing pictures, but is not stout enough to make good Megilp

Manganesed Linseed Oil. Purified Linseed Oil containing a small percentage of Oxide of Manganese. The oil is thus rendered highly siccative

Manganesed Poppy Oil. A precisely similiar preparation made with Poppy Oil

Medium. A carefully prepared composition of Drying Oil, Mastic Varnish and Copal Varnish

Megilp. A combination of Pale Drying Oil and Mastic Varnish

Pale Drying Oil. Linseed Oil prepared with Oxide of Lead

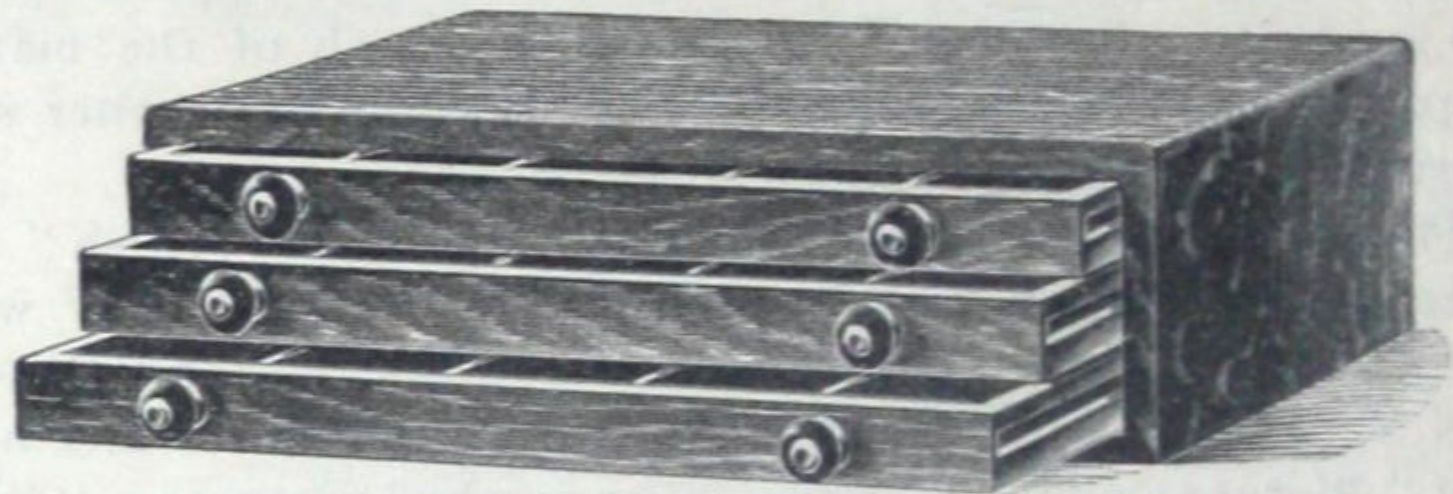
Petroleum, or "Essence de Petrole." A volatile spirit obtained from Petroleum or "Rock Oil," and specially prepared for use by Artists as a substitute for Turpentine. It is thinner, and more penetrating in its nature than the latter, evaporates more rapidly, and leaves no sticky residue. It is also destitute of the pungent odor which renders turpentine so distasteful to many painters

Purified Linseed Oil. Linseed Oil clarified by two or three years' exposure to sunlight

Purified Poppy Oil. Poppy Oil clarified by two or three years' exposure to sunlight

Strong Drying Oil. Linseed Oil with the Oxides of Lead and Manganese

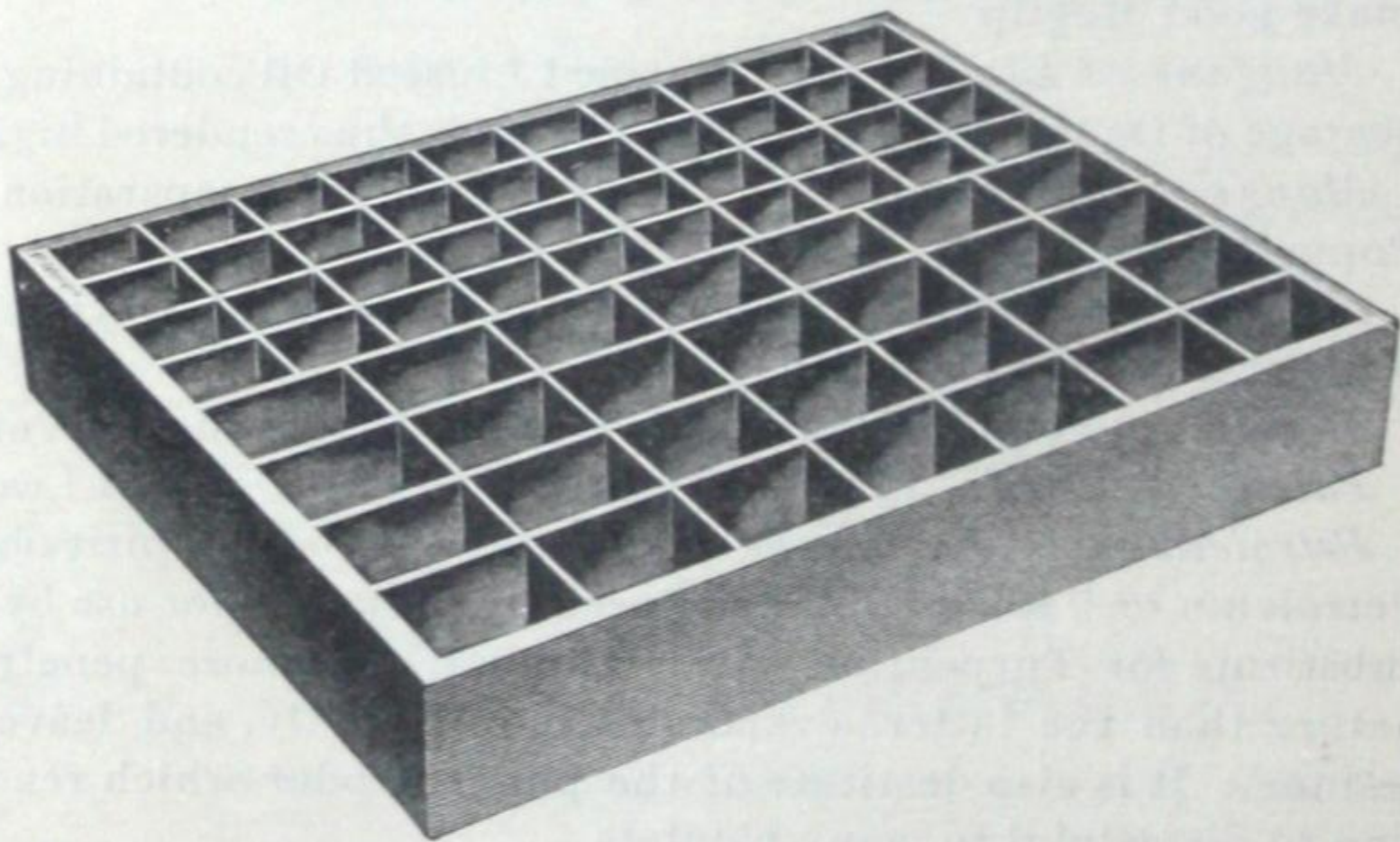
FROST & ADAMS CO'S
 WATER COLOR AND BRUSH CABINETS



Cabinet for Half Pans and Tubes, size $17 \times 12\frac{1}{2} \times 5$ inches; size of drawers, $15 \times 11\frac{1}{4} \times 1$ inches; each drawer contains 20 partitions; made of whitewood, mahogany stained each, \$3.75
 Cabinet for Quill Brushes, 3 drawers " 3.75

FROST & ADAMS CO'S
 TUBE RACK FOR OIL COLORS

Made of Hard Wood, Shellac Finish. Compartments Fit any Make of Tubes



Size of Rack, 25 inches long, 20 inches high, $4\frac{1}{8}$ inches deep, 28 partitions $3\frac{1}{4} \times 2\frac{3}{8} \times 4$, and 40 partitions $2\frac{1}{4} \times 1\frac{7}{8} \times 4$ each, \$3.75

Dealers ordering Assortment of Artists' Oil Colors in tubes, of Winsor & Newton's manufacture, will be furnished with a Tube Rack free
 Compartments hold a dozen tubes of each Color

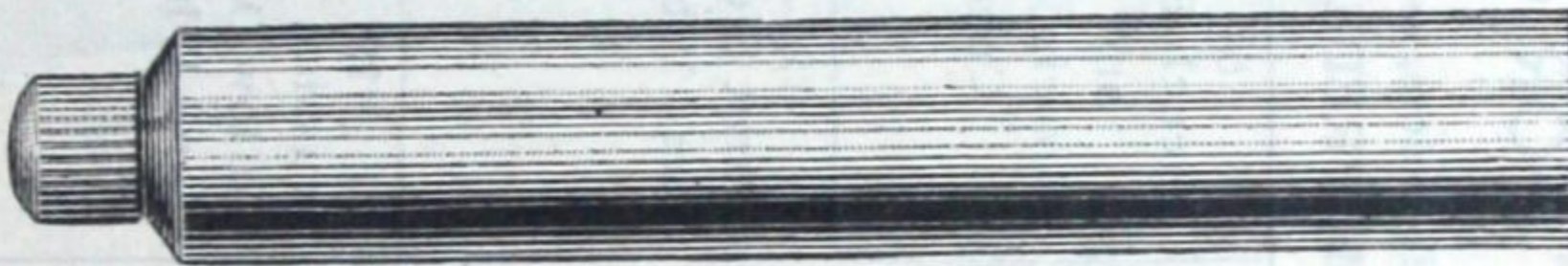
EMPTY COLLAPSIBLE TUBES

For Artists' Colors, Cosmetics, Tooth Pastes, Salves, Printing Ink, Cements, Etc.

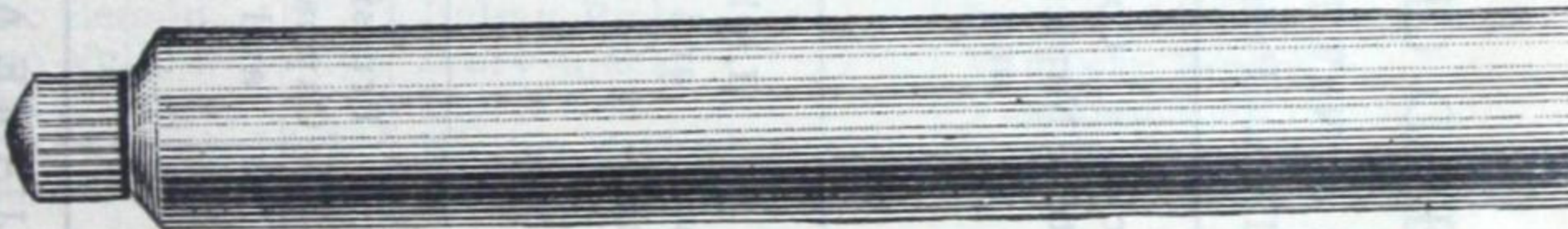
Furnished to Order Only — at Short Notice



No. 1 $\frac{1}{2}$ x $2\frac{3}{8}$ Inches



No. 2 $\frac{1}{2}$ x $3\frac{3}{8}$ Inches



No. 3 $\frac{1}{2}$ x $4\frac{3}{8}$ Inches

No.	Size (Inches)	Holds	Quantity in Box	Net Per Gross	No.	Size (Inches)	Holds	Quantity in Box	Net Per Gross
1.	$\frac{1}{2}$ x $2\frac{3}{8}$	$1\frac{2}{3}$ dr.	1 gr.	\$2.25	5.	1 x $4\frac{1}{2}$	$1\frac{1}{2}$ oz.	$\frac{1}{2}$ gr.	\$6.25
2.	$\frac{1}{2}$ x $3\frac{3}{8}$	2 dr.	1 gr.	2.40	6.	1 x $6\frac{3}{8}$	2 oz.	$\frac{1}{2}$ gr.	9.00
3.	$\frac{1}{2}$ x $4\frac{3}{8}$	3 dr.	1 gr.	2.80	7.	$1\frac{1}{4}$ x $6\frac{1}{2}$	$3\frac{1}{2}$ oz.	$\frac{1}{2}$ gr.	13.00
4.	$\frac{3}{4}$ x $4\frac{3}{8}$	1 oz.	1 gr.	4.25	8.	$1\frac{1}{2}$ x $6\frac{5}{8}$	5 oz.	$\frac{1}{4}$ gr.	17.25

Pliers for Closing Tubes per pair \$1.50

In closing the end of the Tube after filling, the metal should be brought tightly together and lapped twice; the smaller sizes, one-eighth inch for each lap; the larger, one-quarter inch

PLAN OF A COLORED CHART FOR OIL-PAINTING

Illustrating Combinations of WINSOR & NEWTON'S Oil Colors, and showing an easy method of Mixing and Blending into Tints. Painted by Mr. FREDERICK OUGHTON

1 Cobalt, Rose Madder, Yellow Ochre and White	2 Cobalt, Light Red and White	3 Ivory Black and White	4 Cobalt, Naples Yellow and White	5 French Blue and Alizarin Crimson	6 Vermilion and Aurora Yellow	7 Ivory Black Raw Umber and White
8 Rose Madder, Vermilion, Naples Yellow and White	9 Vermilion Naples Yellow and White	10 Vandyke Brown, Vermilion and White	11 Light Red and White	12 Burnt Sienna and White	13 Brown Madder and White	14 Permanent Mauve and White
15 Prussian Blue Raw Sienna and Aurora Yellow	16 Prussian Blue and Cadmium Yellow	17 Ivory Black and Aurora Yellow	18 Prussian Blue, Cappah Brown and White	19 Prussian Blue Yellow Ochre and White	20 Cobalt Raw Sienna and White	21 Cobalt Emerald Green Naples Yellow and White

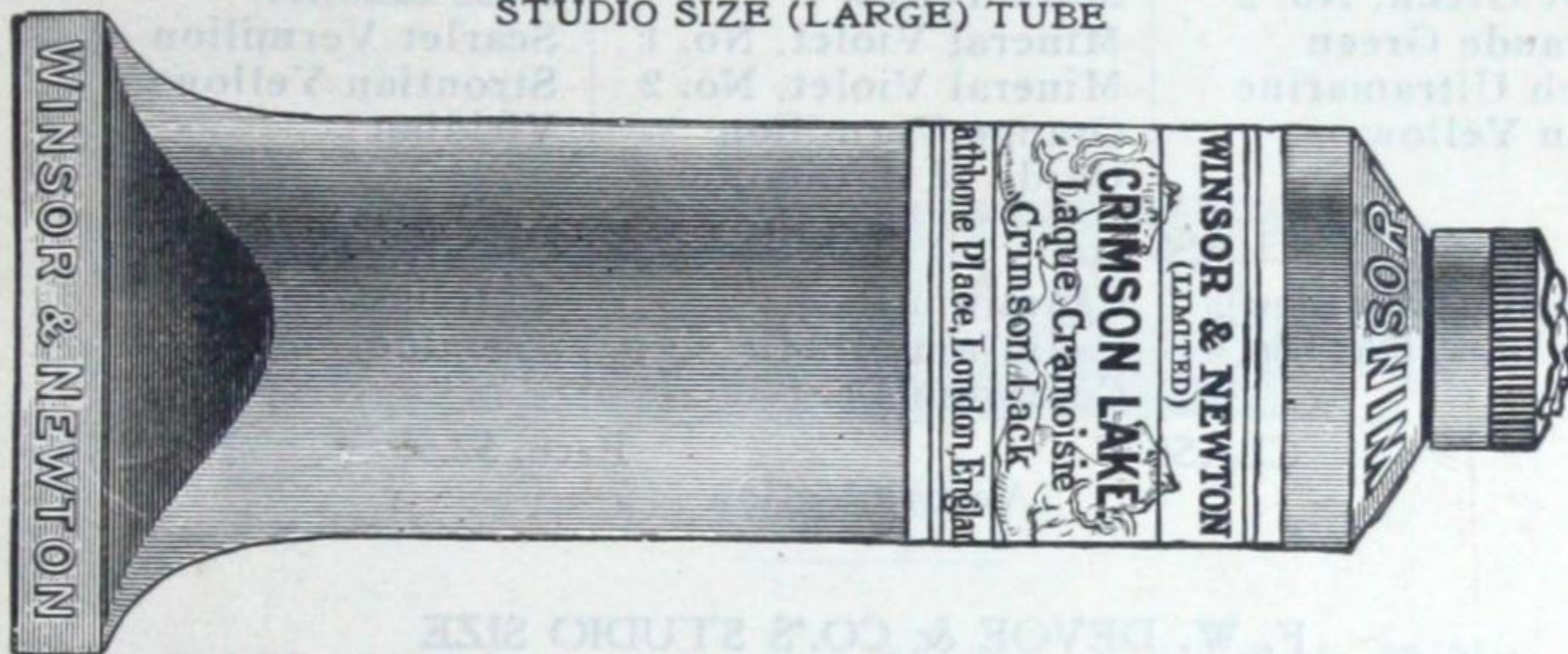
A MOST POPULAR, VALUABLE AND INTERESTING COLOR CHART

Size 14 x 8 inches. Each, .50

WINSOR & NEWTON'S

FINELY PREPARED OIL COLORS FOR ARTISTS

STUDIO SIZE (LARGE) TUBE



CLASS A

Each, .30

- | | | |
|------------------------|----------------------|------------------------|
| Blue Black | Cinnabar Green, Deep | Raw Sienna |
| Burnt Sienna | Emerald Green | Raw Umber |
| Burnt Umber | Gold Ochre | Terre Verte |
| Chrome Lemon | Indian Red | Transparent Gold Ochre |
| Chrome Yellow | Ivory Black | Vandyke Brown |
| Chrome Orange | Light Red | Venetian Red |
| Cinnabar Green, Light | Naples Yellow | Yellow Lake |
| Cinnabar Green, Middle | Prussian Blue | Yellow Ochre |

CLASS B

Each, .60

- | | | |
|---------------|----------------|--------------|
| Cappagh Brown | Flesh Tint | Sap Green |
| Crimson Lake | Mauve | Scarlet Lake |
| Cyprus Umber | New Blue | Sky Blue |
| | Permanent Blue | |

CLASS C

Each, .75

- | | | |
|------------------|-------------------|-----------------|
| Alizarin Crimson | Cerulean Blue | Spectrum Red |
| Alizarin Green | Chinese Vermilion | Spectrum Violet |
| Alizarin Scarlet | French Vermilion | Spectrum Yellow |
| Brown Madder | Geranium Lake | Vermilion |
| | Permanent Crimson | |

Winsor & Newton's Oil Colors — continued

CLASS D		Each, \$1.20
Cobalt Blue	Lemon Yellow	Oxide of Chromium, Transparent
Cobalt Green, No. 1	Madder Lake	Rose Doré
Cobalt Green, No. 2	Mars Yellow	Rose Madder
Emeraude Green	Mineral Violet, No. 1	Scarlet Vermilion
French Ultramarine	Mineral Violet, No. 2	Strontian Yellow
Indian Yellow	Orange Vermilion	Viridian
	Oxide of Chromium	
CLASS E		Each, \$1.50
Aureolin (Cobalt Yellow)	Cadmium Pale	Cadmium Orange
Cadmium Yellow, Extra Pale	Cadmium Middle	Carmine
	Cadmium Deep	
CLASS F		Each, \$2.50
	Aurora Yellow	

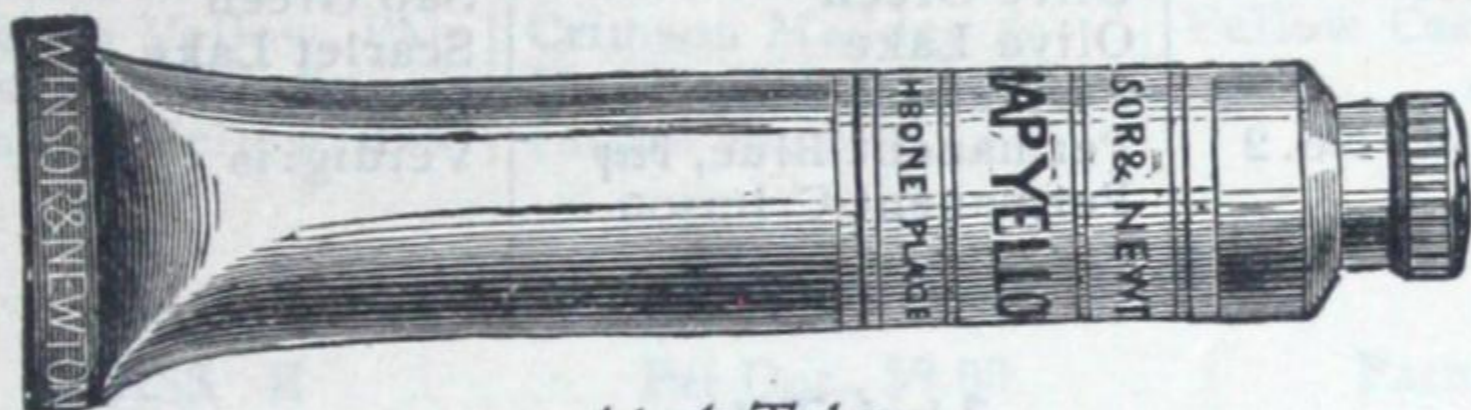
F. W. DEVOE & CO.'S STUDIO SIZE
FINELY PREPARED OIL COLORS FOR ARTISTS

CLASS A		Each, .20
Blue Black	Ivory Black	Transparent Gold Ochre
Burnt Sienna	Light Red	Van Dyke Brown
Burnt Umber	Naples Yellow, Lt.	Venetian Red
Chrome Yellow, Lt.	Naples Yellow, Med.	Yellow Lake
Chrome Yellow, Med.	Naples Yellow, Deep	Yellow Ochre
Chrome Yellow, Deep	Prussian Blue	Zinnober Green, Lt.
Chrome Orange	Raw Sienna	Zinnober Green, Med.
Emerald Green	Raw Umber	Zinnober Green, Deep
Indian Red	Terre Verte	
CLASS B		Each, .40
Crimson Lake	New Blue	Sap Green
Mauve	Permanent Blue	Scarlet Lake
CLASS C		Each, .55
Alizarin Crimson	Brown Madder	French Vermilion
Alizarin Green	Chinese Vermilion	Geranium Lake
Alizarin Scarlet	English Vermilion	Harrison Red
CLASS D		Each, .80
Cobalt Blue	Madder Lake	Scarlet Vermilion
Emeraude Green	Orange Vermilion	Ultramarine
Indian Yellow	Oxide of Chromium	Viridian
Lemon Yellow	Rose Madder	
CLASS E		Each, \$1.25
Cadmium Lemon	Cadmium Yellow	Cerulean Blue
Cadmium Pale	Cadmium Orange	French Carmine
	Cadmium Deep	

WINSOR & NEWTON'S

PREPARED OIL COLORS FOR ARTISTS

IN COLLAPSIBLE TUBES



4 inch Tubes

CLASS A	Per Doz., \$1.50	Each, .08 Net
Antwerp Blue	Cool Roman Ochre	Naples Yellow
Asphaltum	Copal Megilp, No. 1	Naples Yellow, French
Bitumen	Copal Megilp, No. 2	Neutral Tint
Black Lead	Cork Black	Orpiment
Blue Black	Cremnitz White	Oxford Ochre
Bone Brown	Davy's Gray	Payne's Gray
Brown Ochre	Emerald Green	Permanent White
Brown Pink	Flake White, No. 1	Prussian Blue
Burnt Roman Ochre	Flake White, No. 2	Prussian Green
Burnt Sienna	Flake White, Slow Drying	Pyne's Megilp
Burnt Umber	Gold Ochre	Raw Sienna
Caledonian Brown	Indian Red	Raw Sienna, Pale
Cassel Earth	Indigo	Raw Umber
Charcoal Gray	Italian Pink	Roman Ochre
Chinese Blue	Ivory Black	Silver White
Chrome Green, No. 1	Jaune Brillant	Silver White, No. 2
Chrome Green, No. 2	King's Yellow	Sugar of Lead
Chrome Green, No. 3	Lamp Black	Terra Rosa
Chrome Lemon	Light Red	Terre Verte
Chrome Yellow	Medium (Copal Megilp) No. 1	Terre Verte, Olive Shade
Chrome Deep	Medium (Copal Megilp) No. 2	Transparent Gold Ochre
Chrome Orange	Megilp	Vandyke Brown
Cinnabar Green, Pale	Monochm Tint, Cool No. 1	Venetian Red
Cinnabar Green, Light	Monochm Tint, Cool No. 2	Verona Brown
Cinnabar Green, Olive	Monochm Tint, Cool No. 3	Yellow Lake
Cinnabar Green, Middle	Monochm Tint, Warm No. 1	Yellow Ochre
Cinnabar Green, Deep	Monochm Tint, Warm No. 2	Yellow Ochre, Pale
Cologne Earth	Monochm Tint, Warm No. 3	Zinc White
	Mummy	

Winsor & Newton's Oil Colors — continued

2 inch Tubes

CLASS A-2	Per Doz., \$1.50	Each, .08 Net
Cappagh Brown	Mauve	Permanent Yellow
Chrome Red	Mauve, No. 2	Prussian Brown
Crimson Lake	New Blue	Purple Lake
Cyprus Umber	Olive Green	Sap Green
Gamboge	Olive Lake	Scarlet Lake
Indian Lake	Permanent Blue	Sky Blue
Lemon Yellow, No. 2	Permanent Blue, Deep	Verdigris
Magenta	Permanent Crimson	

2 inch Tubes

CLASS B	Per Doz., \$2.40	Each, .18
Alizarin Carmine	Crimson Madder (Alizarin)	Rose Madder (Alizarin)
Alizarin Crimson	French Vermilion	Rubens' Madder
Alizarin Green	Geranium Lake	Ruby Madder (Alizarin)
Alizarin Orange	Green Lake, Light	Scarlet Madder (Alizarin)
Alizarin Scarlet	Green Lake, Deep	Sepia
Alizarin Yellow	Madder Carmine (Alizarin)	Spectrum Red
Brown Madder	Malachite Green, No. 2	Spectrum Violet
Carmine Lake	Mineral Gray	Spectrum Yellow
Cerulean Blue	Orange Madder (Alizarin)	Vermilion, Pale
Chinese Orange	Purple Madder (Alizarin)	Vermilion
Chinese Vermilion	Rembrandt's Madder	

2 inch Tubes

CLASS C	Per Doz., \$4.20	Each, .28
Brilliant Ultramarine	Indian Yellow	Oxide of Chromium
Burnt Lake	Leitch's Blue	Oxide of Chromium, Transparent
Carmine, No. 2	Lemon Yellow, Pale	Permanent Mauve
Citron Yellow	Lemon Yellow	Permanent Violet
Cobalt Blue	Madder Lake	Pink Madder
Cobalt Green	Malachite Green	Primrose Yellow
Cobalt Green, No. 2	Mars Brown	Purple Madder
Cobalt Violet	Mars Orange	Rose Doré
Cyanine Blue	Mars Red	Rose Madder
Emerald Oxide of Chromium	Mars Violet	Rose Madder (Pink Shade)
Emeraude Green	Mars Yellow	Scarlet Madder
Extract of Vermilion	Mineral Violet	Scarlet Vermilion
French Ultramarine	Mineral Violet, No. 2	Strontian Yellow
French Veronese Green	Orange Vermilion	Viridian

Winsor & Newton's Oil Colors — continued

2 inch Tubes

CLASS D	Per Doz., \$6.60	Each, .40
Aureolin	Cadmium Orange	Madder Carmine
Burnt Carmine	Carmine	Orient Yellow
Cadmium Yellow, Extra Pale	Cobalt Yellow	Violet Carmine
Cadmium Yellow, Pale	Crimson Madder	Yellow Carmine
Cadmium Yellow, Middle Opaque	Field's Orange Vermilion	
Cadmium Yellow, Deep	Indian Purple	

2 inch Tubes

CLASS E	Per Doz., \$9.00	Each, .80
Aurora Yellow	Primrose Aureolin	Ultramarine Ash

2 inch Tubes

CLASS F	Per Doz., \$12.00	Each, \$1.40
Extra Madder Carmine	Extra Purple Madder	Extra Ultramarine Ash

Double Tubes

Per Doz., \$3.00 Each, .16 Net

Cremnitz White
Flake White, No. 1
Flake White, No. 2
Flake White, Slow Drying
Silver White
Silver White, No. 2
Zinc White
Medium (Copal Megilp) No. 1
Medium (Copal Megilp) No. 2
Megilp

Treble Tubes

Per Doz., \$4.50 Each, .24 Net

Cremnitz White
Flake White, No. 1
Flake White, No. 2
Flake White, Slow Drying
Silver White
Silver White, No. 2
Zinc White

Half-pound Tubes

Per Doz., \$6.00 Each, .32 Net

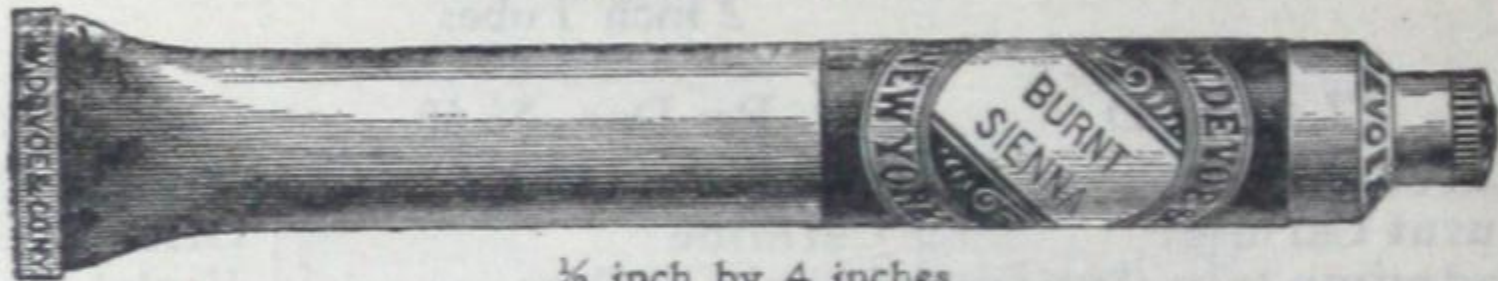
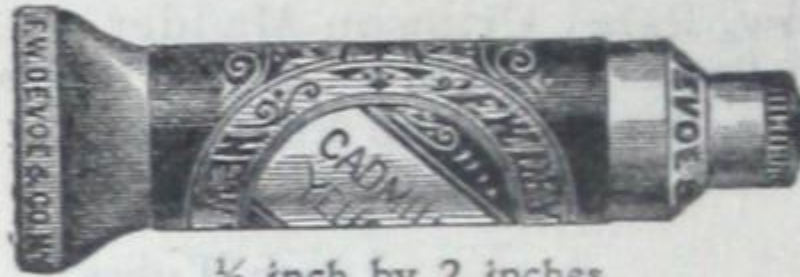
Cremnitz White
Flake White, No. 1
Flake White, No. 2
Flake White, Slow Drying
Silver White
Silver White, No. 2
Zinc White

WINSOR & NEWTON'S "WINTON" WHITE

Winton White, double tubes	per doz., \$1.50 each, .10
Winton White, half pound tubes	" 3.00 " .20
Winton White, one pound tubes	" 6.00 " .40
Winton White, two pound tubes	" 10.00 " .80

F. W. DEVOE & CO.'S PREPARED OIL COLORS

SINGLE TUBES

 $\frac{1}{2}$ inch by 4 inches $\frac{1}{2}$ inch by 2 inches

CLASS A

Per Doz., .50

Each, .06

American Vermilion	French Green	Payne's Gray
Antwerp Blue	French Naples Yellow	Permanent Blue
Asphaltum	Flesh Ochre	Permanent White
Bistre	Gamboge	Perm. Green, Light
Bitumen	Gold Ochre	Perm. Green, Medium
Blue Black	Geranium Lake	Perm. Green, Deep
Bone Brown	Greenish Nap. Yellow	Persian Red
Brilliant Yellow	Indian Lake	Prussian Blue
Brown Ochre	Indian Red	Prussian Brown
Brown Pink	Indigo	Prussian Green
Burnt Umber	Italian Pink	Purple Lake
Burnt Roman Ochre	Ivory Black	Raw Sienna
Burnt Sienna	King's Yellow	Raw Umber
Burnt Terre Verte	Lamp Black	Red Brown
Caledonian Brown	Light Red	Roman Ochre
Cappah Brown	Light Raw Sienna	Rome's Yellow
Cassel Earth	Megilp	Scarlet Lake
Cork Black	Mummy	Silver White
Copal Megilp	Mauve	Sugar of Lead
Chrome Green, 1-L	Magenta	Trans. Gold Ochre
Chrome Green, 2-M	Nap. Yellow, 00-E.P.	Terra Rosa
Chrome Green, 3-L	Nap. Yellow, 0-P.	Terra Verte
Chrome Yellow, 1-L	Nap. Yellow, No. 1-L	Vandyke Brown
Chrome Yellow, 2-M	Nap. Yellow, No. 2-M	Venetian Red
Chrome Yellow, 3-D	Nap. Yellow, No. 3-D	Verdigris
Chrome Orange	Neutral Tint	Verona Brown
Chrome Red	New Blue	Veronese Green
China White	Olive Lake	Yellow Lake
Chinese Blue	Olive Tint	Yellow Ochre
Cologne Earth	Orpiment	Zinc White
Cremnitz White	Oxford Ochre	Zinnober Green, L
Crimson Lake	Paris Blue	Zinnober Green, M
Emerald Green	Paris Green	Zinnober Green, Deep
Flake White		

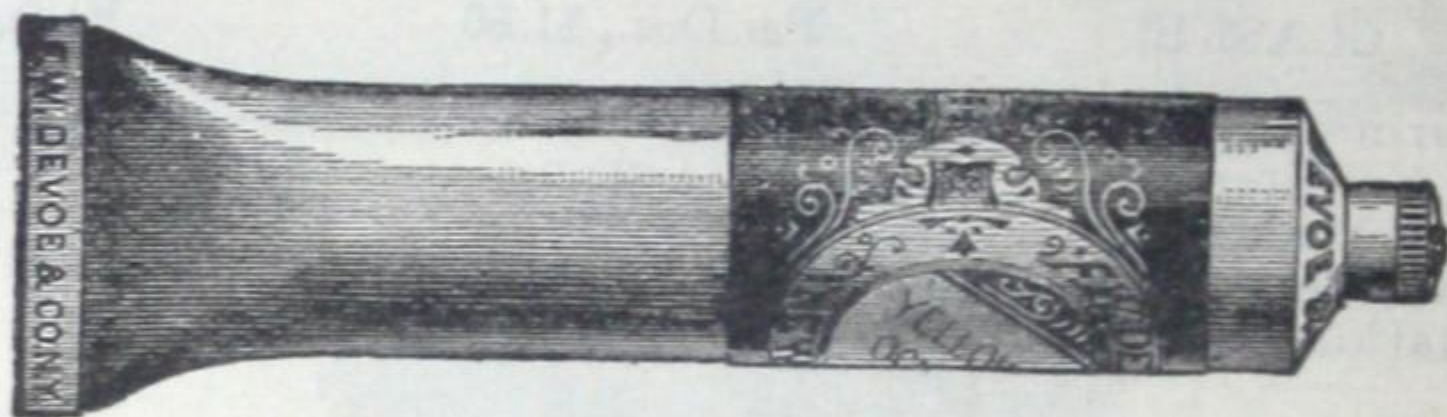
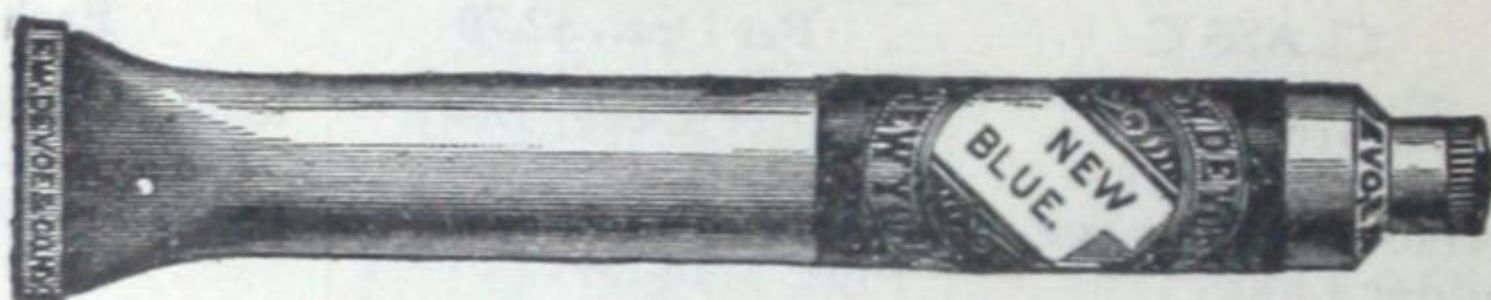
F. W. Devoe & Co.'s Prepared Oil Colors — continued

SINGLE TUBES

CLASS B	Per Doz., \$1.60	Each, .15
Alizarin Crimson Blue Verditer Brown Madder Burnt Lake Carnation Lake	Citron Yellow Chinese Green Chinese Vermilion English Vermilion French Vermilion	Gaude Lake Green Lake Imperial Orange Perfect Yellow Sepia
CLASS C	Per Doz., \$2.70	Each, .20
Cobalt Green Emeraude Green Extract of Gamboge Madder Lake	Madder Lake, Deep Malachite Green Oxide of Chromium Pink Madder	Rose Madder Strontian Yellow Trans. Oxide Chrom.
CLASS D	Per Doz., \$3.15	Each, .25
Cobalt Blue Cadmium, Lemon Cadmium, Pale Cadmium, Light Cadmium, Yellow Cadmium, Deep Cadmium, Orange Cerulean Blue	Cadmium, Red Extract of Vermilion Lemon Yellow Mars Brown Mars Red Mars Violet Mars Yellow	Orange Vermilion Paul Veronese Green Robert Lake Rubens' Madder Scarlet Vermilion Ultramarine
CLASS E	Per Doz., \$4.30	Each, .35
Antimony Yellow Capucine Madder	French Carmine Indian Yellow	Purple Madder Violet Carmine
CLASS F	Per Doz., \$5.00	Each, .40
Burnt Carmine Madder Carmine	Mars Orange Scarlet Madder	Ultramarine Ash Yellow Madder
CLASS G	Per Doz., \$5.40	Each, .45
Robert Lake, No. 1 Robert Lake, No. 2 Robert Lake, No. 3	Robert Lake, No. 4 Robert Lake, No. 5 Robert Lake, No. 6	Robert Lake, No. 7 Robert Lake, No. 8

F. W. Devoe & Co.'s Prepared Oil Colors — continued

IN DOUBLE (or Large Size) TUBES

 $\frac{3}{4}$ inch by 4 inches $\frac{1}{2}$ inch by 4 inches

CLASS A	Per Doz., \$1.50	Each, .10
American Vermilion	Chrome Orange	Light Raw Sienna
Antwerp Blue	Chrome Red	Magenta
Asphaltum	Chrome Yellow, 1 - L	Mauve
Bistre	Chrome Yellow, 2 - M	Megilp
Bitumen	Chrome Yellow, 3 - D	Mummy
Black Lead	Cologne Earth	Naples Yellow, 00 - EP
Blanc de Laque	Copal Megilp	Naples Yellow, 0 - P
Blue Black	Cork Black	Naples Yellow, 1 - L
Bone Brown	Cremnitz White	Naples Yellow, 2 - M
Brilliant Yellow	Crimson Lake	Naples Yellow, 3 - D
Brown Ochre	Emerald Green	Naples Yellow, French
Brown Pink	Flake White	Naples Yellow, Greenish
Burnt Roman Ochre	Flesh Ochre	Neutral Tint
Burnt Sienna	French Green	New Blue
Burnt Terre Verte	Gamboge	Nopal Maroon
Burnt Umber	Geranium Lake	Nopal Orange
Caledonian Brown	Gold Ochre	Nopal Red
Cappah Brown	Indian Lake	Olive Lake
Cassel Earth	Indian Red	Olive Tint
China White	Indigo	Orpiment
Chinese Blue	Italian Pink	Oxford Yellow
Chrome Green, 0 - EP	Ivory Black	Paris Blue
Chrome Green, 1 - L	King's Yellow	Paris Green
Chrome Green, 2 - M	Lamp Black	Payne's Gray
Chrome Green, 3 - D	Light Red	Permanent Blue

F. W. Devoe & Co.'s Prepared Oil Colors — continued

IN DOUBLE (or Large Size) TUBES

CLASS A		Per Doz., \$1.50	Each, .10
Permanent Green, L	Red Brown		Venetian Red
Permanent Green, M	Roman Ochre		Verdigris
Permanent Green, D	Rome's Yellow		Verona Brown
Permanent White	Sap Green		Veronese Green
Permanent Yellow	Scarlet Lake		Yellow Lake
Persian Red	Silver White		Yellow Ochre
Prussian Blue	Sugar of Lead		Zinc Yellow
Prussian Brown	Terra Rosa		Zinc White
Prussian Green	Terre Verte		Zinnober Green, L
Purple Lake	Transparent Black		Zinnober Green, M
Raw Sienna	Transparent Gold Ochre		Zinnober Green, D
Raw Umber	Vandyke Brown		
CLASS B		Per Doz., \$2.70	Each, .25
Alizarin Carmine	Carnation Lake		Harrison Red
Alizarin Crimson	Citron Yellow		Imperial Orange
Alizarin Green	Chinese Vermilion		Perfect Yellow
Alizarin Orange	English Vermilion		Rose Carthame
Alizarin Yellow	French Vermilion		Rubens' Madder
Brown Madder	Green Lake		Sepia
CLASS C		Per Doz., \$4.50	Each, .40
Carmine, No. 2	Madder Lake, D		Paul Veronese Green
Cobalt Blue	Malachite Green		Pink Madder
Cobalt Green	Mars Brown		Purple Madder
Emeraude Green	Mars Orange		Rose Madder
Extract of Gamboge	Mars Red		Robert Lake
Extract of Vermilion	Mars Violet		Scarlet Madder
Indian Yellow	Mars Yellow		Scarlet Vermilion
Lemon Yellow	Oxide of Chromium		Strontian Yellow
Lemon Yellow, P	Oxide of Chromium, Trans.		Ultramarine
Madder Lake	Orange Vermilion		Viridian
CLASS D		Per Doz., \$5.25	Each, .45
Cadmium, Deep	Cadmium, Orange		Cadmium, Red
Cadmium, Lemon	Cadmium, Pale		Cadmium, Yellow
Cadmium, Light	Cerulean Blue		
CLASS E		Per Doz., \$7.20	Each, .60
Antimony Yellow	Cobalt Yellow, Light		Ultramarine Ash
Burnt Carmine	Crimson Madder		Violet Carmine
Capucine Madder	French Carmine		Yellow Carmine
Cobalt Yellow, D	Madder Carmine		Yellow Madder
Cobalt Yellow, Greenish	Orient Yellow		

CREMNITZ, FLAKE, SILVER AND ZINC WHITE

Treble Tubes, 1×4 inches	per doz., \$2.70	per tube, .20
Quadruple Tubes, 1×6 inches	“ 3.60	“ .30

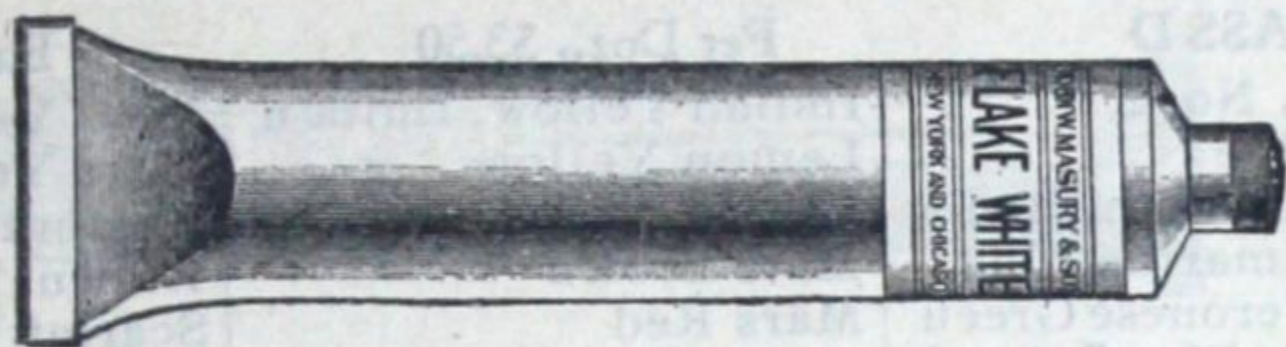
CAMBRIDGE STUDIO OIL COLORS



Frost & Adams Co., New England Agents

CLASS A		Each, .25
Blue Black	Naples Yellow, Imitation	Trans. Golden Ochre
Burnt Sienna	Prussian Blue	Venetian Red
Burnt Umber	Raw Sienna, Dark	Venetian Red, No. 1, Light
Flake White	Raw Sienna, Light	Venetian Red, No. 2
Golden Ochre	Raw Umber	Virgin Gold Ochre
Indian Red	Roman Ochre	Yellow Ochre, Light
Ivory Black	Terre Verte	Yellow Ochre, Oxford
CLASS B		Each, .45
Cyprus Umber	Old Terre Verte	Permanent Blue
CLASS C		Each, .80
Brown Madder	Chinese Vermilion,	Transparent Brown, Dk.
Cerulean Blue	Permanent Crimson	Transparent Brown, Lt.
CLASS D		Each, \$1.25
Cadmium, Extra Pale	Cobalt Green, Light	Purple Madder
Cadmium, Pale	Cobalt Violet	Rose Madder
Cadmium, Mid.	Cobalt Yellow	Ruby Madder
Cadmium, Deep	Cyanine Blue	Scarlet Madder
Cadmium, Orange	French Ultramarine	Scarlet Vermilion
Cobalt Blue	Lemon Yellow	Violet Mineral, No. 1
Cobalt Green, Dark	Oxide of Chromium, Viridian	Violet Mineral, No. 2
	Oxide of Chromium, Opaque	
QUADRUPLE TUBES		Each, .32
New Flake White, No. 1, Stiff	New Flake White, No. 2, Med.	New Flake White, No. 3, Thin

LE MESURIER ARTISTS' COLORS IN DOUBLE TUBES



CLASS A

Per Doz., \$1.05

Each, .10

- Antwerp Blue
- Asphaltum
- Bitumen
- Black Lead
- Blanc d'Argent
- Blue Black
- Bone Brown
- Brown Ochre
- Brown Pink
- Burnt Roman Ochre
- Burnt Sienna
- Burnt Umber
- Caledonian Brown
- Cappagh Brown
- Carmine Lake
- Chinese Blue
- Chrome Green, L
- Chrome Green, M
- Chrome Green, D
- Chrome Yellow, Med.
- Chrome Yellow, Deep
- Chrome Yellow, Orange
- Chrome Red
- Cologne Earth
- Cool Roman Ochre
- Copal Megilp
- Cork Black
- Cremintz White
- Crimson Lake

- Emerald Green
- Flake White
- Gamboge
- Indian Lake
- Indian Red
- Indigo
- Italian Pink
- Ivory Black
- Jaune Brilliant
- Kings' Yellow
- Lamp Black
- Light Red
- Magenta
- Mauve
- Megilp
- Mummy
- Munich Lake
- Naples Yellow, L
- Naples Yellow, D
- Neutral Tint
- New Blue
- Nottingham White
- Olive Lake
- Orpiment
- Oxford Ochre
- Payne's Gray
- Perfect Blue
- Perfect Purple
- Permanent Blue

- Permanent White
- Permanent Yellow
- Portland Amber
- Prussian Blue
- Prussian Brown
- Prussian Green
- Purple Lake
- Pyne's Megilp
- Raw Sienna
- Raw Umber
- Roman Ochre
- Sap Green
- Scarlet Lake
- Silver White
- Sugar of Lead
- Terra Rosa
- Terre Verte
- Trans. Golden Ochre
- Vandyke Brown
- Venetian Red
- Verdigris
- Verona Brown
- Yellow Lake
- Yellow Ochre
- Zinc White
- Zinnober Green, L
- Zinnober Green, M
- Zinnober Green, D

CLASS B

Per Doz., \$1.80

Each, .15

- Brown Madder
- Burnt Lake
- Cerulean Blue
- Chinese Vermilion

- Citron Yellow
- English Vermilion, Pale
- English Vermilion, Deep

- Geranium Lake
- Perfect Yellow
- Sepia

CLASS C

Per Doz., \$3.00

Each, .25

- Cobalt Green
- Madder Lake
- Malchite Green
- Mineral Gray

- Orange Vermilion
- Oxide of Chromium
- Ox. Chromium, Trans.

- Pink Madder
- Rose Madder
- Strontian Yellow

Le Mesurier Artists' Colors in Tubes — continued

CLASS D	Per Doz., \$3.50	Each, .35
Carmine, No. 2	Indian Yellow, Imita'n	Mars Violet
Cobalt Blue	Lemon Yellow	Mars Yellow
Extract of Vermilion	Lemon Yellow, P	Rembrandt's Madder
Fr. Ultramarine Blue	Mars Brown	Rubens' Madder
French Veronese Green	Mars Red	Scarlet Vermilion
Gen. Ultra Blue M. strength		

CLASS E	Per Doz., \$4.80	Each, .45
Brill. Ultramarine Blue	French Carmine	Violet Carmine
Extra Malachite Green	Indian Yellow, Genuine	Viridian
Field's Orange Vermil.	Purple Madder	

CLASS F	Per Doz., \$5.40	Each, .50
Aureolin	Cadmium Yellow, Med.	Madder Carmine
Burnt Carmine	Cadmium Yellow, Orange	Mars Orange
Cadmium Yellow, Pale		

CLASS G	Per Doz., \$7.20	Each, .65
Gen. Ultra. Blue full strength	Robert Lake	Ultramarine Ash

CLASS H	Per Doz., \$9.00	Each, .80
Extra Marine Carmine	Extra Purple Madder	

MUSSINI FINELY PREPARED OIL COLORS

CLASS A	Per Doz., \$1.50	Each, .10
Anwerp Blue	Crimson Lake	Purple Lake
Asphaltum	Emerald (deck) Green	Raw Sienna
Bone Brown	English (light) Red	Raw Umber
Brilliant Yellow	Flesh Ochre	Roman Ochre
Brown Ochre	Florentine Lake	Roman Ochre, Burnt
Brown Ochre, Burnt	Gold Ochre	Saturn Red
Brown Red	Indian Red, Light	Terra Puzzuoli (rose earth)
Burnt Light Ochre	Ivory Black	Terre Verte
Burnt Sienna	Lemon Yellow	Terre Verte, Burnt
Burnt Umber	Naples Red	Vandyke Brown
Caput Mortuum, L	Naples Yellow, Light	Verona Green Earth
Caput Mortuum, D	Naples Yellow, Deep	Yellow Ochre, L
Chrome Yellow, L	Naples Yellow, Reddish	Yellow Ochre, D
Chrome Yellow, D med.	Permanent Blue	Zinnober Green, L
Chrome Yellow, Orange	Permanent Green, D	Zinnober Green, D
Chrome Green, L	Prussian Blue	Zinnober Green, Yellowish

Mussini Finely Prepared Oil Colors — continued



CLASS B		Per Doz., \$2.40	Each, .15
Brown Madder	Chinese Vermilion	Scarlet Lake	
Cerulean Blue	Perm. (Ultram.) Yellow	Scarlet Vermilion	
CLASS C		Per Doz., \$3.50	Each, .20
Blue Lake	Green Lake, L	Red Ultramarine	
Cobalt Blue, L	Green Lake, D	Sap Green	
Cobalt Blue, D	Madder Lake, rose doree	Ultramarine Blue, L	
Cobalt Green, L	Oxide of Chromium	Ultramarine Blue, D	
Cobalt Green, D	Oxide of Chromium, Trans.	Violet Ultramarine	
Dutch Pink	Pink Madder		
CLASS D		Per Doz., \$4.00	Each, .25
Madder Lake, Rose	Madder Lake, Medium	Madder Lake, Violet	
CLASS E		Per Doz., \$5.50	Each, .30
Burnt Carmine	Carmine	Malachite Green	
Cadmium Yellow, L	Indian Yellow	Olive Green	
Cadmium, Yellow, D	Madder Lake, Deep	Vert Emeraude	
Capucine Madder			
CLASS F		Per Doz., \$8.00	Each, .45
Blue Green Oxide	Madder Lake Purple, ext.	Extra Madder Carmine	

CREMNITZ, FLAKE, SILVER AND ZINC WHITE

Double tubes	per doz., \$3.00	per tube, .20
Quadruple tubes	“ 6.00	“ .30

The Ingredients of the Binding Materials for the Mussini Oil Colors are :

Poppy Oil and Linseed Oil, varied according to the color, Turpentine Oil, the finest rectified, Balsam Oil, instead of Venetian Turpentine, Amber Varnish

DR. FR. SCHOENFELD & CO'S

CELEBRATED GERMAN OIL COLORS

CLASS A	Per Doz., \$1.50	Each, .10
Antwerp Blue	Cologne Earth	Permanent Blue
Asphaltum	Cork Black	Permanent Green, Deep
Bitumen	Cremnitz White	Permanent Green, L
Blue Black	Crimson Lake	Permanent Green, M
Bone Black	Dark English Red	Persian Red
Bone Brown	Dark Ochre	Prussian Blue
Brown Ochre	Flesh Ochre	Prussian Brown
Brown Pink	Gold Ochre	Raw Sienna
Brown Red	Half Burnt L Ochre	Raw Umber
Burnt Brown Ochre	Indian Red, D	Red Oxide of Iron
Burnt Dark Ochre	Indian Red, L	Roman Brown
Burnt Gold Ochre	Indigo	Roman Ochre
Burnt Roman Ochre	Ivory Black	Satinober
Burnt Yellow Ochre	Lamp Black	Scarlet Lake
Burnt Sienna	Light Red	Schuttgelb
Burnt Sienna, No. 2 Deep	Light English Red	Silver White
Burnt Terre Verte	Massicot (Yellow)	Terre Verte
Burnt Umber	Maugau Brown	Terre Verte, Veronese
Brilliant Yellow, Deep	Mineral Blue	Turkey Red
Brilliant Yellow, L.	Mineral Green	Vandyke Brown
Caledonian Brown	Mineral Yellow	Velvet Black
Cappah Brown	Morellen Salt (Red)	Venetian Red
Caput Mortum, Deep	Mummy	Verdigris
Caput Mortum, L	Munich Lake	Zinnober, Dunkel
Cassel Earth	Naples Red	Zinnober, Gelb
Chrome Green, No. 1	Naples Yellow, Deep	Zinnober, Hellgruner
Chrome Green, No. 2	Naples Yellow, L	Yellow Ochre, No. 1
Chrome Yellow, Deep	Naples Yellow, Greenish	Yellow Ochre, No. 2
Chrome Yellow, L	Naples Yellow, Reddish	Yellow of Gold
Chrome Yellow, M	New Blue	Zinc Yellow
Chrome Yellow, Orange	Rue Ochre	Zinc White
CLASS B	Per Doz., \$2.00	Each, .20
Cobalt Green, Light	Kings Yellow No. 4	Ultramarine Blue, deep
Cobalt Green, Deep	Ultramarine Blue, light	
CLASS C	Per Doz., \$2.50	Each, .25
Bleu de Lumière	Japan Yellow	Ultramarine Yellow
Brussels Brown	Madder Lake, No. 1	Vienna Red
Cobalt Blue, No. 2.	Strontian Yellow	

Dr. Fr. Schoenfeld & Co.'s Celebrated German Oil Colors—

continued

CLASS D

Per Doz., \$3.20

Each, .30

Bleu Celeste
Carmine Vermilion
Chinese Vermilion
Cobalt Blue, No. 1.
Green Lake, Light

Green Lake, Deep
Madder Lake No. 2
Patent Vermilion
Sap Green
Sepia

Stil de grain, brun
Stil de grain, verte
Yellow Lake, Light
Yellow Lake, Deep

CLASS E

Per Doz., \$4.50

Each, .40

Cobalt Blue, No. 0
Crimson Lake, genuine
Geranium Lake
Madder Brown
Madder Lake, No. 3

Madder Lake, No. 4
Mars Orange
Mars Violet
Mars Yellow
Robert Lake, No. 7

Robert Lake, No. 8
Rose Carthame
Scarlet Vermilion
Vandyke Red
Violet Lake

CLASS F

Per Doz., \$5.20

Each, .45

Cadmium, No. 1 citron
Cadmium, No. 2 light
Cadmium, No. 3 medium

Cadmium, No. 4 deep
Cadmium, No. 5 orange

Olive Green
Verte Emeraude

CLASS G

Per Doz., \$5.50

Each, .50

Aureolin
Carmine

Indian Yellow
Madder Lake, Burnt

Turquoise Blue

CLASS H

Per Doz., \$6.40

Each, .55

Burnt Carmine
Madder Lake, No. 7

Malachite Green
Oxide of Chromium, Blue Green

Oxide of Chromium, Green Blue
Violet Carmine

CLASS I

Per Doz., \$7.50

Each, \$.65

Madder Lake, No. 8

CLASS J

Per Doz., \$9.00

Each, .75

Madder Carmine

WHITES. DOUBLE AND QUADRUPLE TUBES

	Double Tubes		Quadruple Tubes	
	per doz.,	each,	per doz.,	each,
Cremnitz White	\$3.00	.25	\$6.50	.50
Flake White	3.00	.25	6.50	.50
Silver White	3.00	.25	6.50	.50
Zinc White	3.00	.25	6.50	.50

FROST & ADAMS CO'S FLAKE WHITE

PREPARED OIL COLOR IN TUBES

Flake White, single tube	per doz.,	.90	each,	.06
Flake White, double tube	"	1.20	"	.10
Flake White, quadruple tube	"	3.60	"	.30

BREIDBACH'S OIL COLOR SPECIALTIES FOR ARTISTS

IN TUBES

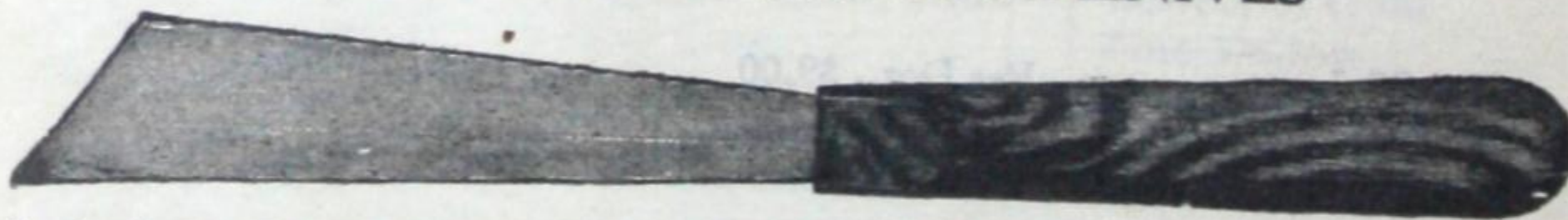
Brilliant Rose, Rose Tint	per doz.,	\$1.75	each,	.15
Carmilion	"	1.75	"	.15
Carmine Paste	"	2.75	"	.25
Crimson Carmine	"	1.25	"	.15
French Carmine, No. 40	"	2.75	"	.25
Green Lake	"	1.25	"	.15
Jaqueminot Rose	"	1.75	"	.15
Madder Brown	"	.85	"	.10
Purple Carmine	"	1.25	"	.15
Rose Carthame	"	1.75	"	.15
Scarlet Carmine	"	1.25	"	.15
Yellow Lake	"	1.25	"	.15

ROBERSON'S MEDIUM

IN TUBES

Medium, small tube, single	per doz.,	\$3.00	each,	.25
Medium, large tube, double	"		"	.50

ARTISTS' STEEL PALETTE KNIVES



3 inch Blade, Cocoa Handles, German Shape	doz.,	\$4.25	each,	.40
3½ " " " " " " " " " " " " " "	"	4.75	"	.45
4 " " " " " " " " " " " " " "	"	5.50	"	.50

THE "RAFFAELLI" SOLID OIL COLORS



100 TINTS, 15 CENTS EACH

Group 1 — Reds

Rose Madder	1	2	5	6
Vermilion	7	9		
Bright Flesh Tints	{ 13	16	17	
	{ 19			
Indian Red	20	21	22	23
Light Red	24	27		
Burnt Sienna	28	29	32	
Dark Flesh Tints	{ 37			
	{ 38	40		

Group 2 — Yellows

Orange	41	43
Deep Cadmium	44	46
Pale Cadmium	48	
Lemon Cadmium and Lemon Yellow	50	53 56
Raw Sienna	57	
Buff Tint	64	
Yellow Ochre	70	72 74 75
Naples Yellow and Jaune Brilliant	77	79
Citrine Tints	80	82

Group 3 — Greens

Viridian	85	86	87	89	91
Emerald Green	92	95	96		
Mid. Chrome	97				
Various Green and Apple Green Tints	99	102	103	104	105
Terre Verte	106	108	109		
Ox. Chromium	113	115	117		
Mid. Cinnabar	116	118			
Olive Green	121				

Group 4 — Blues

Prussian and Antwerp Blues	124	126	127	128
French Blue and Ultramarine Ash	129	131	134	
Cobalt Blue	136	137	139	
Payne's Gray	141			
Indigo	144	147	149	150
Neutral Tints	151	152	157	
Purple Madder	161			
Permanent Violet	164	166	169	
Indian Purple	170			

Group 5 — Browns and Warm Monochrome Tints

Caledonian Brown	171	172	175	Raw Umber	183	187	188
Burnt Umber	177	179		Bitumen	189		
Brown Pink	181						

Group 6 — Black, Grays and White

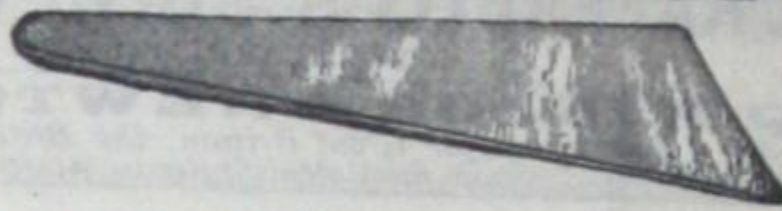
Lamp Black, graduated to White	191	194	197	200
--------------------------------	-----	-----	-----	-----

The names appended to the tints, which range from dark to light, the first number representing the strongest and the last the weakest tint of any given series, are merely intended as guides to the general hue of each stick, as the nearest representative among ordinary Oil Colors, and must not be taken as necessarily indicative of the nature of the pigment employed

Book of Instruction and Sample Cards on application

PALETTE KNIVES FOR CHINA PAINTERS

HORN PALETTE KNIFE



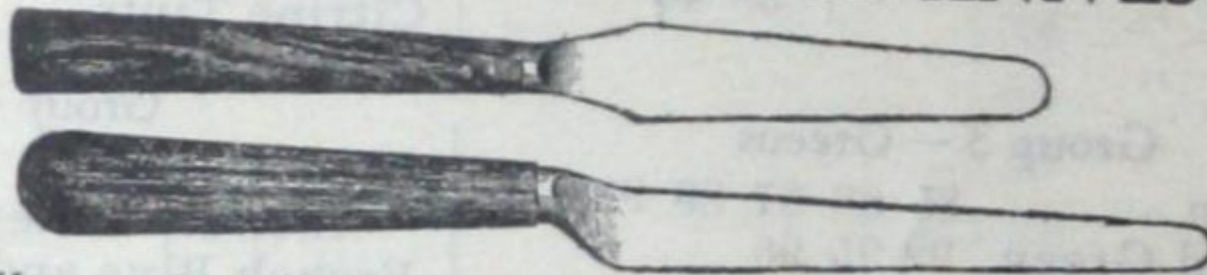
4 inch Horn	doz., \$1.00 each, .10	6 inch Horn	doz., \$1.75 each, .20
5 " "	" 1.10 " .15	7 1/2 " "	" 2.50 " .25
No. 0. Horn Petite (for gold)			.90 " .10

"PETITE" PALETTE KNIFE



2 1/4 inch Blade, Ebony Handle, finest quality tempered steel doz., \$2.75 each, .25

ARTIST'S STEEL PALETTE KNIVES



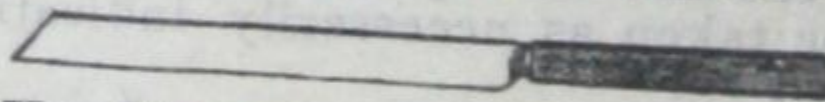
3 inch Blade, Ebony Handles (Limber)	per doz., \$2.75 each, .25
3 1/2 " " " "	" 2.75 " .25
4 " " " "	" 3.00 " .30
4 1/2 " " " "	" 3.40 " .35
5 " " " "	" 3.75 " .40
6 " " " "	" 5.00 " .45
3 " " Trowel shape, Ebony Handles	" 4.00 " .40
3 1/2 " " " "	" 4.00 " .40
4 " " " "	" 4.50 " .45
5 " " " "	" 5.50 " .50

FRENCH STEEL PALETTE KNIVES

Very Flexible, and Suitable for Applying Color

No. 1.	3, 3 1/2, 4, 4 1/2, 5 inch	Long Pointed Trowel	each, .70
2.	2, 2 1/2, 3 inch	Short Broad Trowel	" .90
3.	3, 3 1/2, 4, 4 1/2, 5 inch	Angular Points	" .70
4.	4, 4 1/2, 5 inch	Long, Slender, Tapered Points	" .70
5.	3, 3 1/2, 4, 4 1/4, 5 inch	Angular Tapered Points	" .70

EXTRA GILDERS' KNIFE



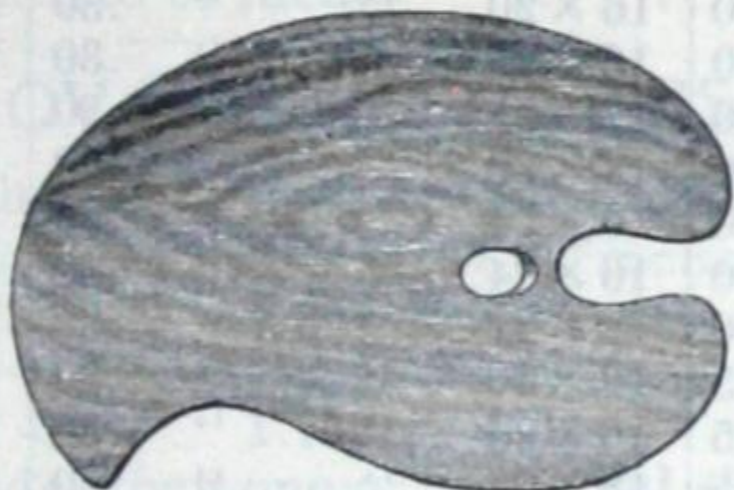
6 inch Blade, Cocoa Handle each, .50

FROST & ADAMS CO'S

MAHOGANY FOLDING PALETTES

Size	Oiled Mahogany		Polished Mahogany	
8x11 inch open	doz., \$5.50	each, .55	doz., \$12.00	each, \$1.20
9x13 " "	" 6.00	" .60	" 13.00	" 1.30
10x13 " "	" 7.00	" .70	" 14.00	" 1.40
10x14 " "	" 7.50	" .75	" 14.50	" 1.45
11x13 " "	" 7.50	" .80	" 14.50	" 1.50

MAHOGANY STUDIO ARM PALETTES



THIS PALETTE IS
PROPERLY BALANCED
FOR THE ARM

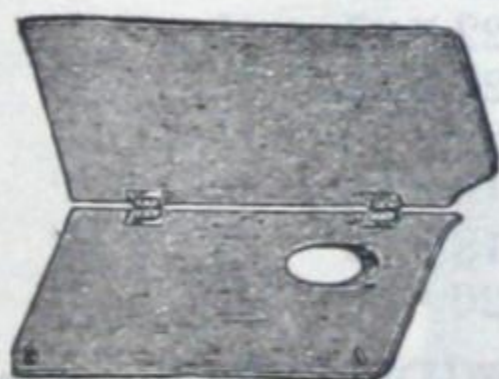
THE BACK IS
CROSS-VENEERED
AT THUMB HOLE

Size	Finish	Price
13 1/2 x 18	Oiled finish	each, \$1.75
16 x 24	" "	" 2.50
19 x 27	" "	" 2.75
21 1/2 x 30	" "	" 3.30
25 x 36	" "	" 3.75
13 1/2 x 18	Polished finish	each, \$2.25
16 x 24	" "	" 3.00
19 x 27	" "	" 3.80
21 1/2 x 30	" "	" 4.25
25 x 36	" "	" 5.50

SUPERIOR WOODEN PALETTES FOR OIL PAINTING



OVAL



FOLDING



OBLONG

Length	Oiled Mahogany		Polished Mahogany		Oiled Walnut	Polished Walnut
	doz., \$	each, .	doz., \$	each, .		
9 inch,	1.80	.20	4.20	.60	.30	.60
10 "	2.00	.20	4.50	.70	.35	.70
11 "	2.40	.25	5.00	.80	.38	.80
12 "	2.75	.25	5.50	.90	.40	.90
13 "	3.00	.30	6.20	1.00	.40	1.00
14 "	3.75	.35	7.00	1.10	.45	1.10
15 "	4.50	.40	7.75	1.20	.50	1.20
18 "	7.00	.60	12.00	1.40	1.00	1.40

THE PFLEGER PATENT STRETCHERS

Dealers attention is called to their great superiority over all others as the pieces are interchangeable, which insures perfect joints at the corners. A great saving in time and labor in making up odd size stretchers

6 × 8 inches, each, .20	14 × 17 inches, each, .25	22 × 32 inches, each, .40
6 × 9 " " .20	14 × 18 " " .25	22 × 34 " " .40
6 × 10 " " .20	12 × 24 " " .30	22 × 36 " " .40
6 × 12 " " .20	14 × 20 " " .30	24 × 30 " " .40
7 × 9 " " .20	14 × 22 " " .30	24 × 32 " " .40
7 × 10 " " .20	14 × 24 " " .30	24 × 34 " " .40
7 × 12 " " .20	15 × 20 " " .30	25 × 30 " " .40
7 × 13 " " .20	16 × 20 " " .30	26 × 36 " " .45
8 × 10 " " .20	16 × 22 " " .30	24 × 36 " " .45
8 × 11 " " .20	17 × 21 " " .30	27 × 34 " " .45
8 × 12 " " .20	14 × 26 " " .30	18 × 44 " " .45
8 × 14 " " .20	15 × 25 " " .30	18 × 46 " " .50
9 × 11 " " .20	16 × 24 " " .30	24 × 42 " " .50
9 × 12 " " .20	18 × 22 " " .30	26 × 40 " " .50
9 × 13 " " .25	12 × 30 " " .30	27 × 36 " " .50
9 × 14 " " .25	16 × 26 " " .30	28 × 36 " " .50
10 × 12 " " .25	18 × 24 " " .30	29 × 36 " " .50
10 × 13 " " .25	18 × 26 " " .30	30 × 36 " " .50
10 × 14 " " .25	20 × 24 " " .30	18 × 48 " " .55
12 × 14 " " .25	16 × 28 " " .30	18 × 50 " " .55
10 × 15 " " .25	20 × 26 " " .35	20 × 60 " " .60
10 × 16 " " .25	16 × 30 " " .35	30 × 40 " " .60
10 × 18 " " .25	18 × 28 " " .35	28 × 40 " " .60
11 × 15 " " .25	20 × 28 " " .35	28 × 42 " " .60
12 × 15 " " .25	18 × 30 " " .35	26 × 44 " " .60
12 × 16 " " .25	18 × 32 " " .35	32 × 40 " " .60
13 × 16 " " .25	20 × 30 " " .35	26 × 46 " " .75
10 × 20 " " .25	22 × 27 " " .35	28 × 44 " " .75
12 × 17 " " .25	20 × 32 " " .40	28 × 46 " " .75
12 × 18 " " .25	22 × 30 " " .40	28 × 50 " " .75
12 × 20 " " .25	16 × 36 " " .40	30 × 46 " " .75
12 × 22 " " .25	18 × 36 " " .40	30 × 48 " " .75
14 × 16 " " .25	20 × 36 " " .40	30 × 50 " " .75

WIDE SERIES—3 inches

16 × 42 inches, each, .68	28 × 48 inches, each, 1.00	36 × 42 inches, each, 1.00
16 × 50 " " .74	30 × 40 " " .80	36 × 50 " " 1.00
16 × 60 " " .80	30 × 42 " " .80	36 × 60 " " 1.34
18 × 44 " " .74	30 × 44 " " .80	40 × 50 " " 1.34
18 × 48 " " .74	32 × 40 " " .80	40 × 54 " " 1.34
18 × 50 " " .74	34 × 42 " " 1.00	40 × 60 " " 1.34
20 × 50 " " .80	34 × 44 " " 1.00	44 × 64 " " 1.34
28 × 40 " " .80	34 × 60 " " 1.00	48 × 72 " " 1.68

Cross Bars, extra, each, .34

PFLEGER PATENT STRETCHERS FOR CANVAS

All lengths from 6 to 36 inches, including wedges per 100 strips, \$ 6.00
 " " 37 to 50 " " " " " " 12.00

For a small stock the most desirable lengths are 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30 and 36 in.

THE PFLEGER PATENT STRETCHERS

Narrow and Thin

All lengths from 6 inches to 12 inches . . . per 100 strips, \$3.75
 " " 13 inches to 18 inches . . . " " 4.75
 " " 19 inches to 24 inches . . . " " 5.50

OVAL STRETCHERS

The following sizes are regular

12x16 inches . . . each, \$1.60	18x22 inches . . . each, \$1.85
14x17 " . . . " 1.60	20x24 " . . . " 2.00
16x20 " . . . " 1.60	22x27 " . . . " 2.15
17x21 " . . . " 1.75	25x30 " . . . " 2.30

An extra charge made when one or more odd size Oval Stretchers are ordered

Stretchers with arcs, Circular, or any other shape made to order only

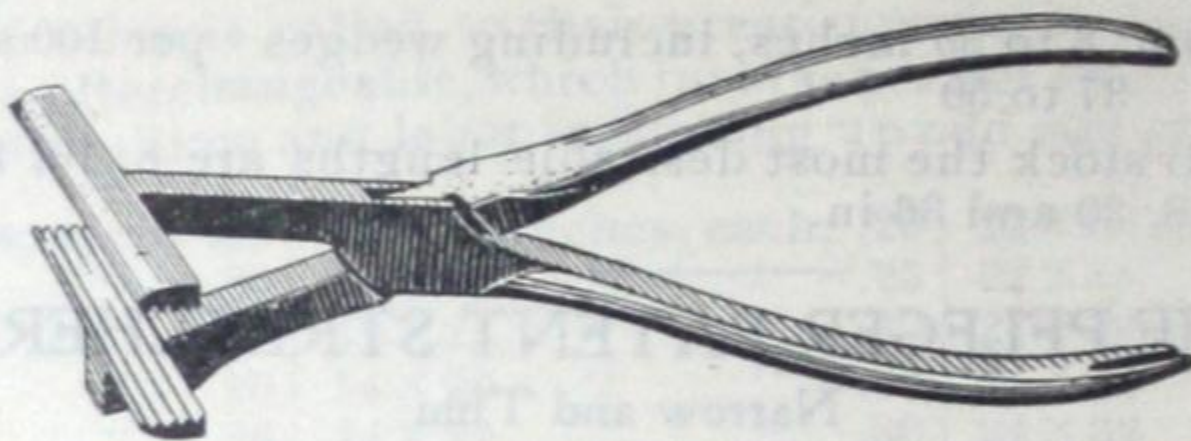
A. D. SHATTUCK'S PATENT STRETCHER KEYS

Applied to any mitered corner they make a complete stretcher. Any length can be cut from the strip — the corners cut on a miter — and the key applied

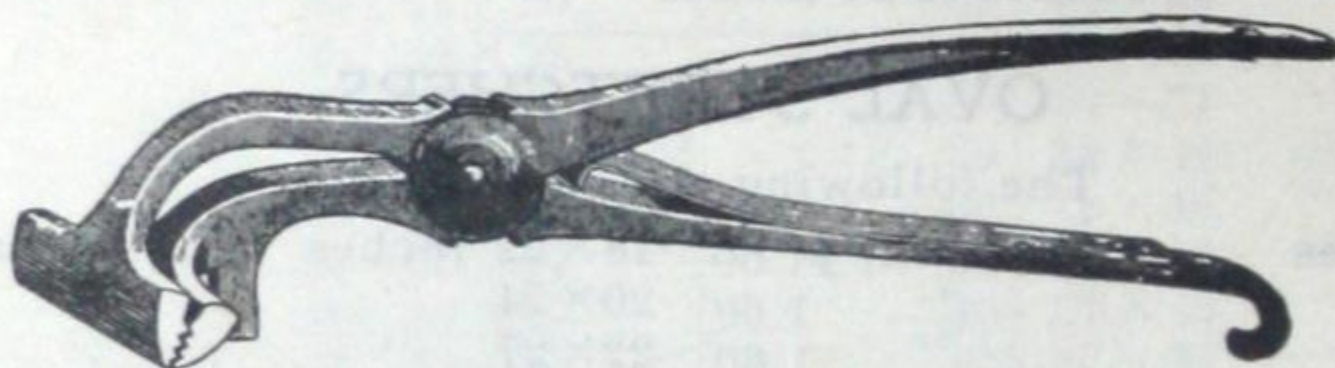


No. 1, per gross, \$2.85	per doz., .35	No. 3, per gross, \$5.05	per doz., .60
No. 2, " 3.80	" .45	No. 4, " 6.72	" .75

CANVAS PLIERS FOR STRETCHING CANVAS



- No. 1. Small, Straight Jaw each, \$1.75
- 2. Medium, " " 2.00



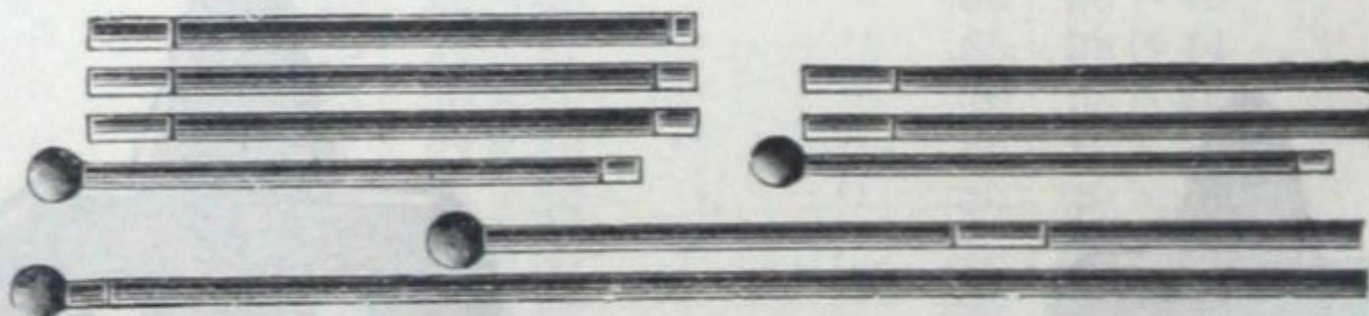
- No. 3. Large, Curved Jaw with Spring each, \$2.00

CANVAS PINS



Wooden centre with steel pins projecting on each side, to place between canvases for carrying wet sketches. Single point, per dozen .35
 Double point " .50

FRENCH MAHL STICKS



- White Wood, 30 to 40 inches long each, .20
- Stained and Varnished, 30 to 40 inches long " .30
- Jointed Wooden, Brass Ferrules " .75
- Bamboo, 30 to 40 inches " .30

PENCIL STICKS AND HAND RESTS

- Plain Cedar each, .01
- Varnished Cedar " .02
- Ivory " .10
- Walnut Hand Rests for China Painting " .25

FROST & ADAMS CO'S

AMERICAN PREPARED CANVAS FOR OIL PAINTING

On Best English Linen — in Rolls of Six Yards

	Single Prime (with tooth)	Smooth	Roman	Twilled		
27 in. wide	per roll, \$5.85	\$5.85	\$5.85	\$6.60	per yard,	\$1.10
30 "	" 6.30	6.30	6.30	7.50	"	1.20
30 "	" 7.50	7.50	7.50	8.70	"	1.30
42 "	" 8.80	8.80	8.80	11.40	"	1.50
45 "	" 10.40	10.40	10.40	13.20	"	1.75
54 "	" 14.30	14.30	14.30		"	2.40
62 "	" 20.80	20.80	.	.	"	3.50
74 "	" 27.30	27.30	.	.	"	4.60
86 "	" 32.50	32.50	.	.	"	5.50
96 "	" 39.00	39.00	.	.	"	6.70
120 "	" 52.00	52.00	.	.	"	8.70
144 "	" 70.20	70.20	.	.	"	12.00

FROST & ADAMS CO'S "COLUMBIA" CANVAS

Of Smooth, Even Grain, Pliable, of Lighter Texture than Our Best English Linen — in Rolls of Six Yards

27 inches wide	per roll, \$5.20	per yard, .90
30 "	" 5.50	" 1.00
36 "	" 6.50	" 1.15
42 "	" 7.80	" 1.40
45 "	" 9.10	" 1.75
54 "	" 11.70	" 2.00

FROST & ADAMS CO'S ABSORBENT CANVAS

Best English Linen — in Rolls of Six Yards

27 inches wide	per roll, \$5.85	per yard, \$1.00
30 "	" 6.30	" 1.10
36 "	" 7.50	" 1.30
42 "	" 8.80	" 1.50

FROST & ADAMS CO'S STUDENT'S LINEN CANVAS

"Single Prime" and "Semi-Absorbent" — in Rolls of Six Yards

44 inches wide	per roll, \$6.50	per yard, \$1.15
----------------	------------------	------------------

FROST & ADAMS CO'S
NO. 3, TWILLED SKETCHING CANVAS

Heavy and Strong. Gray back. In rolls of Six Yards

28 inches wide	.	.	.	.	.	per roll, \$4.00	per yard, .75
30	"	.	.	.	.	" 5.00	" .90
36	"	.	.	.	.	" 5.40	" 1.00

FROST & ADAMS CO'S

NO. 4, GRAY BACK, PLAIN SKETCHING CANVAS

Double Prime — in Rolls of Six Yards

28 inches wide	.	.	.	.	.	per roll, \$3.25	per yard, .60
31	"	.	.	.	.	" 3.55	" .75
37	"	.	.	.	.	" 4.25	" 1.00

FROST & ADAMS CO'S "ACADEMY" CANVAS

In Rolls of Six Yards

40 inches wide	per roll, \$3.25	per yard, .75
----------------	---	---	---	---	---	------------------	---------------

FROST & ADAMS CO'S "STUDIO" CANVAS

In Rolls of Six Yards

40 inches wide	per roll, \$3.60	per yard, .70
----------------	---	---	---	---	---	------------------	---------------

FROST & ADAMS CO'S COARSE CANVAS

For Ceiling Decoration, etc. — In Rolls of Six Yards

36 inches wide	.	.	.	.	.	per roll, \$5.35	per yard, \$1.00
54	"	.	.	.	.	" 9.60	" 1.60
96	"	.	.	.	.	" 28.80	" 4.80
120	"	.	.	.	.	" 38.40	" 6.50
144	"	.	.	.	.	" 57.60	" 9.75

In Rolls of Ten Yards

144 inches wide	.	.	.	.	.	per roll, \$96.00	per yard, \$10.50
216	"	.	.	.	.	" 144.00	" 15.50

IMPORTED FRENCH LINEN CANVAS

No. 1.	Lamb, Coarse Grain	80 in. wide,	per yard, \$7.00	40 in. \$3.50
2.	Lippincott Med. Grain	80	" "	7.00 40 " 3.50
3.	Gray Tint, Fine	" 80	" "	7.00 40 " 3.50
4.	White " Fine	" 80	" "	7.00 40 " 3.50
5.	Yellow " Fine	" 80	" "	7.00 40 " 3.50
6.	Gray " Twil'd	" 80	" "	7.00 40 " 3.50
7.	Cream " Fine	" 80	" "	4.00 40 " 2.00

Sample Book of Canvas furnished to Dealers

FROST & ADAMS CO'S

NO. 1, SMOOTH OR SINGLE PRIME, ENGLISH LINEN

In Rolls of Six Yards

27 inches wide	per roll, \$5.85	per yard, \$1.00
30 " "	" 6.30	" 1.10
36 " "	" 7.50	" 1.20
42 " "	" 8.80	" 1.35
10 feet x 21 feet	" 47.00	
10 " x 26 "	" 58.00	
10 " x 30 "	" 67.00	

FROST & ADAMS CO'S

PASTEL CANVAS. "SUPER" BEST ENGLISH LINEN

In Rolls of Six Yards

- Style A — Velvet surface
- Style B — Gray, rough surface
- Style C — Buff, rough surface

	Velvet Surface	Rough Surface	
30 inches wide	per roll, \$ 8.40	\$7.20	per yard, \$1.50
36 " "	" 10.20	9.00	" 1.75

PASTEL CANVAS. EXTRA. SKETCHING LINEN

In Rolls of Six Yards

- Style D — Velvet surface
- Style E — Gray, rough surface
- Style F — Buff, rough surface

	Velvet Surface	Rough Surface	
31 inches wide	per roll, \$6.00	\$5.40	per yard, \$1.50
37 " "	" 7.80	6.80	" 1.75

WINSOR & NEWTON'S "WINTON" CANVAS

In Rolls of Six Yards

27 in. wide	roll, \$6.00	yard, \$1.10	45 in. wide	roll, \$11.00	yard, \$1.85
30 " "	" 7.00	" 1.25	54 " "	" 12.50	" 2.25
36 " "	" 8.00	" 1.35	62 " "	" 15.00	" 3.00
42 " "	" 9.50	" 1.60	74 " "	" 17.00	" 3.50

FROST & ADAMS CO'S

No. 5, TWILLED SKETCHING CANVAS

In Rolls of Six Yards

40 inches wide	Buff Tint, F	per roll, \$3.25	per yard, .60
40 " "	Gray " E	" 3.25	" .60

SCHOOL OF ART CANVAS

In Rolls of Six Yards

40 inches wide	per roll, \$3.40	per yard .60
----------------	------------------	--------------

FRENCH TAPESTRY CANVAS

No. 3,	37 inches wide,	Fine ribbed	per yard, \$1.60
4,	37	" Medium ribbed	" 1.30
10,	84	" Fine ribbed	" 3.35
11,	82	" Medium grain	" 3.30
12,	82	" Coarse grain	" 3.30
13,	82	" Cotton Reps, fine	" 4.00
13, B.,	51	" Woolen Reps, fine	" 6.00
14,	120	" Cotton Reps coarse	" 8.00
15, B.,	56	" Gobelins, fine stitch	" 1.60
15, Ter.,	122	" " wool, fine stitch, superfine	15.00
16,	120	" " wool coarse stitch	8.00
18,	120	" " wool gray tint, coarse stitch	6.20
19,	82	" Cotton Reps, fine ribbed	4.85
20,	82	" Gobelins, fine ribbed, extra fine	6.20
20, Ter.,	56	" " wool, ex. fine st'ch, superfine	8.50
20, Bis.,	56	" " silk, ex. fine st'ch, ex.	12.00
21,	120	" " coarse stitch, superfine	6.00
21, Bis.,	56	" " coarse stitch, superfine	1.60

The prices quoted on the above tapestries by the yard, means the running yard of whatever width the number designates—not the square yard.

WINSOR & NEWTON'S "BRITISH" CANVAS

Three Surfaces, Rough, Smooth and Roman—In Rolls of Six Yards

27 inches wide, Smooth, per roll, \$5.00	Single Prime, \$4.50	per yard, \$1.00
30 " " " 5.75	" " 5.25	" " 1.10
36 " " " 6.75	" " 6.00	" " 1.20
42 " " " 7.75	" " 7.00	" " 1.35
45 " " " 8.50	" " 8.00	" " 1.75
54 " " " 11.50	" " 10.00	" " 2.25
62 " " " 14.50	" " 13.00	" " 3.00
74 " " " 20.00	" " 18.00	" " 3.75

WINSOR & NEWTON'S BEST ARTIST'S CANVAS

PREPARED FOR PAINTING IN OIL COLORS

Full Primed, Single Primed and White Single Primed

British Linen, carefully selected and of fine quality, is used by Winsor & Newton

27 inches wide	per roll, \$ 6.90	per yard, \$1.25
30 " " " " " " " " " " " "	" 7.60	" 1.40
36 " " " " " " " " " " " "	" 8.70	" 1.50
42 " " " " " " " " " " " "	" 10.30	" 2.00
45 " " " " " " " " " " " "	" 12.60	" 2.25
54 " " " " " " " " " " " "	" 16.10	" 2.75
62 " " " " " " " " " " " "	" 19.30	" 3.50
74 " " " " " " " " " " " "	" 24.00	" 4.00
86 " " " " " " " " " " " "	" 30.00	" 5.00

Roman Canvas is supplied at the same prices

FROST & ADAMS CO'S

NO. O, EXTRA SMOOTH, ENGLISH LINEN

FINEST GRADE

27 inches wide	per roll, \$7.50	per yard, \$1.35
30 " " " " " " " " " " " "	" 8.45	" 1.50
36 " " " " " " " " " " " "	" 9.75	" 1.75

GEORGE ROWNEY & CO'S PREPARED CANVAS

QUALITY B

27 inches wide	per roll, \$4.50	per yard, \$1.00
30 " " " " " " " " " " " "	" 5.25	" 1.10
36 " " " " " " " " " " " "	" 6.00	" 1.20
42 " " " " " " " " " " " "	" 7.00	" 1.35

FROST & ADAMS CO'S

AMERICAN PREPARED CANVAS ON STRETCHERS

6 x 8 inches	each, \$	.32	15 x 18 inches	each, \$	.68
6 x 9 "	"	.32	15 x 27 "	"	.95
6 x 10 "	"	.32	16 x 20 "	"	.76
6 x 12 "	"	.32	16 x 22 "	"	.76
6 x 18 "	"	.45	16 x 24 "	"	.85
7 x 9 "	"	.32	16 x 26 "	"	.90
7 x 10 "	"	.32	16 x 42 "	"	2.00
7 x 11 "	"	.32	16 x 50 "	"	2.20
7 x 12 "	"	.32	16 x 60 "	"	2.35
8 x 10 "	"	.32	17 x 21 "	"	.85
8 x 12 "	"	.32	17 x 25 "	"	.95
8 x 16 "	"	.45	18 x 22 "	"	.95
8 x 18 "	"	.50	18 x 24 "	"	.95
8 x 20 "	"	.58	18 x 26 "	"	.95
9 x 11 "	"	.32	18 x 30 "	"	1.00
9 x 12 "	"	.32	18 x 48 "	"	2.35
9 x 13 "	"	.36	18 x 50 "	"	2.35
9 x 14 "	"	.38	18 x 60 "	"	2.50
9 x 15 "	"	.45	20 x 24 "	"	1.05
9 x 17 "	"	.50	20 x 27 "	"	1.08
9 x 20 "	"	.58	20 x 30 "	"	1.16
10 x 12 "	"	.38	22 x 27 "	"	1.12
10 x 14 "	"	.40	22 x 30 "	"	1.20
10 x 15 "	"	.45	22 x 36 "	"	1.40
10 x 16 "	"	.45	24 x 30 "	"	1.25
10 x 18 "	"	.54	24 x 34 "	"	1.40
10 x 20 "	"	.63	24 x 36 "	"	1.60
10 x 22 "	"	.65	25 x 30 "	"	1.25
10 x 24 "	"	.72	26 x 36 "	"	1.55
11 x 15 "	"	.50	26 x 42 "	"	2.00
12 x 14 "	"	.50	27 x 34 "	"	1.50
12 x 15 "	"	.54	28 x 48 "	"	2.45
12 x 16 "	"	.54	29 x 36 "	"	1.60
12 x 17 "	"	.58	30 x 40 "	"	2.45
12 x 18 "	"	.58	30 x 42 "	"	2.45
12 x 20 "	"	.63	30 x 44 "	"	2.50
12 x 24 "	"	.76	30 x 50 "	"	2.90
12 x 30 "	"	.90	34 x 42 "	"	2.50
14 x 16 "	"	.63	34 x 44 "	"	2.65
14 x 17 "	"	.63	34 x 60 "	"	3.60
14 x 18 "	"	.68	36 x 42 "	"	2.50
14 x 20 "	"	.68	36 x 50 "	"	3.15
14 x 22 "	"	.68	36 x 60 "	"	3.80
14 x 24 "	"	.80	40 x 50 "	"	3.40
14 x 40 "	"	1.55	40 x 54 "	"	3.60
14 x 60 "	"	2.30			

Special and irregular sizes made and stretched to order, of Single Prime, Roman, Twilled, and Brush Prepared American Canvas

WINSOR & NEWTON'S
PREPARED CANVAS ON STRETCHERS

	Smooth or Roman	Twilled		Smooth or Roman	Twilled
6 x 8 inches	each, \$.35	\$.45	15 x 18 inches	each, \$.75	\$.95
6 x 9 "	" .35	.45	15 x 27 "	" 1.05	1.20
6 x 10 "	" .35	.45	15 x 30 "	" 1.15	1.40
6 x 12 "	" .35	.45	16 x 18 "	" .80	1.10
6 x 18 "	" .50	.60	16 x 20 "	" .85	1.10
7 x 9 "	" .35	.45	16 x 22 "	" .85	1.10
7 x 10 "	" .35	.45	16 x 24 "	" .90	1.15
7 x 11 "	" .35	.45	16 x 26 "	" 1.00	1.25
7 x 12 "	" .35	.45	16 x 28 "	" 2.25	2.65
8 x 10 "	" .35	.45	16 x 30 "	" 2.45	2.85
8 x 12 "	" .35	.45	16 x 32 "	" 2.60	3.00
8 x 16 "	" .50	.60	17 x 21 "	" .95	1.15
8 x 18 "	" .55	.65	17 x 25 "	" 1.05	1.25
8 x 20 "	" .65	.75	18 x 22 "	" 1.05	1.25
9 x 11 "	" .35	.45	18 x 24 "	" 1.05	1.25
9 x 12 "	" .35	.45	18 x 26 "	" 1.05	1.35
9 x 13 "	" .40	.50	18 x 30 "	" 1.10	1.40
9 x 14 "	" .42	.55	18 x 40 "	" 1.80	2.75
9 x 15 "	" .50	.60	18 x 48 "	" 2.40	2.90
9 x 17 "	" .55	.75	18 x 50 "	" 2.40	2.90
9 x 20 "	" .65	.80	18 x 60 "	" 2.75	3.15
10 x 12 "	" .40	.55	20 x 24 "	" 1.15	1.45
10 x 14 "	" .45	.60	20 x 27 "	" 1.20	1.45
10 x 15 "	" .50	.60	20 x 30 "	" 1.30	1.60
10 x 16 "	" .50	.60	22 x 27 "	" 1.25	1.65
10 x 18 "	" .60	.75	22 x 30 "	" 1.35	1.70
10 x 20 "	" .70	.85	22 x 36 "	" 1.55	2.00
10 x 22 "	" .75	.95	24 x 30 "	" 1.40	1.85
10 x 24 "	" .80	.95	24 x 34 "	" 1.55	2.00
11 x 15 "	" .55	.70	24 x 36 "	" 1.80	2.25
12 x 14 "	" .55	.70	25 x 30 "	" 1.40	1.90
12 x 15 "	" .60	.75	26 x 36 "	" 1.70	2.30
12 x 16 "	" .60	.75	26 x 42 "	" 2.20	2.75
12 x 17 "	" .65	.80	27 x 34 "	" 1.65	2.20
12 x 18 "	" .65	.90	28 x 48 "	" 2.75	3.60
12 x 20 "	" .70	.90	29 x 36 "	" 1.75	2.50
12 x 24 "	" .85	1.05	30 x 40 "	" 2.70	3.15
12 x 30 "	" 1.00	1.25	30 x 42 "	" 2.75	3.25
12 x 36 "	" 1.25	1.65	30 x 44 "	" 2.85	3.50
14 x 16 "	" .70	.90	30 x 50 "	" 3.10	4.00
14 x 17 "	" .70	.95	34 x 42 "	" 2.80	3.50
14 x 18 "	" .75	.95	34 x 44 "	" 2.95	3.65
14 x 20 "	" .75	1.00	34 x 60 "	" 4.00	5.00
14 x 22 "	" .75	1.00	36 x 42 "	" 2.80	3.65
14 x 24 "	" .85	1.10	36 x 50 "	" 3.50	4.25
14 x 40 "	" 1.70	2.30	36 x 60 "	" 4.20	5.25
14 x 50 "	" 2.00	2.60	40 x 50 "	" 3.80	4.75
14 x 60 "	" 2.55	3.40	40 x 54 "	" 3.90	5.00

NOTE.—French Canvas of the above sizes stretched to order at short notice in the most workmanlike manner. Ordinary French Canvas same price as Winsor & Newton's Smooth. Best Ordinary, and Fine French higher than Winsor & Newton's Smooth. Paintings on Canvas cut down and re-stretched by experienced workmen

Special and irregular sizes made and stretched to order of French, German and American Canvas

FROST & ADAMS CO'S

PREPARED CANVAS ON STRETCHERS

Academy Sketching Canvas

6 x 8 inches	each,	.25	14 x 26 inches	each,	.65
6 x 9 "	"	.25	14 x 28 "	"	.75
6 x 10 "	"	.25	15 x 18 "	"	.60
6 x 12 "	"	.25	15 x 27 "	"	.75
7 x 9 "	"	.25	16 x 20 "	"	.55
7 x 10 "	"	.25	16 x 22 "	"	.55
7 x 11 "	"	.25	16 x 24 "	"	.70
7 x 12 "	"	.25	17 x 21 "	"	.63
8 x 10 "	"	.25	17 x 25 "	"	.75
8 x 12 "	"	.25	18 x 24 "	"	.75
8 x 16 "	"	.35	18 x 26 "	"	.75
8 x 18 "	"	.38	18 x 30 "	"	.80
8 x 20 "	"	.45	18 x 40 "	"	1.50
9 x 11 "	"	.25	18 x 50 "	"	1.80
9 x 12 "	"	.25	20 x 24 "	"	.80
9 x 13 "	"	.30	20 x 27 "	"	.85
9 x 14 "	"	.30	20 x 30 "	"	.85
9 x 15 "	"	.35	22 x 27 "	"	.85
9 x 17 "	"	.38	22 x 30 "	"	1.00
9 x 20 "	"	.45	24 x 30 "	"	1.00
10 x 12 "	"	.30	24 x 34 "	"	1.15
10 x 14 "	"	.30	24 x 36 "	"	1.25
10 x 15 "	"	.35	25 x 30 "	"	1.00
10 x 16 "	"	.35	26 x 36 "	"	1.20
10 x 18 "	"	.40	26 x 42 "	"	1.60
10 x 20 "	"	.50	27 x 34 "	"	1.15
10 x 24 "	"	.55	28 x 48 "	"	1.90
11 x 15 "	"	.40	29 x 36 "	"	1.25
12 x 14 "	"	.40	30 x 40 "	"	2.00
12 x 15 "	"	.45	30 x 42 "	"	1.90
12 x 16 "	"	.45	30 x 44 "	"	2.00
12 x 17 "	"	.45	30 x 50 "	"	2.15
12 x 18 "	"	.45	34 x 42 "	"	2.00
12 x 20 "	"	.45	34 x 44 "	"	2.10
12 x 24 "	"	.60	34 x 60 "	"	2.80
14 x 16 "	"	.45	36 x 42 "	"	2.00
14 x 17 "	"	.50	36 x 50 "	"	2.45
14 x 18 "	"	.50	36 x 60 "	"	3.00
14 x 20 "	"	.50	40 x 50 "	"	2.75
14 x 22 "	"	.50	40 x 54 "	"	2.80
14 x 24 "	"	.60			

FROST & ADAMS CO'S

ARTISTS' OILS, VARNISHES, MEDIUMS, ETC.



1 OZ. BOTTLE



2½ OZ. BOTTLE



1 OZ. BOTTLE

	Doz.	Each		Doz.	Each
Amber Varnish . . .	\$ 2.75	.25	Liquid for Gold Paint	\$1.50	.15
Fixatif, 2 oz., for Charcoal	2.40	.25	Mastic Varnish . . .	4.80	.45
Fixatif, 4 oz., for Charcoal	3.00	.30	Nut Oil	1.80	.20
Fixatif, 8 oz., for Charcoal	4.20	.35	Pale Drying Oil . . .	1.80	.20
Fixatif, 16 oz., for Charcoal	7.80	.65	Picture Mastic Varnish	3.50	.30
Fixatif, 32 oz., for Charcoal	13.80	1.20	Picture Copal Varnish	2.40	.25
Fixatif for Crayons	3.00	.25	Picture Varnish, Colorless	2.40	.25
Fixatif for Pastels . . .	3.00	.25	Poppy Oil	1.80	.20
Siccatif de Harlem, French	5.40	.50	Retouching Varnish	2.75	.25
Grecian Varnish	2.75	.25	Siccatif de Courtray	2.75	.20
Gum Water	2.40	.20	Spirits Turpentine . .	1.25	.15
Japan Gold Size	2.25	.20	Strong Drying Oil . . .	1.50	.15
Linseed Oil, Cold Pressed	1.50	.20	White Damar Varnish	2.40	.25
Liquid Dryer	2.40	.25	White Shellac	2.75	.25
Adhesive Preparation, for photograph painting on glass				2.40	.25
Diaphanous Liquid, for making photos transparent				2.00	.20
Preservative Liquid, for photograph painting on glass				2.40	.25
Transparency Medium, for photograph painting on glass				2.40	.25
Sochnees' French Varnish, No. 3 for Oil Colors				3.00	.25
Sochnees' French Varnish, No. 2 for Water Colors				3.00	.25
F. W. Co. Mixing Preparation, 2 oz				3.00	.25

The F. W. Co. preparation, mixed with the Oil Colors, will prevent their running when used on paper, satin or wood

WINSOR & NEWTON'S OILS AND VARNISHES



2 OUNCE ROUND



1 OUNCE FLAT



SIC. DE HARLEM

	1 Oz.	2 Oz.		1 Oz.	2 Oz.
Amber Varnish	ea. .30	.60	Oil Vehicles, 3, 3a, 3b	ea. .20	.40
Brown Spirit Varnish " . . . . .	.20	.40	Pale Drying Oil	" .10	.20
Crystal or Map Varnish " . . . . .	.20	.30	Pale Amber Varnish " . . . . .	.40	.75
Fat Oil	" .15	.25	Picture Copal Varnish " . . . . .	.20	.40
Japan Gold Size	" .15	.25	Picture Mastic Varnish " . . . . .	.30	.60
Manganesed Linseed Oil " . . . . .	.10	.20	Purified Linseed Oil " . . . . .	.10	.15
Manganesed Poppy Oil " . . . . .	.10	.20	Purified Poppy Oil " . . . . .	.10	.20
Mastic Varnish	" .40	.75	Pur. Walnut (Nut) Oil " . . . . .	.10	.15
Oil Copal Varnish " . . . . .	.20	.40	Strong Drying Oil " . . . . .	.10	.20
Oil of Spike	" .20	.40	Spirits Turpentine " . . . . .	.10	.15
Oil Vehicles, 1, 1a, 1b " . . . . .	.20	.40	White Lac Varnish " . . . . .	.20	.40
Oil Vehicles, 2, 2a, 2b " . . . . .	.20	.40	White Spirit Varnish " . . . . .	.20	.40

T. G. VIBERT'S FRENCH OILS AND VARNISHES

Essence de Petrole doz., \$3.60 ea.	.35	Vernis a retoucher doz , \$7.50 ea.	.65
Huile ent de Petrole " 3.60 "	.35	" a pendre " 7.50 "	.65
Vernis a Tableaux " 7.50 "	.65	French Siccatif de Harlem " 5.40 "	.50

PROFESSOR DR. BUTTNER'S
PRIMARY VARNISH, PHOEBUS A, AND B

For the Preservation of Oil Paintings Either Old or New

Phoebus A is not a picture varnish, but a preserving and refreshing medium, which does not dry, but penetrates the picture, remains pliable for years and will not crack. It is indispensable for oil paintings, to museums and art institutes, as it easily removes dirt from pictures, without expert knowledge and preserves them in every way. It consists chiefly of volatile oils, Balsam Copaiva and Vaseline Oil, and serves to replace in dried out pictures the vanished substance of the binding medium used in painting and to keep the pictures pliable



Small Bottle, 2 ounce, Primary Varnish, Phoebus A, or B .	each, .40
Large " 4 " " " " " " " " "	.70
Ex. Large " 6 " " " " " " " " "	1.25

H. SCHMINCKE & CO'S

MEDIUMS AND VARNISHES

Mussini Medium, No. 2, slow drying, Small Bottle each,	.25
" " 2, " Ex. Large " "	.65
" " 3, quick drying Small " "	.25
" " 3, " Ex. Large " "	.65
Mussini Varnish . . . . .	.40
Amber Varnish . . . . .	.50
Balsam Copaiva 2 ounce Bottle	.30
Copal Varnish " "	.30
Mastic " " "	.40
Cold Pressed Linseed Oil " "	.30
" " Raw " "	.30
" " Boiled " "	.30
Retouching Varnish " "	.40
Turpentine Oil Rectified " "	.25

These Liquids are without exception of the highest standard



FRENCH LIQUID TAPESTRY COLORS

Prepared especially for
Tapestry Canvas and other
Textiles, in 2 ounce Bottles

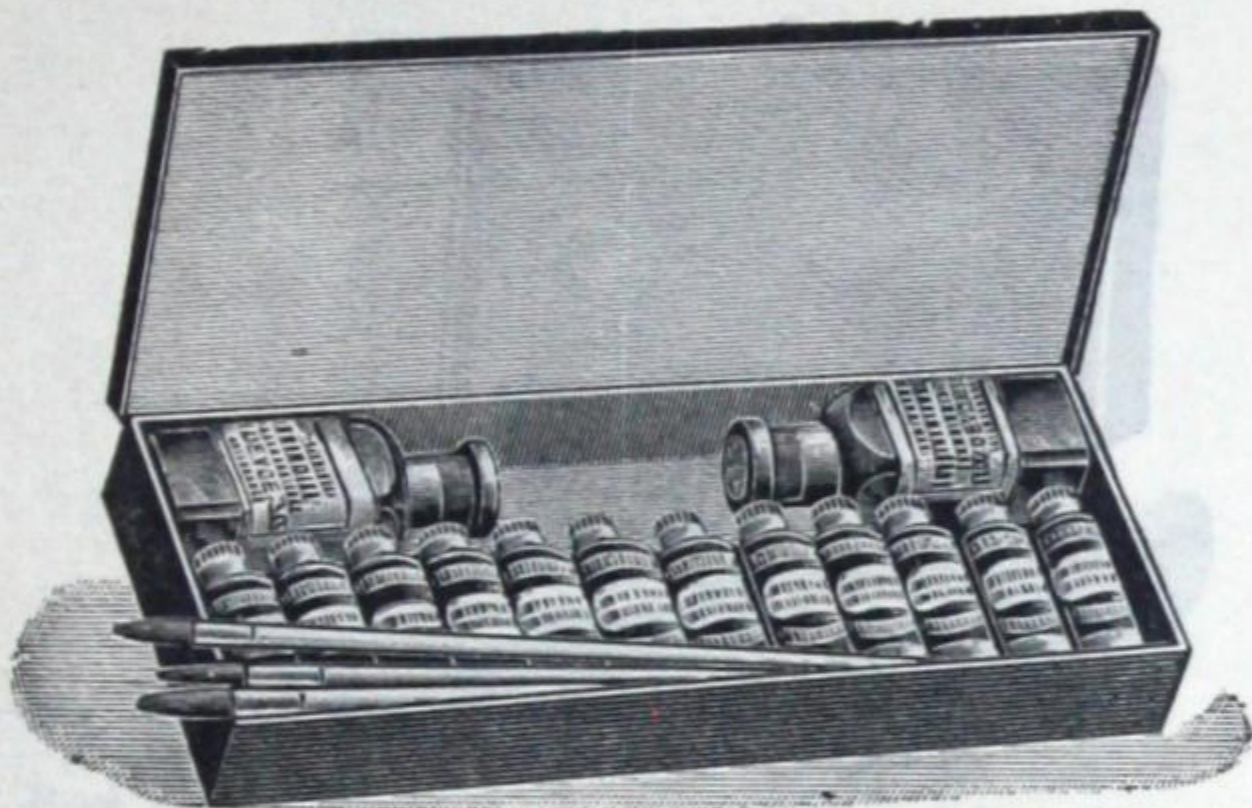


Paper Stencils in large
variety, for Tapestry work.
Send for Special Catalogue

All colors, except Carmine per doz., \$2.40 each, .25
Carmine " 4.80 " .50

- | | | |
|-------------------|---------------------|------------------|
| 1 Chrome Yellow L | 17 Cobalt Blue | 33 Chinese Rose |
| 2 Golden Yellow | 18 Ultramarine Blue | 34 Madder Brown |
| 3 Cadmium Yellow | 19 Prussian Blue | 35 Bistre |
| 4 Italian Earth | 20 Indigo | 36 Raw Umber |
| 5 Raw Sienna | 21 Vegetable Green | 37 Orient Red |
| 6 Burnt Sienna | 22 Emeraude Green | 38 Indian Yellow |
| 7 Burnt Umber | 23 Veronese Green | 39 Green Lake |
| 8 Cassel Earth | 24 Olive Green | 40 Bengal Rose |
| 9 Red Brown | 25 Prussian Green | 41 Scarlet |
| 10 Vandyke Brown | 26 Carmine Lake | 42 Pink Madder |
| 11 Saturn Red | 27 Sepia | 43 Crimson Lake |
| 12 Vermilion | 28 Payne's Gray | 44 Neutral Tint |
| 13 Madder Rose | 29 Ivory Black | 45 Mauve |
| 14 Blue Violet | 30 Carmine | 46 Purple Lake |
| 15 Purple Violet | 31 Yellow Ochre | |
| 16 Turquoise Blue | 32 Dark Green | |

THE LITTLE ARTISTS' OIL COLOR BOX, NO 9



Japanned Tin Box, containing 12 Tubes F. W. Devoe & Co's Artists' Oil Colors, assorted, 3 Fine Brushes, 1 Bottle Oil for mixing and 1 Bottle Turpentine.

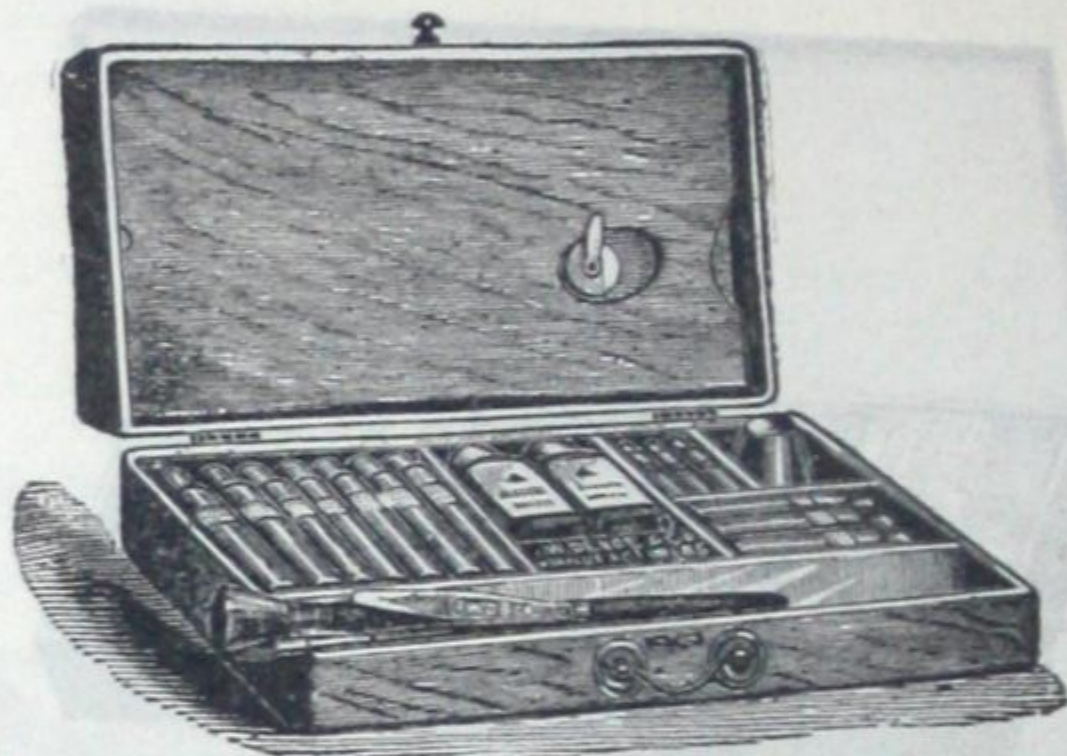
The Colors contained in this box are of the best quality, put up in small tubes of special size adapted to the shape of the box, and for the purpose of having the box of compact form, suitable for outdoor sketching, school use, etc. . each, \$1.25

"BEGINNER'S" BOX OF OIL COLORS AND MATERIALS



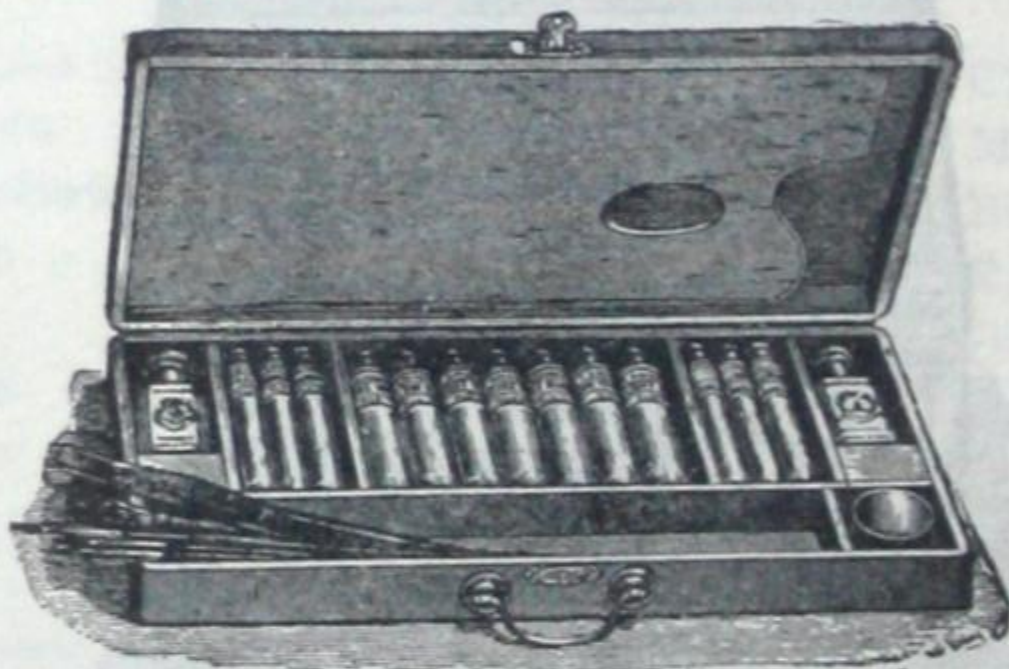
Polished Wood Box, size 10 inches long, 6 inches wide, 2 inches deep. Containing 10 Single Tubes of F. W. Devoe & Co's Prepared Artists' Oil Colors; Bottle Pale Drying Oil and Turpentine, Palette Cup, Mahogany Palette, Badger Blender, Palette Knife, 1 Sable and 2 Bristles Artists' Brushes each, \$1.75

"SCHOLARS" BOX OF OIL COLORS AND MATERIALS



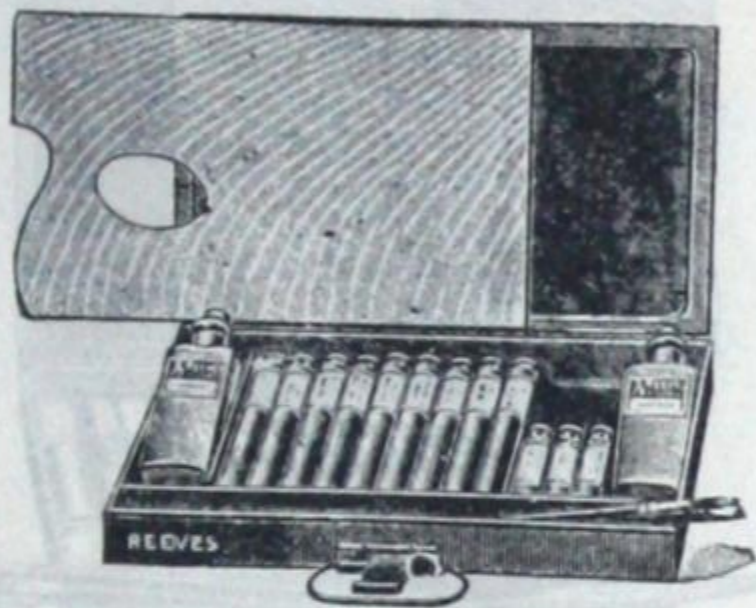
Polished Wood Box, size 11 inches long, 6 inches wide, 2 inches deep. Containing 13 Single Tubes of F. W. Devoe & Co's Prepared Artists' Oil Colors, 1 Palette Knife, Bottle of Pale Drying Oil and Spirits Turpentine, 3 Sable and Bristle Artists' Brushes, Badger Blender, Palette Cup, Mahogany Palette, Tracing and Transfer Papers, 4 Studies and 1 Academy Board each, \$2.00

"ACADEMY" BOX OF OIL COLORS AND MATERIALS



Polished Wood Box, size 13¼ inches long, 6½ inches wide, 2 inches deep. Containing 13 Double (or large size) Tubes of F. W. Devoe & Co's Artists' Oil Colors, Bottle of Pale Drying Oil and Spirits Turpentine, Steel Palette Knife, Palette and Palette Cup, Badger Blender, 1 Sable and 2 Bristle Brushes, Academy Board, Tracing and Transfer Paper each, \$2.50

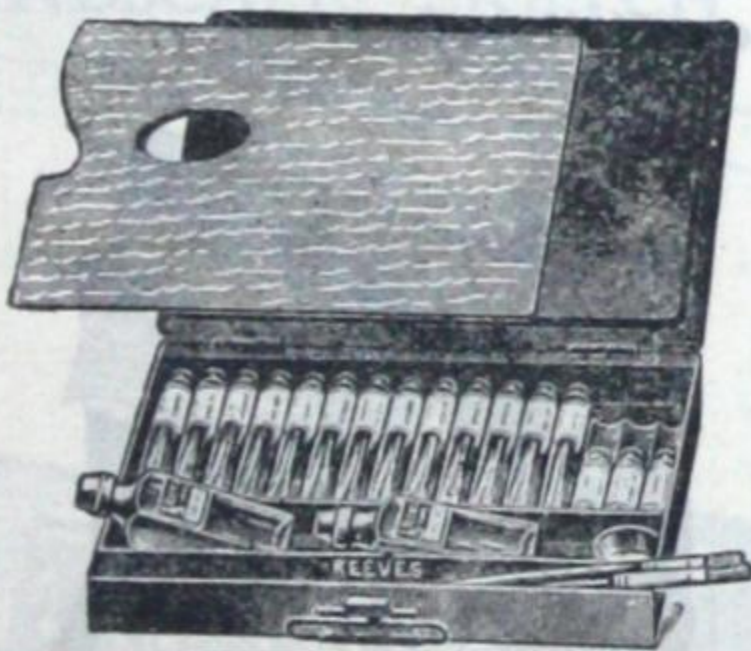
ENGLISH JAPANNED TIN, OIL COLOR BOXES, FITTED



NO. 302. THE STUDENTS' OUTFIT

No. 302. Box contains Mahogany Palette, 2 Brushes, Bottle Oil, Bottle Turpentine and 12 Tubes of Oil Colors . . . each, \$2.00

Colors: Burnt Sienna, Chrome Yellow, Medium; Crimson Lake, Flake White, Ivory Black, Light Red, Raw Sienna, Raw Umber, Terre Verte, Ultramarine Blue, Vermilion, Yellow Ochre

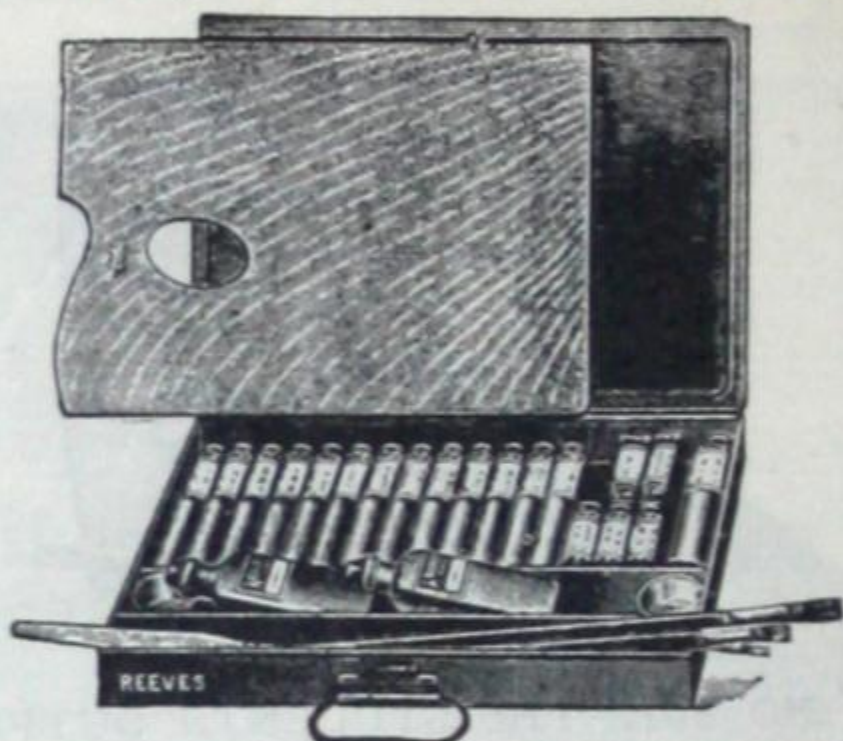


NO. 303. THE FAVORITE OUTFIT

No. 303. Box contains Mahogany Palette, 2 Brushes, Bottle Oil, Bottle Turpentine, Oil Cup and 16 Tubes of Oil Colors . . . each, \$3.00

Colors: Burnt Sienna, Chrome Yellow, Medium; Chrome Yellow, Pale; Crimson Lake, Flake White, Indian Red, Ivory Black, Light Red, Naples Yellow, Prussian Blue, Raw Sienna, Raw Umber, Terre Verte, Ultramarine Blue, Vermilion, Yellow Ochre

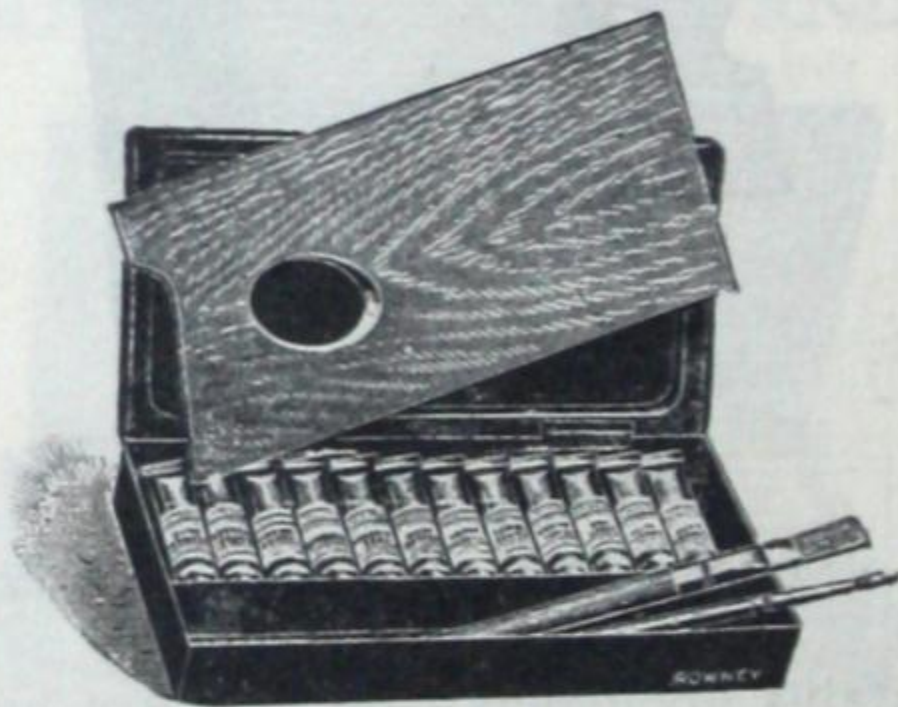
English Japanned Tin, Oil Color Boxes, Fitted — Continued



NO. 304. THE ADVANCED OUTFIT

No. 304. Box contains Mahogany Palette, 4 Brushes, Bottle Oil, Bottle Turpentine, 2 Oil Cups, Palette Knife, 18 Single Tubes and 1 Double Tube of Oil Colors each, \$4.00

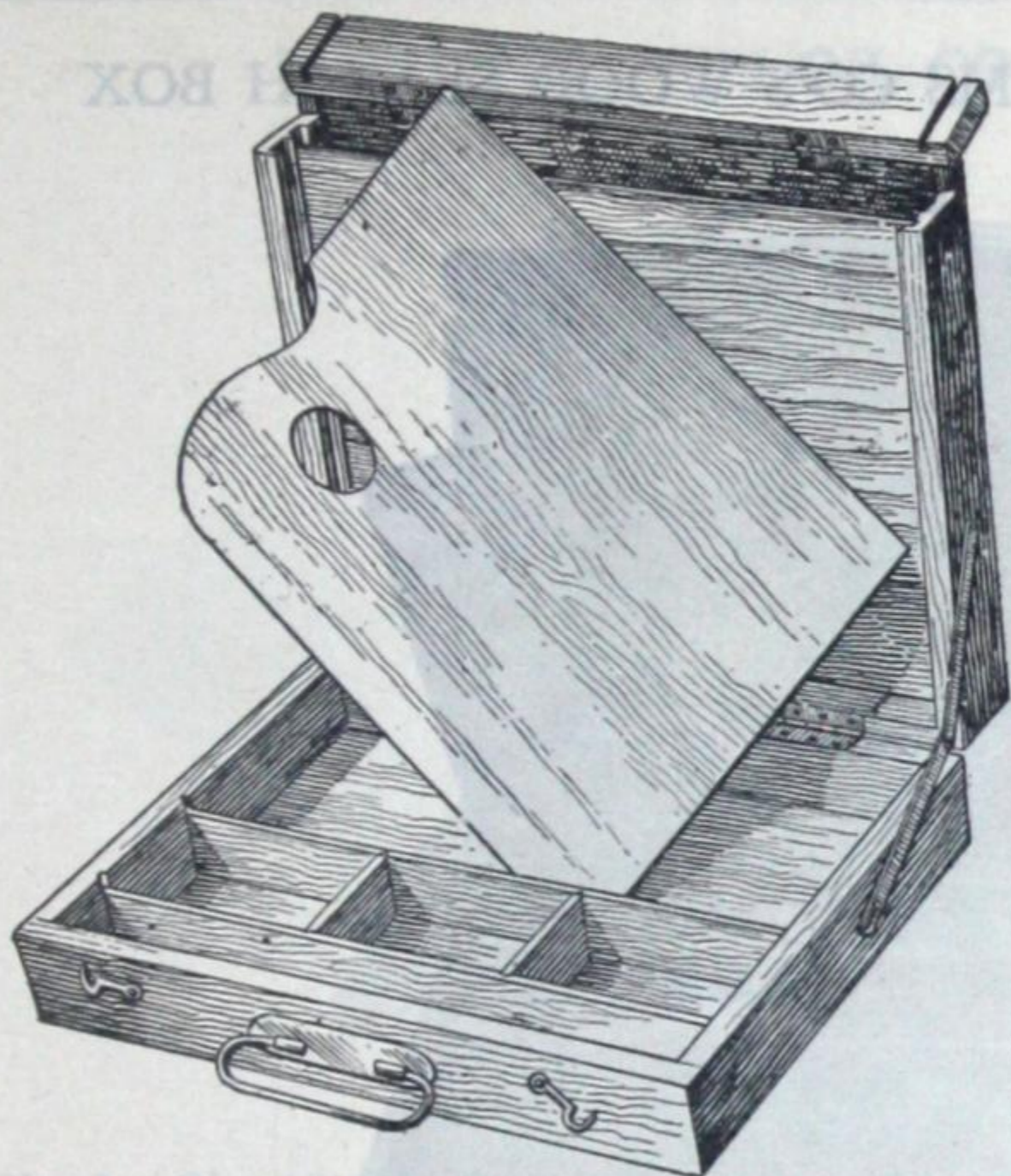
Colors: Brown Madder, Burnt Sienna, Chrome Yellow, Medium; Chrome Yellow, Pale; Crimson Lake, New Blue, Emerald Green, Flake White (Double), Indian Red, Ivory Black, Light Red, Naples Yellow, Prussian Blue, Raw Sienna, Raw Umber, Terre Verte, Ultramarine Blue, Vermilion, Yellow Ochre



NO. 0. THE SCHOOL OF ART OUTFIT

No. 0. Box contains Mahogany Palette, 2 Bristle Brushes and 12 Tubes of Oil Colors each, \$1.50

Colors: Burnt Sienna, Brown Madder, Crimson Lake, Chrome Yellow, No. 1, Flake White, French Blue, Light Red, Raw Sienna, Rose Madder, Vermilion, Vandyke Brown, Yellow Ochre

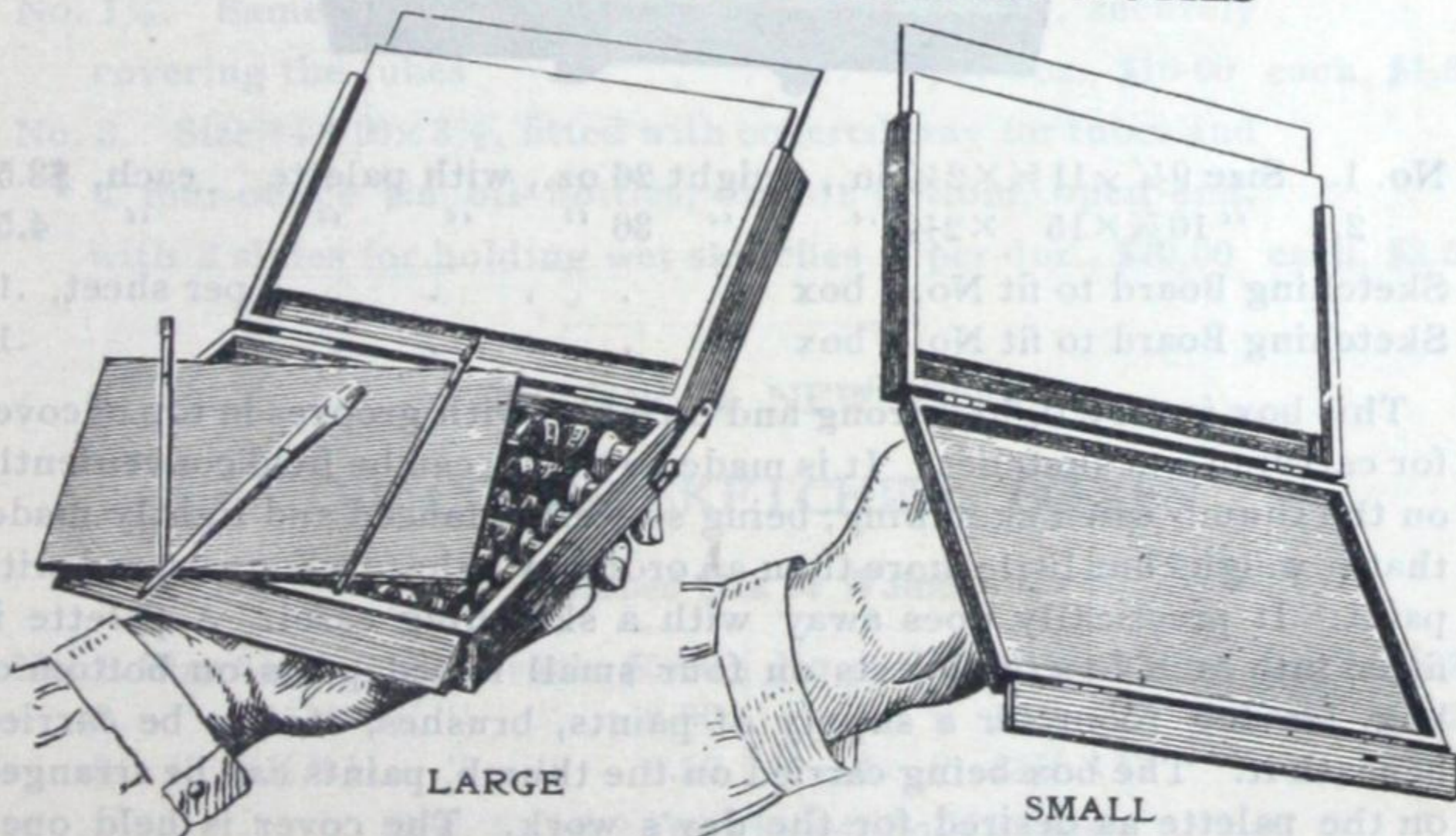


YANKEE SKETCH BOX

- No. 100. Yankee Sketch Box,
9 x 12 inches
each, \$3.75
- 200. Yankee Sketch Box,
10 x 14 inches
each, \$4.50
- 300. Yankee Sketch Box,
12 x 16 inches
each, \$5.25

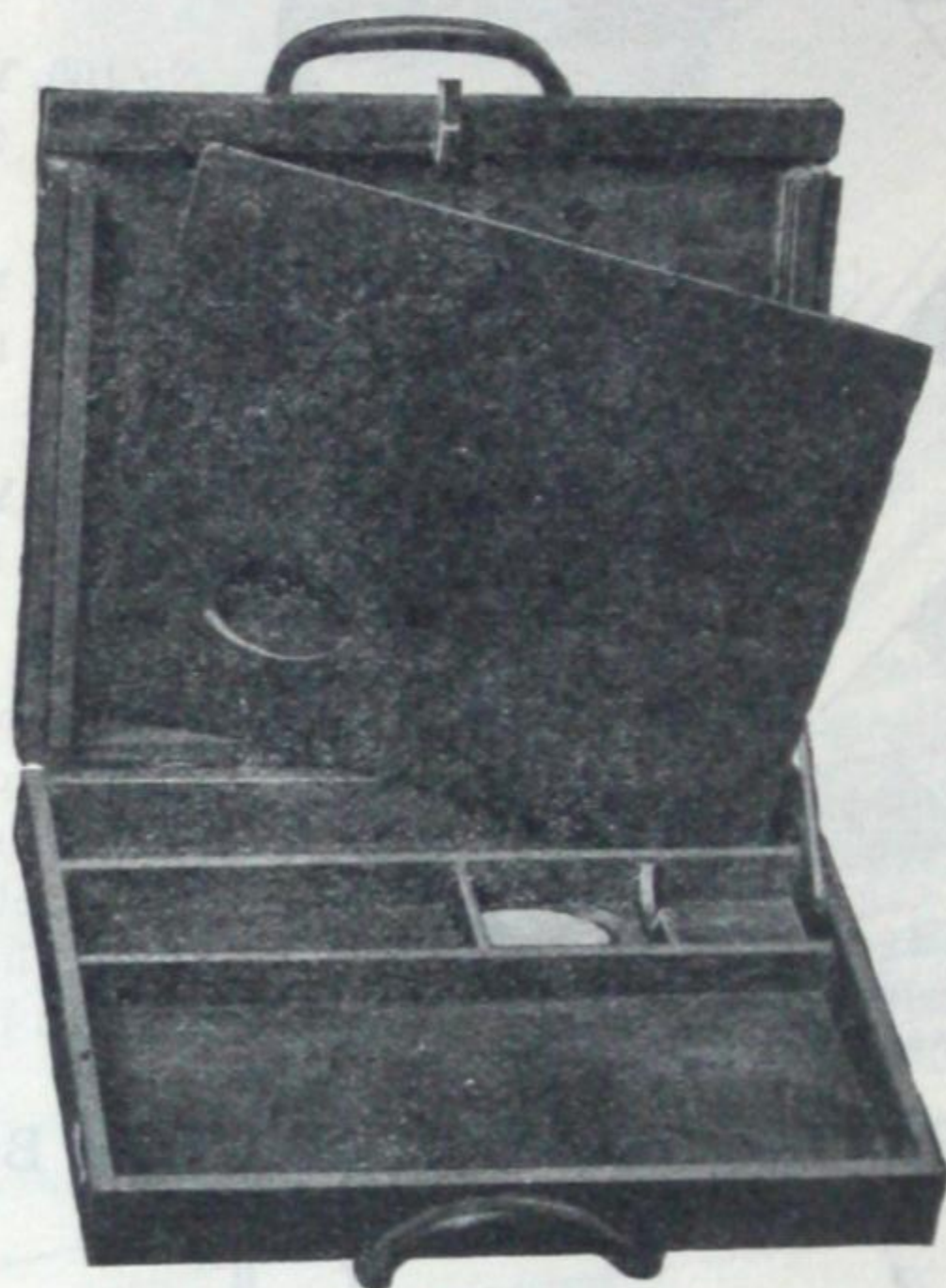
Made of imitation walnut, with two panels in cover, partitions for brushes, paints, etc. This is without doubt the best box for the price in the market

THE "LANDSCAPE" SKETCH BOXES



- | | | | | |
|--------|---------------------------|---|-----|-----------|
| No. 1. | Small or Pocket Size, | $1\frac{1}{4} \times 4\frac{1}{2} \times 6\frac{1}{4}$ | • • | each, .70 |
| 2. | Medium Size with Palette, | $2\frac{5}{16} \times 5\frac{1}{8} \times 6\frac{1}{4}$ | • • | " 1.00 |
| 3. | Large Size with Palette, | $2\frac{1}{2} \times 6\frac{1}{4} \times 8\frac{1}{2}$ | • • | " 1.50 |

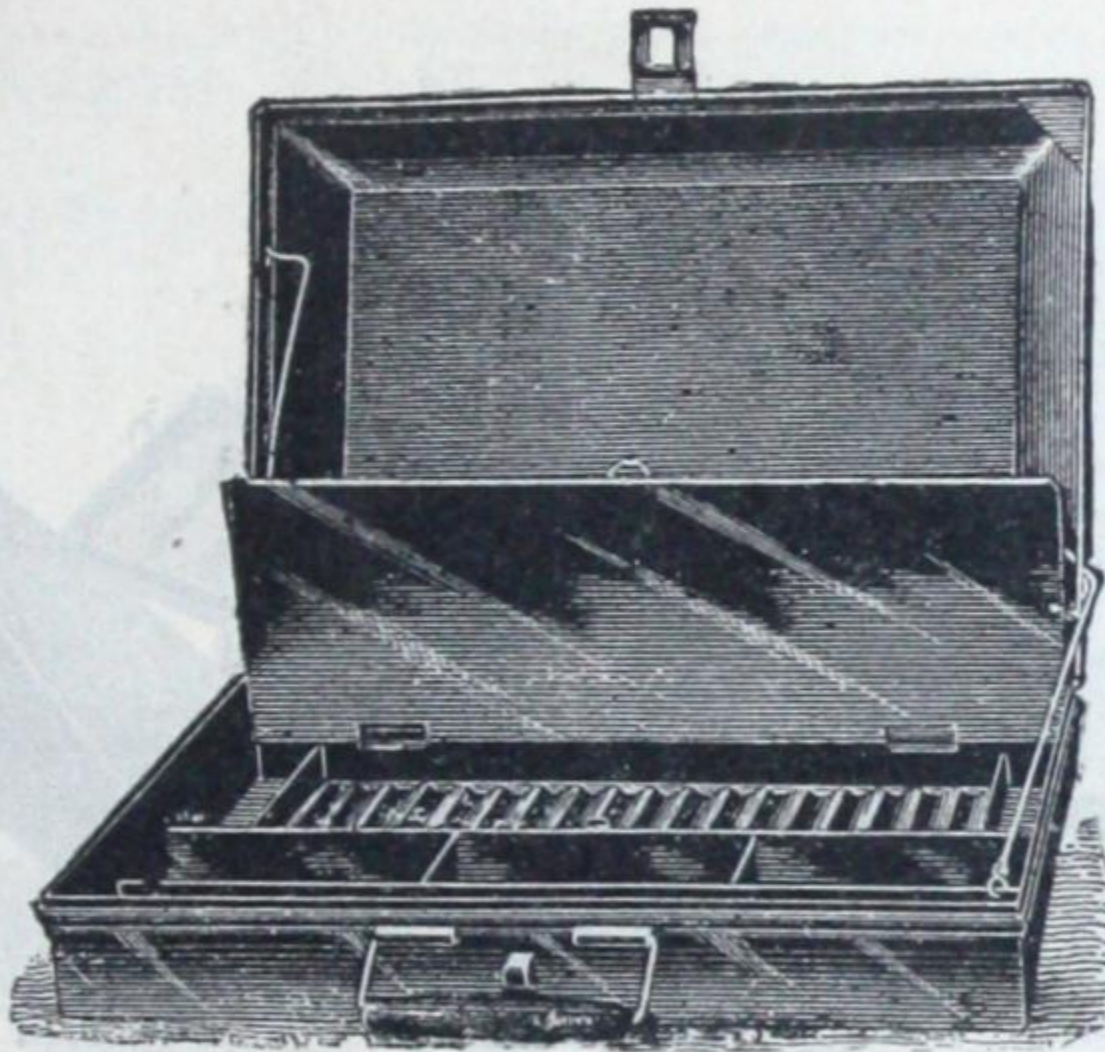
FROST & ADAMS CO'S WOOD SKETCH BOX



No. 1.	Size $9\frac{1}{4} \times 11\frac{5}{8} \times 2\frac{1}{2}$ in.,	weight 26 oz.,	with palette	each, \$3.50
2.	" $10\frac{7}{8} \times 15 \times 2\frac{1}{2}$ "	" 36 "	" "	" 4.50
Sketching Board to fit No. 1 box	.	.	.	per sheet, .10
Sketching Board to fit No. 2 box	.	.	.	" .15

This box is very light, strong and durable, with grooves in top of cover for carrying wet sketches. It is made so that it can be held conveniently on the thumb when sketching, being so well balanced and lightly made, that it weighs but little more than an ordinary palette when covered with paint. It practically does away with a sketching easel. A palette is fitted into each box, and rests on four small raised posts on bottom of box, leaving room for a supply of paints, brushes, etc., to be carried beneath it. The box being carried on the thumb, paints can be arranged on the palette as desired for the day's work. The cover is held open with side brackets, at any angle desired. Oil Sketch Boards with Smooth, Single Prime, Roman, or Twilled canvas surfaces made to fit into grooves of box cover

JAPANNED TIN OIL COLOR BOXES



NO. 1 1/2

- No. 1. Size 13×9×3 1/4 in., flat or raised top per doz., \$15.00 each, \$1.50
 No. 1 1/2. Same as above, but with lid and spring, securely covering the tubes per doz., \$16.00 each, \$1.60
 No. 3. Size 14×10×3 1/2, fitted with covered tray for tubes and 4 four-ounce tin oil bottles, double bottom, open end, with 3 slides for holding wet sketches per doz., \$40.00 each, \$3.50

WINSOR & NEWTON'S

OIL COLOR SKETCHING BOXES

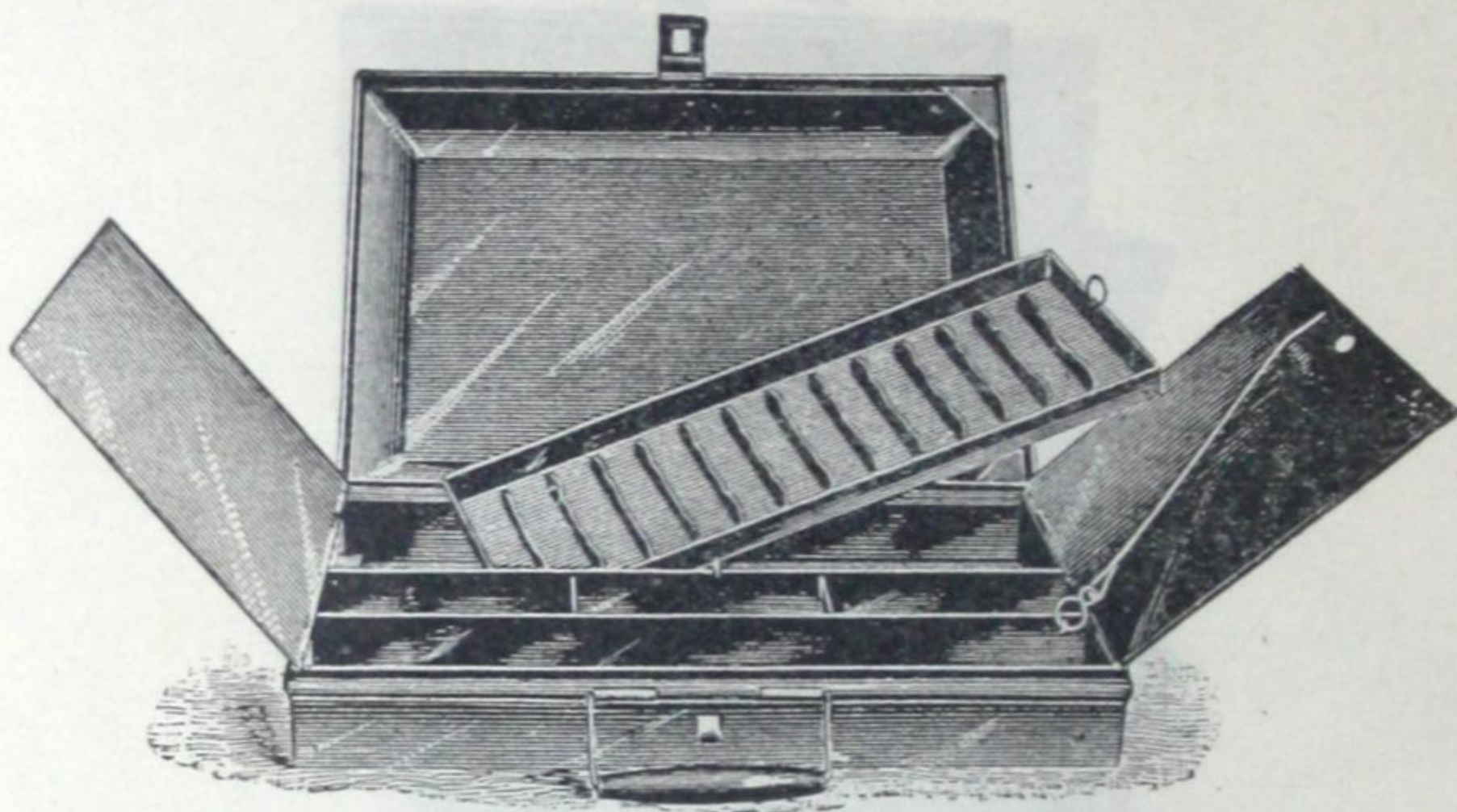
Polished Oak or Walnut

- | | |
|--|--|
| No. 1. Size 6 1/4 × 9 1/4 in. each, \$5.00 | No. 4. Size 10 1/4 × 13 in. each, \$8.25 |
| 2. " 6 3/4 × 10 1/4 " " 6.00 | 5. " 11 1/4 × 15 " " 9.50 |
| 3. " 8 1/2 × 11 " " 6.50 | 6. " 13 1/4 × 17 " " 11.00 |

Nos. 1 and 2 are Thumb-hole Boxes

These Boxes are lined with tin, and contain 2 tin oil bottles, double dipper with screw tops, palette and two wood panels

JAPANNED TIN OIL COLOR BOXES

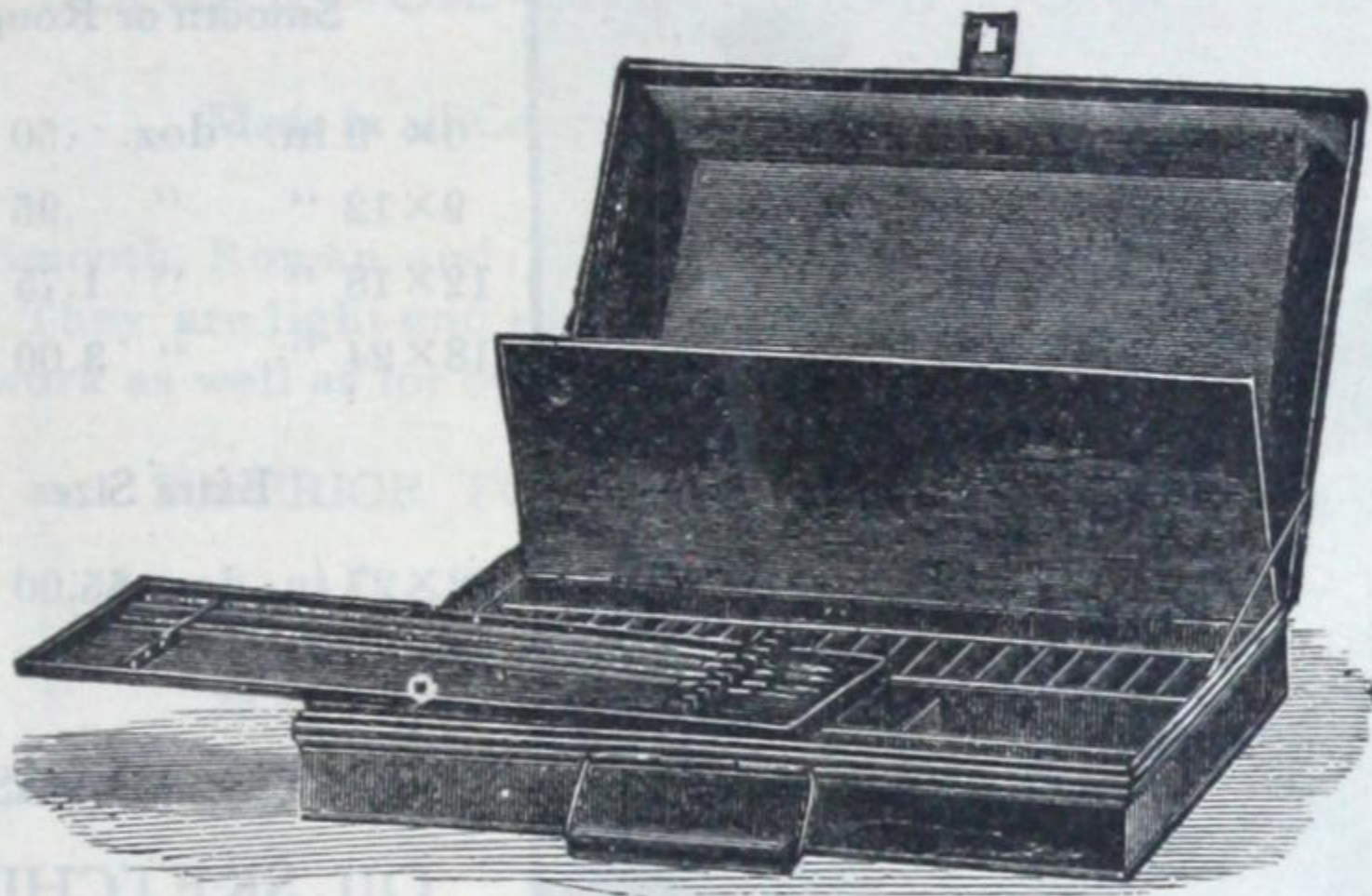
NO. 1 $\frac{3}{4}$

No. 1 $\frac{3}{4}$. Size 13×9×2 $\frac{1}{2}$ inches. Flat or raised top. Having extra tray for tubes. The inside flaps cover the entire contents of the box, thus preventing the displacement of any article per doz., \$18.00 each, \$1.80

Parties wishing boxes with divisions for double tubes should add the letter D to number when ordering

No. 2 $\frac{3}{4}$. Size 13 $\frac{1}{2}$ ×9 $\frac{3}{4}$ ×3 $\frac{1}{4}$. Flat top and double bottom for carrying wet sketches. The inside flaps cover the entire contents of the box, thus preventing the displacement of any article per doz., \$23.00 each, \$2.30

JAPANNED TIN OIL COLOR BOXES



ECLIPSE, NO. 1

No. 1. Eclipse. Size, $13 \times 9 \times 3\frac{1}{4}$, with bevel top. This box will at once recommend itself to all artists by its completeness and the utility of its improvements. It is provided with an extra tray for tubes. The whole is kept intact by a lid, which when closed, is firmly secured by a spring. In addition to the usual space for brushes, an extra tray is provided for wet brushes. This tray is also secured by a spring, so that when the box is closed, no matter in what position it is carried, the contents cannot be displaced from their proper position . . . per doz., \$22.00 each, \$2.25

No. 2. Eclipse. Size, $13\frac{1}{2} \times 9\frac{3}{4} \times 3\frac{1}{4}$, with flat top. Made same as above and has a double bottom with slides for holding wet sketches . . . per doz., \$27.00 each, \$2.70

FROST & ADAMS CO'S ACADEMY BOARDS



Smooth or Rough

6 × 9 in.	doz.	.50	each,	.05
9 × 12 "	"	.95	"	.10
12 × 18 "	"	1.75	"	.15
18 × 24 "	"	3.00	"	.25

Extra Sizes

22 × 27 in.	doz.	\$5.00	each,	.45
23 × 30 "	"	6.00	"	.55

FROST & ADAMS CO'S OIL SKETCHING PAPERS

22 × 30 in.	Smooth	Doz.	\$2.40	each,	.25
22 × 30 "	Rough	"	2.40	"	.25

MINIATURE IVORIES

For Oil and Water Color Painting

No.	0.	Size		each,	.45	No. 7.	Size		each,	\$2.20
1.	"	$1\frac{3}{4} \times 2\frac{5}{8}$	"	.55		8.	"	$3\frac{1}{4} \times 4\frac{1}{4}$	"	2.50
2.	"	$2\frac{1}{8} \times 2\frac{1}{2}$	"	.65		9.	"	$3\frac{1}{2} \times 4\frac{1}{2}$	"	3.00
3.	"	$2\frac{1}{4} \times 2\frac{3}{4}$	"	.90		10.	"	4×5	"	4.00
4.	"	$2\frac{1}{2} \times 3$	"	1.25		11.	"	$4\frac{1}{2} \times 5\frac{1}{4}$	"	6.00
5.	"	$2\frac{5}{8} \times 3\frac{1}{4}$	"	1.50		12.	"	$4\frac{1}{2} \times 6$	"	7.00
6.	"	$2\frac{3}{4} \times 3\frac{1}{4}$	"	1.80						

RAGGED-EDGE CARDS

For Oil or Water Color Painting

$2\frac{1}{2} \times 4\frac{1}{4}$ in.	per hund.,	\$1.50	per doz.,	.18	$5\frac{1}{4} \times 5\frac{1}{4}$ in.	per hund.,	\$2.50	per doz.,	.36
4 × 5 "	"	2.00	"	.25	9 × 9 "	"	9.00	"	1.20
$4\frac{1}{2} \times 6\frac{1}{2}$ "	"	2.50	"	.36	6 × 6 "	"	3.00	"	.50
5 × 7 "	"	3.00	"	.60	10 × 12 "	"	12.00	"	1.50
$3\frac{1}{2} \times 3\frac{1}{2}$ "	"	1.50	"	.24	7 × 7 "	"	3.50	"	.60
4 × 4 "	"	2.00	"	.30	7 × 9 "	"	9.00	"	1.20
$6\frac{1}{2} \times 8\frac{1}{2}$ "	"	4.00	"	.60	8 × 12 "	"	12.00	"	1.50
8 × 10 "	"	9.00	"	1.20					

WINSOR & NEWTON'S

LONDON - OIL - SKETCHING BOARD

Made in all Canvas Surfaces, as follows

Rough, Smooth, Roman and Ticken, making a good hard surface to work on. They are light and easy to carry, will not warp and are used in Studio work as well as for outdoor sketching

SUPERIOR TO ACADEMY BOARDS

5½ × 7½	per dozen, .50	each .05	11 × 15	per dozen, \$1.80	each, .15
7½ × 11	" .90	" .10	15 × 22	" 3.60	" .30
	22 × 30	per dozen, \$7.20	each, .60		

RUSSELL'S CANVAS BOARDS

Very Desirable for Outdoor Sketching in Oil

4 × 6	each, .10	10 × 12	each, .35	14 × 18	each, .50
4 × 8	" .12	10 × 14	" .35	14 × 20	" .50
6 × 8	" .15	10 × 16	" .35	14 × 22	" .60
6 × 10	" .20	10 × 18	" .40	14 × 24	" .65
6 × 12	" .20	10 × 20	" .40	14 × 26	" .70
8 × 10	" .25	12 × 14	" .35	14 × 28	" .75
8 × 12	" .30	12 × 16	" .40	16 × 20	" .65
8 × 14	" .30	12 × 18	" .45	16 × 22	" .70
8 × 16	" .35	12 × 20	" .50	16 × 24	" .75
9 × 11	" .30	12 × 22	" .50	16 × 26	" .80
9 × 13	" .35	12 × 24	" .50	18 × 22	" .80
9 × 15	" .35	14 × 16	" .45	18 × 24	" 1.00
9 × 18	" .40				

GILT BEVELED EDGE CARDS FOR WATER COLORS

C. P. WHATMAN'S SURFACE. BOXES OF 50 CARDS

3 × 4½ inches,	per 100 cards, \$2.50	per doz., .36
3½ × 5	" 3.50	" .48
4 × 5¼	" 4.50	" .60
4½ × 6	" 5.50	" .75

LEATHER BOARD, OR COMPOSITION PLAQUES

Prepared for Oil Painting

PLAIN, ROUND

6 inches	per doz., \$1.80	each, .15	16 inches	per doz., \$7.00	each, .60
7 "	"	2.10 "	18 "	"	9.80 "
8 "	"	2.50 "	20 "	"	15.00 "
10 "	"	3.20 "	22 "	"	18.00 "
12 "	"	4.20 "	24 "	"	21.00 "
14 "	"	5.60 "			

FROSTED PORCELAIN PLAQUES

ROUND

5 inches	per doz., \$1.75	each, .15	10 inches	per doz., \$5.40	each, .50
6 "	"	2.25 "	12 "	"	7.80 "
7 "	"	2.75 "	14 "	"	10.20 "
8 "	"	3.25 "	16 "	"	16.10 "
9 "	"	4.50 "	18 "	"	20.00 "

CELLULOID IN SHEETS, FOR DECORATING

POLISHED ONE SIDE, DULL FINISH OTHER SIDE

White	No. 44.	Size 20×50, thickness 1000,	per sheet, \$1.50
Semi. Trans.	300.	" " " "	2.00
Transparent	301.	" " " "	2.60
Dark Pink	359.	" " " "	1.50
Light Pink	361.	" " " "	1.50
Light Lavender	403.	" " " "	1.50
Dark Lavender	404.	" " " "	1.50
Light Cream	430.	" " " "	1.50
Medium Cream	432.	" " " "	1.50
Dark Cream	431.	" " " "	1.50
Light Green	470.	" " " "	1.50
Dark Green	472.	" " " "	1.50
Light Blue	657.	" " " "	1.50
Dark Blue	658.	" " " "	1.50

Samples furnished gratis

THIN PORCELAIN PANELS

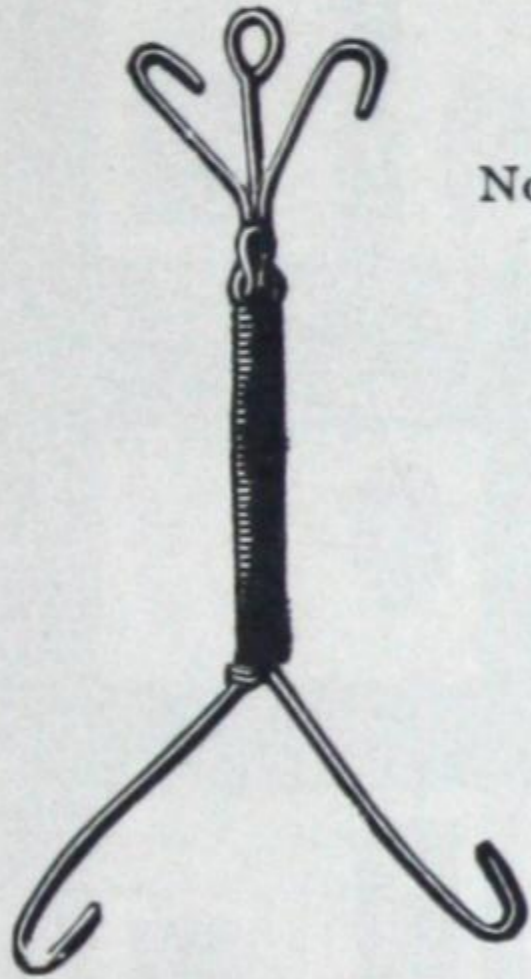
PLAIN

3×5 inches	each, .08	5×8 inches	each, .23
3×8 "	.10	6×8 "	.24
4×4 "	.09	8×8 "	.30
4×6 "	.13	5×10 "	.28
4×8 "	.17	8×10 "	.37
6×6 "	.17	8×12 "	.42
5×7 "	.20	10×12 "	.50

FROST & ADAMS CO'S

PLAQUE HANGERS, WHITE WIRE

With Spiral Spring Guards

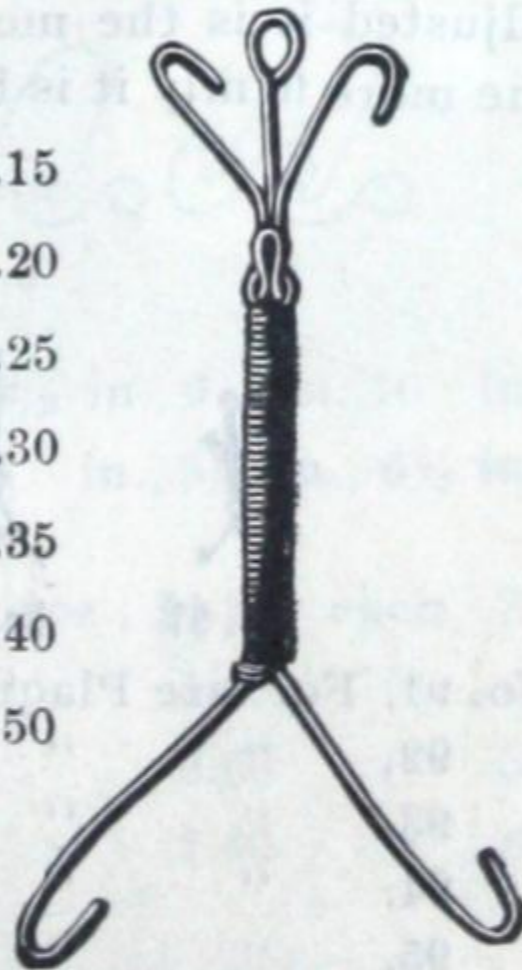


No. 2191.	Capacity 6 to 7 in.	per doz., \$1.50 each,	.12
2192.	" 7 to 9 "	" 1.75 "	.15
2193.	" 9 to 11 "	" 2.00 "	.20
2194.	" 11 to 13 "	" 2.50 "	.25
2195.	" 13 to 15 "	" 3.00 "	.30
2196.	" 16 to 18 "	" 3.50 "	.35
2197.	" 18 to 21 "	" 5.00 "	.40

FROST & ADAMS CO'S

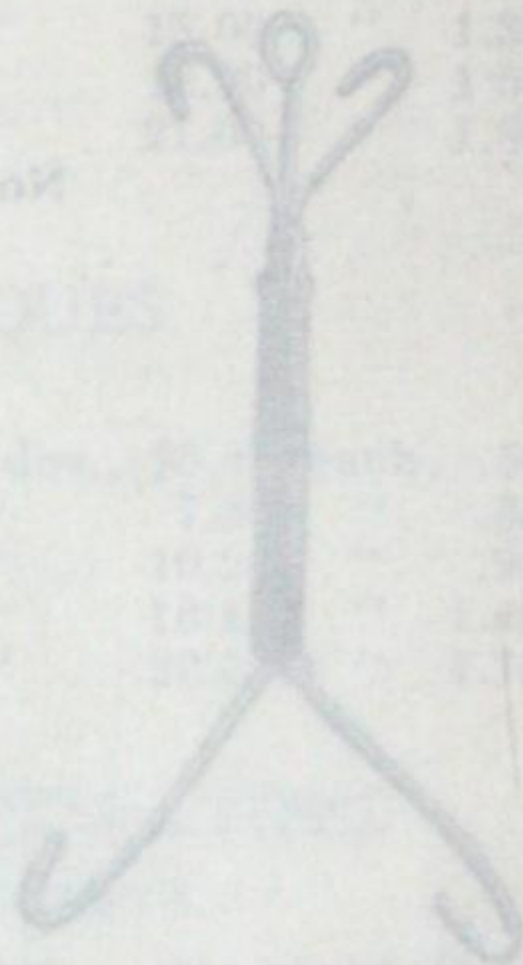
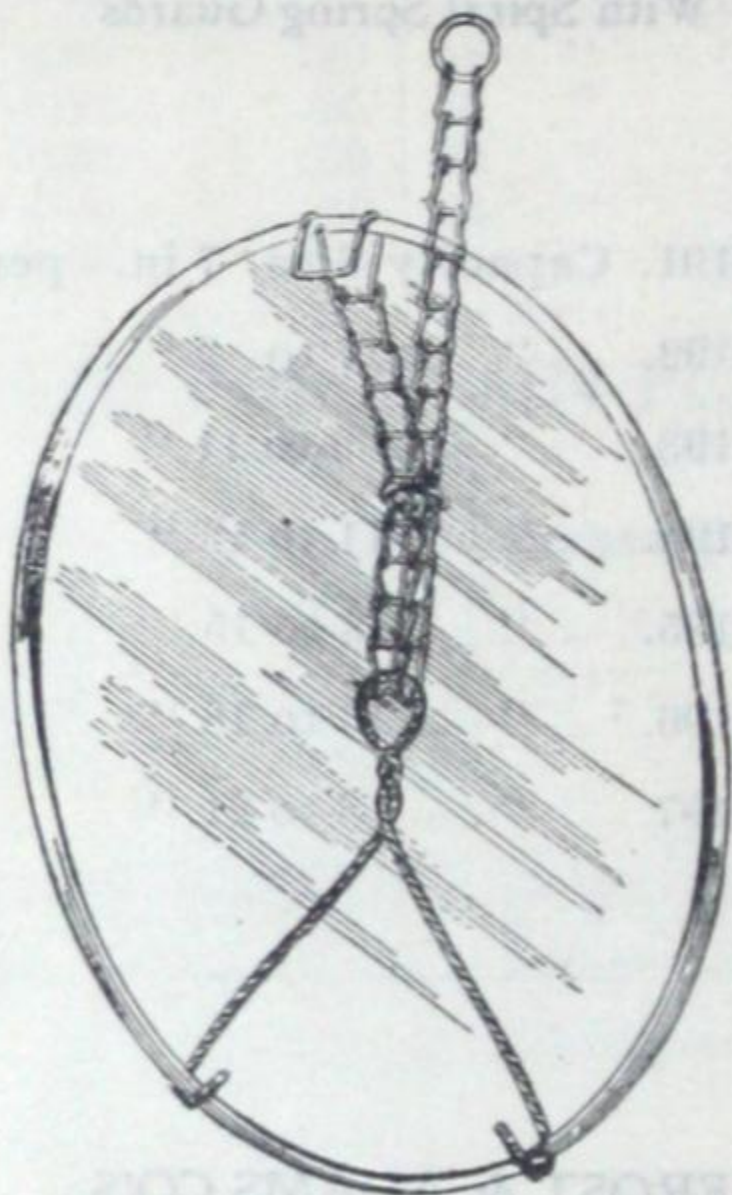
PLAQUE HANGERS, BRASS WIRE

No. 4191.	Capacity 6 to 7 in.	per doz., \$2.00 each,	.15
4192.	" 7 to 9 "	" 2.25 "	.20
4193.	" 9 to 11 "	" 2.50 "	.25
4194.	" 11 to 13 "	" 3.00 "	.30
4195.	" 13 to 15 "	" 4.00 "	.35
4196.	" 15 to 18 "	" 4.50 "	.40
4197.	" 18 to 21 "	" 6.00 "	.50



FROST & ADAMS CO'S
CHAIN PLAQUE HANGERS

Patented



This hanger is the most practical adjustable hanger made. It is adjustable both for diameter of Plaque and hanging pitch. If properly adjusted it is the most secure made. The heavier the plaque or plate, the more firmly it is held



No. 91



No. 92



No. 93



No. 94



No. 95

No. 91, For size Plaque 5 to 7 inches . . .	per doz., \$2.50	each, .20
92, " " 7 to 10 inches . . .	" 3.00	" .25
93, " " 8 to 12 inches . . .	" 3.60	" .30
94, " " 11 to 15 inches . . .	" 4.20	" .40
95, " " 12 to 18 inches . . .	" 5.50	" .50

Illustrated Catalogue of Wire Goods furnished on application

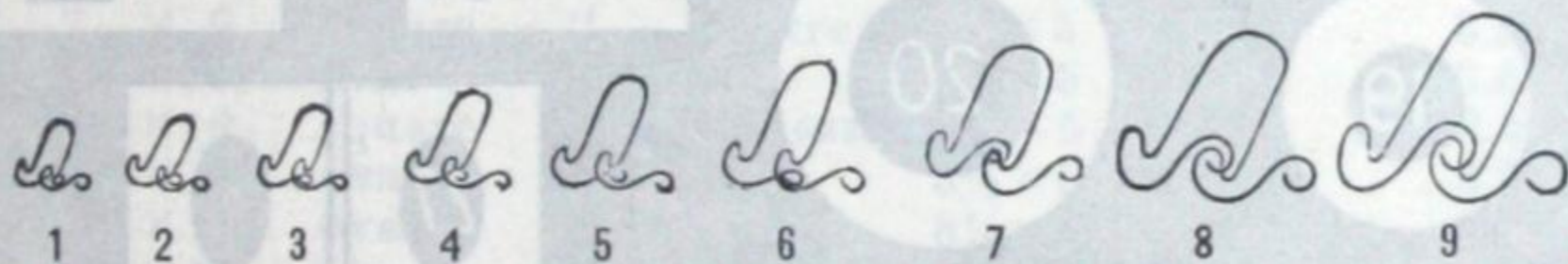
FROST & ADAMS CO'S

PLAQUE OR CARD EASEL, ROCKER DESIGN

Popular Grade. Gold Lacquer Finish



This easel is of the popular market grade and is of equal or superior quality to any other made. Observe dimensions of each and beware of marked up sizes in comparing prices



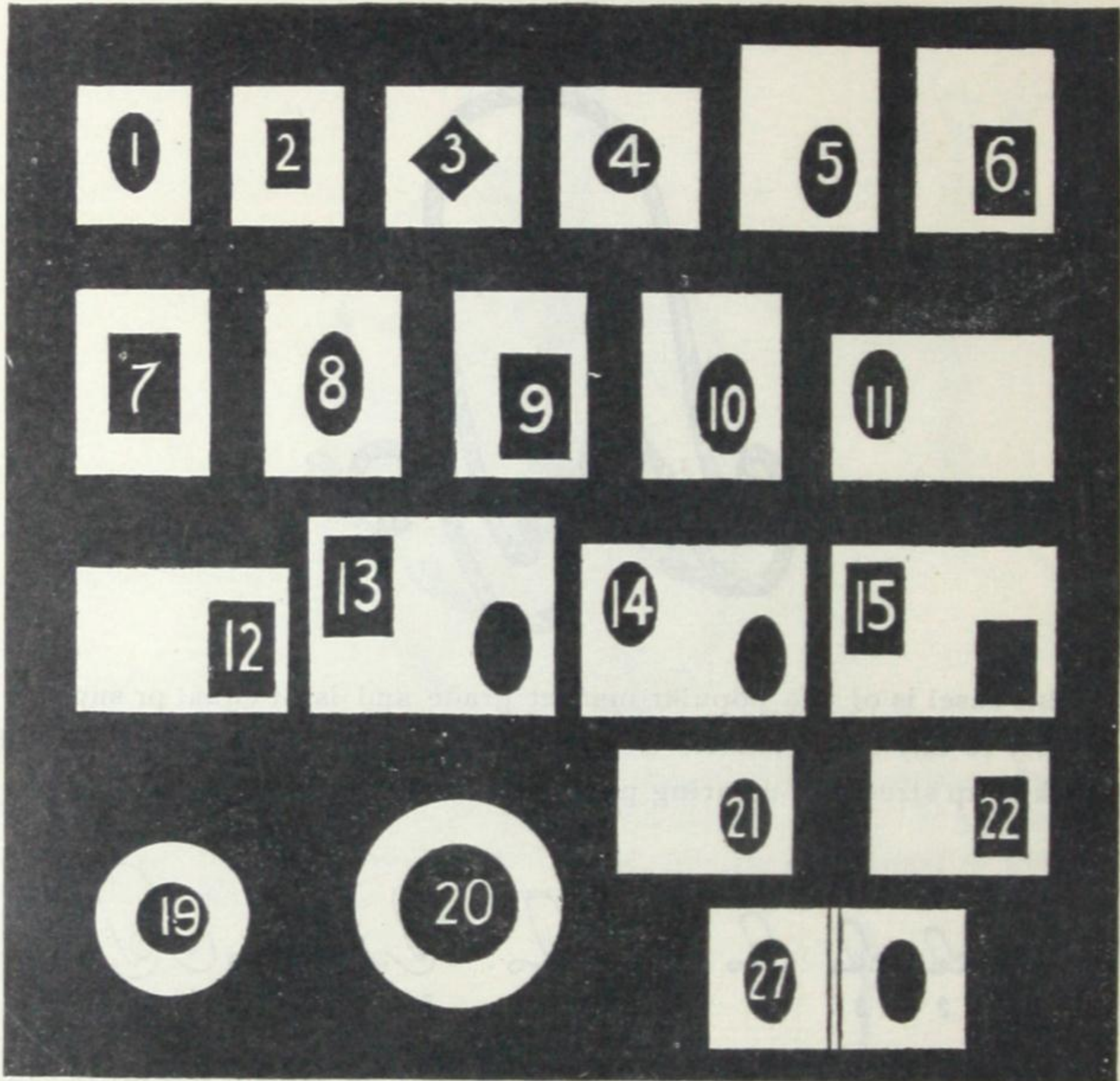
Hight, 4 in., 4 1/4 in., 4 3/4 in., 5 1/2 in., 6 3/4 in., 7 1/2 in., 8 1/2 in., 9 in., 10 in.
 Width, 2 in., 2 1/4 in., 2 3/4 in., 3 1/4 in., 3 3/4 in., 4 1/2 in., 5 in., 5 1/2 in., 6 1/2 in.

No. 1,	per doz., \$1.50	each, .15	No. 6,	per doz., \$4.20	each, .35
2,	" 1.80	" .20	7,	" 5.00	" .45
3,	" 2.40	" .20	8,	" 6.00	" .50
4,	" 3.00	" .25	9,	" 7.60	" .65
5,	" 3.60	" .30			

Illustrated Catalogue of Wire Goods furnished on application

FRAMES FOR DECORATING

For Description and Prices see page No. 54



SATIN WOOD FRAMES

Natural Wood Color, suitable for Burning, Painting and Monograms

No.	Size	Size	Doz.	Each
1.	4 × 4 $\frac{3}{4}$, oval opening, in centre	1 $\frac{3}{4}$ × 2 $\frac{3}{4}$	\$2.50	.20
2.	4 × 4 $\frac{3}{4}$, square " "	1 $\frac{5}{8}$ × 2 $\frac{1}{4}$	2.50	.20
3.	4 $\frac{3}{4}$ × 4 $\frac{3}{4}$, diamond " "	2 × 2	2.50	.20
4.	4 $\frac{3}{4}$ × 4 $\frac{3}{4}$, round " "	2 × 2	2.50	.20
5.	6 × 8, oval " right corner	2 $\frac{3}{4}$ × 2 $\frac{3}{4}$	3.50	.30

SATIN WOOD FRAMES — Continued

No.	Size		Size	Doz.	Each
6.	6 × 8,	square opening right corner	2 ³ / ₄ × 2 ³ / ₄	\$3.50	.30
7.	7 × 9,	square " centre	3 ¹ / ₂ × 5	4.50	.40
8.	7 × 9,	oval " "	3 ¹ / ₂ × 5	4.50	.40
9.	7 × 9,	square " right corner	3 ¹ / ₂ × 5	4.50	.40
10.	7 × 9,	oval " "	3 ¹ / ₂ × 5	4.50	.40
11.	8 × 12,	oval " "	3 ¹ / ₂ × 5	6.00	.50
12.	8 × 12,	square " "	3 ¹ / ₂ × 5	6.00	.50
13.	10 × 13,	1 square 1 oval " sides	3 ¹ / ₂ × 5	8.00	.75
14.	10 × 13,	2 oval " "	3 ¹ / ₂ × 5	8.00	.75
15.	10 × 13,	2 square " "	3 ¹ / ₂ × 5	8.00	.75
19.	5 × 5,	round " centre	2 × 2	4.00	.35
20.	7 ¹ / ₂ × 7 ¹ / ₂ ,	round " "	3 ⁵ / ₈ × 3 ⁵ / ₈	6.00	.50
21.	4 ¹ / ₂ × 6 ¹ / ₂ ,	oval " right corner	1 ³ / ₄ × 2 ³ / ₄	3.00	.25
22.	4 ¹ / ₂ × 6 ¹ / ₂ ,	oval " "	1 ³ / ₄ × 2 ³ / ₄	3.00	.25

WHITE WATER COLOR, PADDED FRAMES

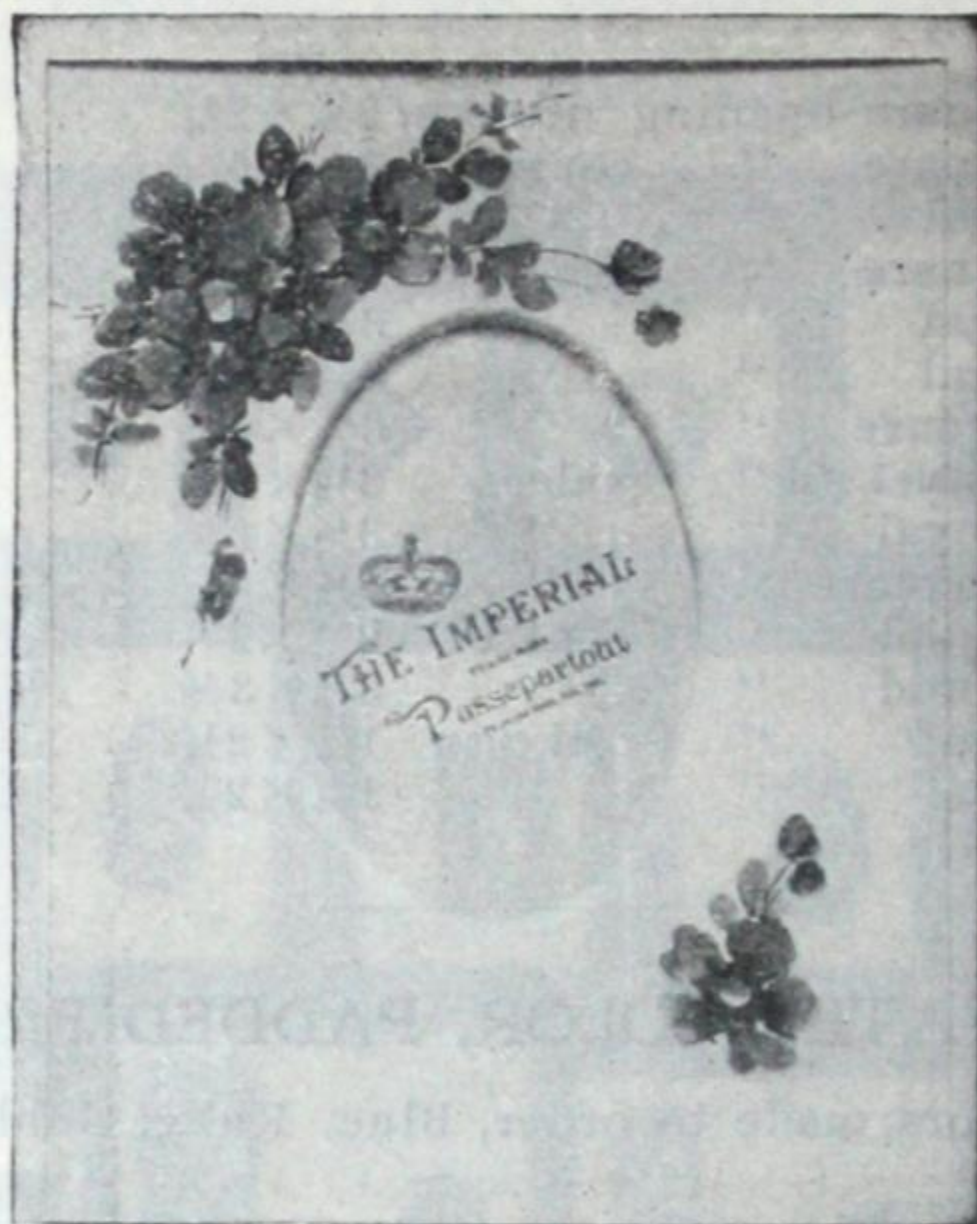
The following colors made to order, Blue, Ruby, Golden Rod, Gray, Maroon, Olive

No.	Size		Size	Doz.	Each
1.	4 × 4 ³ / ₄ ,	oval opening in centre	1 ³ / ₄ × 2 ³ / ₄	\$1.70	.15
2.	4 × 4 ³ / ₄ ,	square " "	1 ⁵ / ₈ × 2 ¹ / ₄	1.70	.15
3.	4 ³ / ₄ × 4 ³ / ₄ ,	diamond " "	2 × 2	1.70	.15
4.	4 ³ / ₄ × 4 ³ / ₄ ,	round " "	2 × 2	1.70	.15
5.	6 × 8,	oval " right corner	2 ³ / ₄ × 3 ³ / ₄	2.80	.25
6.	6 × 8,	square " "	2 ³ / ₄ × 3 ³ / ₄	2.80	.25
7.	7 × 9,	square " centre	3 ¹ / ₂ × 5	3.50	.30
8.	7 × 9,	oval " "	3 ¹ / ₂ × 5	3.50	.30
9.	7 × 9,	square " right corner	3 ¹ / ₂ × 5	3.50	.30
10.	7 × 9,	oval " "	3 ¹ / ₂ × 5	3.50	.30
11.	8 × 12,	oval " "	3 ¹ / ₂ × 5	4.50	.40
12.	8 × 12,	square " "	3 ¹ / ₂ × 5	4.50	.40
13.	10 × 13,	1 square 1 oval " sides	3 ¹ / ₂ × 5	6.00	.50
14.	10 × 13,	2 oval " "	3 ¹ / ₂ × 5	6.00	.50
15.	10 × 13,	2 square " "	3 ¹ / ₂ × 5	6.00	.50
19.	5 ¹ / ₂ × 5 ¹ / ₂ ,	round " pad surface	2 ¹ / ₂ × 2 ¹ / ₂	3.00	.30
20.	6 ³ / ₄ × 6 ³ / ₄ ,	round " "	3 ¹ / ₄ × 3 ¹ / ₄	4.50	.40
21.	4 ¹ / ₂ × 6 ¹ / ₂ ,	oval " right corner	1 ³ / ₄ × 2 ³ / ₄	2.50	.20
22.	4 ¹ / ₂ × 6 ¹ / ₂ ,	square " "	1 ³ / ₄ × 2 ³ / ₄	2.50	.20
56.	3 ⁷ / ₈ × 4 ³ / ₄ ,	square " "	1 ¹ / ₂ × 2 ¹ / ₂	1.50	.12
57.	4 ¹ / ₂ × 6 ¹ / ₄ ,	square " "	2 ¹ / ₂ × 3 ³ / ₄	1.75	.15
58.	7 × 9,	square " "	3 ³ / ₄ × 5	2.25	.20
160.	8 × 8,	round " egg shell	3 ¹ / ₂ × 3 ¹ / ₂	3.60	.33

Special Catalogue of Water Color Frames furnished on application

THE IMPERIAL PASSEPARTOUT FRAME, WHITE

VERY
ARTISTIC
AND
POPULAR



WITH
AMATEUR
AND
PROFESSIONAL
ARTISTS

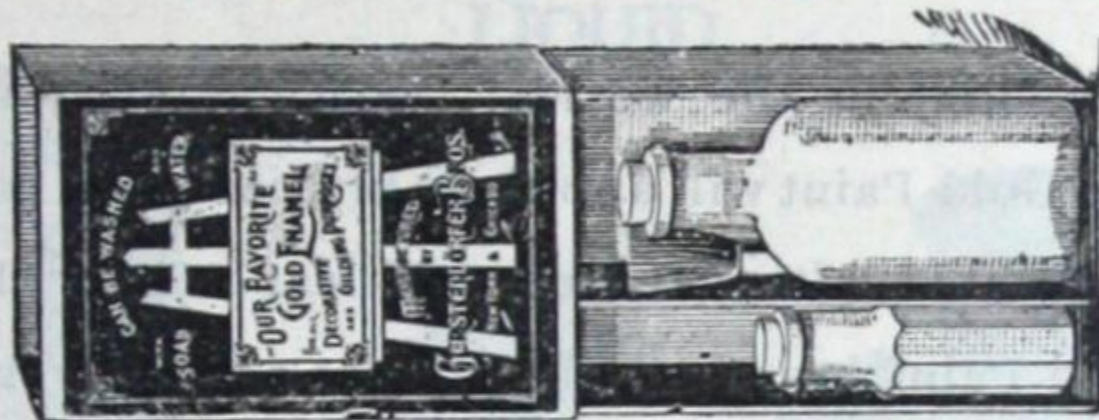
Size	Shape	Opening	Surface	Size	Doz.	Each
6×8, card,	oval	opening,	rough surface,	2 $\frac{1}{8}$ × 3 $\frac{3}{8}$	\$5.00	.45
6×8, "	square	"	"	2 $\frac{1}{8}$ × 3 $\frac{3}{8}$	5.00	.45
8×10, cabinet,	oval	"	"	3 $\frac{1}{2}$ × 5	8.00	.75
8×10, "	heart	"	"	"	8.00	.75
8×10, "	round	"	"	"	8.00	.75
8×10, "	square	"	"	"	8.00	.75
10×12, "	oval	"	"	"	12.00	1.00
10×12, "	round	"	"	"	12.00	1.00
10×12, "	square	"	"	"	12.00	1.00
10×13, "	oval 2	"	"	"	14.00	1.25
10×14, "	oval 1	"	"	"	14.00	1.25
10×14, "	square	"	"	"	14.00	1.25
12×16, "	oval 3	"	"	"	20.00	1.75

DIAMOND DUST, GLITTERS AND BRILLIANTINES

For Decorating Postal Cards, Souvenirs, Etc.

Silver Brilliantine	per lb.	\$2.50	per oz.	.15
Silver Blue Brilliantine	"	3.00	"	.20
Silver Red Brilliantine	"	3.00	"	.20
Cashmere Brilliantine	"	3.00	"	.20
Gold Brilliantine	"	2.50	"	.15
Diamond Dust	"	.75	"	.05
White Frosting	"	.50	"	.05
Fine Mica	"	.50	"	.05

"SAPOLIN" GOLD ENAMEL, WASHABLE



Small size	.	.	.	.	.	.	.	.	.	each, .15
Medium size	.	.	.	.	.	.	.	.	.	" .25
Large size	.	.	.	.	.	.	.	.	.	" .40
Ex. large	.	.	.	.	.	.	.	.	.	" .75

Prices for either Gold or Silver

We have overcome all the objections that can be urged against gilding preparations and now offer you a Washable Gold Enamel—a perfect gilding preparation. It is so simple to apply that the most inexperienced can use it to perfection. It dries in a few minutes with an enamel finish presenting a brilliant gold surface, on which no brush marks are visible. At little cost and with very little labor

BRONZE POWDERS

All Desirable Shades, including Green and White

We have the following shades: Rich Gold, Deep Gold, Pale Gold, Green Gold, Red Gold, Green, Fire, Crimson, Copper, Carmine, Light and Dark Blue, Orange, Lemon, Flesh, Maroon, White or Silver, Nickel, Peacock Blue, Cream, Turtle, Lilac

No. 10,000	.	.	per ounce, .20	No. 4,000	.	.	per ounce, .13
8,000	.	.	" .18	3,000	.	.	" .11
6,000	.	.	" .15	2,000	.	.	" .10
5,000	.	.	" .14	1,000	.	.	" .09

Patent Emerald, Patent Dark Green, Patent Light Green,
 Patent Violet, Patent Dark Blue, Patent Light Blue,
 Patent Rose per ounce, .20

FLITTERS

Made from Foil Paper, in small Flakes, but more Brilliant than Brocades

First Quality Blue, Dark Green, Light Green, Orange, Purple and Red	.	.	.	.	.	.	per ounce, 18
Assorted colors, mixed	.	.	.	.	.	.	" .16
Gold and Copper	.	.	.	.	.	.	" .10
Silver	.	.	.	.	.	.	" .14

JAPANESE GOLD PAINT

The finest Gold Paint in the world. Decorates anything and everything. Japanese Gold Paint will appear so brilliant, that only experts can tell whether it is coated with genuine gold leaf or not. For this reason the Japanese Gold Paint is and can be used as a perfect substitute on all articles where Gold Leaf has been used heretofore



No. 3. Small size,	each,	.10
2. Regular size	"	.25
1. Large size	"	.40

DIRECTIONS

Shake the bottle until its contents become fully mixed, and apply with the accompanying brush. Keep well corked when not in use

Special price for gross lots

JAPANESE GOLD INK AND ENAMEL BRONZING LIQUID



Japanese Gold Ink	. . . . .	per dozen, \$1.50 each,	.10
Worden's Gold Ink	. . . . .	" 1.80 "	.15

Write your letters with Japanese Gold Ink, which writes as fluently as common ink, is used with any ordinary pen, dries very brilliant, does not thicken and requires no preparation, being ready for immediate use. A perfect, smoothly flowing ink in every respect, it is the only satisfactory article of its kind on the market, and is one of the best selling novelties ever offered. The low price at which we quote it places it within the reach of all

FROST & ADAMS CO'S ENAMEL BRONZING LIQUID, WASHABLE

1 Ounce Bottles,	. . . . .	per dozen, \$1.00 each,	.10
2 " "	. . . . .	" 1.80 "	.20
Half Pint "	. . . . .	" "	.30
Pint "	. . . . .	" "	.60
Quart "	. . . . .	" "	1.00
Gallon Cans	. . . . .	" "	3.00

We have succeeded in producing a Bronzing Liquid which can be used in connection with Bronze Powder for outdoor gilding, fine decorating and on articles subject to handling and rubbing. It can even be washed without injury to its appearance, as the Liquid spreads a film over the Powder, making it impervious to water as well as to the atmosphere.

GERSTENDORFER BROS.

"G" ALUMINUM ENAMEL



An Aluminum Paint which puts a smooth washable Enamel finish, with frosted silver effect on any surface. It is always bright and needs no polishing

It is absolutely proof against moisture

1-6 pint Cans	.15
¼ " " " " " " " " " " " "	.25
½ " " " " " " " " " " " "	.40
1 " " " " " " " " " " " "	.75

Put up in partition boxes containing 1 dozen cans

GERSTENDORFER BROS.

"STAR" ENAMEL



This cut is the exact fac-simile of the beautifully decorated ¼ Pint Can in which the Star Enamels are put up

It is made up in 29 different colors, as follows :

No. 1. White	No. 15. Orange
2. Rose	16. Light Blue
3. Ivory	17. Flesh
4. Pale Blue	18. Violet
5. Yellow	19. Dark Green
6. Moss Green	20. Terra Cotta
7. Vermilion	21. Blue-Green
8. Silver Gray	22. Royal Blue
9. Pink	23. Black
10. Turquoise Blue	24. Cardinal Red
11. Light Green	25. Bicycle Ruby
12. Maroon	26. " Ash
13. Lilac	27. " Yellow
14. Oak Brown	28. " Blue
Size No. 1 each, .15	Size No. 3 each, .40
" 2 " .25	" 4 " .75

"SAPOLIN" VARNISH STAIN



Sapolin Varnish Stain,	$\frac{1}{4}$ pint cans	.	.	.	.	each,	.15
"	"	$\frac{1}{2}$	"	"	"	"	.25
"	"	1	"	"	"	"	.40
"	"	1 quart	"	"	"	"	.75
"	"	1 gallon	"	"	"	"	2.00

Made in Light Oak, Dark Oak, Walnut, Cherry, Mahogany, Rosewood, Forest Green, Delft Blue, Ebony and Natural or Clear

Quick drying: beautiful, glossy finish produced by one coat of "Sapolin" Varnish Stain. A brilliant, transparent color, stain and varnish at one application

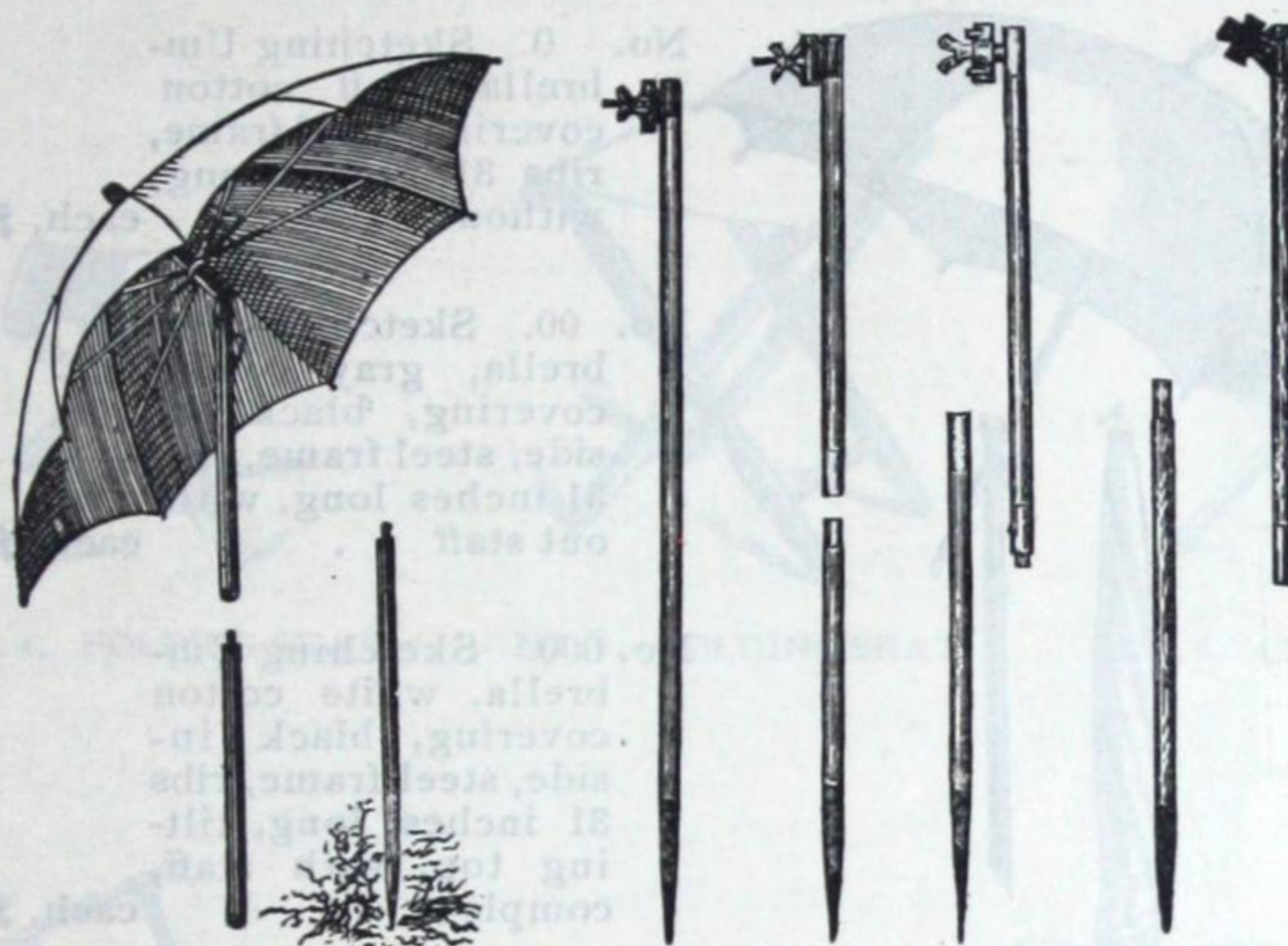
"STAR" BATH-TUB ENAMEL

Star Bath Tub Enamel,	$\frac{1}{4}$ pint cans	.	.	.	.	each,	.15
"	"	$\frac{1}{2}$	"	"	"	"	.25
"	"	1	"	"	"	"	.40
"	"	1 quart	"	"	"	"	.75
"	"	1 gallon	"	"	"	"	4.00

The smaller sizes are put up in cartons containing one dozen cans

Adapted for bathtubs, washstands, flower pots, as well as for walls, ceilings and woodwork of bathrooms; steam and moisture have no effect on it. It will not crack, blister or peel off, and resists hot and cold water. Produces a marble-like, glossy surface, as hard and lasting as porcelain

SKETCHING UMBRELLAS AND STAFFS



FRENCH UMBRELLAS

No. 2 No. 1 No. 4 No. 6
STAFFS

SKETCHING UMBRELLAS

French Gray Linen, 28 inch, with Screw-jointed Staff in 3 parts, square-jointed steel shoe, nickel-plated trimmings steel frame, turn-over joint, complete	each, \$9.00
American Gray Linen, 30 inch, with Slip-jointed Staff in 2 parts, square-jointed iron shoe, steel frame, turn-over joint, complete	" 5.00
Tourist Gray Linen, 31 inch, without Staff	" 3.00
Scholar's Gray Linen, 32 inch, without Staff	" 2.50

The Tourist and Scholar's can be used with any Staff

UMBRELLA STAFFS

No. 1. Jointed, slip-joint, japanned trimmings, iron shoe, 54 inches long	each, \$1.50
2. Plain Staff, japanned iron clasp and shoe, 46 inches long	" 1.25
3½. Jointed, screw-joint, japanned trimmings, iron clasp and shoe, 48 inches long	" 2.50
4. Jointed, screw-joint, brass clamp, adjustable to any angle, iron shoe, 56 inches long	" 2.75

SKETCHING UMBRELLAS, WITHOUT STAFF



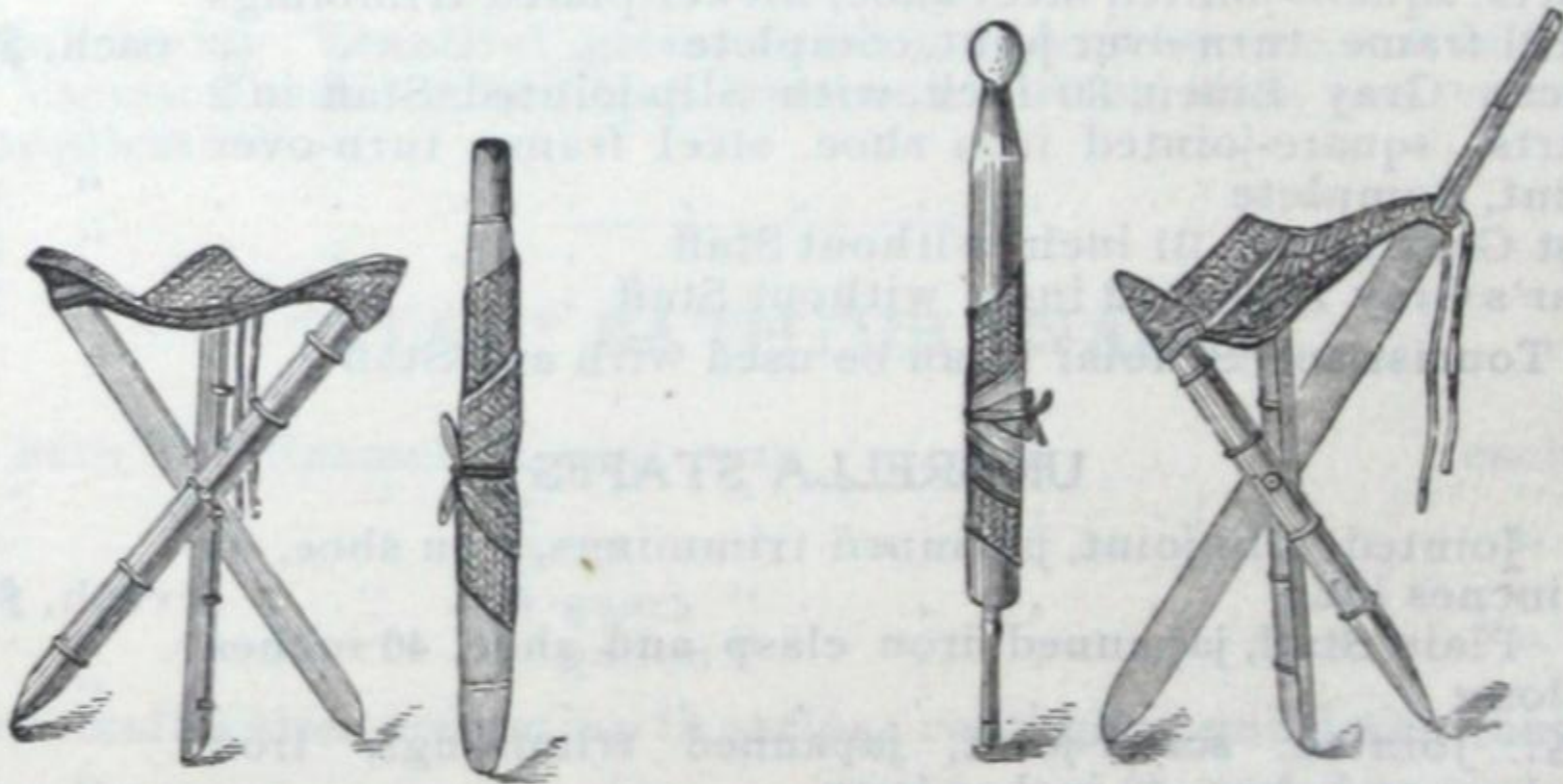
No. 0. Sketching Umbrella, buff cotton covering, steel frame, ribs 31 inches long, without staff . . . each, \$3.00

No. 00. Sketching Umbrella, gray cotton covering, black inside, steel frame, ribs 31 inches long, without staff . . . each, \$3.00

No. 000. Sketching Umbrella, white cotton covering, black inside, steel frame, ribs 31 inches long, tilting top, with staff, complete . . . each, \$5.50

FRENCH SKETCHING STICKS AND STOOLS

Best Quality, Very Strong



NO. 685

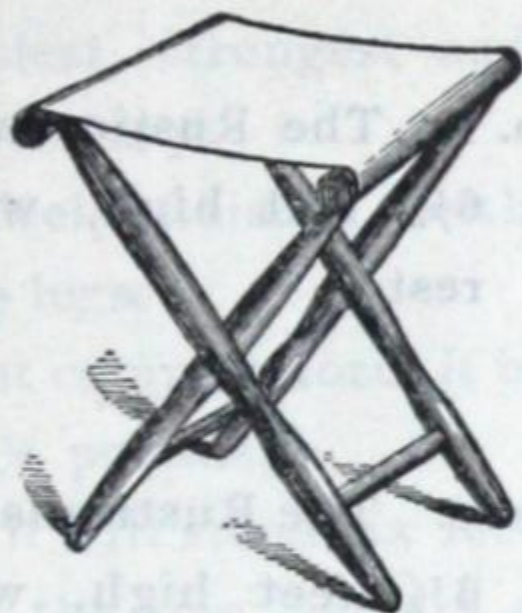
NO. 683

No. 683.	French Sketching Stick, with canvas seat	. . .	each; \$2.25
684.	" " " " leather seat	. . .	" 3.00
685.	" " Stool " canvas seat	. . .	" 1.65
686.	" " " " leather seat	. . .	" 2.35

SKETCHING SEATS



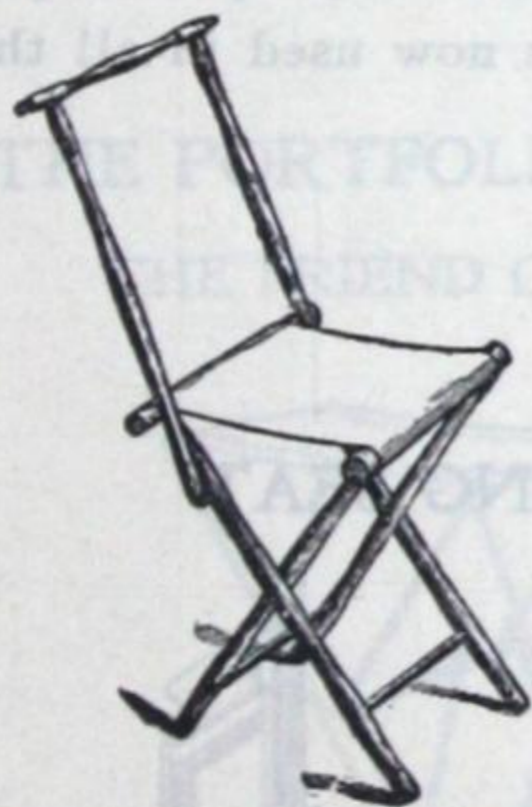
NO. 4. FOLDING SEAT



NO. 1. FOLDING SEAT



NO. 5. CLUB SEAT



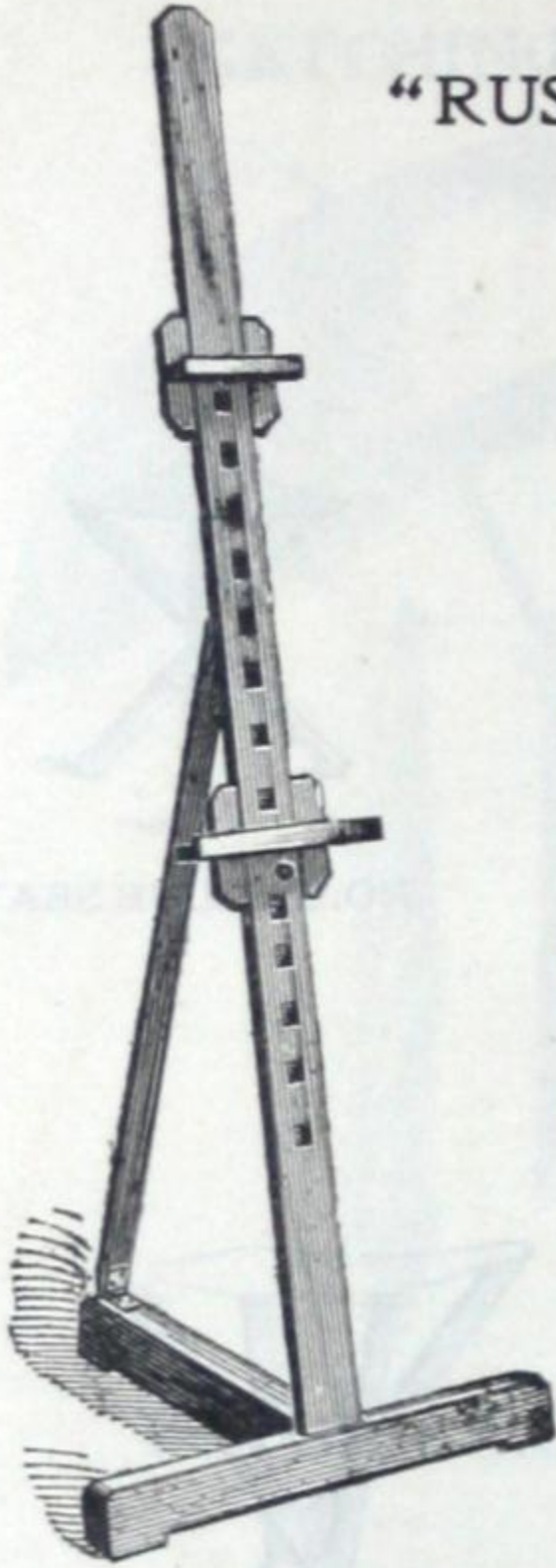
NO. 11. FOLDING CHAIR



NO. 3. F. & A. CO'S SEAT

No. 1.	Square Folding Canvas Seat	each, .40
3.	F. & A. Co. Folding Club Seat, Canvas, Square Top	" .40
4.	Square Folding Carpet Seat	" .75
5.	Club Seat, Light American	" .80
11.	Square Folding Canvas Seat with Back	" .50

"RUSTICANA" STUDIO EASEL

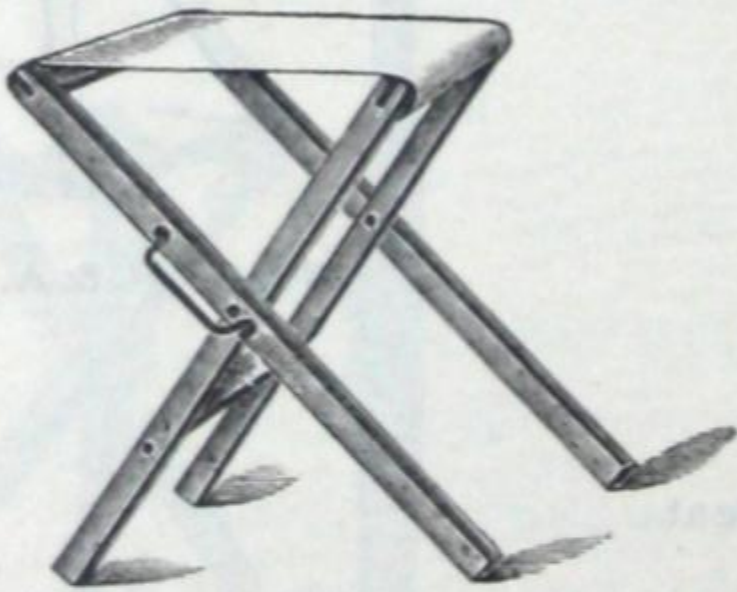


No. 1. The Rusticana Pine Easel is
6½ feet high, with adjustable
rest each, \$3.50

No. 2. The Rusticana Pine Easel is
6½ feet high, with adjustable
rest and weighted base each \$4.00

When not in use, can be closed up and put
in a corner. This Easel is now used in all the
large Art Schools

CAMP STOOL OR SKETCHING SEAT



NO. 710

No. 710. Sketching Seat each, .65

Made of Ash Wood. Square Folding, Strong Canvas Seat with Brass
Handle

THE IMPROVED SKETCHING EASEL

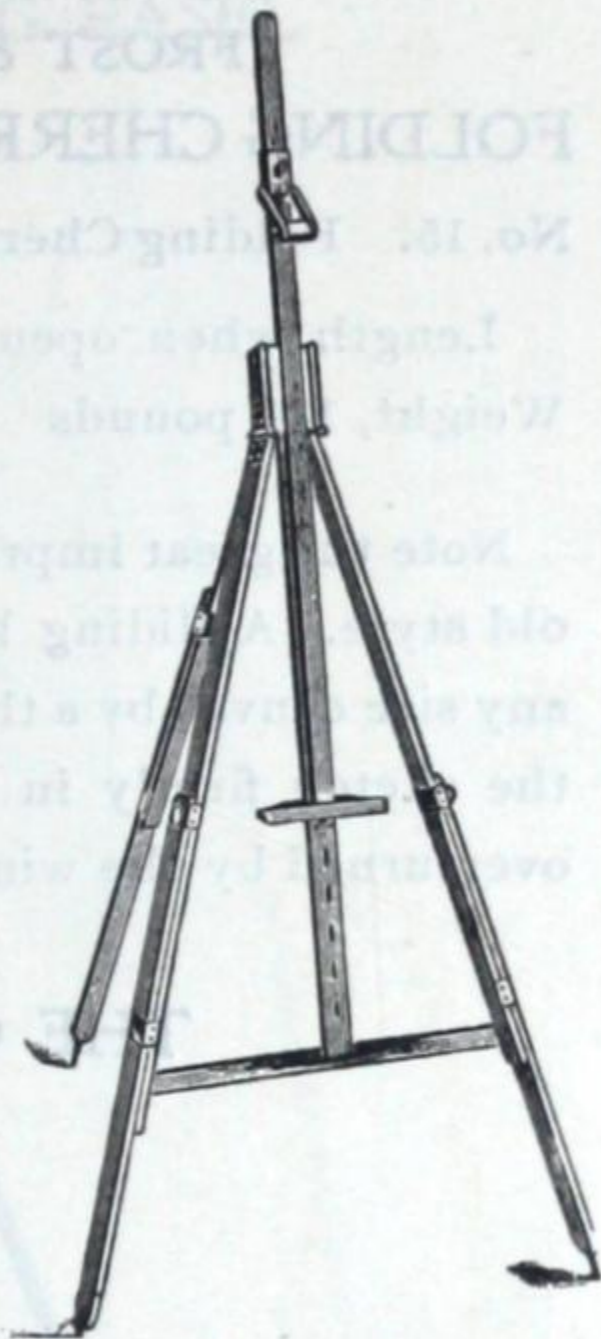
Easel complete \$4.50

This is one of the simplest, strongest and firmest Easels on the market today.

It is made of cherry, nicely finished, with brass mountings and sliding legs.

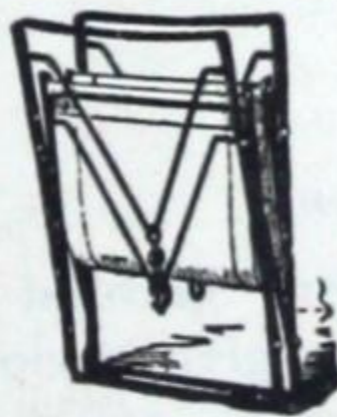
When shut up in its most compact form it is 31 inches long and weighs 3½ pounds.

It can be opened so that it will stand six feet high, and is so made that the side legs are a support to the canvas when painting, and the device for holding and inclining the canvas at the top is very ingenious and practical



THE PORTFOLIO CAMP STOOL

THE FRIEND OF THE WEARY



Unique, strong, compact; easily handled and carried; it cannot get out of order. Invaluable for Artists and Amateurs, Sportsmen, Tourists, Baseball Grounds, Race Tracks, Excursionists; in fact for all. It is made of steel and it only weighs about two pounds

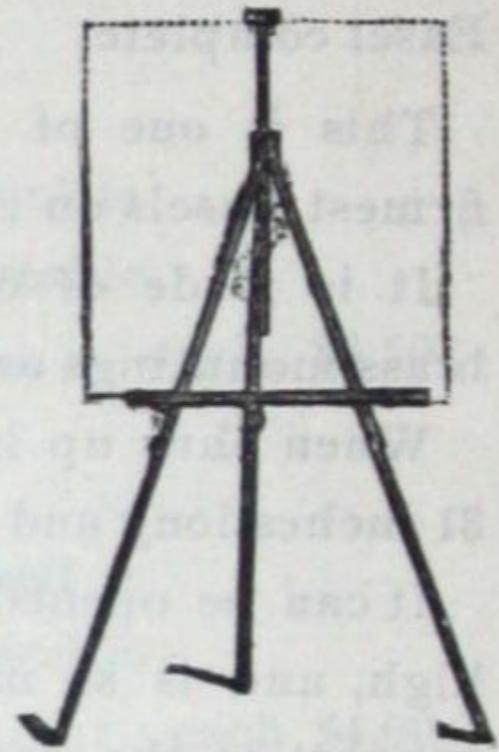
Japanned, in box, Closed, 9×12×½ in. Open, 19×14×8 in. each, \$1.50

FROST & ADAMS CO.'S
FOLDING CHERRY SKETCHING EASEL

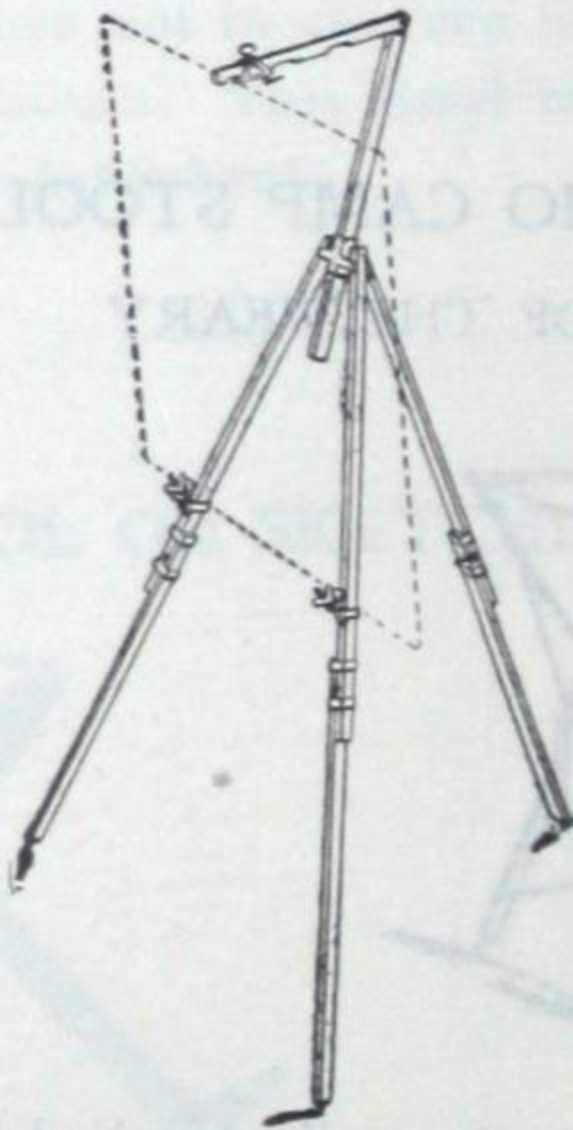
No. 15. Folding Cherry Sketching Easel each, \$1.25

Length when open, 47 inches, closed, 27 inches.
 Weight, 1½ pounds

Note the great improvement in this Easel over the old style. A sliding bar, which can be adjusted to any size canvas by a thumb-screw at the back, holds the sketch firmly in place and prevents its being overturned by the wind



THE CROSS SKETCHING EASEL



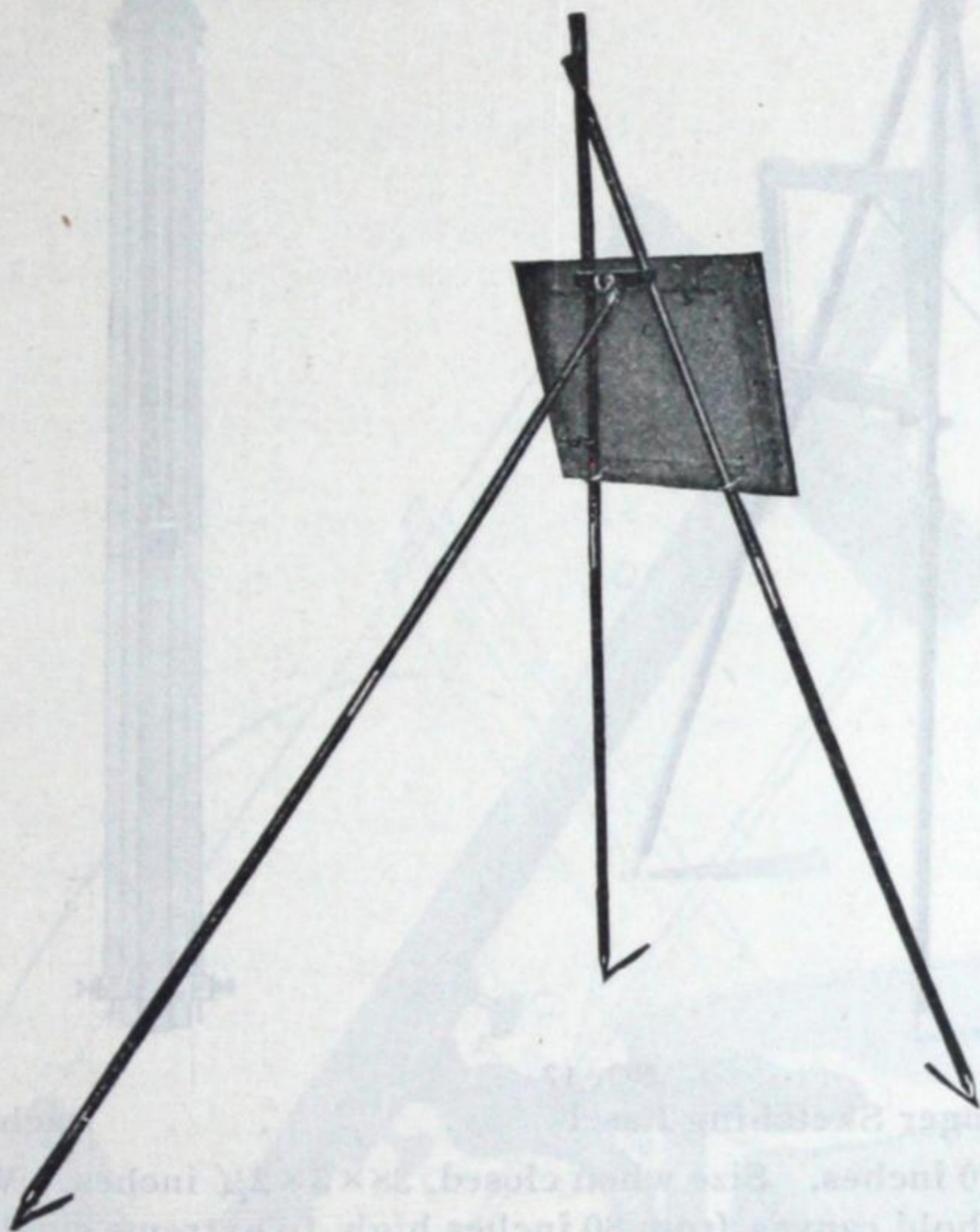
Patented, United States and France. Received Medal of M. C. M. A., 1887

Weighs 3¼ lbs., 36 inches long, closed each, \$5.50

The simplest, strongest and most practical easel ever made. Now used by all the leading French and American artists. The only easel in which the canvas gives firmness to the easel, which inclines the canvas forward, and which carries any canvas up to 5 feet, high enough to work upon while standing

THE WOODBURY SKETCHING EASEL

Patented



The best Sketching Easel in the market . . . each, \$3.00

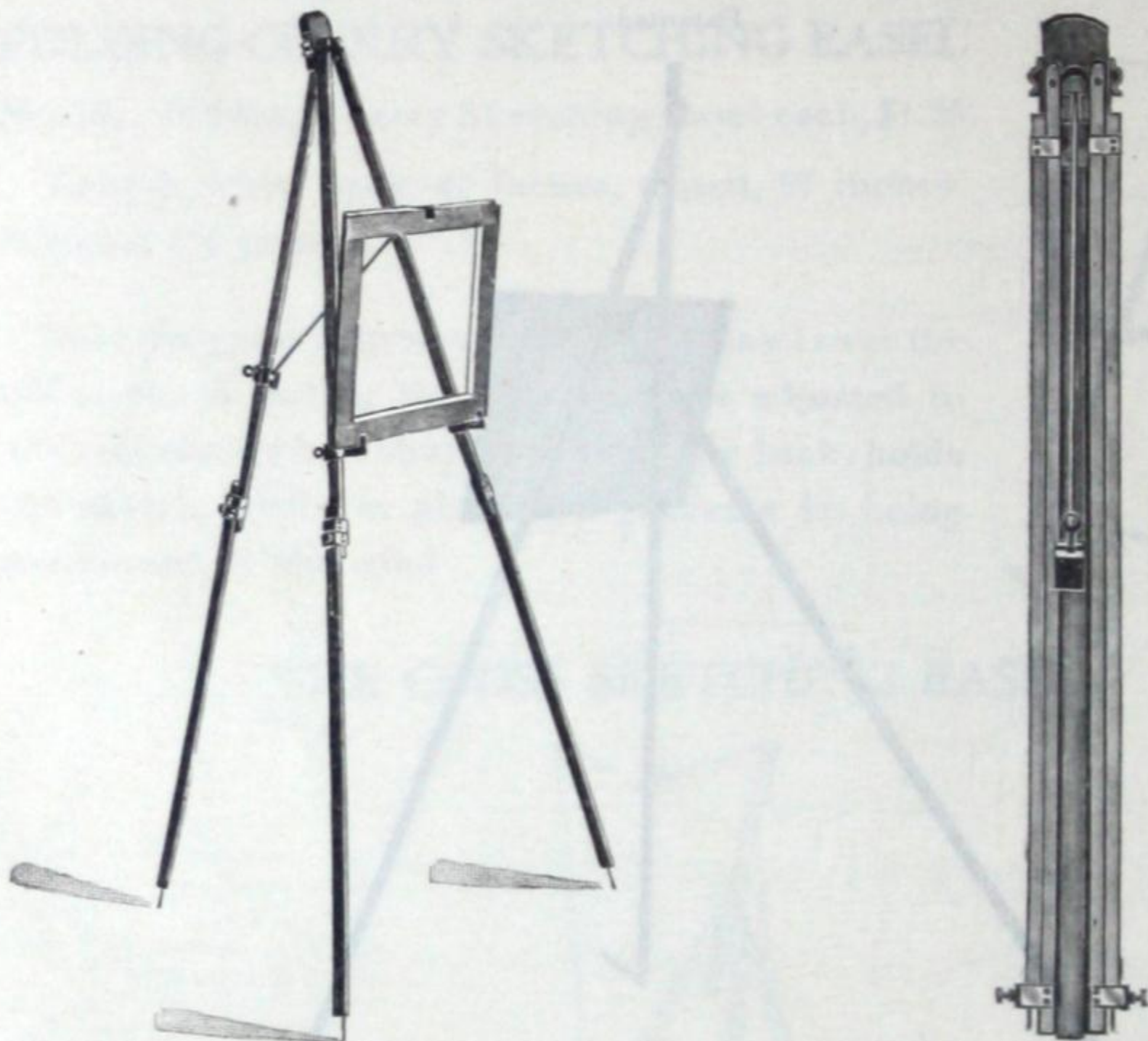
The stretcher is fastened to the Easel, thereby holding the canvas firmly in any desired position. It can be adjusted to any height, as well as to uneven ground, and used either standing or sitting. A canvas of any size can be used. It packs very closely, and weighs but $2\frac{1}{4}$ pounds.

DIRECTIONS FOR SETTING UP EASEL

1st. Screw the two screw-eyes into the bottom of stretcher about 12 or 15 inches apart.

2d. Screw the back yoke (connected with back rod) in centre of top of stretcher, then put the rods through the two bottom eyes, up through back yoke and adjust to height desired, screwing in top screw-eye to make firm.

THE RANGER SKETCHING EASEL



NO. 17

No. 17. The Ranger Sketching Easel each, \$5.00

Height open, 70 inches. Size when closed, $38 \times 3 \times 2\frac{1}{4}$ inches. Weight 3 pounds. Will hold canvas from 80 inches high, to extreme small sizes

The Ranger Sketching Easel is pronounced the most unique sketching easel by prominent artists. Ingenious devices imparting a tone of smartness are evidenced in its construction

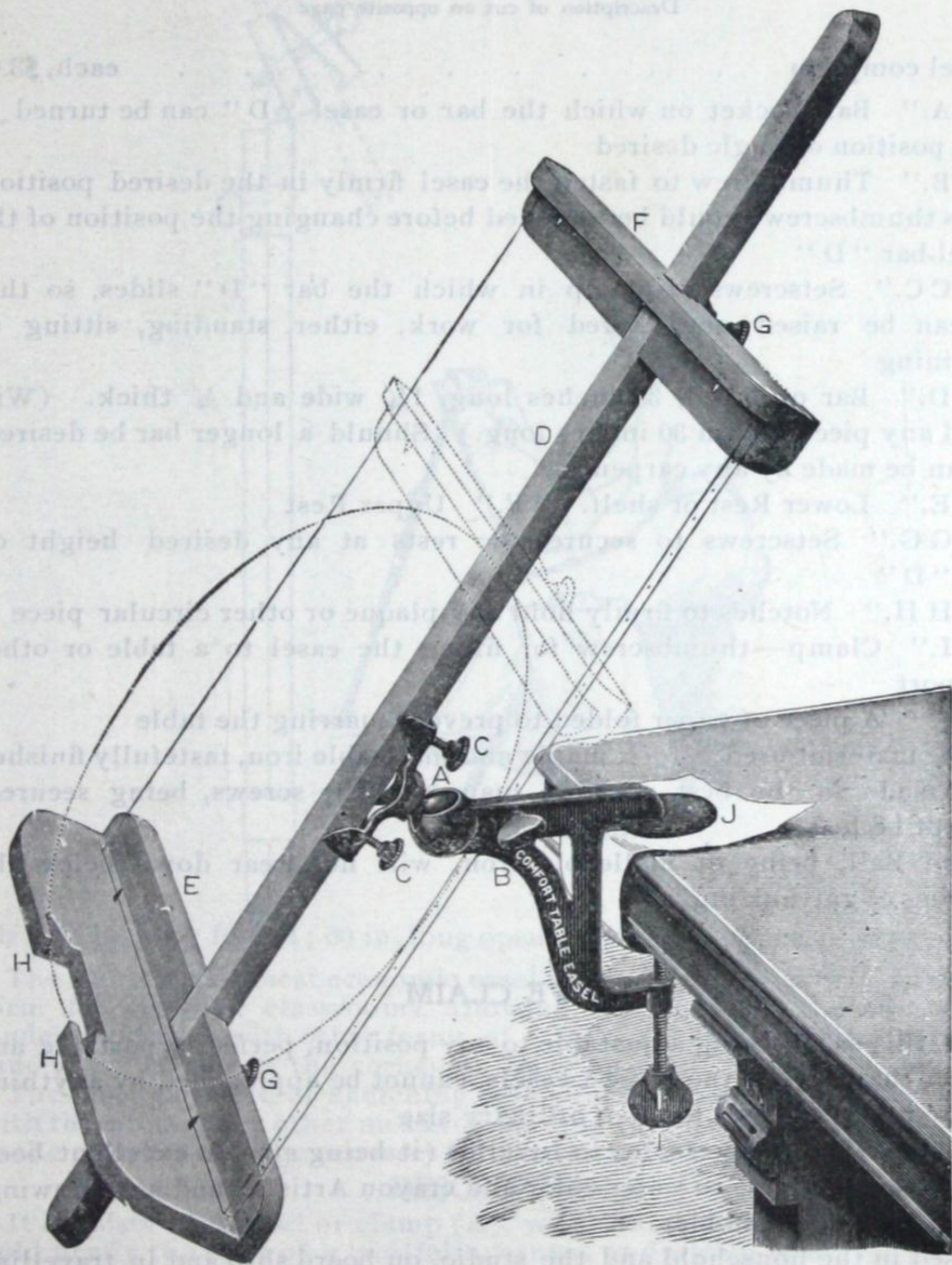
The Tilting arrangement is a highly nickeled bar 19 inches long, which permits the canvas to be inclined at any desired angle and can be adjusted for sitting or standing position

Made of selected hard wood, all fittings nickel-plated; no bother with pins or trays in regulating height of canvas

The Ranger Clamps can be adjusted to any position on front legs and are held to head of easel when closed by spring clasp, making easel compact and easy to convey

A special contrivance is fitted to clamps to hold canvas securely, assuring a firm working surface

THE COMFORT TABLE EASEL



Comfort Table Easel each, \$3.00

THE COMFORT TABLE EASEL

Description of cut on opposite page

Easel complete each, \$3.00

"A." Ball Socket on which the bar or easel "D" can be turned to any position or angle desired

"B." Thumbscrew to fasten the easel firmly in the desired position. This thumbscrew should be loosened before changing the position of the easel-bar "D"

"C C." Setscrews of clamp in which the bar "D" slides, so that it can be raised or lowered for work, either standing, sitting or reclining

"D." Bar or Easel, 33 inches long, $1\frac{3}{4}$ wide and $\frac{3}{4}$ thick. (Will hold any piece within 30 inches long.) Should a longer bar be desired, it can be made by any carpenter

"E." Lower Rest or shelf. "F." Upper Rest

"G G." Setscrews to secure the rests at any desired height on bar "D"

"H H." Notches to firmly hold any plaque or other circular piece

"I." Clamp—thumbscrew for fixing the easel to a table or other support

"J." A piece of paper folded to prevent marring the table

The material used is rock maple and malleable iron, tastefully finished and made in the best possible manner. The screws, being secured, cannot be lost

The Ball, being of malleable iron, will not wear down below the coating of galvanizing

WE CLAIM

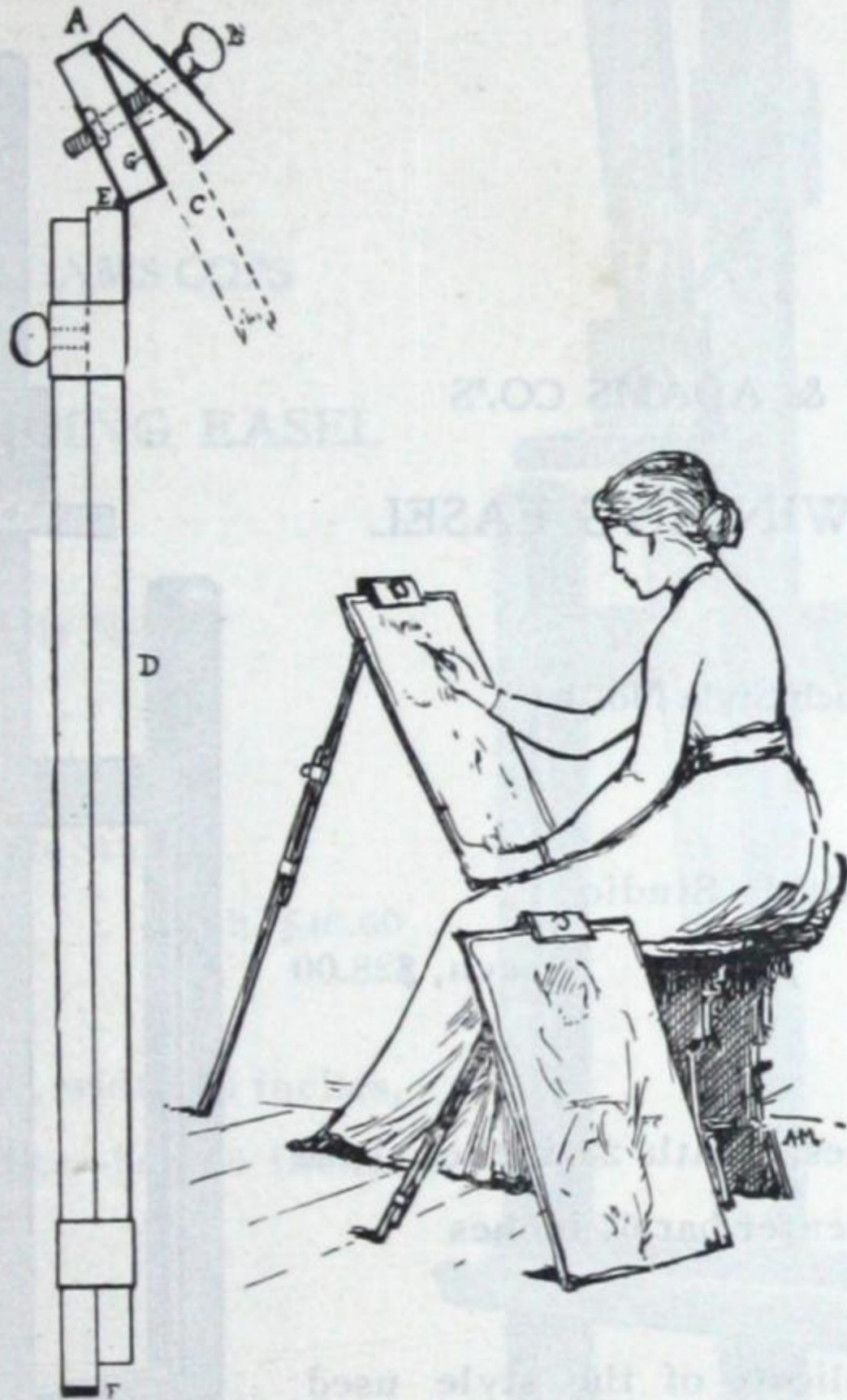
That this easel, being adjustable to any position, perfectly portable and firmer than all but the largest easels, cannot be approached by anything in the market for all work of ordinary size

It is particularly welcome to Invalids (it being also an excellent book and music holder); to water-color and crayon Artists; and as a drawing-board and plaque holder

Used in the household and the studio, on board ship and in travelling generally

It folds up very compactly, making a package 33 inches long and about 2 inches square and weighs $4\frac{1}{2}$ pounds

MUNSELL'S PORTFOLIO BRACE EASEL



Size, 34 in. long folded ; 60 in. long open. Weight, 17 ounces each, \$2.00

The lightest and most economic easel in the market, and only practical form for crowded classrooms, allowing nearly double the number of students possible with other forms of easel. Takes as much room as a cane when leaned in the corner or hung on a nail

The most portable of sketching easels for outdoor work. Does away with thumb tacks or other means of holding the paper. Can be clamped to the crossbar of large canvases for cartoons and large work.

DESCRIPTION

It consists of a head or clamp (A), with thumb-screw (B), adapted to hold firmly the edge of a portfolio, canvas or drawing-board (C), whose lower edge rests on the knees, floor or other support, and an adjustable leg (D), which is hinged (E) to the head so as to permit of any desired height or inclination, while a rubber tip (F) prevents slipping on the floor, and a strip of rubber (G) in the clamp holds firmly the upper edge of the portfolio, and any paper or canvas thereon.

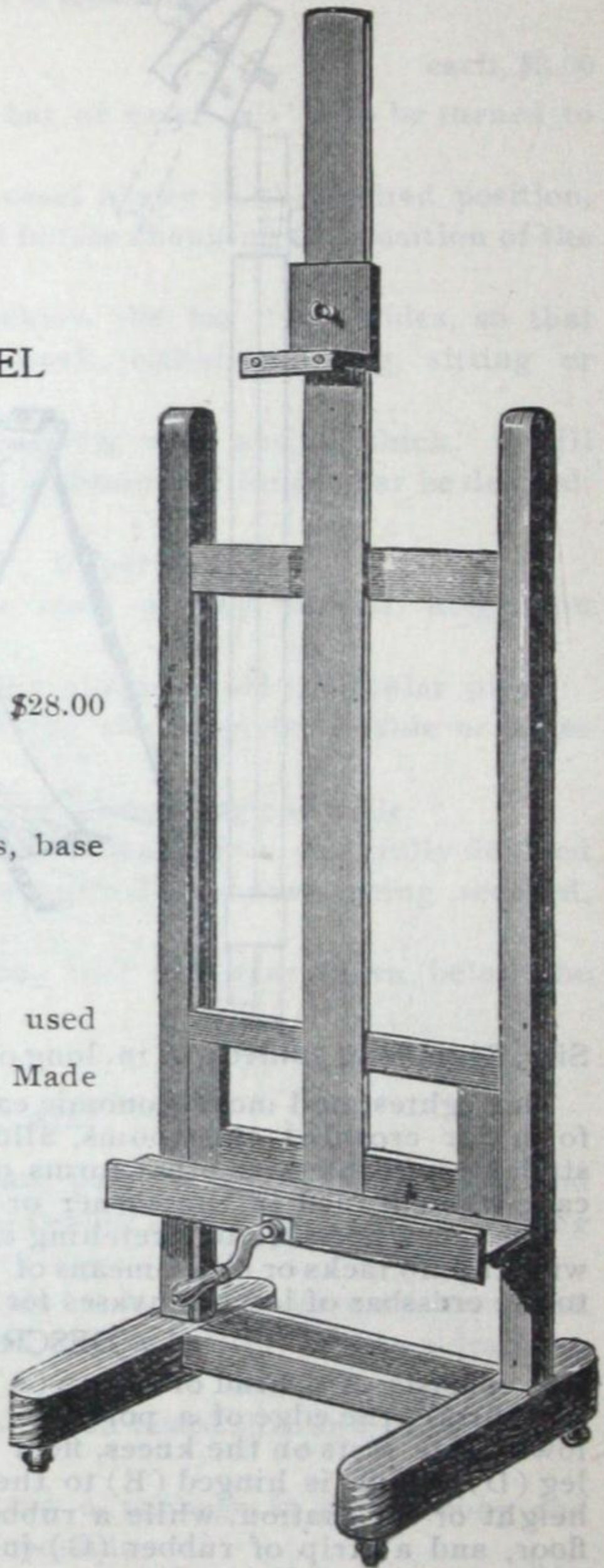
FROST & ADAMS CO.'S
STUDIO WINDING EASEL

French Style No. 1

No. 1. French Style Studio
Easel each, \$28.00

Height 72 inches, width 23 inches, base
23 × 25 inches, center bar 67 inches

This is a duplicate of the style used
in France, all fittings are imported. Made
of Ash stained to light Flemish Oak



FROST & ADAMS CO.'S

STUDIO WINDING EASEL

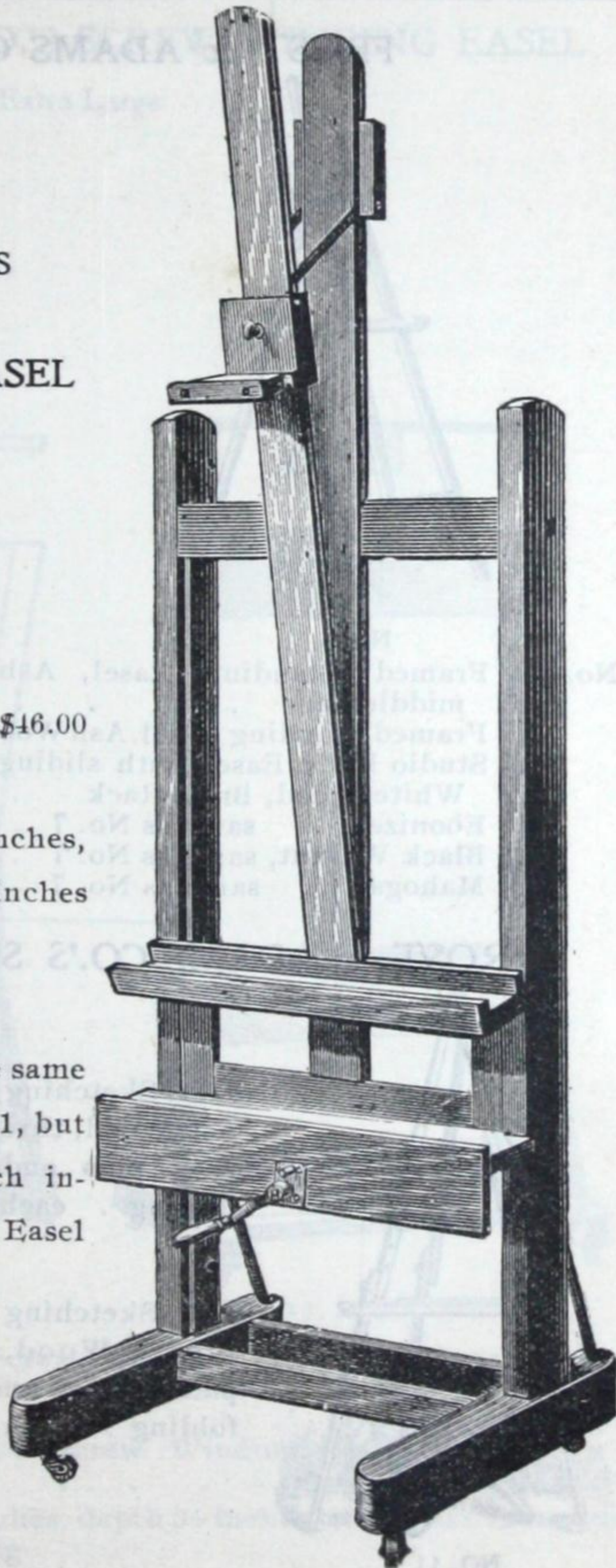
French Style No. 2

No. 2. French Style Studio

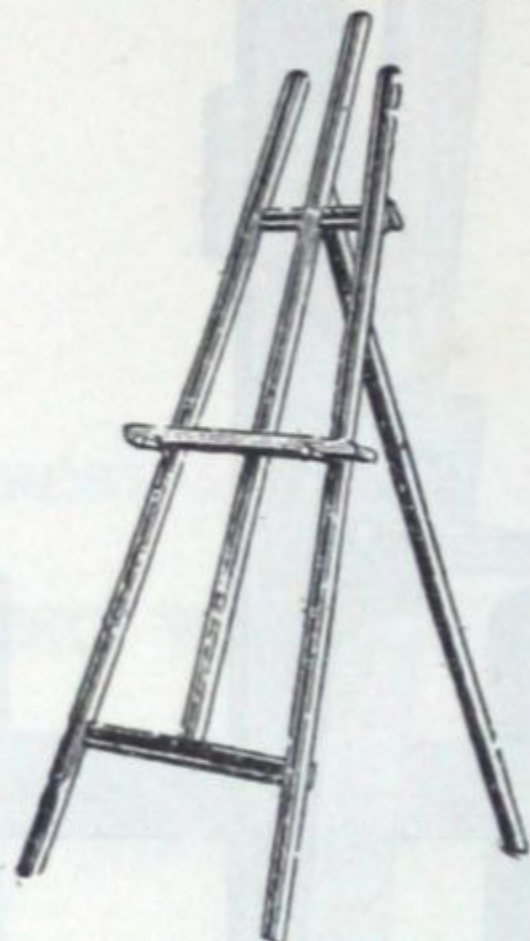
Easel . . . each, \$46.00

Height 78 inches, width 24 inches,
base 25 × 26 inches, bar 66 inches
from upper tray

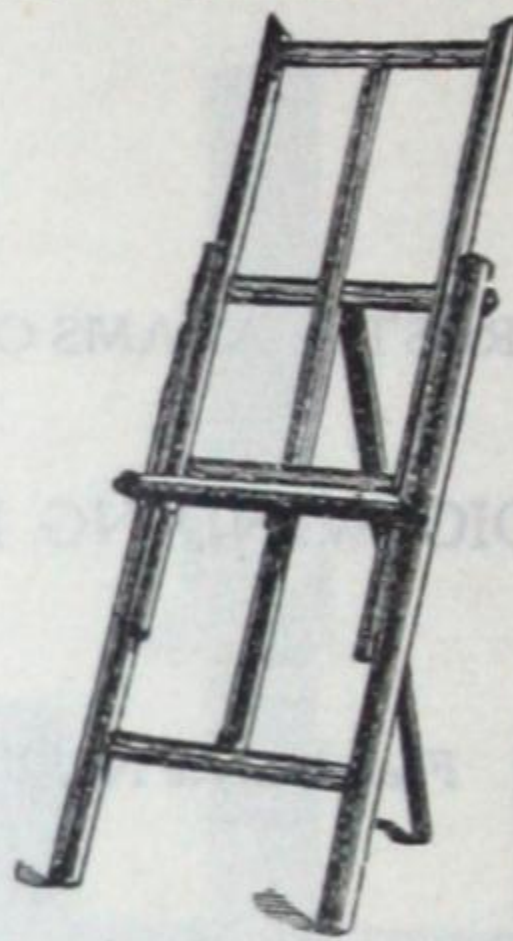
This Easel is made up of the same
high grade material as our No 1, but
has an additional screw which in-
clines the canvas. A better Easel
cannot be made



FROST & ADAMS CO.'S EASELS



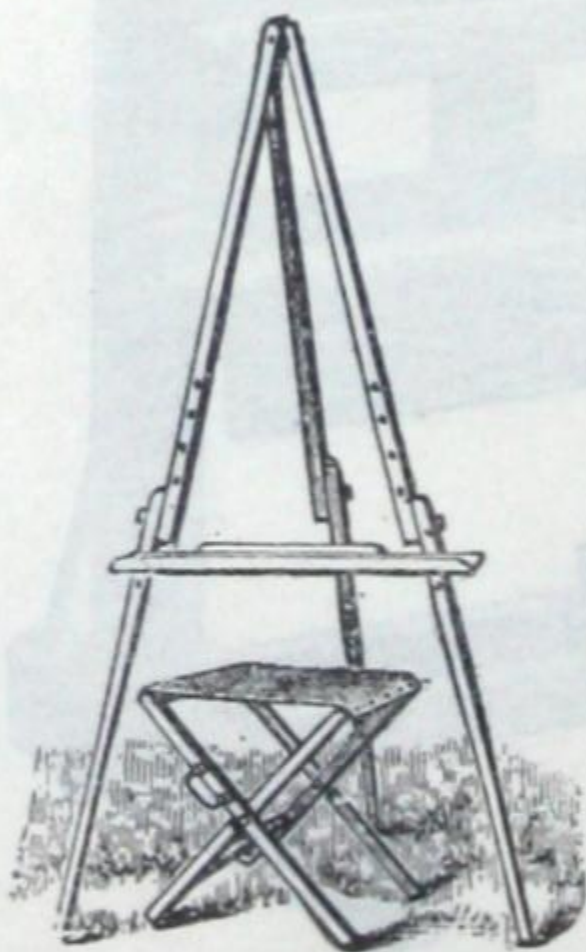
NO. 6



NO. 7

- | | | |
|--------|--|--------------|
| No. 5. | Framed Standing Easel, Ash Wood, without middle bar | each, \$2.50 |
| 6. | Framed Standing Easel, Ash Wood, | " 3.00 |
| 7. | Studio Rack Easel, with sliding frame and tray; White Wood, Brass Rack | " 5.00 |
| 8. | Ebonized, same as No. 7 | " 6.00 |
| 9. | Black Walnut, same as No. 7 | " 6.25 |
| 10. | Mahogany, same as No. 7 | " 7.00 |

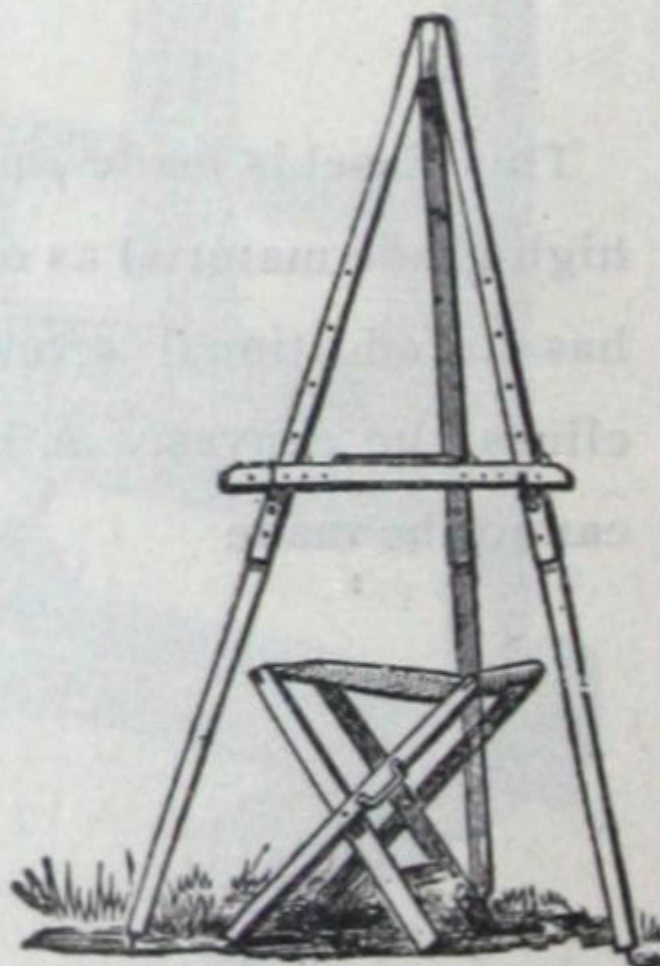
FROST & ADAMS CO.'S SKETCHING EASELS



NO. 11

- No. 11. Sketching Easel, Ash Wood, three legs, with pins and tray, folding . each, .70

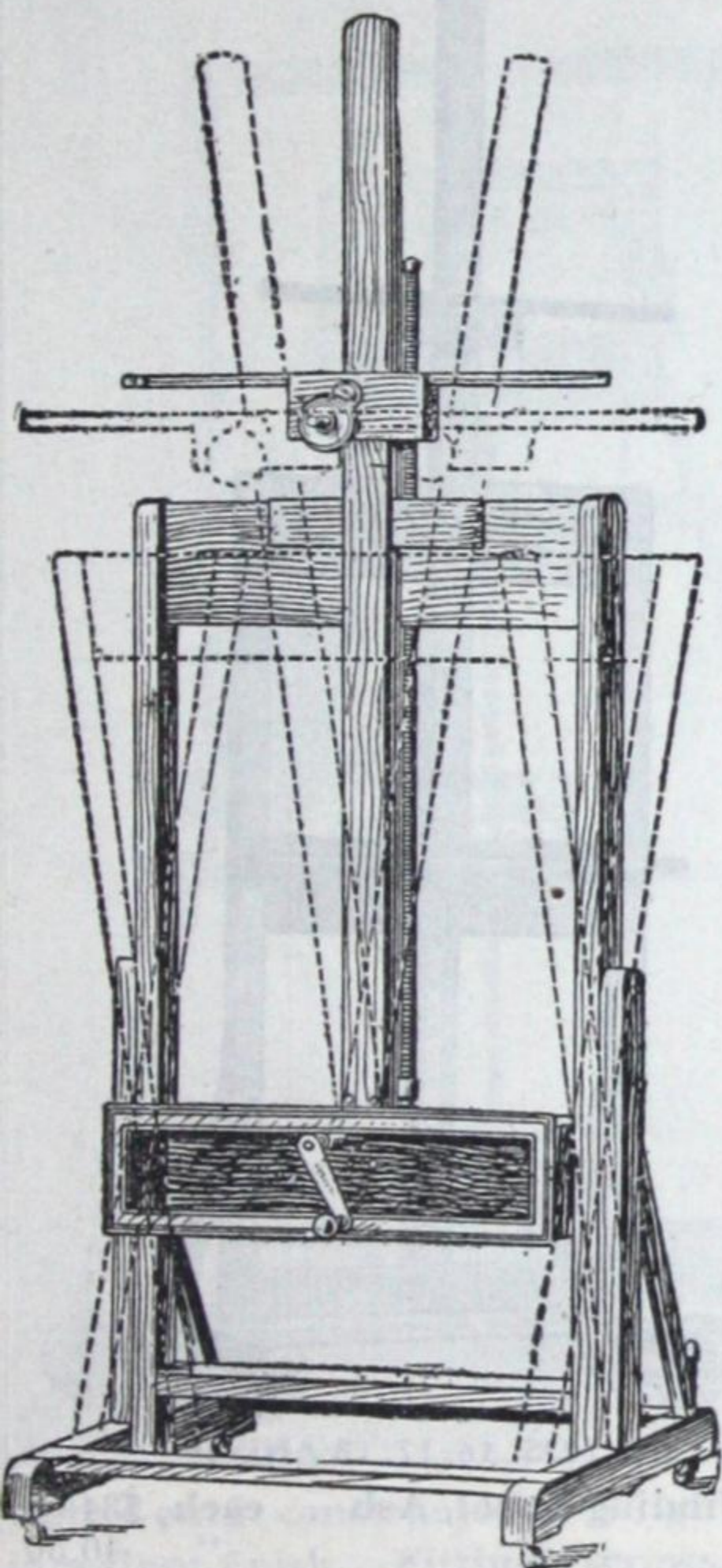
- No. 12. Sketching Easel, White Wood, with patent hinge and tray, folding . each, \$1.00



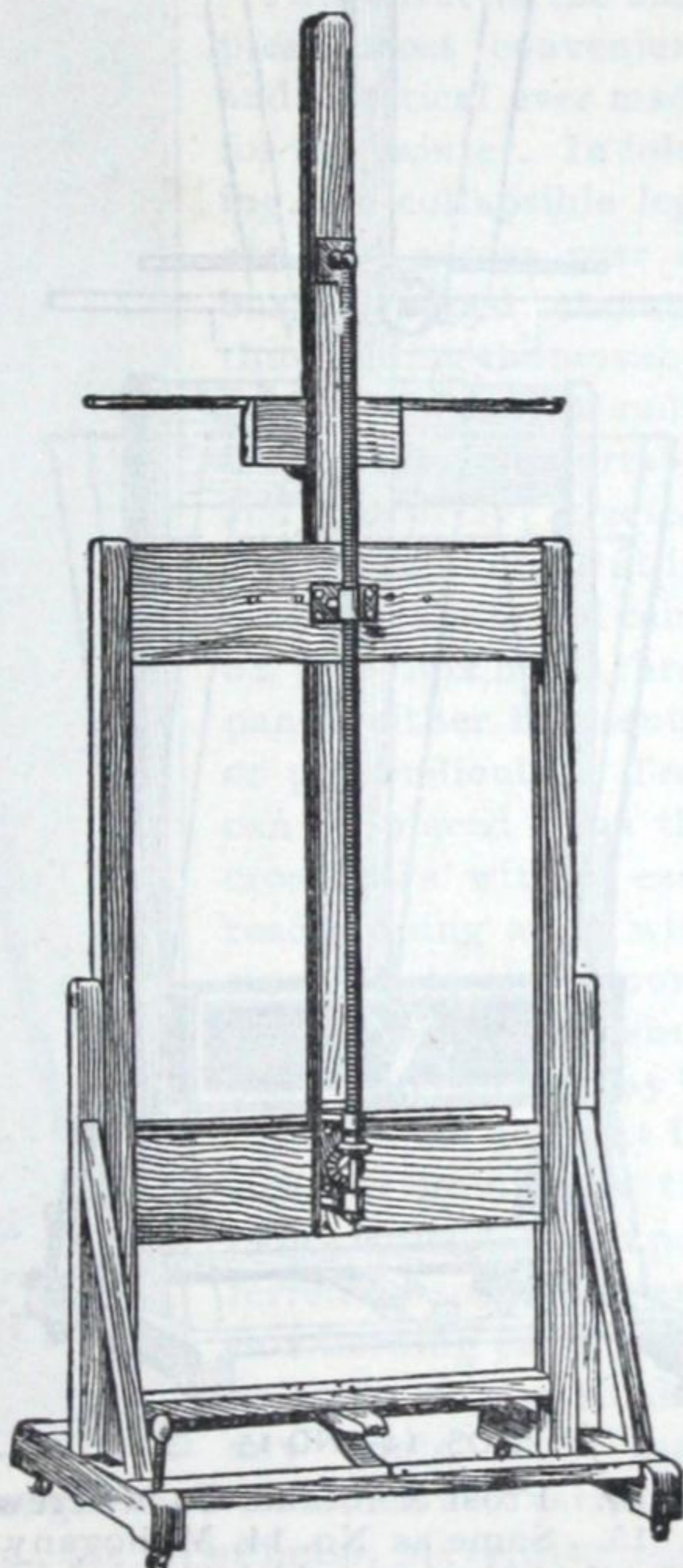
NO. 12

FROST & ADAMS CO.'S SCREW WINDING EASEL

Extra Large



NO. 13, FRONT VIEW

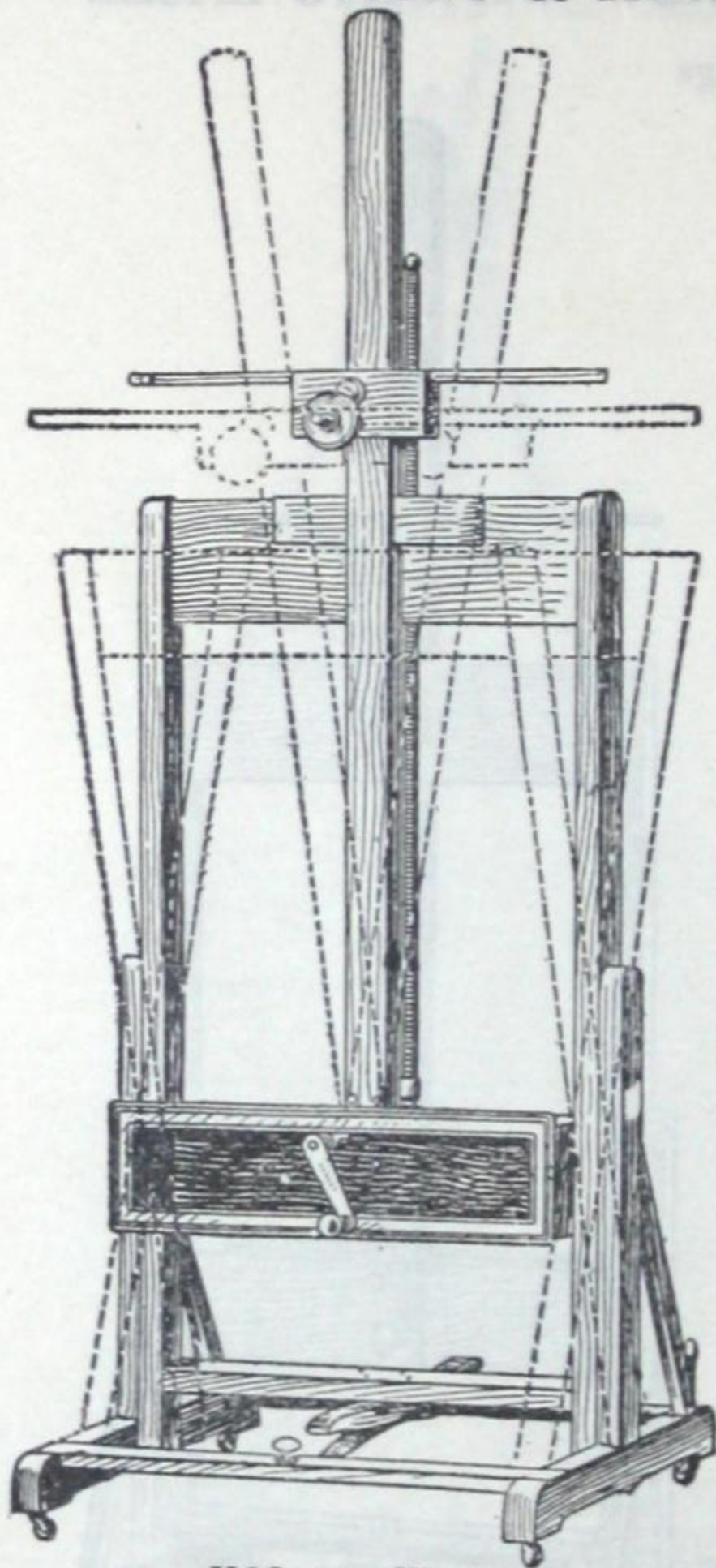


NO. 13, REAR VIEW

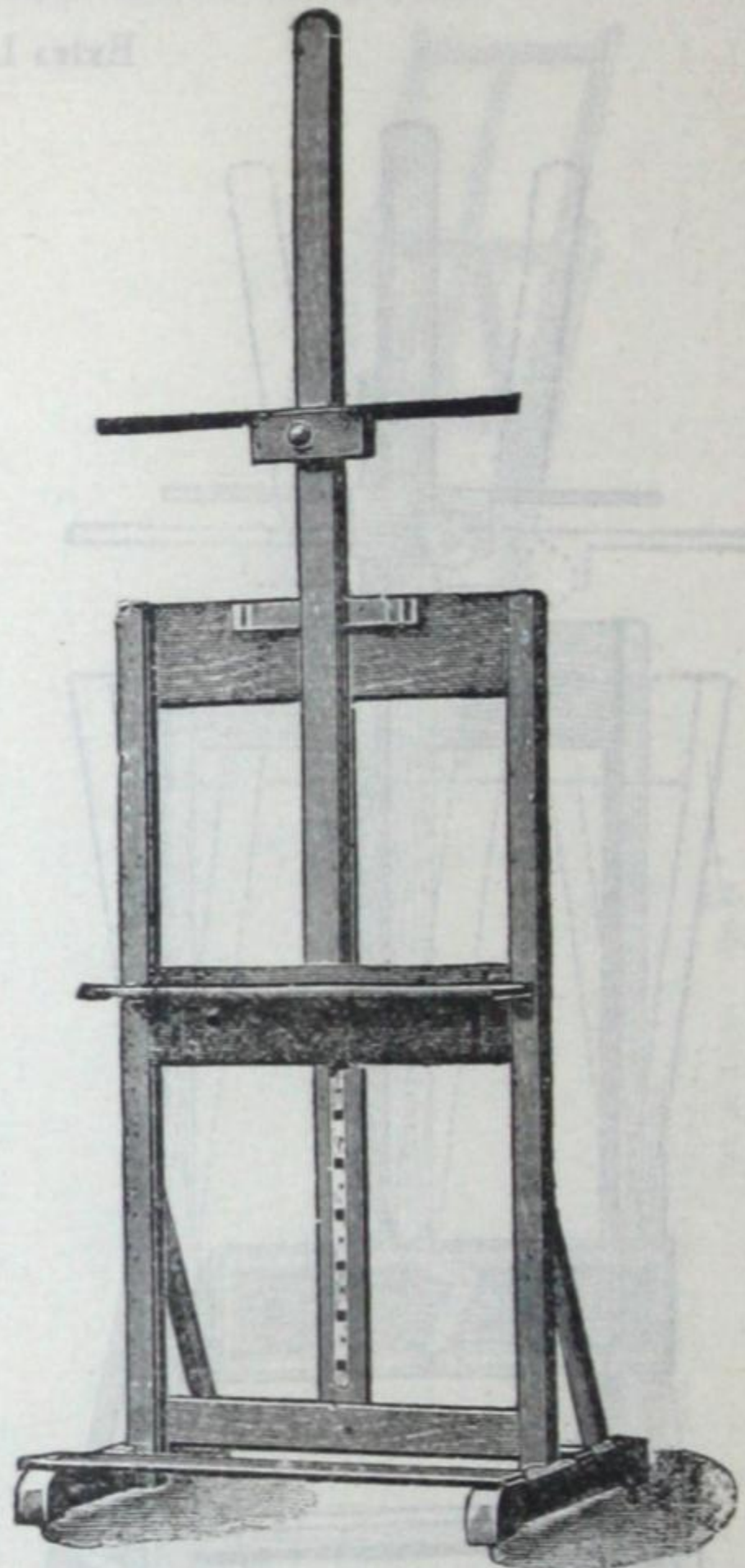
No. 13.	Frost & Adams Co.'s Screw Winding Easel, Ash	each, \$42.00
	Frost & Adams Co.'s Screw Winding Easel, Black Walnut	" 47.00
	Frost & Adams Co.'s Screw Winding Easel, Mahogany	" 52.00

Height 61 inches, width 36 inches, depth 34 inches, centre bar 72 inches.
Spring Attachment for inclining

FROST & ADAMS CO.'S EASELS



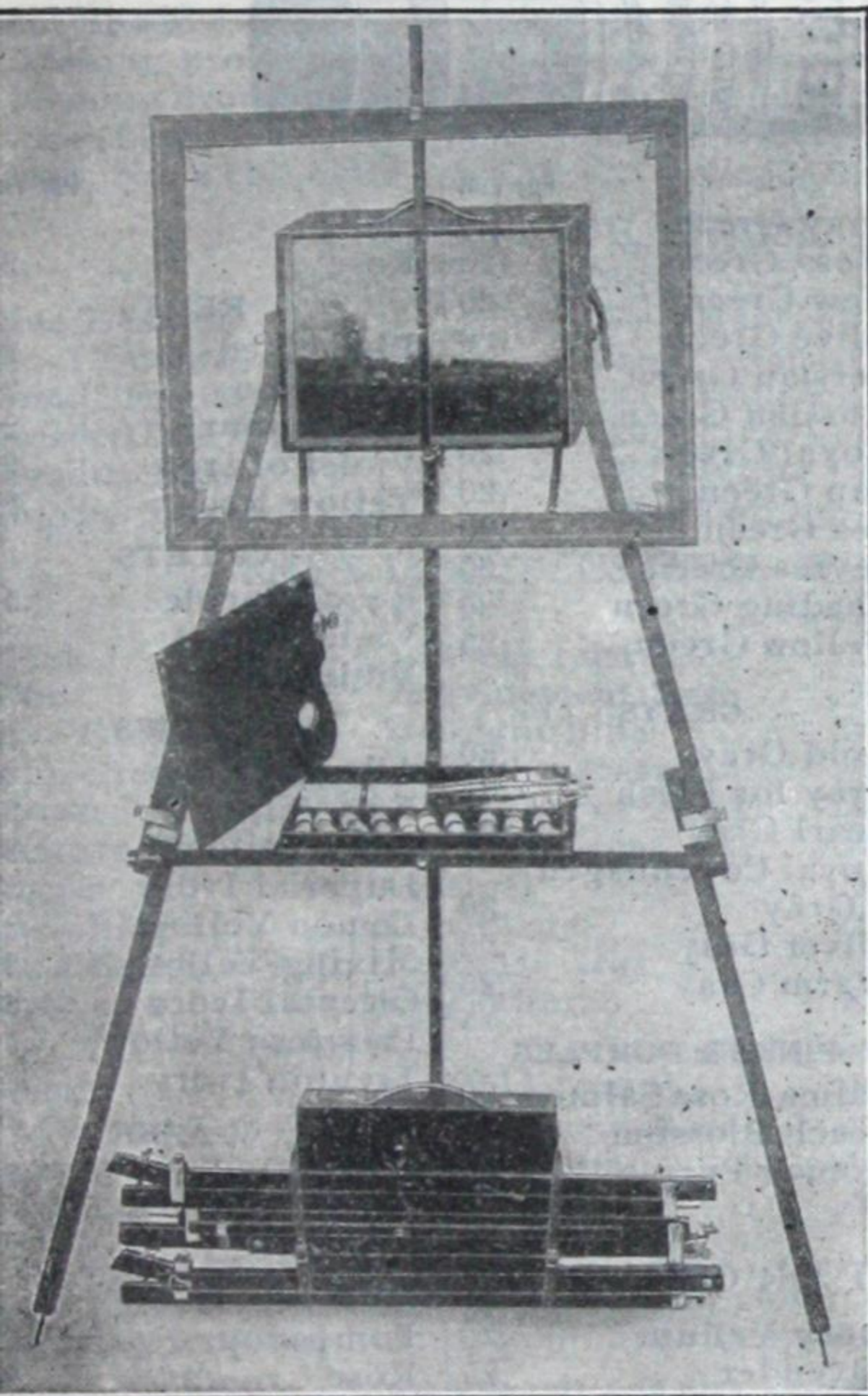
NOS. 14 AND 15



NOS. 16, 17, 18 AND 19

- No. 14. Frost & Adams Co.'s Screw Winding Easel, Ash . each, \$34.50
 15. Same as No. 14, Mahogany " 40.50
 Height 56 inches, width 31½ inches, depth 29 inches, centre bar 58 inches,
 with Attachment to lay the Easel back and forward. Large Size
- No. 16. Frost & Adams Co.'s Studio Sliding Easel,
 Stationary, Pine each, \$11.00
 17. Same as No 16, Ash " 13.00
 No. 18. Frost & Adams Co.'s Studio Sliding Easel, Pine " 14.00
 19. Same as No. 18, Ash " 16.00
- Nos. 18 and 19 have Extra Movement to lay the Easel back and forward
 Nos. 16, 17, 18 and 19 have Sliding instead of Winding Movement

THE SIMPLEX EASEL SKETCH BOX



This outfit is the simplest, most convenient and practical ever made for the painter. In folding, the collapsible legs are laid across rear of box, strapped thereto, thus holding the movable tray in position. Handle is of leather, comfortable and securely riveted. Total weight of outfit including palette and cans, 5¼ lbs. Box holds three panels either horizontal or perpendicular. Tray can be placed upon the cross bars within easy reach, doing away with stooping to the ground for materials, brushes, etc. The palette may be placed upon the tray instead of holding in the hand, which is much preferred by some painters. Box holding panel while painting may be tilted to any angle with ease.

Entire outfit constructed of a light, tough wood — stained and varnished in walnut finish. Fittings, screws, etc., are all of brass, preventing rust

Outfit complete with Palette and Two Oil Cans, Holding 3 Panels

10×14 \$8.00

Outfit complete with Palette and Two Oil Cans, Holding 3 Panels

12×16 10.00

FRY'S VITRIFIABLE COLORS IN POWDER FOR CHINA



	Per Vial		Per Vial		Per Vial
BLACK		Gray Green	.20	Ruby	.75
German Black	.20	Moss Green	.20	Rose	.20
BLUES		New Green	.25	REDS	
Air Blue	.30	Olive Green	.20	Blood Red	.25
Aztec Blue	.60	Persian Green	.25	Carnation	.20
Baby Blue	.25	Russian Green	.25	Pompadour	.20
Banding Blue	.25	Royal Green	.20	Violet of Iron	.25
Celestial Turquoise	.20	Sap Green	.20	Yellow Red	.25
Copenhagen Blue	.25	Sea Green	.20	VIOLETS	
Serves Blue	.20	Sevres Green	.20	Royal Purple	.40
BROWNS		Shading Green	.25	Violet, No. 1	.25
Auburn Brown	.25	Yellow Green	.25	Violet, No. 2	.30
Dark Brown	.20	GRAYS		YELLOWS	
Finishing Brown	.20	Gold Gray	.30	Albert Yellow	.25
Meissen Brown	.25	Gray for Flesh	.45	Egg Yellow	.25
Shading Brown	.25	Pearl Gray	.25	Gray Yellow	.20
Yellow Brown	.20	Royal Copenhagen		Imperial Ivory	.20
GREENS		Gray	.30	Lemon Yellow	.25
Apple Green	.20	Silver Gray	.20	Mixing Yellow	.20
Black Green	.20	Warm Gray	.25	Oriental Ivory	.20
Brown Green	.20	PINKS & PURPLES		Primrose Yellow	.15
Dark Green	.20	Palma-Rosa Salmon	.20	Trenton Ivory	.15
Deep Blue Green	.30	Peach Blossom	.20	GLAZE	
Empire Green	.25	Roman Purple	.60	Ivory Glaze	.20

MATT OR GOUACH COLORS

Black	.20	Ivory Vellum	.20	Pompadour	.20
Bronze Brown	.20	Lavender	.25	Rose	.20
Bronze Green	.20	Light Yellow	.20	Soft Gray	.20
Cardinal Red	.20	Meadow Green	.20	Turquoise Blue, D	.20
Deep Blue	.25	Olive Green	.20	Turquoise Blue, L	.20
Empire Green	.20	Old Ivory	.20	Yellow Brown	.20
Golden Brown	.20	Orange Yellow	.20	Yellow Green	.20
Golden Yellow	.20	Pale Green	.20	White	.20
Indian Red	.20	Purple	.40		

Complete set of samples of above colors each, \$1.75
 Samples of any of above colors " .05

Any of the above colors can be used for dry dusting, if desired

FRY'S COLORS — Continued

Specially Prepared for Miniature and Figure Painting

	Per Vial		Per Vial
Cool Shadow . . . . .	.35	Pompadour . . . . .	.20
Finishing Brown . . . . .	.20	Pompadour, No. 2 (fluxed) . . . . .	.20
Finishing Brown, No. 2 (fluxed) . . . . .	.20	Reflected Light . . . . .	.20
Flesh (blond) . . . . .	.25	Tender Shadow . . . . .	.30
Flesh, No. 2 (blunette) . . . . .	.25	Warm Shadow . . . . .	.35

FRY'S PASTE, ENAMELS, ETC.

	Per Vial		Per Vial
Blue Enamel . . . . .	.25	Hancock's Paste for Raised Gold . . . . .	.20
Coral Enamel . . . . .	.25	Hancock's Hard Enamel . . . . .	.25
Cobalt Enamel . . . . .	.25	Pink Enamel . . . . .	.25
Dresden Relief White (Aufsetzweiss) . . . . .	.20	White Enamel . . . . .	.20
Dresden Flux . . . . .	.25	Turquoise Enamel . . . . .	.25
English Enamel . . . . .	.20		

FRY'S LIQUID LUSTERS — WHOLE VIALS

	Per Vial		Per Vial		Per Vial
Black . . . . .	.75	Gold Lustre . . . . .	.75	Rose . . . . .	.50
Blue . . . . .	.30	Iridescent Rose . . . . .	.70	Purple . . . . .	.75
Blue Gray . . . . .	.45	Light Blue . . . . .	.30	Ruby	1.50
Blue Green . . . . .	.40	Light Green . . . . .	.20	Shammy . . . . .	.20
Brown . . . . .	.25	Mother of Pearl . . . . .	.30	Silver	1.50
Chatoyant . . . . .	.75	Olive Green . . . . .	.30	Steel Blue . . . . .	.70
Copper	1.25	Opal . . . . .	.30	Violet . . . . .	.70
Dark Blue . . . . .	.75	Orange . . . . .	.20	White . . . . .	.20
Dark Green . . . . .	.40	Pearl Gray . . . . .	.25	Yellow . . . . .	.20
Gray . . . . .	.25	Platinum . . . . .	.80	Yellow Brown . . . . .	.20
	Per Half Vial		Per Half Vial		Per Half Vial
Black . . . . .	.40	Gold Lustre . . . . .	.40	Ruby . . . . .	.75
Chatoyant . . . . .	.40	Iridescent Rose . . . . .	.40	Silver . . . . .	.75
Copper . . . . .	.65	Platinum . . . . .	.45	Steel Blue . . . . .	.40
Dark Blue . . . . .	.40	Purple . . . . .	.40	Violet . . . . .	.40
Burnishing Sand					per vial, .10
Gold Essence, for thinning lustres and gold					" .10
Covering for Gold Lustre, to produce Deep Violet					" .25

FRY'S OILS AND MEDIUMS

IN ONE OUNCE BOTTLES AND PINT CANS

	Bottle	Can		Bottle	Can
Balsam Copaiba . . . . .	.20	\$2.00	Fry's Medium . . . . .	.20	\$2.50
Clove Oil . . . . .	.20	2.00	Fry's Oil for Raised Paste . . . . .	.20	2.00
Dresden Thick Oil . . . . .	.35	3.00	Fry's Tinting Oil, Special . . . . .	.20	2.00
English Grounding Oil . . . . .	.20	2.00	Lavender Oil . . . . .	.20	2.00
Fat Oil Turpentine . . . . .	.25	2.75	Tar Oil . . . . .	.20	2.00
Fry's Enamel Medium . . . . .	.20	2.00			
Dresden Thick Oil			1/2 oz. bottle, .20	pint can, \$3.00	
Fat Oil Turpentine			1/2 " " .15	" " 2.75	

FRANZ A. BISCHOFF
HIGH GRADE SPECIALTIES

Colors for China, Dry in Powder



	Per Vial		Per Vial		Per Vial
BLACKS		Sap Green	.25	VIOLETS	
Black	.30	Saxony Green	.20	Pansy	.35
Purple Black	.35	Shading Green	.35	Violet	.35
BLUES		Verdigris	.25	YELLOWS	
Banding Blue	.25	Yellow Green	.30	Albert Yellow	.30
Deck's Blue	.20	GRAYS		Dark Yellow	.35
Robin's Egg Blue	.20	Ashes of Roses	.50	Ivory Yellow	.20
Royal Copenhagen	.35	Gold Gray	.30	Lemon Yellow	.25
Sevres Blue	.20	Neutral Gray	.30	Orange Yellow	.30
BROWNS		White Rose, Gray for Flowers	.20	GLAZES	
Brown Pink	.25	PINKS & PURPLES		Ivory	.20
Dark Brown	.25	American Beauty	.65	Lavender	.20
Finishing Brown	.30	Deep Purple	.40	Salmon Pink	.20
Hair Brown	.25	Magenta	.50	Transparent	.20
Purple Brown	.30	Old Rose	.35	Warm Gray	.20
Vandyke Brown	.20	Peach Blossom	.25	PASTES	
Yellow Brown	.20	Rose	.35	For Mending China	.20
GREENS		Ruby	.75	For Raised Gold	.20
Brown Green	.20	REDS		ENAMELS	
Celadon	.30	Blood Red	.25	Dark Blue	.20
Dark Green	.25	Carmine Flesh	.30	Light Blue	.20
Dark Moss Green	.30	Carnation	.20	Lettuce Green	.20
Deep Blue Green	.20	Dragon's Blood	.50	Pink	.20
Moss Green, A	.20	Flame Red	.25	Turquoise Blue	.20
Moss Green, C	.20	Flesh	.25	Turquoise Green	.20
Night Green	.20	Pompadour	.20	White	.20
Olive Green	.20	Poppy Red	.30	Yellow	.20
Russian Green	.20	Violet of Iron	.20		

Like no other Colors in the market, they are ground in turpentine to secure a fine powder (ready for the dusting-on process) which, when mixed with the oils, will result in a smooth paint. The selection of shades is complete

M. M. MASON'S
OVERGLAZE COLORS FOR PORCELAIN



Per Vial	Per Vial	Per Vial
BLACK	Dark Green .20	REDS
Black, best for painting and outlining .20	Dark Blue Green .30	Blood Red .25
BLUES	Empire Green .25	Carnation .20
Banding Blue .25	Gray Green .20	Hancock's Carmine .25
Copenhagen Blue .25	Moss Green .20	Peach Blossom .20
Royal Blue .75	Myrtle Green .20	Pompadour .20
Turquoise Blue .40	Olive Green .25	Rose .25
BROWNS	Royal Green .20	Ruby .80
Dark YellowBrown .20	Russian Green .25	Yellow Red .25
Finishing Brown .25	Shading Green .25	VIOLETS
Hair Brown .25	Yellow Green .25	Violet .40
Vandyke Brown .20	GRAYS	YELLOWS
Yellow Brown .20	Copenhagen Gray .30	Albert Yellow .25
GREENS	French Gray .45	Egg Yellow .25
Apple Green .20	Pearl Gray .25	Neutral Yellow .25
Black Green .20	Slate Gray .25	Lemon Yellow .25
Blue Green .40	Warm Gray .25	GLAZE
Brown Green .20	PINKS & PURPLES	Ivory .25
Celadon Green .25	Brown Pink .25	Flux .20

FOR GROUND LAYING

English Maroon, Best .75	Matt Deep Red .25	Rose for Grounds .25
Bleachery Blue .25	Matt Old Ivory .25	Salmon .20
Grounding Green .20	Matt Wedgewood .25	Sevres Green .25
Hard Black .25	Blue .30	Trenton Ivory .20
Matt Bronze Green .25		

FOR UNDERGLAZE EFFECTS

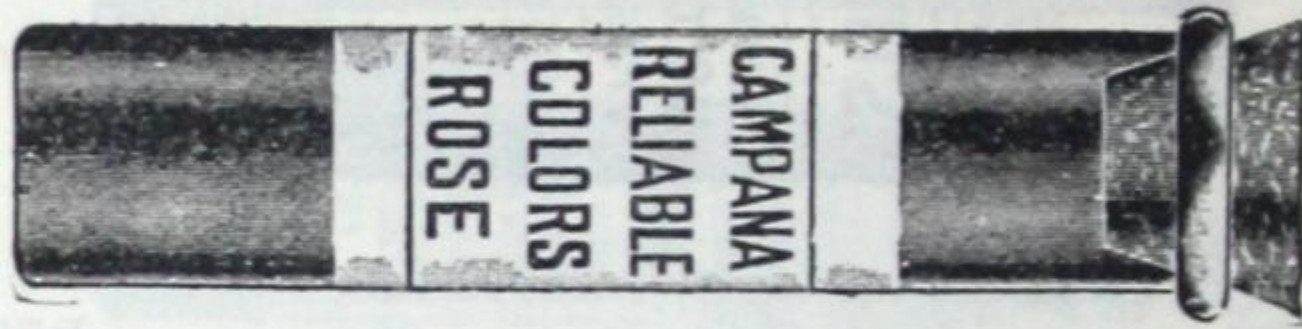
Azure Glaze .40	Gray Blue Glaze .40	Turquoise Glaze .30
Green Glaze .25		

ENAMELS

Aufsetzweiss .25	Hancock's Paste for raised gold .20	Red Enamel .30
Dresden Flux .25	Pink Enamel .25	Turquoise Enamel .25
English Enamel .20		White Enamel, Best .20

D. M. CAMPANA ART CO.'S

RELIABLE MINERAL COLORS



Best Quality, Especially Prepared for Grounding and Painting. In Powder

	Net per Vial		Net per Vial		Net per Vial
Air Blue	.20	Flesh, dark shadow	.20	Poppy Red	.20
Albert Yellow	.13	Flesh, gray	.20	Primrose Yellow	.13
American Beauty	.30	Flesh, shadow	.20	Purple Black, good for grapes	.15
Apple Green	.13	Flesh, soft tint	.20	Rose Color, best	.15
Ashes of Roses	.20	Flesh, transparency	.20	Rose Salmon	.15
Auburn Brown	.13	Flux, soft or hard	.13	Royal Blue	.30
Aztec Blue	.30	Gray Green	.13	Royal Copenhagen Gray	.13
Baby Blue	.13	Green Glaze, for dusting	.13	Royal Green	.13
Banding Blue	.13	Hair Black	.20	Royal Purple	.30
Best Black	.13	Hair Brown	.13	Ruby Purple, brilliant	.45
Black Blue	.13	Imperial Ivory	.13	Ruby Purple, No. 2	.35
Blood Red	.20	Ivory Yellow	.13	Russian Green	.13
Blood Red, No. 2	.13	Ivory Glaze, for dusting	.13	Sevres Blue	.13
Blue Glaze, for dusting	.13	Lavender Glaze, for dusting	.15	Shading Green	.13
Brown Green	.13	Lemon Yellow, rich	.13	Sultan Green, rich	.13
Carnation	.13	Meissen Brown	.13	Sweetpea Pink, soft	.13
Chestnut Brown	.13	Moss Green	.13	Trenton Ivory	.13
Copenhagen Blue	.13	Myrtle Green	.13	Turquoise Blue	.13
Crimson Purple, best	.45	Neutral Yellow	.13	Violet Color	.20
Darkest Green	.13	New Green	.13	Violet of Iron	.20
Dark Violet, No. 2	.13	Olive Green	.13	Violet of Iron, No. 2	.13
Deep Blue Green	.13	Outlining black	.13	Warm Gray	.13
Deep Red Brown	.13	Peach Blossom	.20	Water Green, light	.13
Deep Violet of Gold	.35	Peacock Green	.13	Yellow Brown	.13
Deep Yellow	.13	Pearl Gray	.13	Yellow Green	.13
Egg Yellow	.13	Persian Green	.13	Yellow Red	.20
Empire Green	.13	Pink Glaze, for dusting	.13	Yellow Red, No. 2	.13
Finishing Brown	.20	Pompadour Red, light	.13		
Finishing Brown, No. 2	.13	Pompadour Red, dark	.13		

	Per Vial		Per Vial
Diluting Medium, for outlining	.25	Liquid Bright Gold, purest, no thinner, large	.75
Liquid Bright Gold, purest, no thinner	.37	Mixing Medium, for mixing colors	.18

D. M. CAMPANA ART CO.'S

RELIABLE LUSTRE COLORS

These Tints are all Desirable and Guaranteed

	Net per Vial	½ Vial		Net per Vial	½ Vial
Black . . . . .	.40	.25	Orange . . . . .	.16	.10
Blue Green . . . . .	.40	.25	Pearl, Mother of . . . . .	.20	.12
Blue Gray . . . . .	.25	.15	Pigeon Gray Pearl . . . . .	.25	.15
Brilliant Green . . . . .	.25	.15	Purple . . . . .	.60	.35
Brown . . . . .	.20	.12	Rose . . . . .	.45	.30
Copper Bronze	1.15	.65	Ruby	1.10	.65
Dark Blue . . . . .	.50	.30	Silver Lustre . . . . .	.70	.40
Dark Green . . . . .	.30	.18	Steel Blue . . . . .	.60	.35
Essence, for thinning . . . . .	.10		Transparent Green . . . . .	.40	.25
Gold Lustre . . . . .	.60	.35	Violet . . . . .	.60	.35
Green Pearl . . . . .	.25	.15	Warm Gray . . . . .	.16	.10
Iridescent, strong . . . . .	.60	.35	White . . . . .	.16	.10
Light Green . . . . .	.16	.10	Yellow . . . . .	.16	.10
Marble covering . . . . .	.12		Yellow Brown . . . . .	.16	.10
Olive Green . . . . .	.25	.15	Yellow Pearl . . . . .	.25	.15
Opal . . . . .	.16	.10			

CHINA MARKING PENCILS



Black	per doz., \$1.25	each, .10
Blue, Red, White and Gray	“ 1.40	“ .15

Encased in paper, no wood, therefore easy to sharpen. The best pencil for marking on China or Glass. Packed in Boxes of 1 dozen

Conte Lithographic Pencils (Black) in Wood, No. 1	per doz., .90	each, .10
“ “ “ No. 2	“ .90	“ .10
“ “ “ No. 3	“ .90	“ .10

LACROIX VITRIFIABLE COLORS IN TUBES

For China Painting



BLACKS			
Brunswick Black	per tube,	.45	
Ivory Black	"	.18	
Outlining Black	"	.25	
Raven Black	"	.22	
BLUES			
Air Blue	"	.25	
Blue No. 29	"	.18	
Celestial Blue	"	.25	
Common Blue	"	.18	
Dark Blue	"	.18	
Deep Blue	"	.22	
Deep Ultramarine	"	.30	
Delft Blue	"	.18	
Indian Blue	"	.30	
Lavender Blue	"	.18	
Light Sky Blue	"	.22	
Marine Blue	"	.30	
Old Blue	"	.18	
Old Holland Blue	"	.22	
Sèvres Blue	"	.30	
Sky Blue	"	.22	
Turquoise Blue	"	.30	
Two Fire Blue	"	.22	
Victoria Blue	"	.18	
BROWNS			
Black Brown	"	.22	
Brown M or 108	"	.22	
Brown No. 3	"	.22	
Brown No. 4 or 17	"	.22	
Chestnut Brown	"	.22	
Dark Brown	"	.22	
Deep Red Brown	"	.22	
Gillyflower	"	.22	
Isabella	"	.18	
Light Brown	per tube,	.22	
Light Coffee	"	.18	
Otto Brown	"	.22	
Reddish Brown	"	.22	
Sepia	"	.22	
Shammy Brown	"	.18	
Vandyke Brown	"	.22	
Yellow Brown	"	.22	
CARMINES			
Carmin No. 2	"	.25	
Deep Carmine No. 3	"	.30	
Light Carmine A	"	.22	
Light Carmine No. 1	"	.22	
CARNATIONS			
Carnation, D	"	.22	
Carnation No. 1	"	.22	
Carnation No. 2	"	.22	
FLUX			
Flux	"	.18	
GREENS			
Apple Green	"	.18	
Blue Green, D	"	.37	
Blue Green, L	"	.37	
Bronze Green	"	.30	
Brown Green, No. 6	"	.22	
Celadon	"	.22	
Chrome-Green, 3 B	"	.22	
Chrome Water-Green	"	.18	
Coalport Green, L	"	.25	
Coalport Green, D	"	.25	
Copper Water-Green	"	.18	
Dark Green, No. 7	"	.22	
Deep Blue Green	"	.30	
Deep Chrome-Green	"	.22	

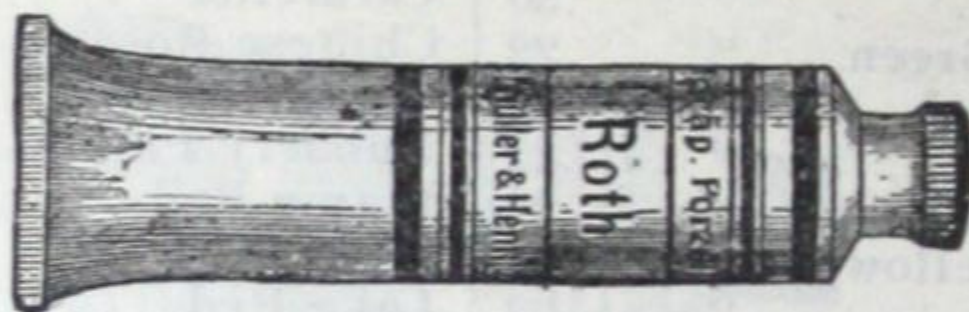
Lacroix Colors — continued

GREENS		Bright Red per tube, .25	
Deep Green	per tube, .22	Capucine Red	“ .22
Duck Green	“ .30	Carmelite	“ .18
Emerald-Stone Green	“ .22	Chinese Rose	“ .22
Grass Green, No. 5	“ .22	Coral Red	“ .18
Green, No. 36 T.	“ .22	Dubarry Pink	“ .30
Grounding Green	“ .22	Flame Red	“ .25
Moss Green J, Yellowish	“ .22	Japan Rose	“ .30
Moss Green V	“ .22	Lake Red	“ .25
Night Green	“ .30	Maroon	“ .75
Olive Green	“ .22	Orange Red	“ .25
Op Green	“ .22	Peach Blossom	“ .37
Rose Leaf Green	“ .25	Pompadour Red No. 23	“ .25
Shading Green	“ .30	Rose	“ .37
Turquoise Green	“ .30	Rose Pompadour	“ .37
		Superior English Pink	“ .25
		Very Fusible Rose	“ .22
GRAYS		RELIEF	
Gold Gray	“ .37	Relief, for Gold	“ .18
Gray for Flesh	“ .25		
Gray for Flowers	“ .25	VIOLETS	
Gray, No. 1, L	“ .22	Deep Violet of Gold	“ .45
Gray No. 2	“ .22	Gray Violet of Iron	“ .32
Neutral Gray	“ .22	Light Violet of Gold	“ .37
Pearl Gray, No. 6	“ .22	Violet of Iron	“ .22
Royal Copenhagen Gray	“ .30		
Royal Copenhagen Warm	“ .30	WHITES	
Steel Gray	“ .22	Chinese White	“ .22
Turtle-dove Gray	“ .22	Permanent White	“ .18
Warm Gray	“ .22	Relief White	“ .22
OCHRES		YELLOWS	
Dark Ochre	“ .22	Albert Yellow	“ .37
Yellow Ochre	“ .22	Canary Yellow	“ .25
PURPLES		Chinese Yellow	“ .18
Crimson Lake	“ .37	Egg Yellow	“ .30
Crimson Purple	“ .65	Gold Bud	“ .22
Deep Purple	“ .55	Ivory Yellow	“ .22
Fusible Lilac	“ .22	Jonquil Yellow	“ .18
Lauve	“ .37	Maize	“ .22
Mansy	“ .45	Orange Yellow	“ .18
Purple, No. 2	“ .45	Permanent Yellow	“ .18
Ruby Purple	“ .75	Silver Yellow	“ .18
REDS		Salmon	“ .22
Bengal Rose	“ .22	Yellow for Mixing	“ .18
West Orange	“ .22		

Always keep tube colors in a cool place, especially during the summer to prevent expansion. To prevent forming a deposit and becoming hard, change their position occasionally

MULLER & HENNIG'S
ROYAL DRESDEN CHINA COLORS

In Tubes. For Painting on Glazed China, Tiles, Etc.



BLACKS					
No. 31.	Brunswick Blk.	per tube,	.70	No. 10.	Shading Green per tube, .30
32.	Outlining Black	"	.30	39.	Turquoise Green " .60
BLUES				6.	Yellow Green " .30
No. 12.	Air Blue	"	.35	PINKS AND PURPLES	
16.	Banding Blue	"	.25	No. 21.	Blue Violet " .40
14.	Carmine Blue	"	.65	18.	Carmine Purple " .70
13.	Dark Blue	"	.45	19.	Deep Purple " .75
56.	Delft Blue	"	.25	20.	Deep Violet " .75
26.	Light Blue	"	.30	17.	Rose Purple " .45
15.	Turquoise Blue	"	.60	38.	Rose " .40
BROWNS				54.	Ruby Purple " .75
No. 43.	Chestnut Brown	"	.30	55.	Violet of Iron " .25
36.	Chocolate Brown	"	.30	REDS	
30.	Dark Brown	"	.25	No. 24.	Brown Red " .25
27.	Finishing Brown	"	.30	53.	Carmine " .45
28.	Sepia Brown	"	.25	34.	Flesh Red " .25
29.	Yellow Brown	"	.25	23.	Pompadour Red " .25
GRAYS				44.	Sup. Pomp. Red " .35
No. 40.	Flux	"	.25	22.	Yellow Red " .25
37.	Gray for Flesh	"	.30	WHITE	
33.	Gray for Flowers	"	.30	No. 1.	Relief White " .25
GREENS				YELLOWS	
No. 42.	Black Green	"	.30	No. 41.	Albert Yellow " .40
8.	Blue Green, D	"	.40	4.	Canary Yellow " .25
7.	Blue Green, L	"	.40	2.	Egg Yellow " .25
52.	Brown Green	"	.30	35.	Ivory Yellow " .25
9.	Dark Green	"	.30	3.	Lemon Yellow " .25
25.	Grass Green	"	.30	5.	Perm. Yellow " .25
11.	Olive Green	"	.30	45.	Yellow Ochre " .25

Sample showing full line above colors fired . . . each, \$3.00

HALL'S SPECIALTIES FOR CHINA PAINTERS

Hall's Superior Paste, prepared for Raised Gold, ready mixed, in 1/2 oz. glass jars	per jar, .25
Hall's White Enamel, for Relief Work, opaque, prepared for applying over fired gold or on plain surfaces of china, in 1/2 oz. glass jars	per jar, .25
Hall's Gold and Color Eraser for removing fired gold and color from china, in 1/2 oz. wooden waxed bottles	per bottle, .25

GOLD, SILVER AND PLATINUM IN LIQUID FORM



MARSCHING'S

Marsching's Superior Liquid Bright Gold, in packages containing one vial of Liquid Bright Gold and one vial of Essence for thinning	per doz. pkgs. \$9.00	each, .75
Marsching's Liquid Burnish Gold "	9.00	" .75
" " Bright Silver "	10.00	" .90
" " " Platinum "	10.00	" .90

MASON'S

Mason's Liquid Bright Gold	per doz. vials, \$6.00	each, .50
" " " Silver "	5.40	" .45
" " " Platinum "	4.20	" .35

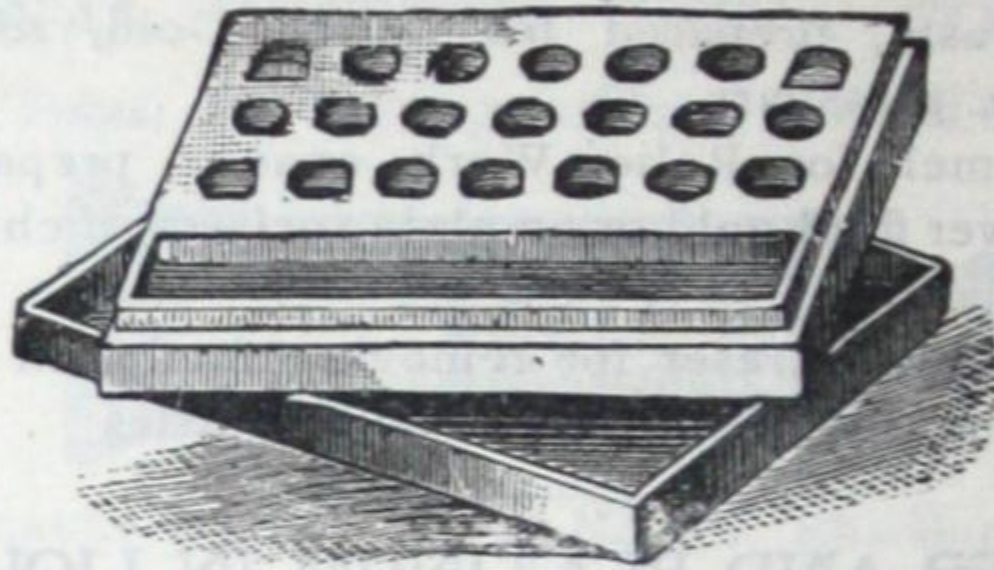
FRY'S

Fry's Liquid Bright Gold	per vial, .50
" " Silver	" .60
" " Platinum	per 1/2 vial, .75 " 1.50
Roman Gold	per box, \$1.00
Unfluxed Gold	" 1.00
Green Gold	" 1.00
Fry's Tracing Paper Wax for fastening tracings. Can be moulded with the fingers; something new and invaluable	per box, .10
Fry's Graphite Transfer Paper, made especially for porcelain work, size, 15x20 1/2 inches	per sheet, .10
Fry's Vitriifiable Cement for mending china	per vial, .20
Fry's Gold Essence, 1 oz. bottle	each, .50

GLAZED WHITE CHINA TILES FOR DECORATION

Size 3x6 in. per doz., \$1.25 each, .15	Size 8x8 in. per doz., \$6.00 each, .50
" 6x6 " 2.40 " .25	" 10x10 " 12.00 " 1.00

CHINA PALETTE FOR MIXING CHINA COLORS



Twenty-one wells with slant and cover . . . per dozen \$7.20 each, .75

PENCILS FOR DRAWING ON CHINA

Conté Lithographic Pencils (Black) Nos, 1, 2 and 3 . . . each, .10
 Faber's Glass Pencils, Blue, White and Yellow . . . " .15

JEWELS

Rubies, Sapphires, Emeralds, Topazes, Crystals, Nos. 1 to 8 per dozen, .10
 Cut Jewels of the same colors and sizes, Nos. 1 to 8 . . . " .20
 Cement for Fastening Jewels " 3.00

FRENCH GLASS BRUSHES

Bound With White Cord



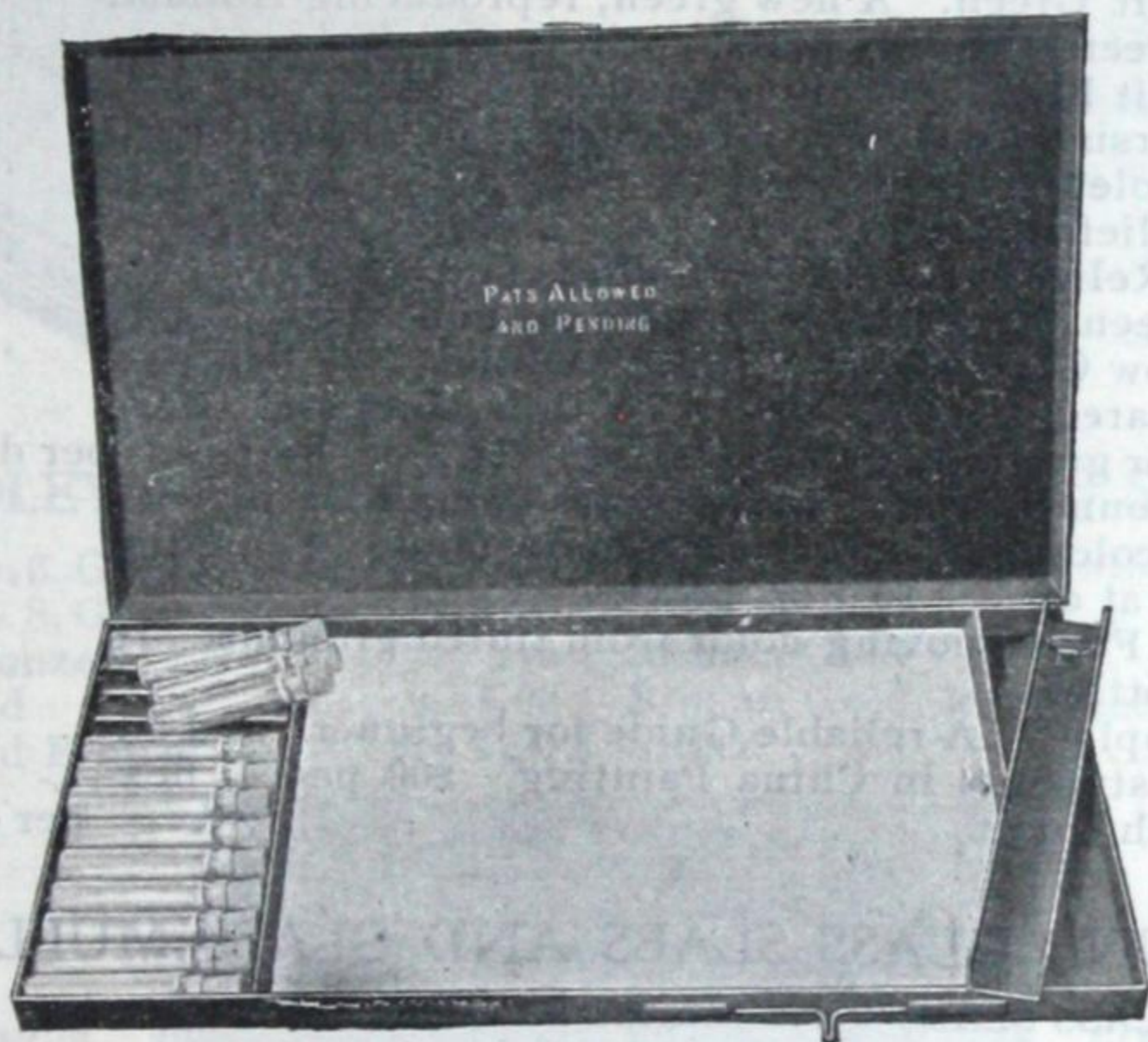
No. 1, 8 inches long, $\frac{1}{2}$ inch diameter each, .25
 2, 8 " " $\frac{3}{4}$ " " " .50
 3, 8 " " 1 " " " .75

Glass brushes are to give fired gold a satin finish, simply by rubbing with the brush. The fine threads of glass break off easily and are apt to irritate the skin unless gloves are worn. Be careful not to allow these fine splinters to settle on unfired paintings as the work will be ruined in firing

SUNDRIES BOOKS

Tried by Fire, with colored plates, by Mrs. Franckleton . . . each, \$6.00
 Hand-Book on China Painting, by M. Louise McLaughlin . . . " .75
 Hand-Book on Pottery Painting, by M. Louise McLaughlin . . . " 1.00
 Suggestions to China Painting " 1.00
 Hand-Book on China Painting, by John C. L. Sparks . . . " .45
 China Painting, by Florence Lewis, with 16 colored plates . . . " 2.50
 A Guide to Porcelain Painting, by S. T. Whitford . . . " 1.00
 Hints for China and Tile Decorators " .50
 How to apply. Osgood " .75

ECLIPSE INDESTRUCTIBLE
 CHINA PAINTERS'
 COMBINATION BOX AND PALETTE



NO. 10

No. 10. China Painting Outfit, size over all, 8×13½ inches each, \$1.50
 Extra Slabs for same " .50

The above illustration shows just what this Palette is. A combination box, to hold thirteen vials or bottles of color, so arranged that you have all your material in the space of 8×13½ inches, including mixing space. This Palette will at once appeal to all china painters by its simplicity and easily removable slab. The hinged partition on the right side of the Palette can be pressed down, the slab raised with the edge of the guard and removed without a loss or smearing of any one of the colors that may be on it

GOLD ESSENCE

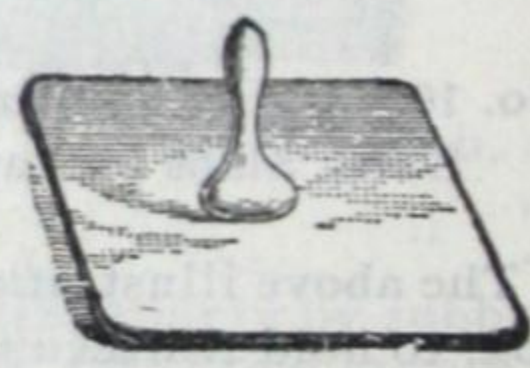
The Roessler & Hasslacher Gold Essence, 1 oz. bottle . . . each, .25

SPECIALTIES OF THE OSGOOD ART SCHOOL

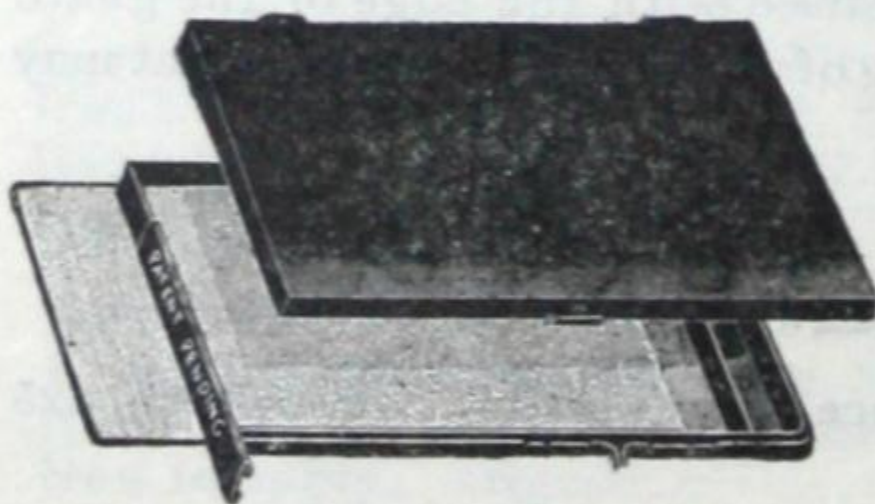
Standard Pink. Stands repeated firings; the most beautiful pink ever produced; nothing excels it for roses	per vial,	.40
Standard Jaque Rose. The most delicate pink as well as the rich dark "Jaque Rose" effect produced with it	"	1.00
Holland Delft Green. A new green, reproducing Holland Delft Green, the only green entirely satisfactory	"	.25
Holland Delft Blue. Finely ground	"	.40
Standard Persian Red. For monochrome or solid grounds	"	.25
Standard Violet	"	.40
Superior Relief Enamel	"	.30
Art School Relief Paste (for both china and glass)	"	.30
Coalport Green Glaze Color. Finely ground	"	.30
Serves Yellow Glaze Color. Finely ground	"	.30
Finely Prepared Tinting Oil. (To thin Matt and Glaze colors for grounding and painting.) In 1 oz. bottles	per doz.,	3.60
Standard Grounding Oil. It simplifies ground-laying with powder colors. The process is continuous. The Color hardens at once. In 1 oz. bottles	"	3.00
Tar Paste. For removing color from tinted grounds. In 1/2 oz. bottles	"	3.60
"How to Apply." A reliable Guide for beginners and advanced students in China Painting. 200 pages, flexible cloth cover	per copy,	.75

GROUND GLASS SLABS AND GLASS MULLERS

GROUND GLASS SLABS			GLASS MULLERS		
4x4 in.	each,	\$.10	1/2 in. diam.	each,	.10
6x6 "	"	.20	3/4 "	"	.15
8x8 "	"	.40	1 "	"	.20
10x10 "	"	.75	1 1/4 "	"	.25
12x12 "	"	1.00	1 1/2 "	"	.30
14x14 "	"	1.25	2 "	"	.35
16x16 "	"	1.75	2 1/2 "	"	.70
			2 3/4 "	"	1.25
			3 "	"	1.75

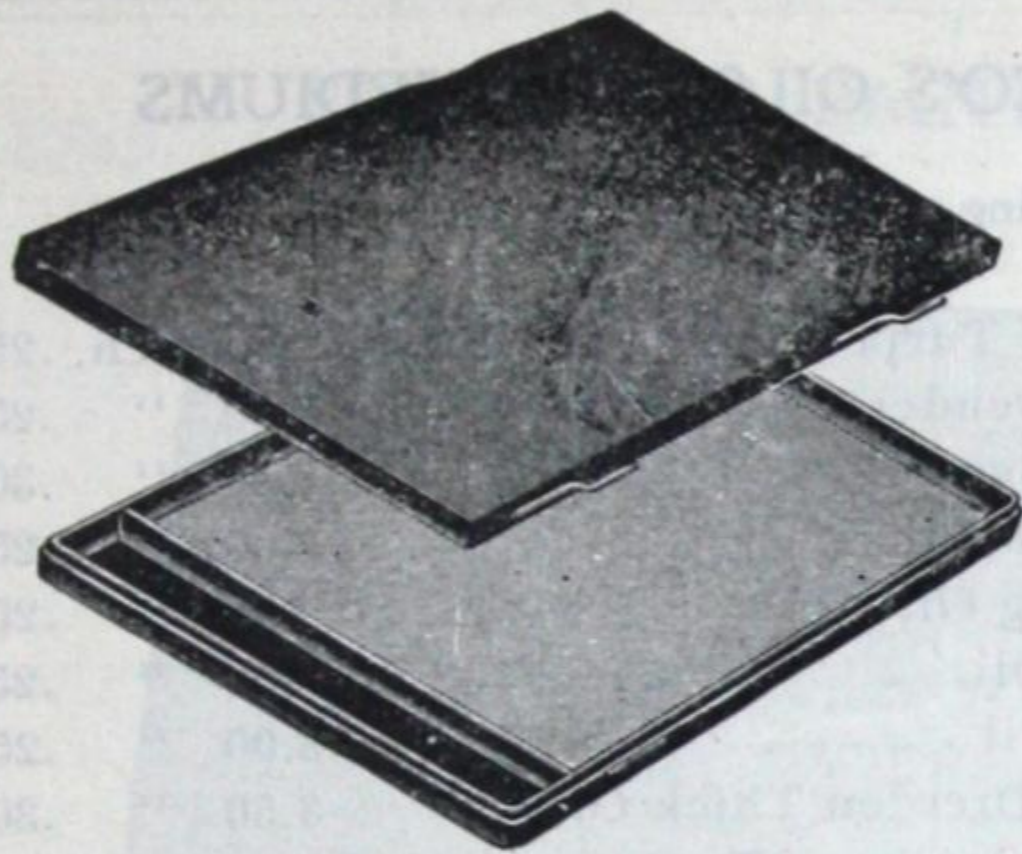


THE NEW CHINA PAINTER'S PALETTE, NO. 3



No. 3. Palette, 9x13 in., with slab, space for colors and brushes each, \$1.50
Opal glass slabs cut to fit " .50

This Palette is indestructible; one end can be taken off, the glass slab removed and another inserted. If a slab is filled with colors not in use, or is broken, it can be removed and a new slab inserted



FRY'S IMPROVED COVERED PALETTE

For Mixing Gold or Colors

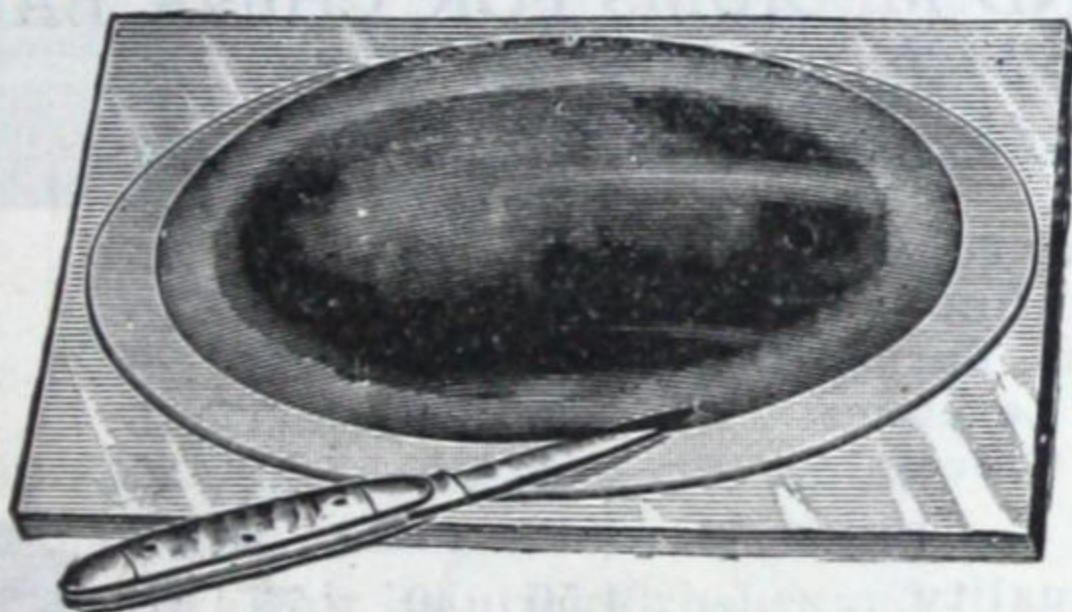
The gold palette consists of a porcelain slab set into a japanned box with brush tray and cover

Size 6× 7 in., (for gold) each, .75
 " 9×13 " (for colors) " 1.25

COOLEY'S PREPARED GOLD ON GLASS SLABS

Brown, No. 6, Gold Bronze	each, \$1.00	Hard or Unfluxed for overcolor	each, \$1.00
Brown, No. 8, Gold Bronze	" 1.00	Light Gold	" .75
Copper Bronze	" .75	Roman Gold	" 1.00
Green Gold	" 1.00	Roman Gold, large size	" 3.00
Green Gold Bronze	" 1.00	Silver	" .50

HASBURG'S



GOLD

Hall's Roman Gold	per box, \$1.00	Marching Hard Gold	per box, \$1.00
Hall's Hard Gold	" 1.00	Marching Rom. Gold, large	" 3.00
Hasburg's Roman Gold	" 1.00	Marching Liquid, bright	" .75
Marching Roman Gold	" 1.00	Sherratt Roman Gold	" 1.00

COOLEY'S LIQUID OILS AND MEDIUMS

For China Painting. One Ounce Bottles

Aniseed Oil	each, .25	Oil of Lavender	each, .25
Balsam Copaiba	" .25	Oil of Tar	" .25
Fat Oil of Turpentine	" .25	Rect'd Spirits Turpentine	" .15
Grounding Oil	" .25	Rect'd Spirits of Tar	" .15
Genuine Dresden Thick Oil	" .30	Tinting Oil	" .25
Oil of Cloves	" .25		

FROST & ADAMS CO'S OILS AND MEDIUMS

For China Painting. One Ounce Bottles



Fat Oil of Turpentine	per doz., \$2.00 each, .25
Oil of Lavender	2.00 " .25
Oil of Cloves	3.50 " .30
Balsam Copaiba	2.00 " .25
Grounding Oil	2.50 " .25
Aniseed Oil	3.00 " .25
Tinting Oil	3.00 " .25
Genuine Dresden Thick Oil "	3.50 " .30
Rectified Spirits of Tar	1.50 " .15
Oil of Tar	2.50 " .25
Rect'd Spirit of Turpentine "	1.00 " .10

OILS AND MEDIUMS FOR CHINA PAINTING

LACROIX'S

	1 oz. bottles		½ oz. bottles	
	Doz.	Each	Doz.	Each
Medium (for Dry colors)	\$2.40	.25	\$1.50	.15
Rectified Turpentine	1.00	.10	.70	.10
Rectified Fat Oil, Turpentine	3.75	.35	2.00	.20
Rectified Oil of Lavender	2.75	.25	1.50	.15
Rectified Oil of Cloves	4.50	.40	2.75	.25

DRESDEN

Thick Oil, 1st quality	4.50	.40	2.75	.25
Thick Oil, 2d quality	3.50	.30	2.00	.20
Medium for Dry Colors	3.50	.30	2.00	.20

DOMESTIC

Domestic Fat Oil Turpentine	2.75	.25	1.50	.15
Extra Balsam Copaiba	2.75	.25	1.50	.15
Rectified Spirits of Tar	1.50	.15	1.00	.10
Oil of Tar	2.75	.25	1.50	.15
Aniseed Oil	5.50	.50	3.00	.25
Best English Grounding Oil, to dust dry colors on	2.75	.25	1.50	.15
Tinting Oil, to thin colors for light grounds	3.00	.25	2.00	.20



Essence, to thin Liquid Bright Gold, 20 gram. bottles doz., \$3.00 each, .25

FRY'S CHINA PAINTING OUTFITS



OUTFIT "A"

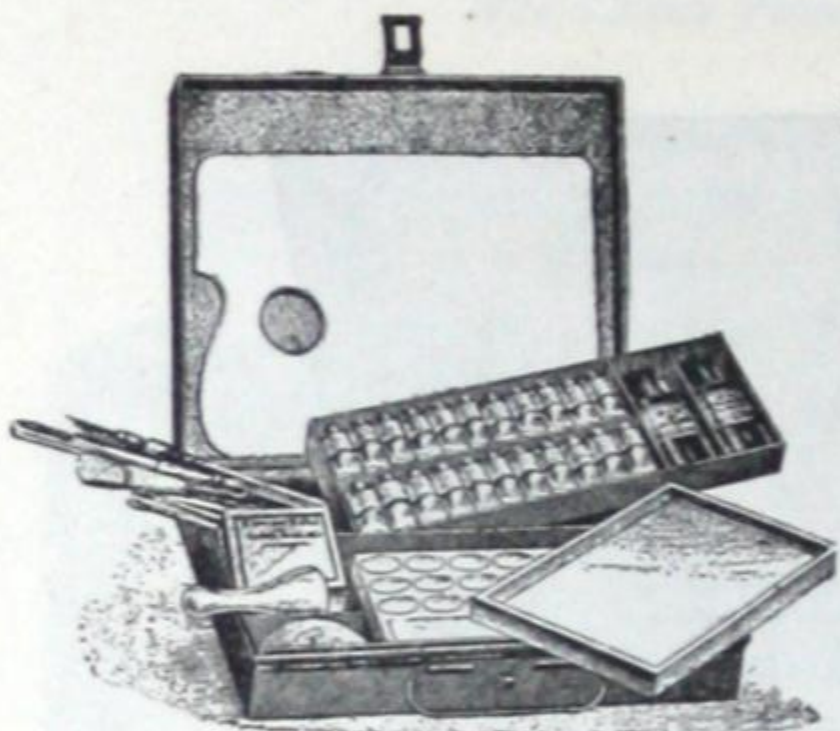
Polished Wood Box, $3\frac{3}{4} \times 8\frac{1}{2} \times 1\frac{3}{8}$ inches, containing
 12 vials Fry's China Colors, 1 bottle Fry's Medium,
 1 Palette Knife, 3 Camel Hair Painting Brushes and
 1 Red Sable Liner each complete, \$3.50

OUTFIT "B"

Polished Wood Box, $3\frac{3}{4} \times 10\frac{1}{8} \times 1\frac{3}{8}$ inches, containing
 15 vials Fry's China Colors (including Ruby), 1
 bottle Fry's Medium, 1 Palette Knife, 5 Camel Hair
 Painting Brushes and 1 Red Sable Liner each complete, \$4.50

The colors in the above Outfits are in regular sized vials and can be re-
 placed at catalogue prices. See pages 86 and 87

EMPTY JAPANNED TIN BOXES FOR CHINA COLORS

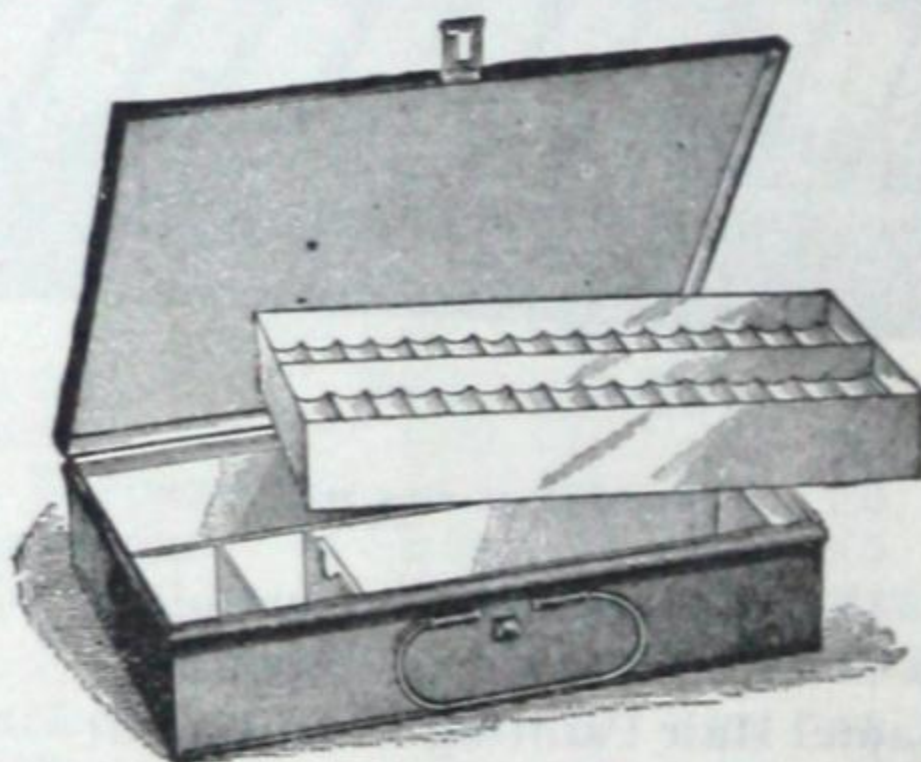


No. 2. Size $10 \times 8\frac{1}{4} \times 1\frac{5}{8}$ in.
24 divisions . . . each, \$2.00

4. Size $11\frac{1}{4} \times 8 \times 1\frac{5}{8}$ in.
12 divisions . . . " 1.50

5. Size $11\frac{1}{4} \times 8 \times 1\frac{5}{8}$ in.
18 divisions . . . " 1.75

NEW BOXES FOR CHINA MATERIALS



No. 1	VD.	Size $6\frac{1}{2} \times 11\frac{1}{2} \times 1\frac{1}{2}$ in.	18 divisions	.	.	each, \$1.50
$1\frac{1}{2}$	VD.	" $7 \times 11 \times 2\frac{1}{2}$	" 18	"	"	3.00
2	VD.	" $8\frac{1}{4} \times 10 \times 1\frac{5}{8}$	" 32	"	"	2.00
3	VD.	" $8\frac{1}{4} \times 12\frac{3}{8} \times 1\frac{5}{8}$	" 40	"	"	2.50
4	VD.	" $9\frac{1}{2} \times 13\frac{1}{2} \times 2$	" 44	"	"	3.00
4	VD.	" $9\frac{1}{2} \times 13\frac{1}{2} \times 2$	" 44	"	with Ideal Palette	4.25
1	VD.	" $3\frac{3}{4} \times 7\frac{3}{4}$	Ground Glass Slab for No. 1 VD. Box	"	"	.25
2	VD.	" $3\frac{1}{4} \times 6\frac{3}{4}$	" " " " 2	"	"	.25
3	VD.	" $3\frac{1}{4} \times 7$	" " " " 3	"	"	.25

The No. $1\frac{1}{2}$ VD Box is arranged for handled brushes, etc., besides vials or tubes of Color; the only one including the "Special" Ideal Palette

The No. 4VD Box is arranged for handled brushes, etc., besides vials or tubes of Color; accommodates the regular size Ideal Palette. The Ideal Palette furnished with this box has a ring handle in the cover

BLOODSTONE BURNISHERS



No. 5. Polished Wooden Handles, 7 inch . . . each, \$1.50

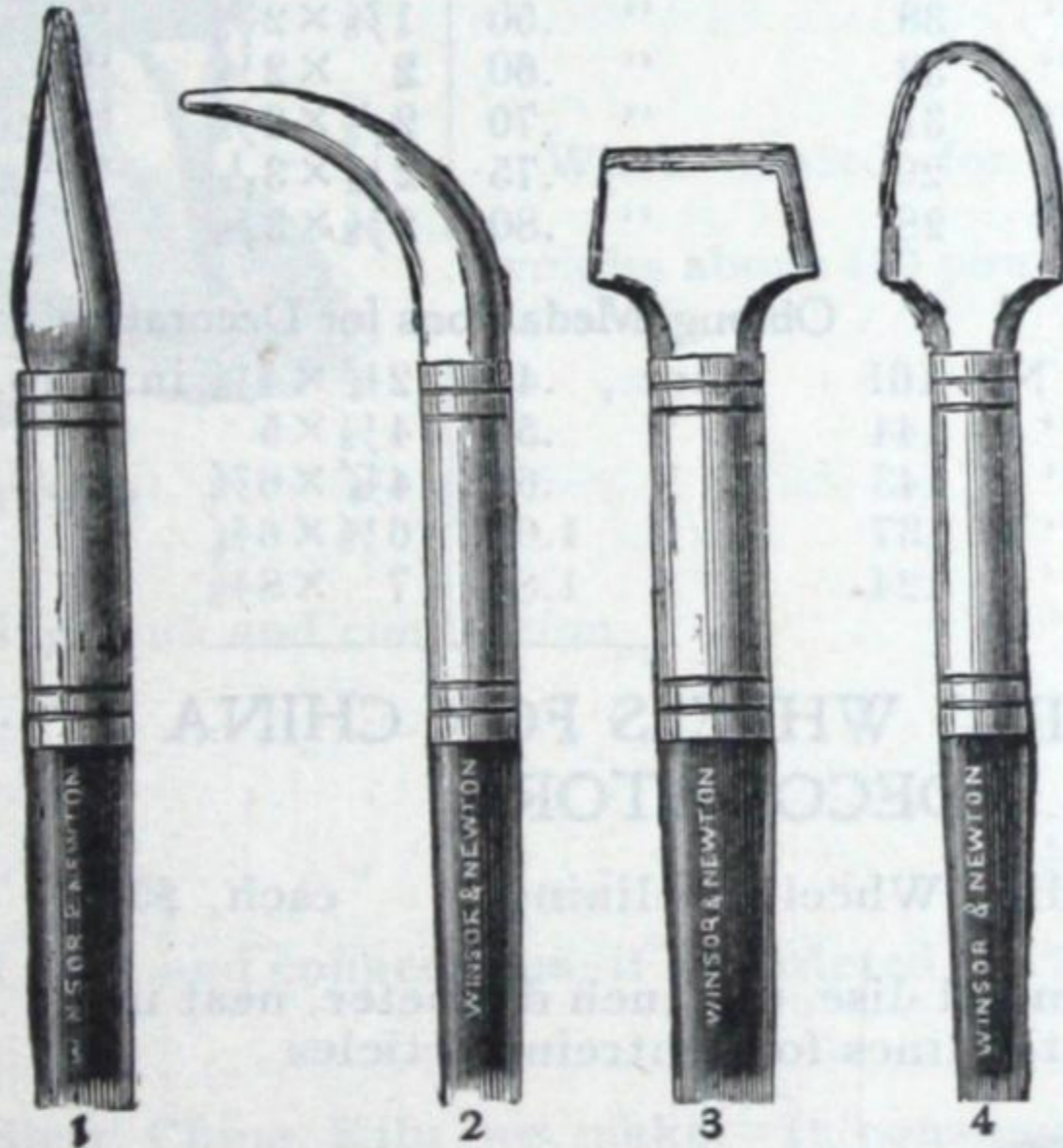


No. 13. Polished Wooden Handles, 7 inch . . . each, \$1.20

IVORY, AGATE AND WOOD TRACERS

All Ivory, 5 inch	each, .40
Ivory Point, Ebony Handle, 5 inch	" .35
Ivory Point, Boxwood Handle, 5 inch	" .30
Agate, Polished Wooden Handle	" .30
All Ebony, double pointed, 6½ inches	" .10

ILLUMINATING AGATE BURNISHERS

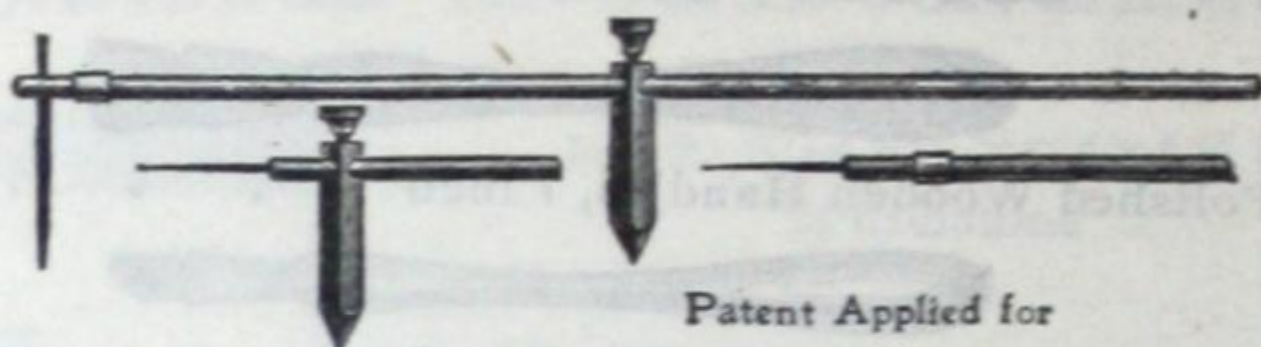


No. 1. Extra Small size, Pencil Pointed	each, .50
2. Round and Curved	" .55
3. Flat or Wedged Shape	" .65
4. Flat and Round Pointed	" .65

HASBURG'S PERFECT PLATE DIVIDER

Paper Divider, 12 inch diameter, in mailing tube . . . each, .10
 Divides in 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, etc., parts

HASBURG'S NEW KERAMIC GAUGE



Patent Applied for

Hasburg's New Ceramic Gauge each, .50

It is a perfect marking and dividing gauge for china and glass painters. Locates centre of plates, etc., instantly. Holds a needle for making stencils, etc. Makes circles up to sixteen inches. Insures accurate, easy and rapid work in conventional designs, etc.

FINEST DRESDEN CHINA MEDALLIONS

Oval Medallions for Decorating

1 × 1 ³ / ₈ in., No. 35	doz., .40	1 ⁵ / ₈ × 2 ¹ / ₈ in., No. 26	doz., .90
1 ¹ / ₈ × 1 ³ / ₈ " 33	" .50	1 ⁷ / ₈ × 2 ⁵ / ₈ " 23	" 1.00
1 ¹ / ₈ × 1 ³ / ₈ " 32	" .60	2 × 2 ¹ / ₂ " 21	" 1.10
1 ¹ / ₄ × 1 ⁹ / ₈ " 31	" .70	2 ¹ / ₈ × 2 ⁵ / ₈ " 17	" 1.20
1 ³ / ₈ × 1 ³ / ₄ " 29	" .75	2 ¹ / ₂ × 3 ¹ / ₈ " 16	" 1.80
1 ¹ / ₂ × 1 ⁵ / ₈ " 28	" .80	2 ⁵ / ₈ × 3 ⁵ / ₈ " 15	" 3.00

Oblong Medallions for Decorating

3/4 × 1 in., No. 161	doz., .40	2 ³ / ₄ × 4 ¹ / ₈ in., No. 110	doz., \$4.80
7/8 × 1 ¹ / ₈ " 144	" .50	4 ¹ / ₈ × 5 " 116	" 9.60
1 × 1 ¹ / ₄ " 143	" .60	4 ³ / ₄ × 6 ⁷ / ₈ " 105	" 14.40
1 ¹ / ₂ × 1 ³ / ₄ " 137	" 1.00	6 ¹ / ₈ × 6 ³ / ₄ " 101	" 21.60
1 ³ / ₄ × 2 ¹ / ₄ " 124	" 1.80	7 × 8 ³ / ₈ " 315	" 28.80

BANDING WHEELS FOR CHINA DECORATORS

No. 1. Banding Wheel, for lining each, \$5.00

Polished metal disc, 6¹/₂ inch diameter, neat iron stand, indented lines for centreing articles



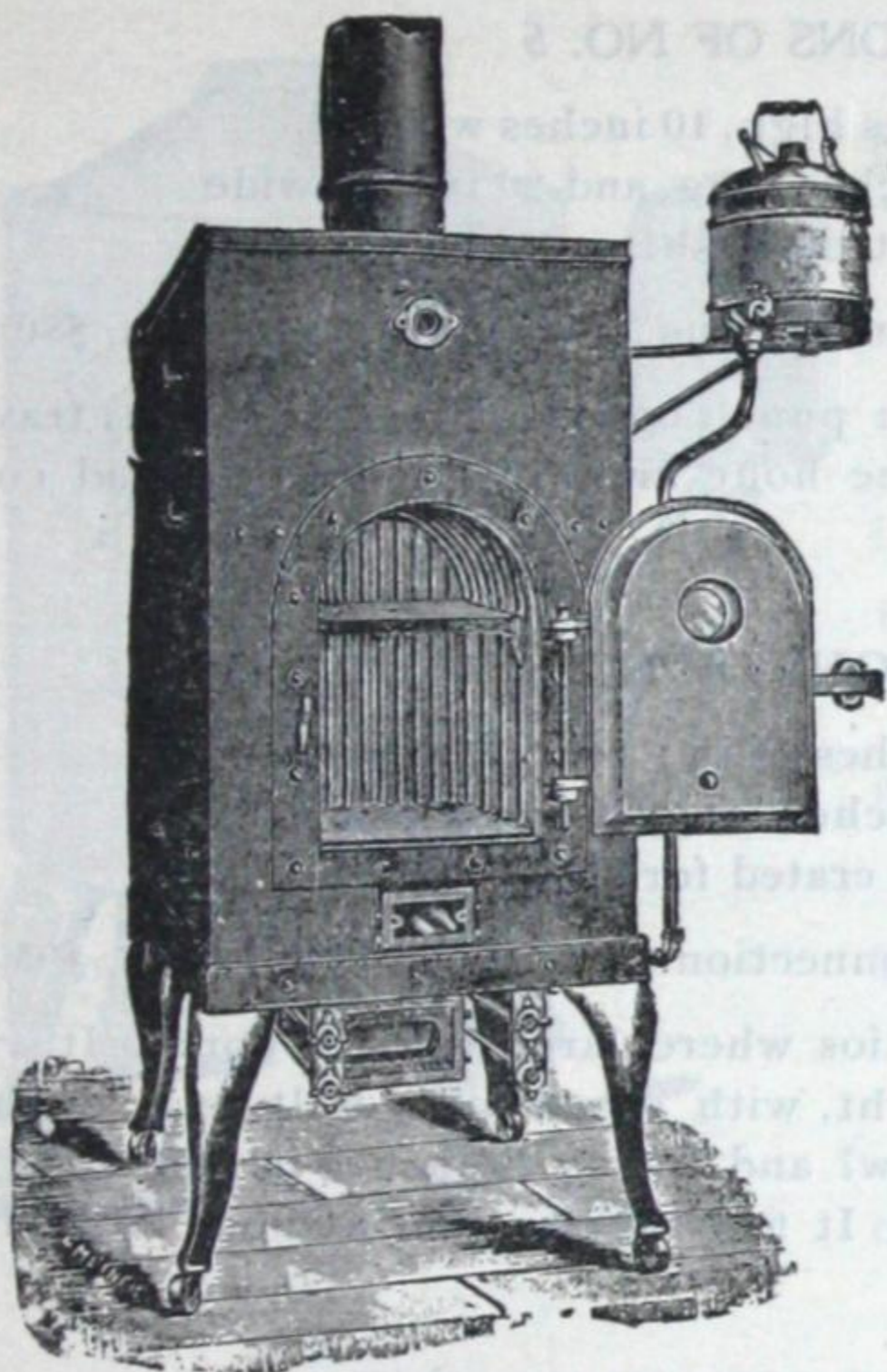
NO. 1

No. 2. Banding Wheel for lining each, \$13.50

Polished metal disc, 8³/₄ inch diameter, turning on steel pivot. Heavy iron floor stand with set screw for adjustment to various heights



NO. 2



CAULKINS' CHINA KILNS

DIMENSIONS OF NO. 4

Inside — 15 inches long, 14 inches high, 9 inches wide

Outside — 40 inches high, 21 inches long, 18 inches wide

When crated for shipment it weighs about 450 pounds

NO. 6 STYLE

No. 4 Kiln, including tank and connection	each, \$48.75
Additional muffle	" 4.75
Lined Elbows	" 2.50
Lined Pipe	per length, 3.00

Without oil tank and connections, if so ordered, \$2.75 less

This is the smallest China Kiln we make. It consumes about one gallon of oil and fires in about one hour and fifteen minutes. It is practical for ordinary studio work, and will receive the 9 inch jardiniere and 13½ inch punch bowl and tete-tete trays

No. 4 is built to use a fire clay muffle, which may be easily set in or taken out, and the opening filled in with asbestos fibre in accordance with directions

DIMENSIONS OF NO. 5

Inside — 19 inches long, 15 inches high, 10 inches wide

Outside — 45 inches high, 25 inches long, and 20 inches wide

Weighs about 550 lbs. when crated for shipment

No. 5 Kiln, including tank and connections each, \$80.00

This size will admit the 14 inch punch bowls, 21 inch ice cream trays, 14 inch table tops. It fires in one hour and fifteen minutes, and consumes a gallon and a half of oil

DIMENSIONS OF NO. 6

Inside — 21 inches deep; 17 inches high; 14 inches wide

Outside — 50 inches high, 25 inches long, 20 inches wide

Weighs about 700 pounds when crated for shipment

No. 6 Kiln, including tank and connections each, \$95.00

This Kiln is practical for studios where large work is done. It will admit the Beleek tankards upright, with space for a stilt or a ring beneath also the 16 inch punch bowl and a tray 20 inches in diameter, or an ice cream tray 24 inches long. It fires in one hour and one half with two gallons of oil

DIMENSIONS OF MINATURE KILN

Inside — 12 inches long; 5 inches wide; 3 inches high

Minature Kiln, complete each, \$30.00

Lined Elbows " 2.50

Additional Muffles " 1.00

Lined Pipe per length, 3.00

This Kiln fires porcelain in about fifteen minutes. It is also used by jewelers and enamellers and can be held at a high heat for ten hours, consuming about 6 gallons of oil or less. The radiation of heat from it is scarcely perceptible

Nos. 5, 6 and 7 Kilns are of tubular construction, so that the lining of the oven is a portion of the construction of the kiln itself. Any of these tubes or different portions being independent parts, may be replaced, without interfering with the rest of the kiln. The kilns are on castors so that it is not difficult to move them, and it is never necessary to lift their full weight

Delivered free on board cars. No charge for boxing

CAULKINS' NEW REVELATION KILN

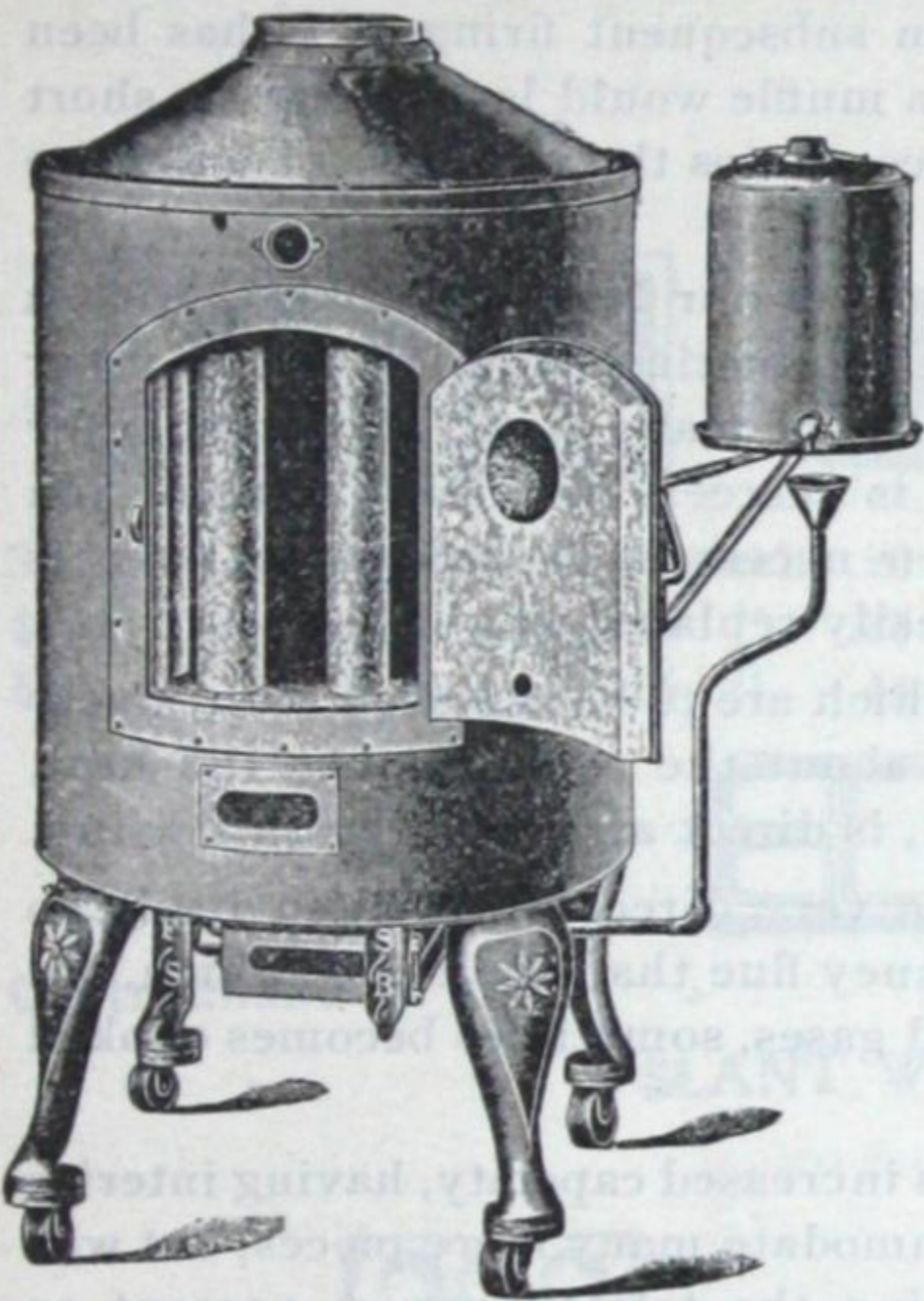
DIMENSIONS OF NO. 3

Inside — 15 inches, diameter, 18 inches high, 47 inches circumference

Outside — 77 inches circumference, 51½ inches high

Weight when crated, about 500 pounds

No. 3 Kiln, including necessary connections, each, \$62.00



It combines the advantages of the round and muffle kilns, together with all the good points of our larger kilns of tubular construction. It will meet the desires of those who prefer to stack in a round oven, yet without having to lift the back-breaking lids of other round kilns, as the ware is stacked through a door in all Revelation Kilns

The new kiln will largely take the place of the No. 4, which, notwithstanding its many friends, has never satisfied us. We have supplied the demand for it, at the same time working to perfect a kiln, similar or somewhat larger in size, which would more nearly approximate our ideas of a perfect kiln. We feel that, with the experience we have had with the tubular construction of the Nos. 5, 6 and 7, we have achieved our object in the No. 3

We shall continue to sell the No. 4 to those who desire it, but the advantages of the new No. 3 are so obvious, we are assured that it will give the same unparalleled satisfaction of our other kilns of tubular make

In the first place, the ever-anticipated breakage of the muffle, which is a part of the No. 4, will be obviated. A muffle, being made of one piece

of fire-brick, is bound to give way during the expansion caused by high heat, forming cracks, which enlarge in subsequent firings. It has been impossible for us to foretell whether a muffle would last a long or short period, but, when one gives out, it necessitates the purchase of an entire new muffle

The No. 3 is built on the same plan as our Nos. 5, 6 and 7, with a heavy outer wall of fire-brick and non-conducting material, and an inner tubular lining. This lining, being made of many parts, allows room for expansion without harm, so that it is scarcely necessary to take even repairs into consideration. Yet, when necessary, any separate part, as a single tube or floor plate, may be easily replaced at a slight cost

The removable tubes at the door, which are to be replaced after stacking, form a complete circle of flame about the oven, so that the heat, which is usually reflected at the front, is direct all around in this kiln

Also, from its construction, it has a very direct draught in itself, so that it will require a less perfect chimney flue than the No. 4, which, not having as free an outlet for smoke and gases, sometimes becomes choked in case of a poor draught

Another advantage of the No. 3 is its increased capacity, having interior dimensions which will not only accommodate many more pieces, but will also admit much larger ones, including the tall shapes at present so much in vogue, and, as the oven is unusually high, these may be stacked upright

Instead of the fire-clay plug at the side, as in the No. 4, there is a mica window beneath the door, which gives direct access to the fire chamber, and there is also a window at the top, above the door, through which the flames may be seen

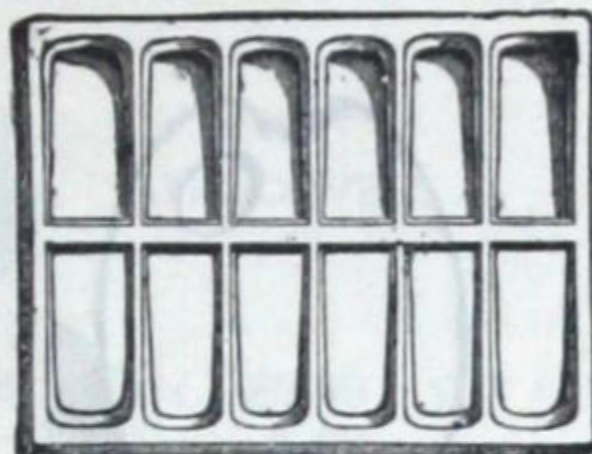
All the other admirable features which have proved practical in our larger Revelation Kilns, have been embraced in the No. 3: — as the square burner, by means of which, for a special purpose, the heat may be thrown or held in any part of the oven at will

The oil can is separate, and to be placed upon a bracket attached to the side of the kiln, and the feed pipe is connected at the factory

The kiln proper, base and legs, are all built together, and as the whole is upon castors, it is a simple matter to remove the crate and roll into place, without the necessity of lifting its full weight

A firing will consume about the same quantity of kerosene oil as the No. 4 — from one and one half to two gallons — and takes from an hour and fifteen minutes to an hour and one half for a firing

DIVIDED SLANTS AND CENTRE SLANTS

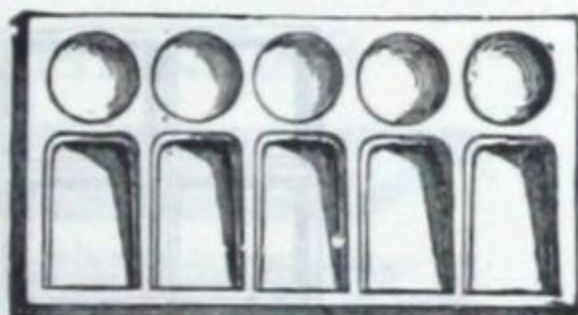


3 Divisions per doz., \$1.55 each, .20	6 Divisions per doz., \$3.60 each, .50
4 " " 2.45 " .35	8 " " 5.25 " .65
5 " " 3.15 " .45	12 " " 8.40 " .85



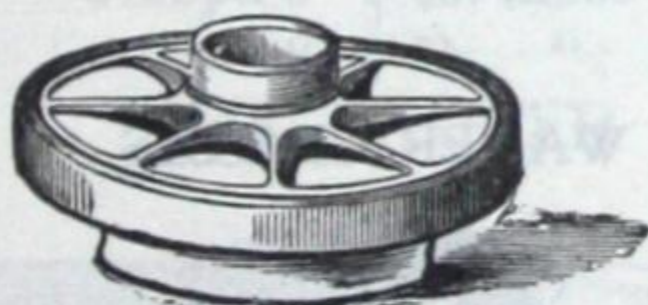
Centre Slant per doz., \$2.25 each, .35

SLANT WELL SLABS



Box or 3 Well Slabs	each, .30
5 Well Slabs	" .65

ROUND SLANT AND BASIN



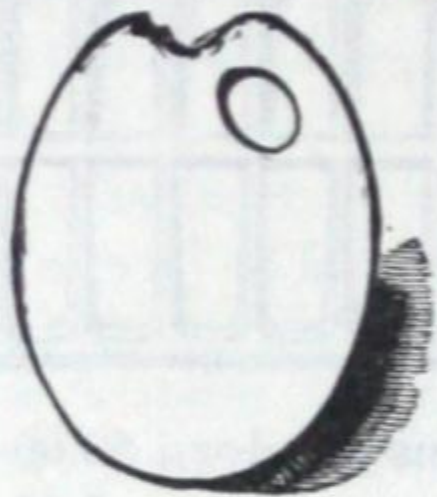
Basin for Architects' Offices, etc. each, \$1.25

INDIA INK AND COLOR SLABS



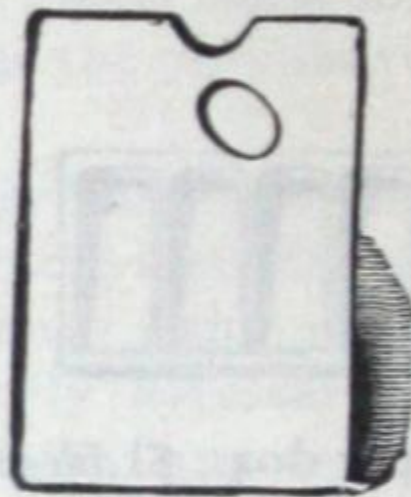
No. 1. Ink Slab	each, .15	No. 11. Ink Slab	each, .35
2. "	" .25	12. "	" .45

WINSOR & NEWTON'S CHINAWARE, ETC.



OVAL

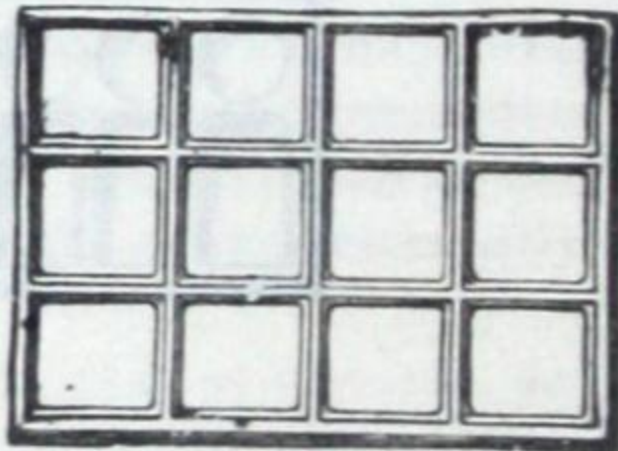
PALETTES



OBLONG

3 inch Oval or Oblong	each, .15	8 inch Oval or Oblong	each, .45
4 " " " "	" .25	9 " " " "	" .55
5 " " " "	" .30	10 " " " "	" .65
6 " " " "	" .35	11 " " " "	" .80
7 " " " "	" .40	12 " " " "	" .95

SQUARE DIVIDED FLAT TILES



3 Square	each, .30	9 Square	each, .65
6 "	" .45	12 "	" .75

WATER GLASSES



Artists' Water Glass, $2\frac{3}{8}$ inch diameter	each, .15
" " $3\frac{1}{4}$ "	" .25
" " $3\frac{3}{4}$ "	" .35
" " $4\frac{1}{4}$ "	" .45
Heavy Bottom Tumblers for Architects	per dozen, 1.50 each, .15

NEST OF CABINET SAUCERS

FIVE CUPS



AND COVER

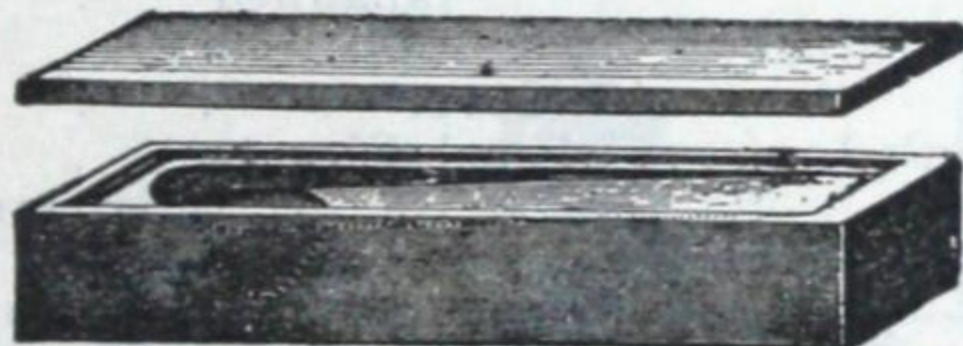
No. 1.	Diameter $2\frac{3}{8}$ inches,	hight $2\frac{3}{4}$ inches	doz., \$5.40	per set, .60
2.	" $2\frac{3}{4}$ "	" 3 "	" 6.60	" .70
3.	" $3\frac{1}{2}$ "	" $3\frac{3}{4}$ "	" 7.50	" .80
Extra Large size				" 1.00

ROUND TINTING SAUCERS



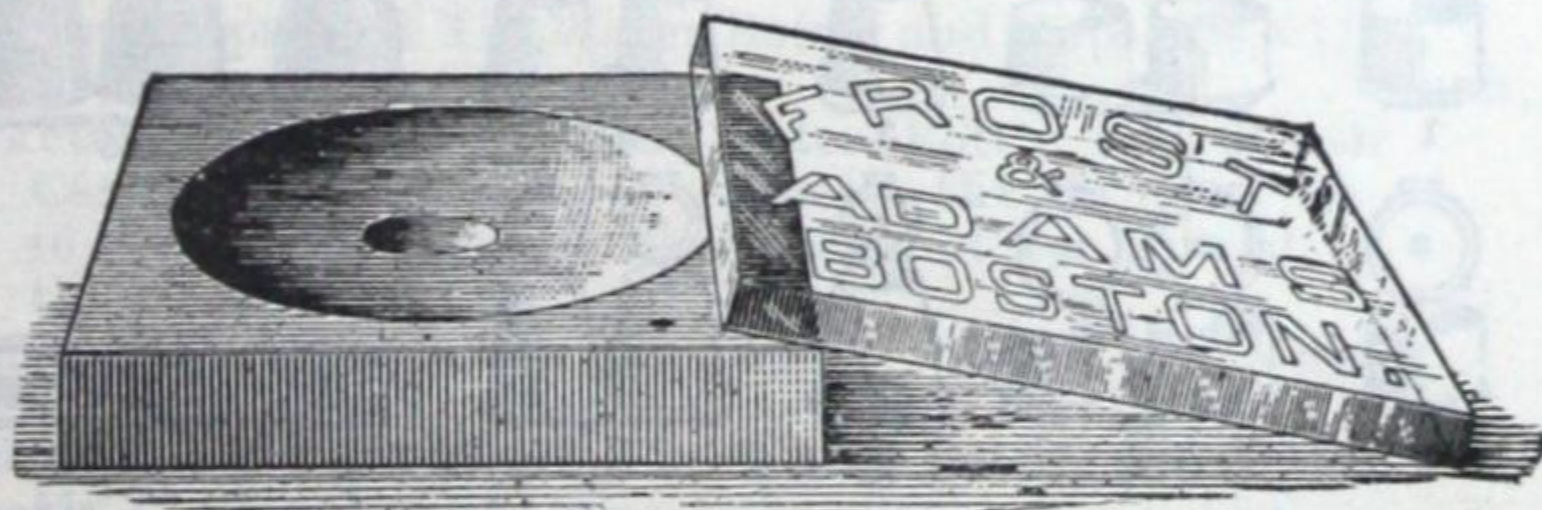
1 inch	each, 03	2 1/2 inch	each, .06
1 1/2 "	" .04	3 "	" .07
2 "	" .05	4 "	" .08

PATENT INK SLAB



Keuffel & Esser's Patent Ink Slab,	$1\frac{3}{4} \times 4\frac{1}{2}$ inches,	with cover each, .50
"	$2\frac{1}{8} \times 5\frac{1}{4}$ "	" " .60

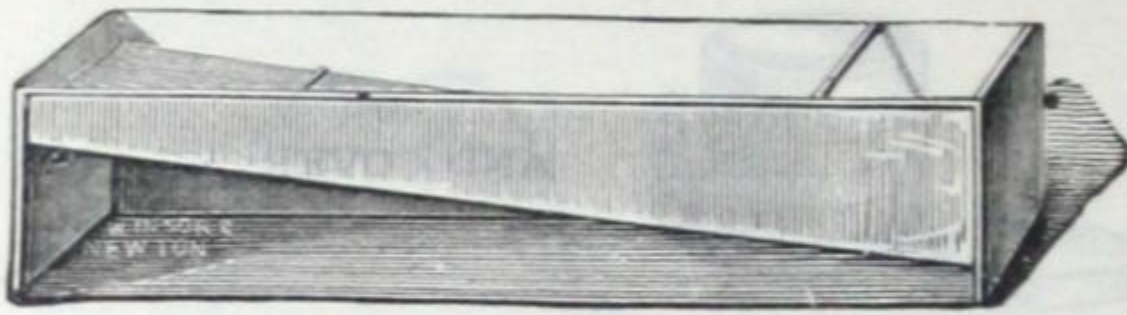
INK SAUCER



Frost & Adams Co's Ink Saucer, square, with glass cover . each, .50

NOTE.—These Ink Saucers are made of Slate, the surface of which presents just the right grain for grinding the ink smoothly. The cover is of plate glass, ground to a joint

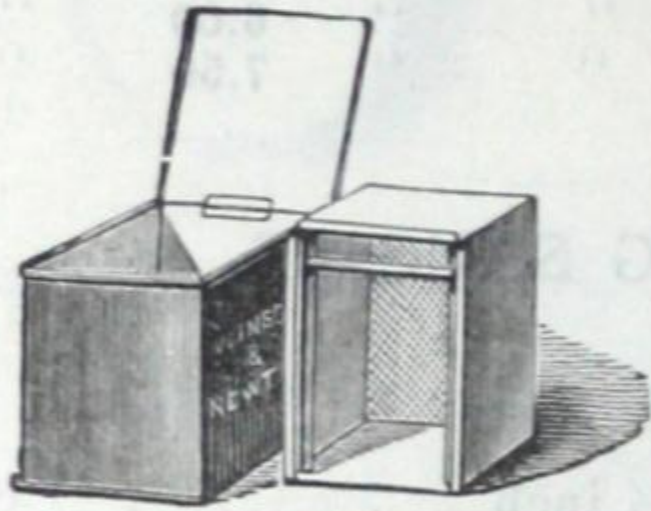
TIN WARE SUNDRIES



IMPROVED SMUTCH AND RAG PAN



IMPROVED PALETTE CUP



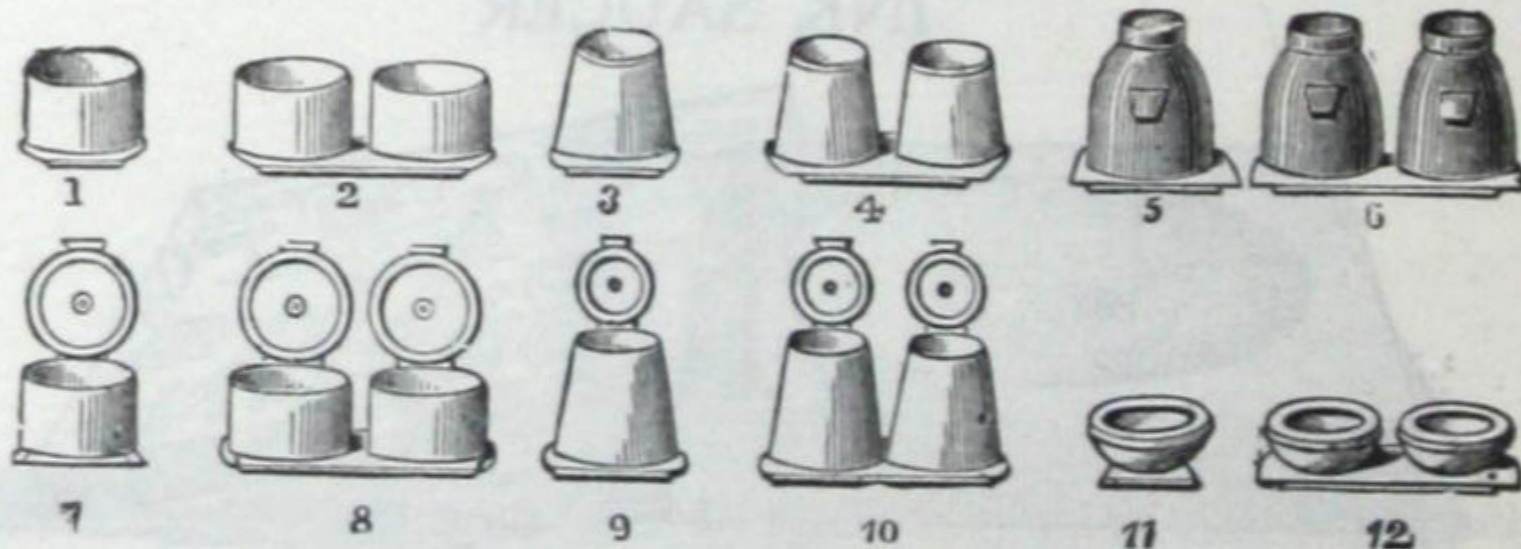
IMPROVED JAPANNED BRUSH CLEANER



JAPANNED BRUSH WASHER

Winsor & Newton's Japanned Flat Oil Bottles, Screw Tops	each,	.60
Japanned Flat Oil Bottles, Screw Tops, Thin	"	.60
Winsor & Newton's Brush Washers	"	.65
" " " Japanned	"	.80
Brush Washers, Ordinary	"	.33
" " " with Cover	"	.42
Winsor & Newton's Improved Brush Cleaners	"	.85
" " " Japanned	"	1.15
" " Smutch Pans, 14 inches long	"	1.15
" " Improved Smutch and Rag Pans, 14 inch	"	1.50
American Improved Smutch and Rag Pans, 14 inch	"	1.25
Improved Palette Cup	per doz., \$2.00	.20

OIL AND WATER COLOR CUPS

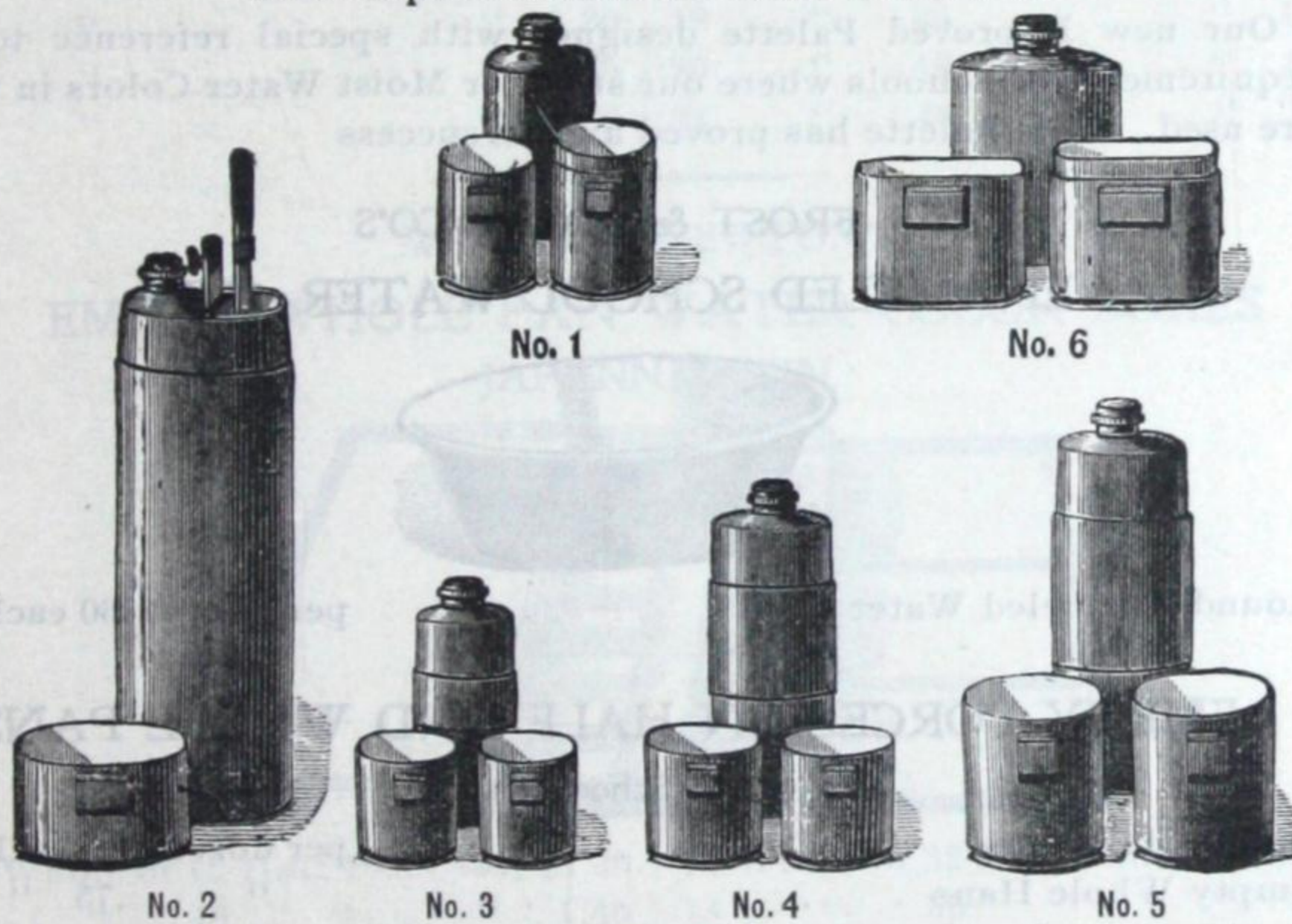


No. 1.	Winsor & Newton's Tin Palette Cup	each,	PLAIN .10	JAPANNED .20
2.	" " " " Double	"	.20	.40
3.	Conical Tin Cups	"		.08
4.	" " Double	"		.10

		PLAIN	JAPANNED
No. 5.	W. & N. Water Color Cups, with neck for corks, each,		.30
6.	Like No. 5, Double		.60
7.	Winsor & Newton's Capped Tin Cups	.30	
8.	" " " " Double	.60	
9.	Capped Conical Tin Cups		.10
10.	" " Double		.15
11.	W. & N. Improved Cups, with moveable rims	.20	.40
12.	Like No. 11, Double	.40	.80

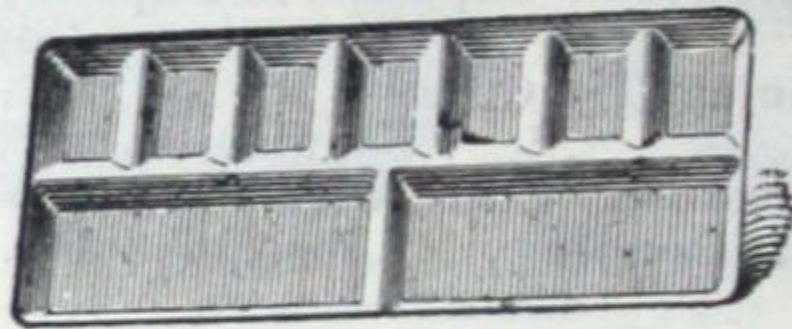
WINSOR & NEWTON'S JAPANNED WATER BOTTLES

With Cups to contain the water when in use



No. 1.	Round Japanned Tin Water Bottle and Cups, $3\frac{1}{2} \times 1\frac{1}{2}$ inches	each, \$1.00
2.	Sketcher's Japanned Tin Water Bottle and Brush Case complete, $8 \times 2\frac{3}{4}$ inches; the brushes being held by elastic bands cannot be injured at their points	" 2.80
3.	Small Oval Japanned Tin Water Bottle and Cups $3\frac{3}{4} \times 1\frac{1}{2}$ inches	" 1.30
4.	Middle Oval Japanned Tin Water Bottle and Cups, $5\frac{1}{4} \times 1\frac{3}{4}$ inches	" 1.50
5.	Large Oval Japanned Tin Water Bottle and Cups $6\frac{1}{4} \times 2$ inches	" 1.80
6.	Flat Oval Japanned Tin Water Bottle and Cups $3\frac{3}{4} \times 2\frac{1}{2}$ inches	" 1.75

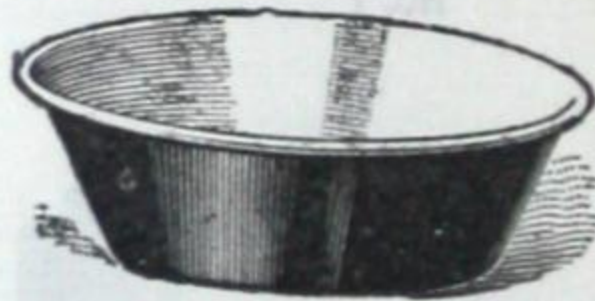
FROST & ADAMS CO'S
ENAMEL SCHOOL MIXING PALETTES



Enamel School Palette, 9 divisions . . . per dozen, .60 each, .06
Aluminum " " " " " " " " " " 1.20 " .12

Our new Improved Palette designed with special reference to the requirements of Schools where our superior Moist Water Colors in tubes are used. This Palette has proved a great success

FROST & ADAMS CO'S
ENAMELED SCHOOL WATER CUPS



Round Enameled Water Cups . . . per dozen, .60 each, .06

EMPTY PORCELAIN HALF AND WHOLE PANS

For School Use

Empty Half Pans . . . per dozen, .50 each, .05
Empty Whole Pans . . . " .75 " .07

FROST & ADAMS CO'S
HALF PANS SCHOOL WATER COLORS

For Refill for the F. & A. Co's Boxes

Alazarin Crimson . . . each, .05	New Green . . . each, .05
Burnt Sienna . . . " .05	Purple Lake . . . " .05
Chinese White . . . " .05	Sepia . . . " .05
Cobalt Blue . . . " .05	Vermilion . . . " .05
Gamboge . . . " .05	Yellow Ochre . . . " .05

Special colors made to order

FROST & ADAMS CO'S

EMPTY WHOLE AND HALF PAN WATER COLOR BOXES

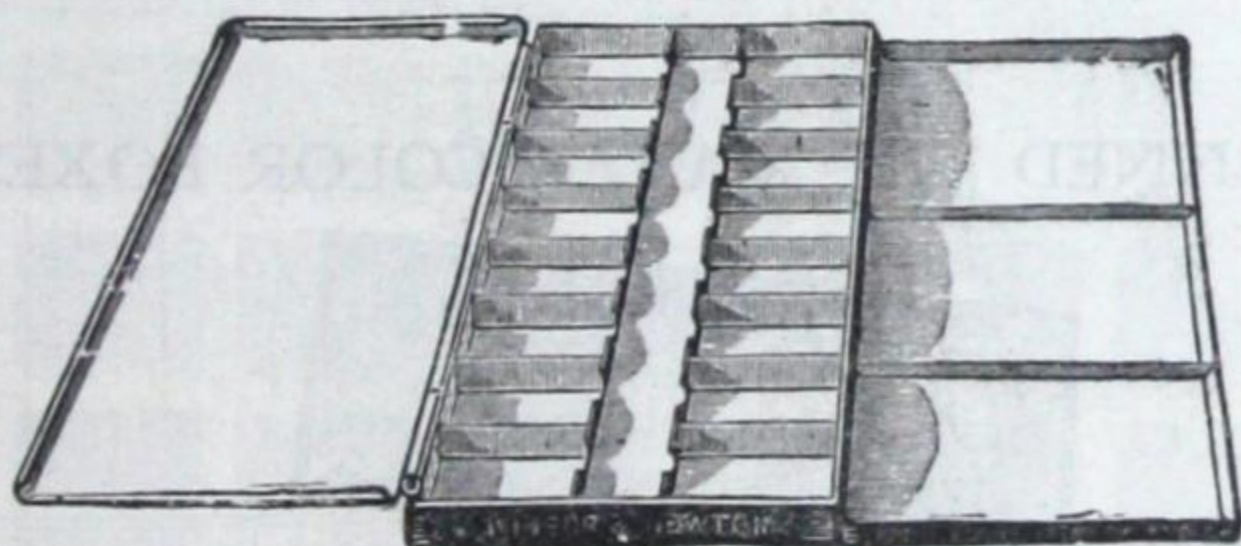
JAPANNED TIN

6 Half Pans	each, .75	6 Whole or 12 Half Pans	each, .85
8 "	" .85	8 " 16	" " 1.00
10 "	" .95	10 " 20	" " 1.15
12 "	" 1.00	12 " 24	" " 1.25
16 "	" 1.25	16 " 32	" " 1.35
18 "	" 1.30	18 " 36	" " 1.45
20 "	" 1.35	20 " 40	" " 1.55
24 "	" 1.50	24 " 48	" " 1.75

WINSOR & NEWTON'S

EMPTY WHOLE PAN WATER COLOR BOXES

JAPANNED TIN



6 Whole or 12 Half Pans	each, \$1 30	16 Whole or 32 Half Pans	each, \$2.25
8 " 16	" " 1.40	18 " 36	" " 2.40
10 " 20	" " 1.65	20 " 40	" " 2.60
12 " 24	" " 1.90	24 " 48	" " 3.00

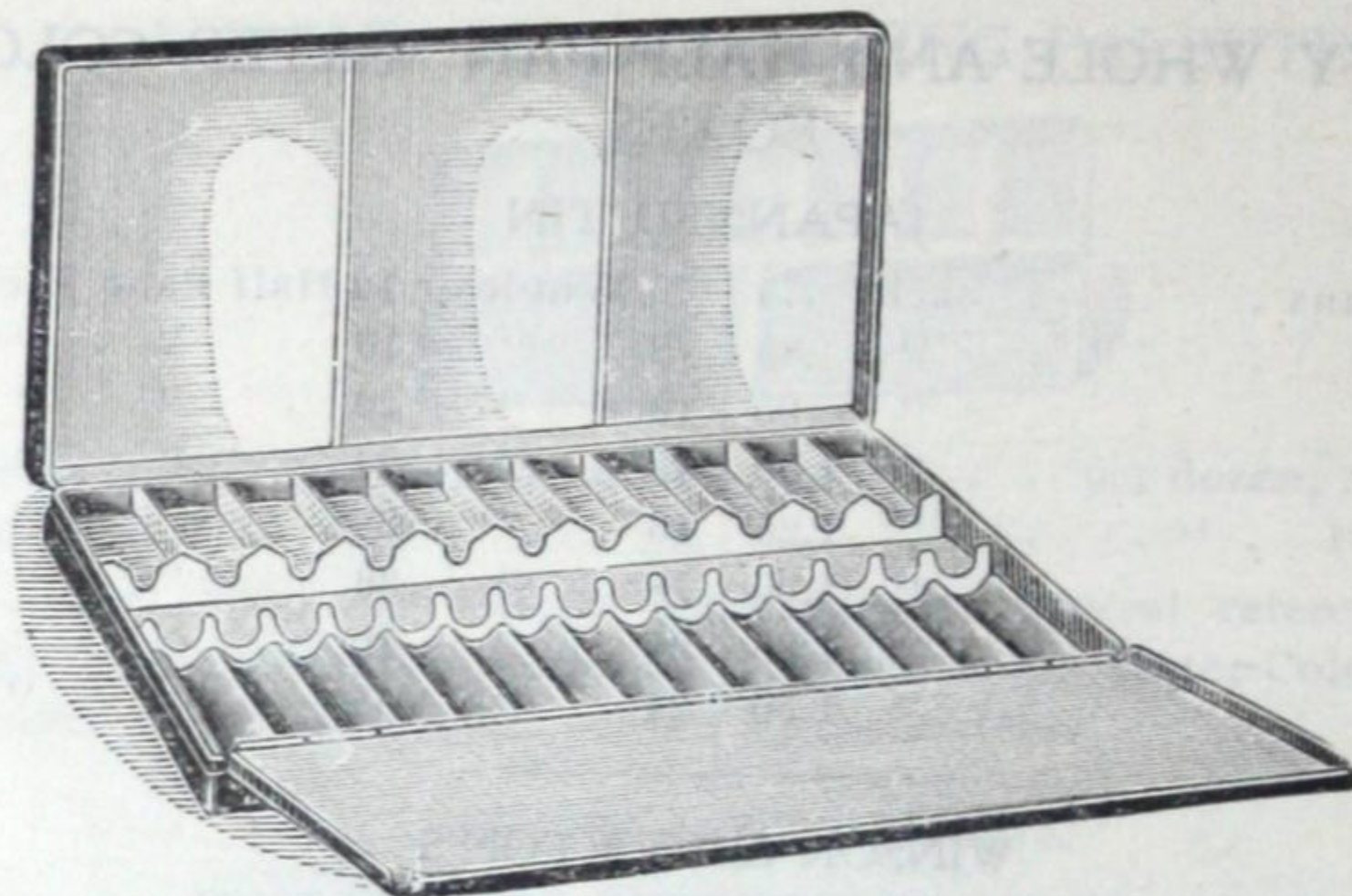
WINSOR & NEWTON'S

EMPTY HALF PAN WATER COLOR BOXES

JAPANNED TIN

To contain 6 Half Pans	each, \$1.25	To contain 16 Half Pans	each, \$1.90
" 8	" " 1.35	" 18	" " 2.00
" 10	" " 1.45	" 20	" " 2.10
" 12	" " 1.55	" 24	" " 2.30

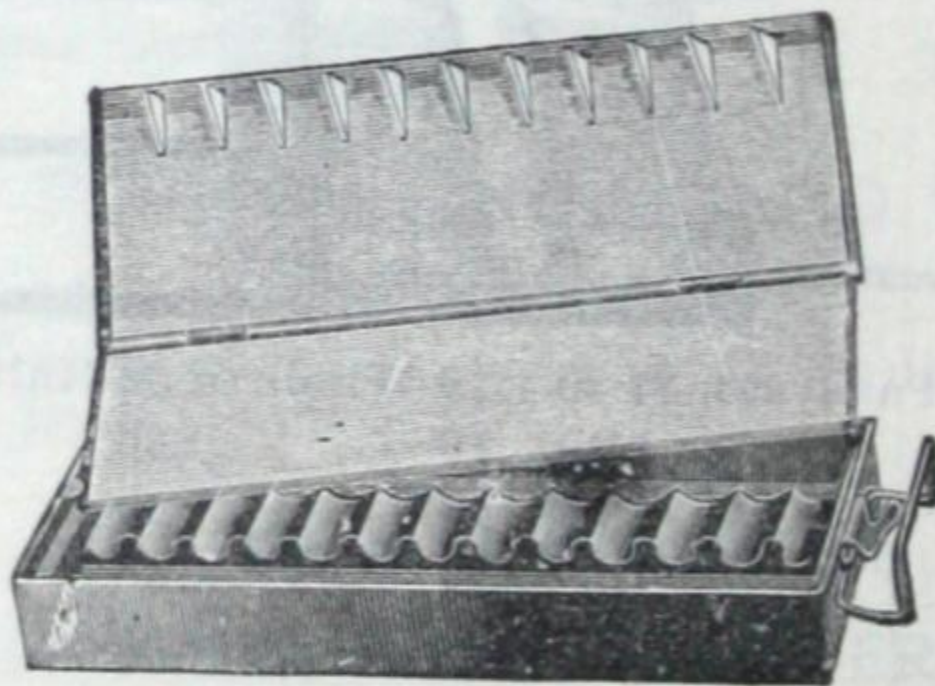
JAPANNED TIN WATER COLOR BOXES



FOR PANS AND TUBES

9 pans and 12 tubes	.	.	.	.	.	each, \$1.75
11 " 15 "	.	.	.	.	.	" 2.00

JAPANNED TIN WATER COLOR BOXES

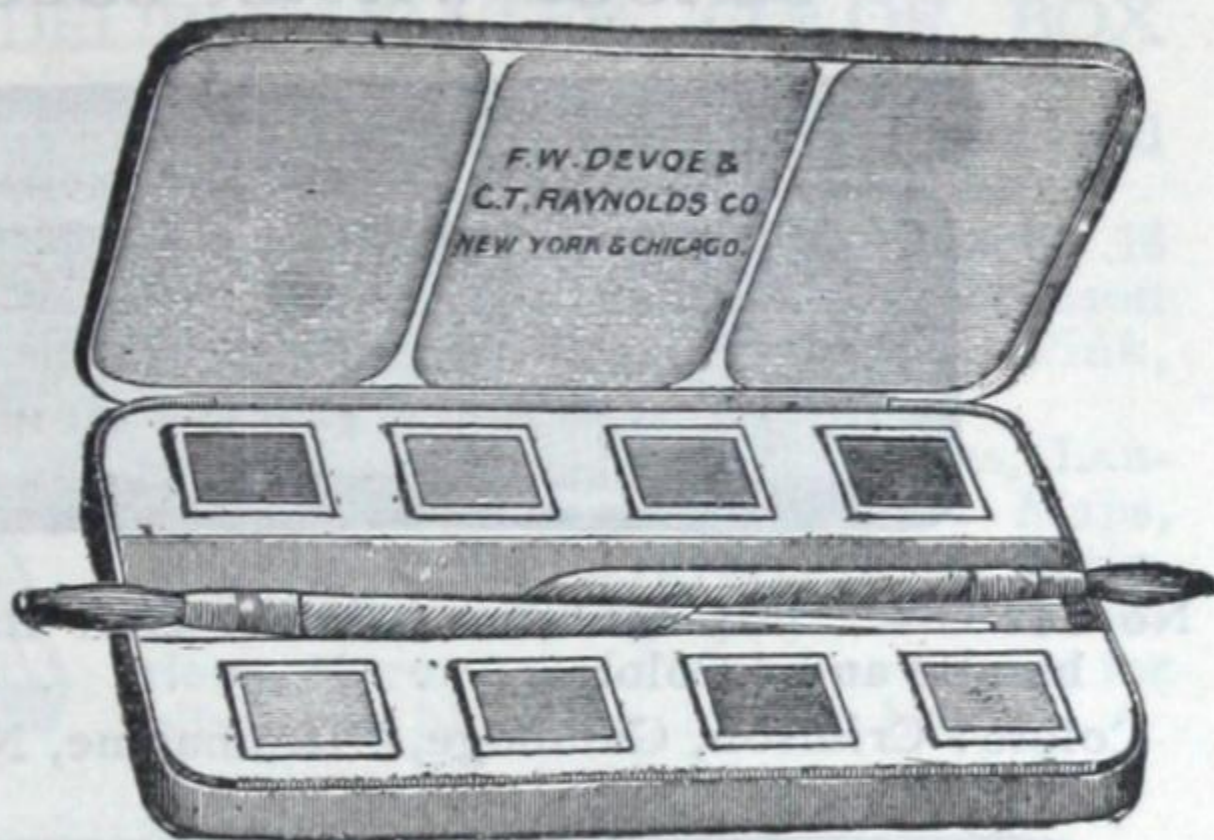


FOR TUBES ONLY

10 divisions, containing Folding Palette	.	.	.	.	.	each, \$1.25
12 " " "	.	.	.	.	.	" 1.40
15 " " "	.	.	.	.	.	" 1.50
20 " " "	.	.	.	.	.	" 1.60
24 " " "	.	.	.	.	.	" 1.75
30 " " "	.	.	.	.	.	" 1.85
32 " " "	.	.	.	.	.	" 2.00
36 " " "	.	.	.	.	.	" 2.25

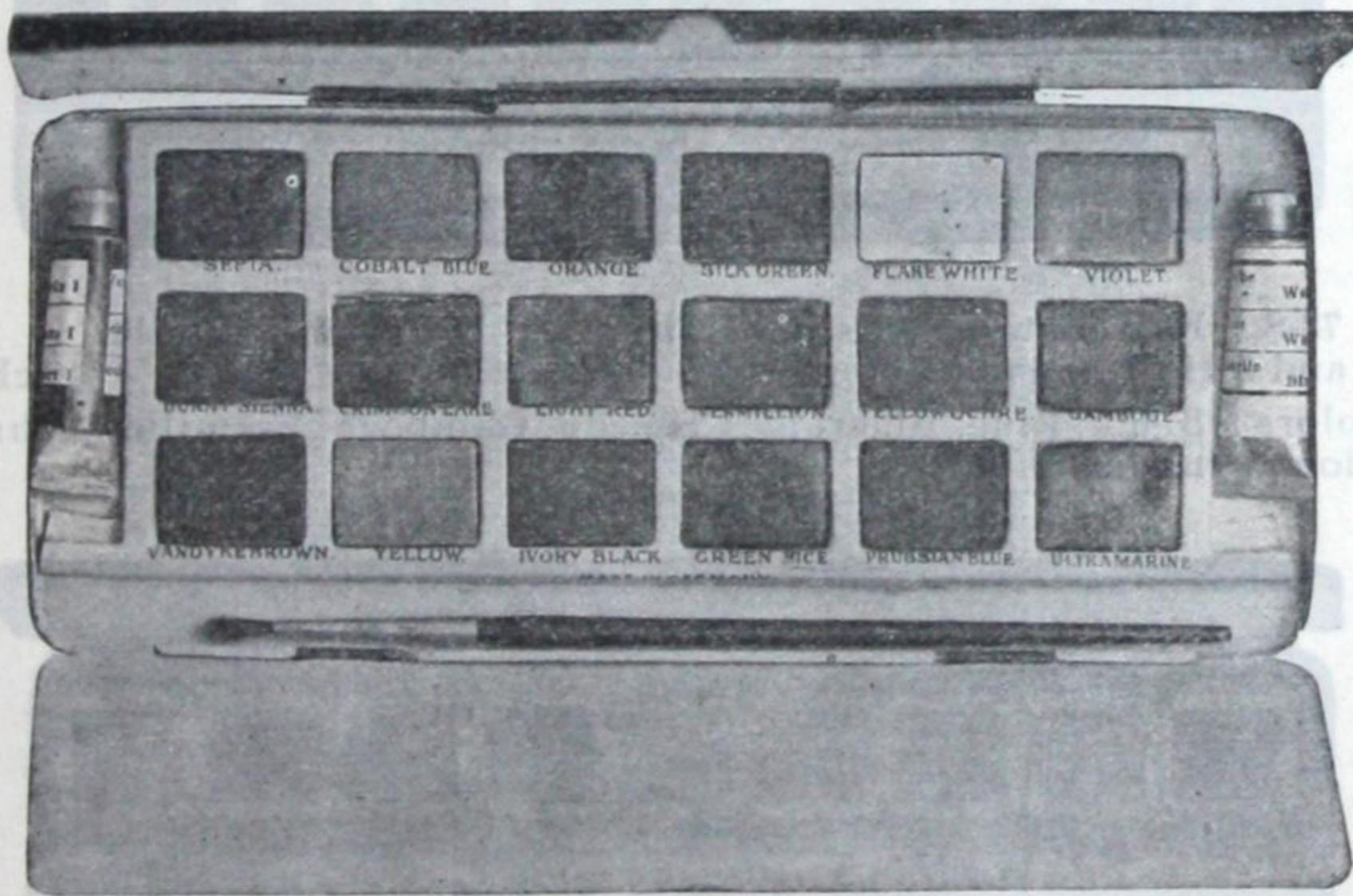
SCHOOL MOIST WATER COLOR BOX

No. 4½X. Box contains
 1 Camel Hair Brush,
 1 Handle and 8 Half
 Pans of Colors ea., .25



Colors: Alizarin Crim-
 son, Gamboge, Cobalt Blue,
 New Green, Burnt Sienna,
 Orange, Violet, Yellow
 Ochre

VANDYKE WATER COLOR BOX



No. 198. Box contains 1 Camel Hair Brush, 18 Colors and
 2 Tubes each, .50

Colors: Sepia, Cobalt Blue, Orange, Silk Green, Flake White, Violet,
 Burnt Sienna, Crimson Lake, Light Red, Vermilion, Yellow Ochre,
 Gamboge, Vandyke Brown, Yellow, Ivory Black, Green Bice, Prussian
 Blue, Ultramarine. Tubes, White and Green

FROST & ADAMS CO.'S
SCHOOL WATER COLOR BOXES



- No. 143 G-4. Box contains 1 Camel Hair Brush, No. 6 with handle and 4 Colors each .30
Colors: Crimson, Gamboge, Ultramarine, Neutral Tint



- No. 73-8. Box contains 1 Camel Hair Brush No. 6, with handle and 8 Half Pans of Colors each, .45
Colors: Black, Blue, Emerald, Crimson, Gamboge, Vermilion, Chrome Yellow, Prussian Blue



- No. 73-10. Box contains 1 Camel Hair Brush No. 6, with handle and 10 Half Pans of Colors each, .50
Colors: Black, Blue, Emerald, Crimson, Gamboge, Vermilion, Chrome Yellow, Prussian Blue, Lemon Yellow, Raw Sienna

FROST & ADAMS CO'S

TRANSPARENT, INDELIBLE WATER-COLOR BOX



NO. 12

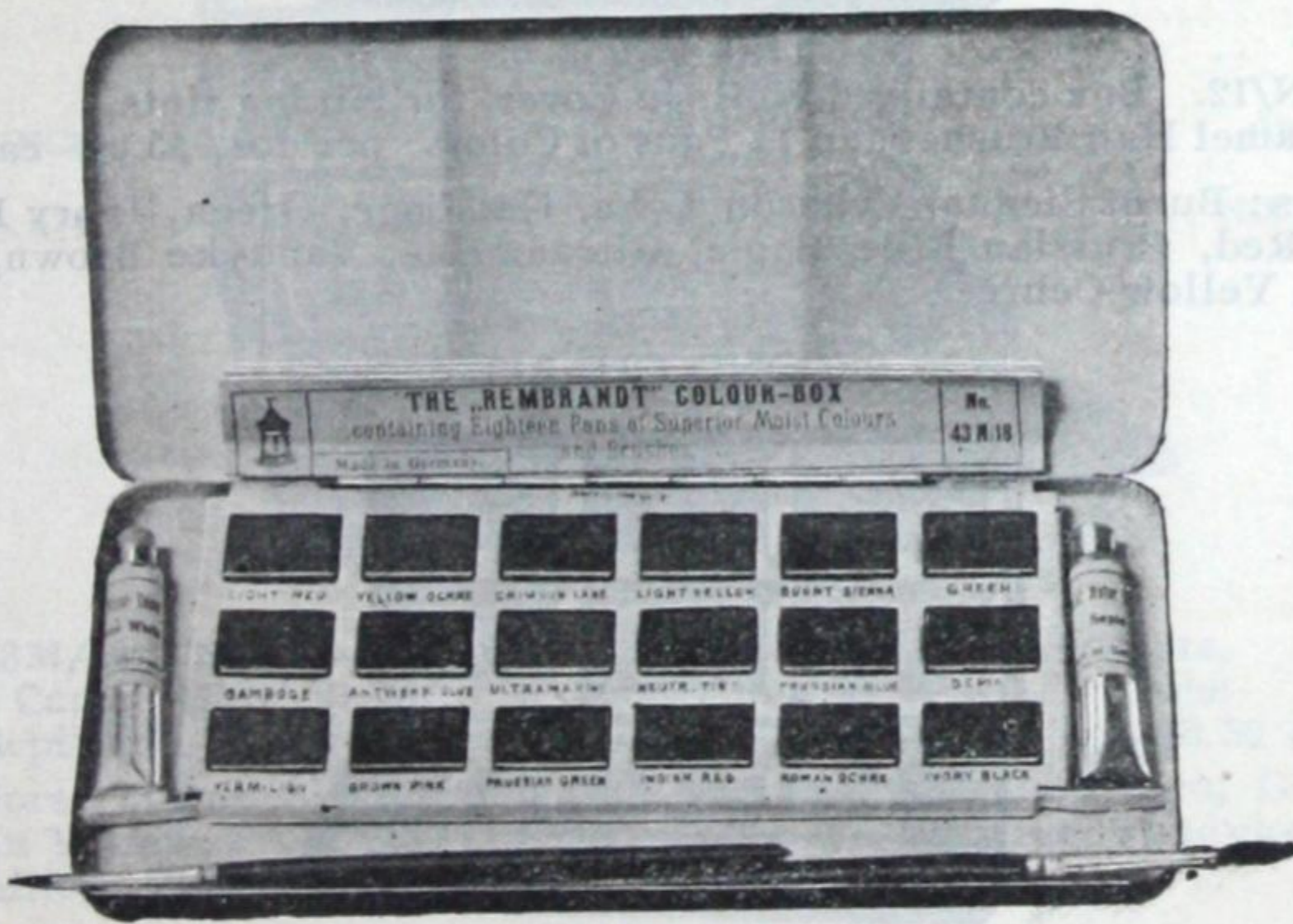
No. 12. Box contains 1 Brush and 12 Round Wooden Pans of Colors

per doz., \$2.00 each, .15

Colors: Black, Brown, Blue, Crimson Lake, Flesh, Green, Magenta, Pink, Purple, Red, White, Yellow

Colors for tinting Photographs, Lantern Slides, Drawings, School Maps, Magazines, Photogravures, Silk, Satin, Leather and Pyrography. Full directions, Harmony of Colors, and rules for mixing or blending, in each box

EXTRA LARGE REMBRANDT WATER COLOR BOX



NO. 43 N/18

No. 43N/18. Box contains 2 Brushes, 18 Pans and 2 Tubes of Colors per doz., \$8.00 each, .75

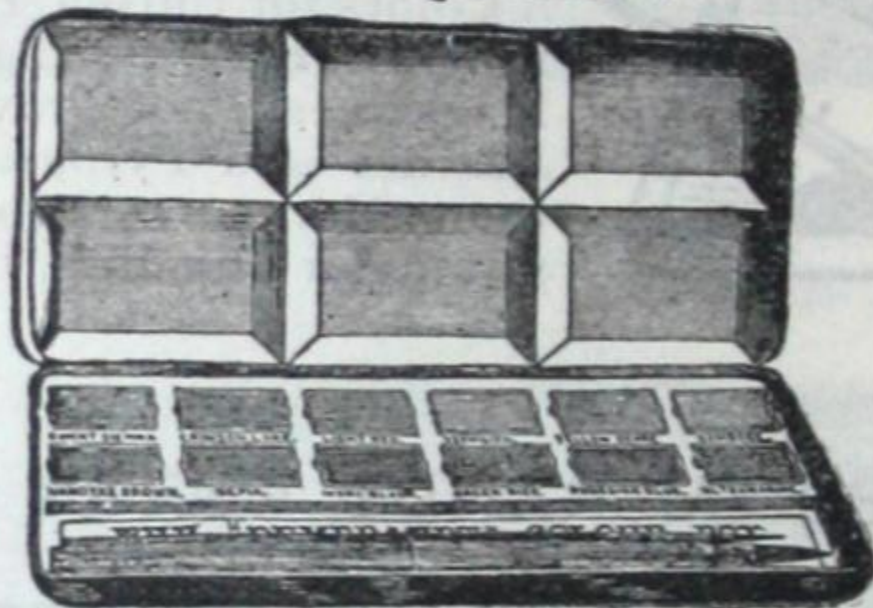
Colors: Antwerp Blue, Brown Pink, Burnt Sienna, Crimson Lake, Gamboge, Green, Indian Red, Ivory Black, Light Red, Light Yellow, Neutral Tint, Prussian Blue, Prussian Green, Roman Ochre, Sepia, Ultramarine, Vermilion, Yellow Ochre

THE SMALL "REMBRANDT" MOIST COLOR BOX

No. 43N/6. Box contains 2 Wells in Cover, for mixing tints,
1 Camel Hair Brush and 6 Pans of Colors per doz., \$3.00 each, .25

Colors: Burnt Sienna, Crimson Lake, Gamboge, Ivory Black, Prussian Blue, Vermilion

THE "REMBRANDT" MOIST WATER COLOR BOXES FIRST QUALITY

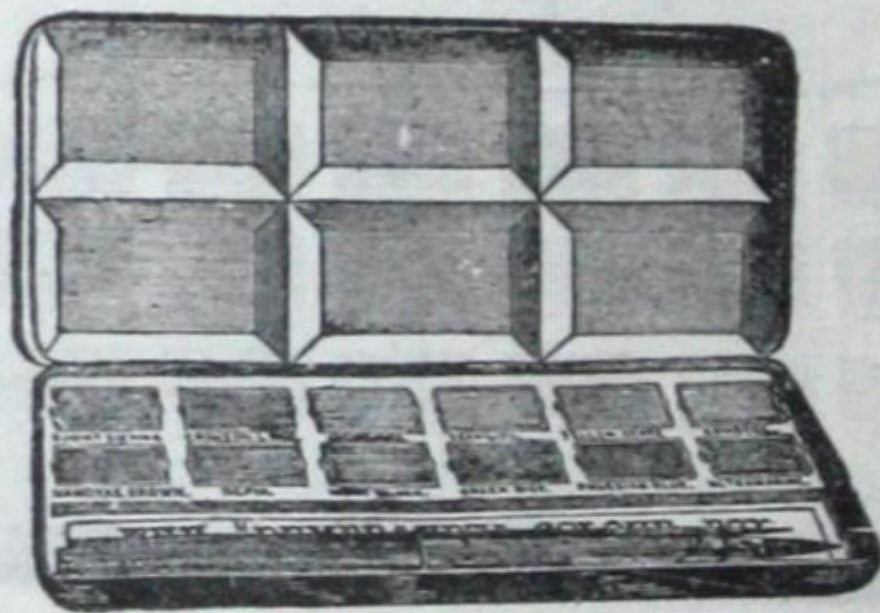


NO. 43N/12

No. 43N/12. Box contains 6 Wells in Cover, for mixing tints,
2 Camel Hair Brushes and 12 Pans of Colors per doz, \$5.00 each .45

Colors: Burnt Sienna, Crimson Lake, Gamboge, Green, Ivory Black, Light Red, Prussian Blue, Sepia, Ultramarine, Vandyke Brown, Vermilion, Yellow Ochre

SECOND QUALITY



NO. 143/12

No. 143/12. Box contains 6 Wells in Cover, for mixing tints,
1 Camel Hair Brush and 12 Pans of Colors per doz., \$4.00 each, .25

Colors; Burnt Sienna, Crimson Lake, Gamboge, Green Bice, Ivory Black, Light Red, Prussian Blue, Sepia, Ultramarine, Vandyke Brown, Vermilion, Yellow Ochre

THE "MURILLO" MOIST WATER COLOR BOXES

SMALL FRENCH

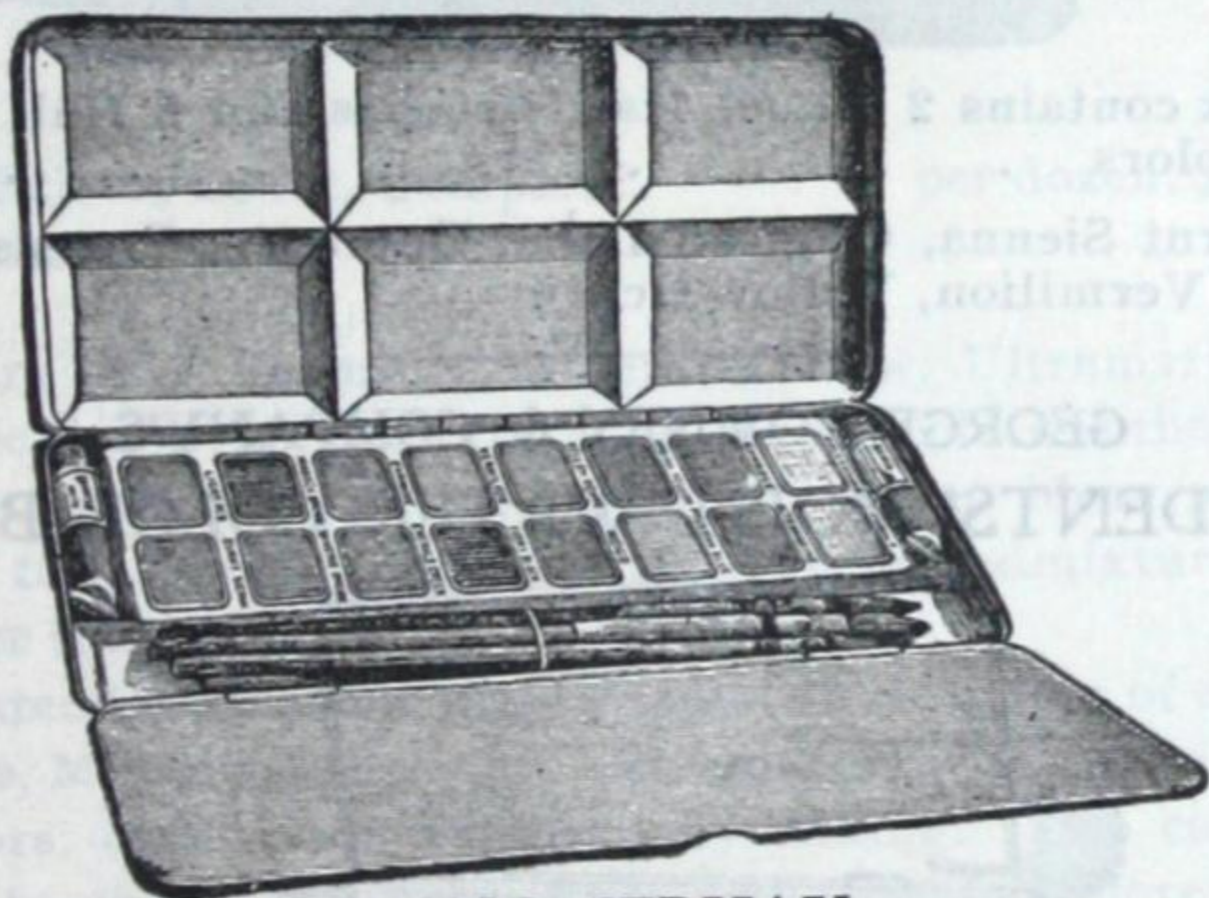
No. 473. Box contains 6 Wells in Cover for mixing tints, 3 Camel Hair Brushes, 1 Tube Chinese White, 1 Tube Sepia and 12 Pans of Colors per doz., \$7.50 each, .75

Colors: Burnt Sienna, Cobalt, Carmine, Emerald Green, Gamboge, Indian Yellow, Ivory Black, Light Red, Prussian Blue, Vandyke Brown, Vermilion, Yellow Ochre

LARGE FRENCH

No. 474. Box contains 6 Wells in Cover and 1 flap Palette for mixing tints, 4 Camel Hair Brushes, 1 Tube Chinese White, 1 Tube Sepia and 16 Pans of Colors per doz., \$11.00 each, \$1.00

Colors: Burnt Sienna, Carmine, Cobalt, Emerald Green, Gamboge, Indian Yellow, Indigo, Ivory Black, Light Red, Madder Brown, Pale Chrome, Prussian Blue, Ultramarine, Vandyke Brown, Vermilion, Yellow Ochre



FRENCH

NO. 474

GERMAN

NO. 43 M/16

SMALL GERMAN

No. 43M/12. Box contains 6 Wells in Cover for mixing tints, 3 Camel Hair Brushes, 1 Tube Chinese White, 1 Tube Sepia and 12 Pans of Colors per doz., \$6.50 each, .60

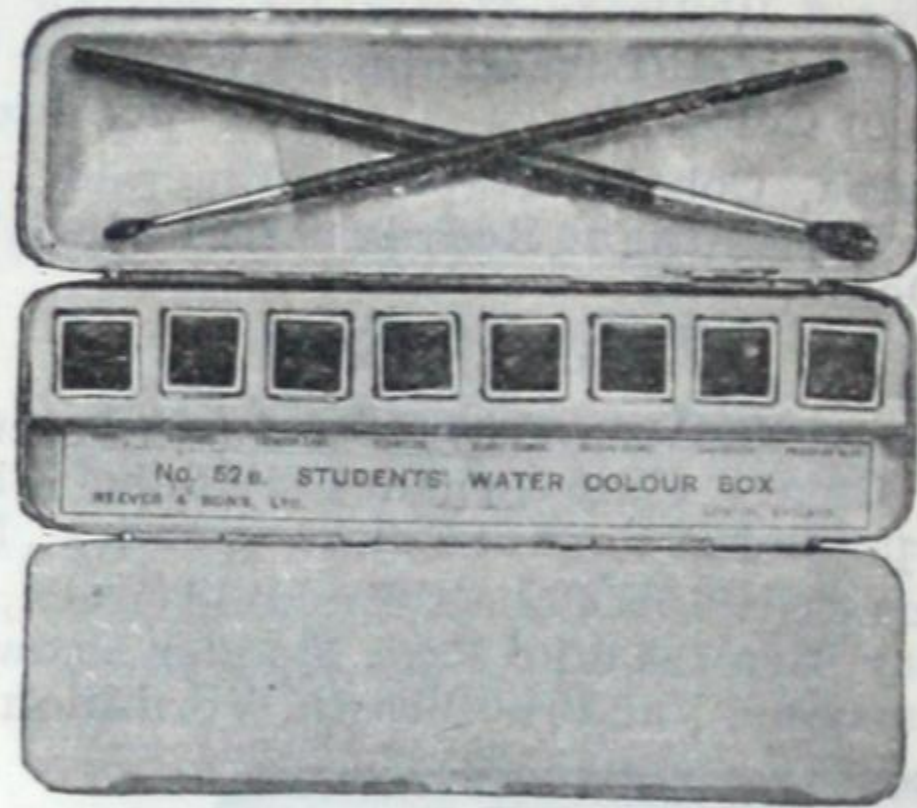
Colors: Burnt Sienna, Cobalt, Carmine, Emerald Green, Gamboge, Indian Yellow, Ivory Black, Light Red, Prussian Blue, Vandyke Brown, Vermilion, Yellow Ochre

LARGE GERMAN

No. 43M/16. Box contains 6 Wells in Cover and 1 flap Palette for mixing tints, 4 Camel Hair Brushes, 1 Tube of Chinese White, 1 Tube Sepia and 16 pans of colors per doz., \$9.50 each, .90

Colors: Burnt Sienna, Carmine, Cobalt, Emerald Green, Gamboge, Indian Yellow, Indigo, Ivory Black, Light Red, Madder Brown, Pale Chrome, Prussian Blue, Ultramarine, Vandyke Brown, Vermilion, Yellow Ochre

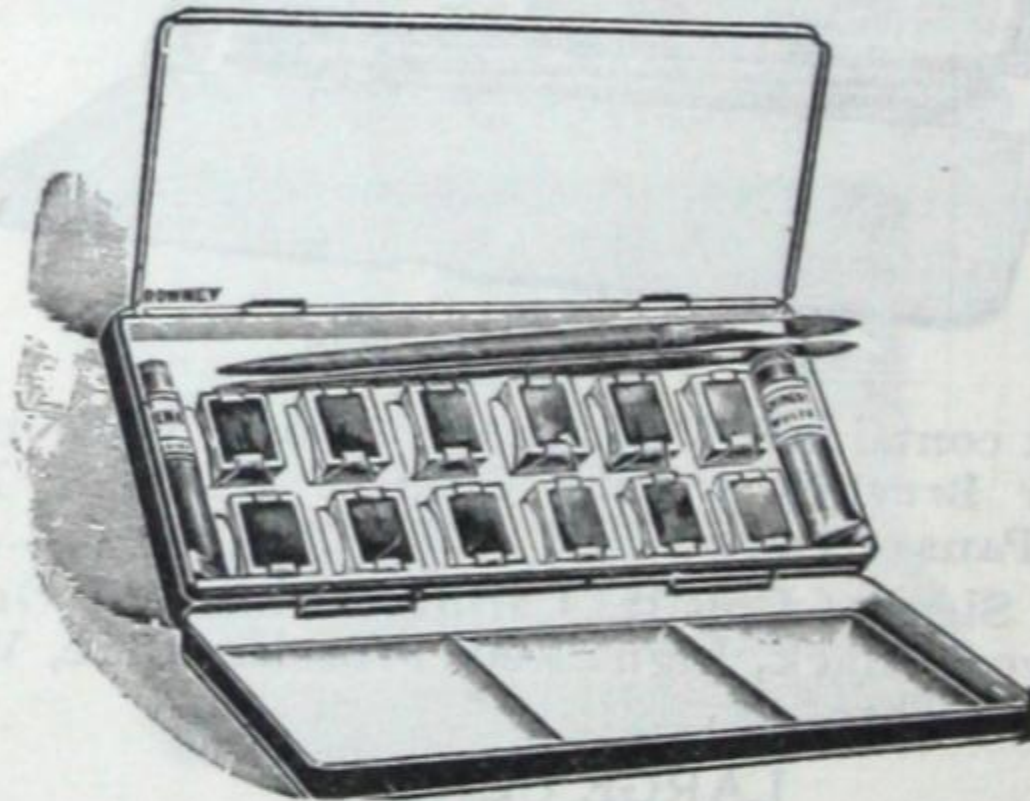
FROST & ADAMS CO'S
STUDENTS' WATER COLOR BOX



No. 52B. Box contains 2 Camel Hair Brushes and 8 Half
Pans of Colors each, .85

Colors: Burnt Sienna, Crimson Lake, Gamboge, Prussian Blue, Sap
Green, Sepia, Vermilion, Yellow Ochre

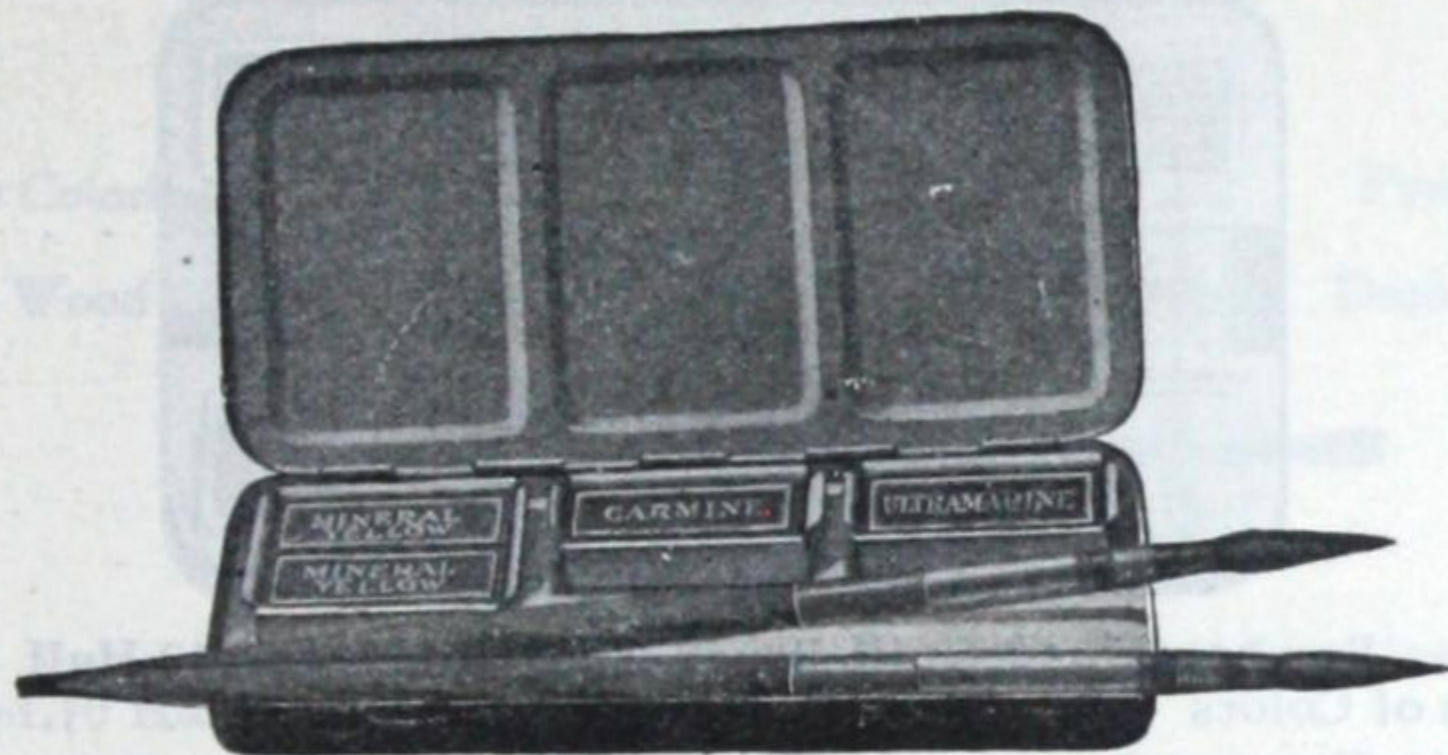
GEORGE ROWNEY & COMPANY'S
STUDENTS' MOIST WATER COLOR BOX



No. 34. Box contains 2 Camel Hair Brushes, No. 1 and No.
4, 1 Tube each Chinese White and Sepia and 12 Pans of
Colors each, \$1.50

Colors: Burnt Sienna, Chrome Yellow, Cobalt Blue, Crimson Lake,
Emerald Green, Gamboge, Light Red, Prussian Blue, Ultramarine,
Vandyke Brown, Vermilion, Yellow Ochre

THE "THREE COLOR" SCHOOL OUTFIT WATER COLOR BOX



Three Color School Outfit, Complete, . . . per dozen, \$3.00 each, .25
 Separate Colors per dozen, .35

Three colors only, Carmine, Mineral Yellow, Ultramarine Blue

The "Three Color" School Outfit of Water Colors is the best that can be devised for school work. Teachers of modern ideas prefer to teach their pupils to produce colors by the careful admixture of primary shades, rather than have all colors provided

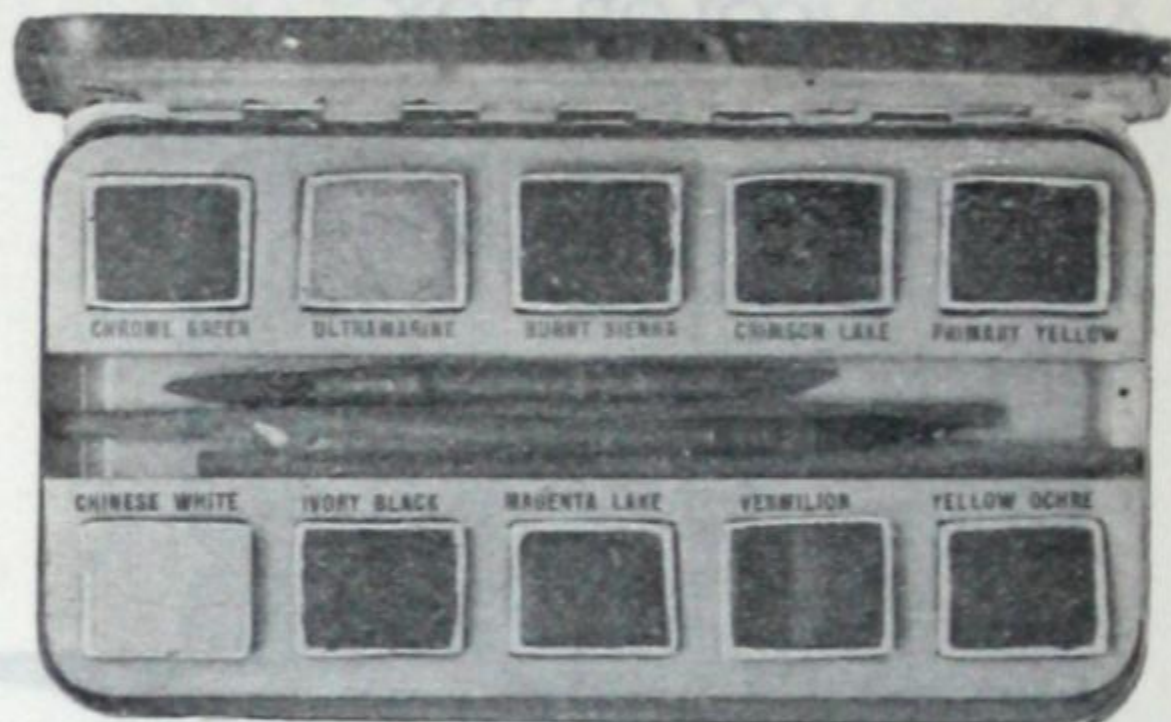
In the "Three Color" Box will be found three colors of extra strength viz.: Carmine, Mineral Yellow and Ultramarine Blue. From these three primary colors, others are produced by mixing. Two cakes of Yellow are provided to one each of the Blue and Carmine, more Yellow being used in mixing than either of the others

The inside of the box cover is intended to be used as a palette. Two extra quality brushes and handles are included in each box. The "Three Color" Box is the ideal outfit of Water Colors for all grades of school instruction

ILLUSTRATORS' VEST POCKET WATER COLOR BOX

Box contains 2 Cakes of White, 1 Cake each Black and
 Charcoal Gray each, .25
 Separate Cakes to refill box, White, Black and Charcoal Gray per doz.. .35

FROST & ADAMS CO.'S VALAZQUEZ BOX

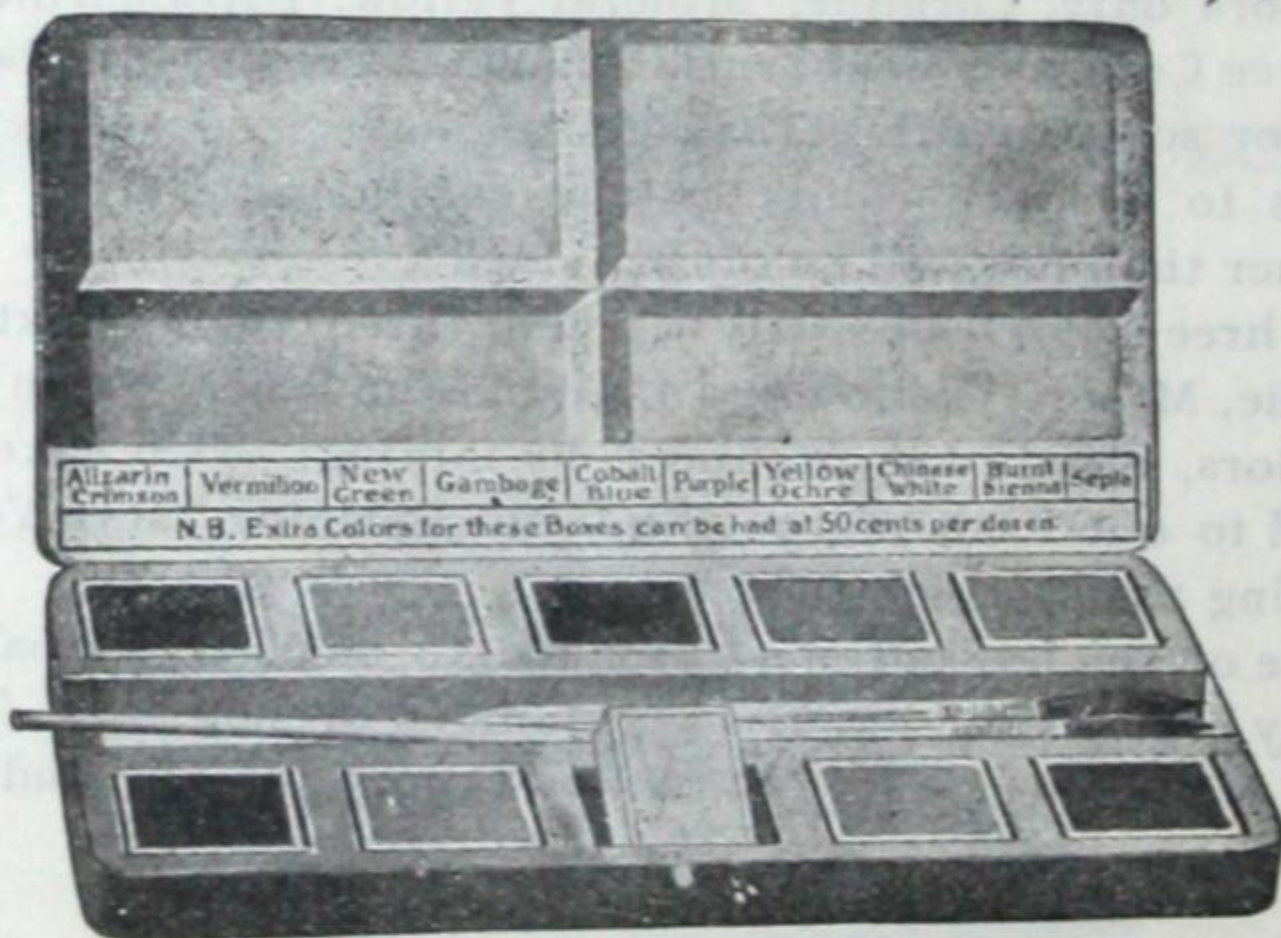


No. 5054. Box contains 1 Quill Brush with handle and 10 Half
Pans of Colors each, .60

Colors: Chrome Green, Ultramarine, Burnt Sienna, Crimson Lake,
Primary Yellow, Chinese White, Ivory Black, Magenta Lake, Vermilion,
Yellow Ochre

High grade French Box Colors equal to Winsor & Newton's

SCHOOL MOIST WATER COLOR BOX, NO. 2

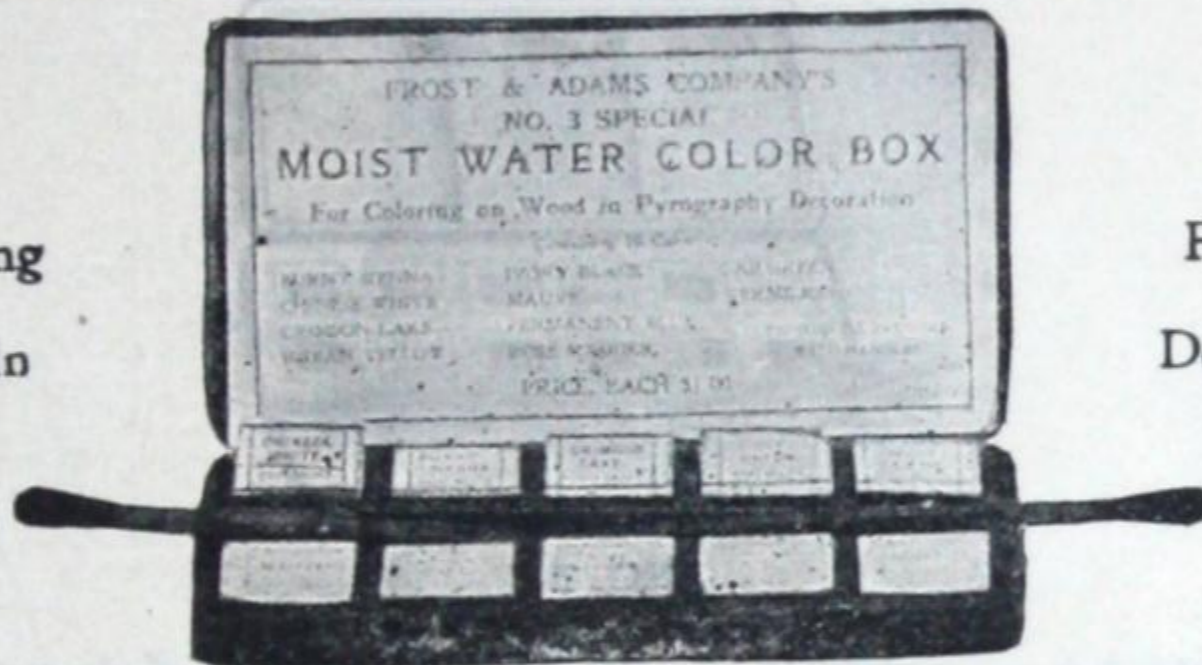


Box No. 2. Contains the following: Alizarin Crimson, Burnt
Sienna, Chinese White, Cobalt Blue, Gamboge, New
Green, Purple, Sepia, Yellow Ochre; 2 fine Camel Hair
Pointed Quill Brushes, with Pencil Stick each, .60
Extra Colors for these Boxes per dozen, .50

This grade of Water Color Boxes we manufacture specially for School
use. Also used largely by Amateurs. For sale by all dealers in Artists'
Materials and Stationery Goods

FROST & ADAMS CO'S
NO. 3, SPECIAL ENGLISH MOIST WATER COLOR BOX

For Coloring
 on Wood in



Pyrography
 Decoration

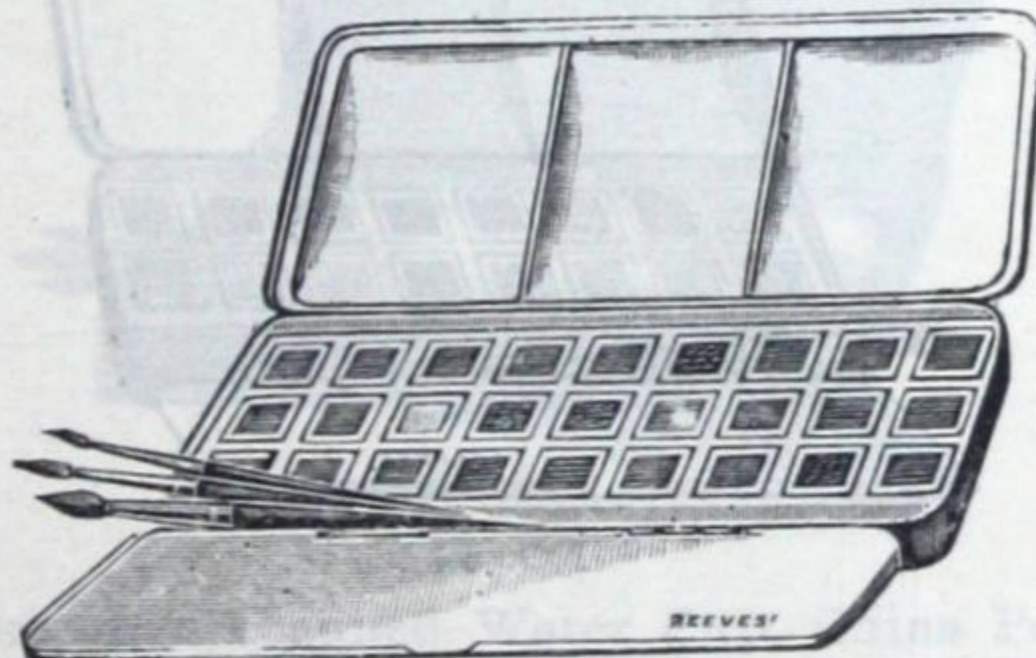
No. 3. Box contains 2 Camel Hair Quill Brushes, with handles
 and 10 Half Pans of Colors each, \$1.00

Colors: Burnt Sienna, Chinese White, Crimson Lake, Indian Yellow,
 Ivory Black, Mauve, Permanent Blue, Rose Madder, Sap Green, Ver-
 milion

NEW ENGLISH

JAPPANED TIN MOIST WATER COLOR BOXES

Fitted with



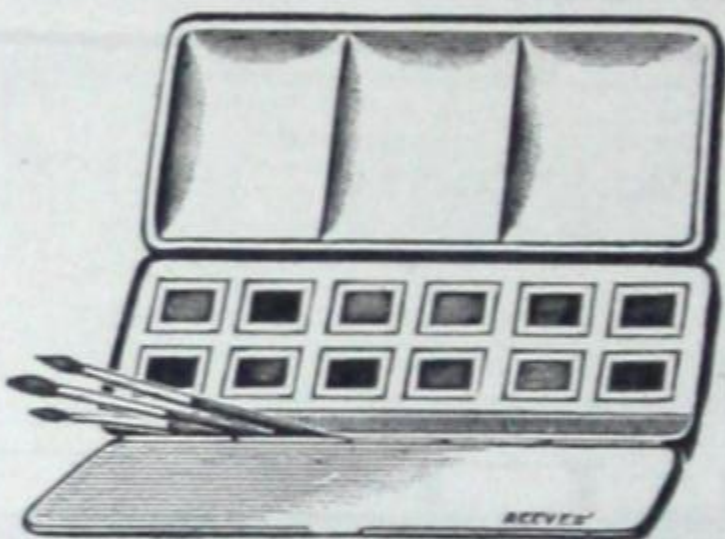
China Half Pans

No. 55. Box contains 3 Camel Hair Brushes and 27 Half Pans
 of Colors each, \$2.25

Colors: Brown Madder, Burnt Sienna, Burnt Umber, Carmine, Chinese
 White, Chrome Yellow, Deep; Chrome Yellow, Pale; Cobalt Blue, Crim-
 son Lake, Emerald Green, Gamboge, Green Bice, Hooker's Green, Ivory
 Black, Light Red, Mauve, Olive Green, Prussian Blue, Raw Sienna, Rose
 Madder, Sap Green, Scarlet Lake, Sepia, Ultramarine Blue, Vandyke
 Brown, Vermilion, Yellow Ochre

These Colors are suitable for Artists, Students and Amateurs. The
 Colors in these Boxes can be replaced with Frost & Adams' or Winsor &
 Newton's Half Pans

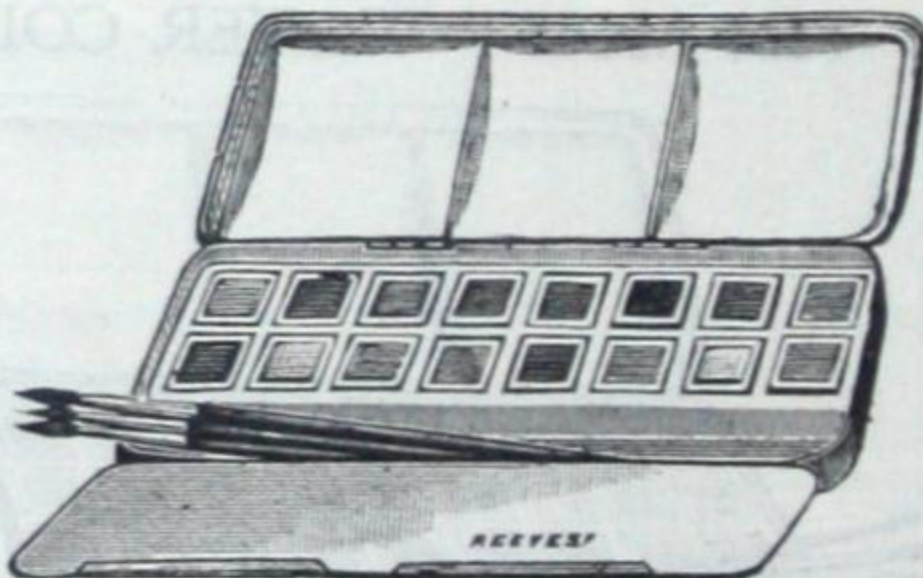
New English Japanned Tin Moist Water Color Boxes—contin'd



NO. 53

No. 53. Box contains 3 Camel Hair Brushes and 12 Half Pans
of Colors each, \$1.00

Colors: Burnt Sienna, Chrome Yellow, Pale; Crimson Lake, Gamboge, Green Bice, Light Red, Prussian Blue, Sepia, Ultramarine Blue, Vandyke Brown, Vermilion, Yellow Ochre



NO. 54

No. 54. Box contains 3 Camel Hair Brushes and 16 Half Pans
of Colors each, \$1.50

Colors: Brown Madder, Burnt Sienna, Chinese White, Chrome Yellow, Pale; Cobalt, Blue, Crimson Lake, Gamboge, Green Bice, Light Red, Olive Green, Prussian Blue, Sepia, Ultramarine Blue, Vandyke Brown, Vermilion, Yellow Ochre

These Colors are suitable for Artists, Students and Amateurs. The Colors in these Boxes can be replaced with Frost & Adams' or Winsor & Newton's Half Pans

New English Japanned Tin Moist Water Color Boxes—Contin'd



NO. 60

No. 60. Box contains 3 Brushes, 5 China Saucers and 8 Half
Pans of Colors each, \$1.00

Colors: Crimson Lake, Gamboge, Green Bice, Ivory Black, Prussian
Blue, Ultramarine, Vermilion, Yellow Ochre



NO. 61A

No. 61A. Box contains Japanned Water Cup, China Palette
3 Camel Hair Brushes and 20 Half Pans of Colors each, \$3.00

Colors: Brown Madder, Burnt Sienna, Chinese White, Chrome Orange,
Chrome Yellow, Pale; Cobalt Blue, Crimson Lake, Gamboge, Green
Bice, Hooker's Green, Ivory Black, Light Red, Mauve, Olive Green,
Prussian Blue, Scarlet Lake, Ultramarine, Vandyke Brown, Vermilion,
Yellow Ochre

The colors in these boxes are the best Students' or School Colors on
the market, the Brushes are of excellent Camel Hair, the boxes are well
finished and very durable

New English Japanned Tin Moist Water Color Boxes—contin'd



NO. 61

No. 61. Box contains Japanned Water Cup, China Palette,
3 Camel Hair Brushes and 14 Half Pans of Colors . . . each, \$2.00

Colors: Brown Madder, Burnt Sienna, Chrome, Pale; Crimson Lake, Gamboge, Green Bice, Ivory Black, Light Red, Olive Green, Prussian Blue, Ultramarine Blue, Vandyke Brown, Vermilion, Yellow Ochre



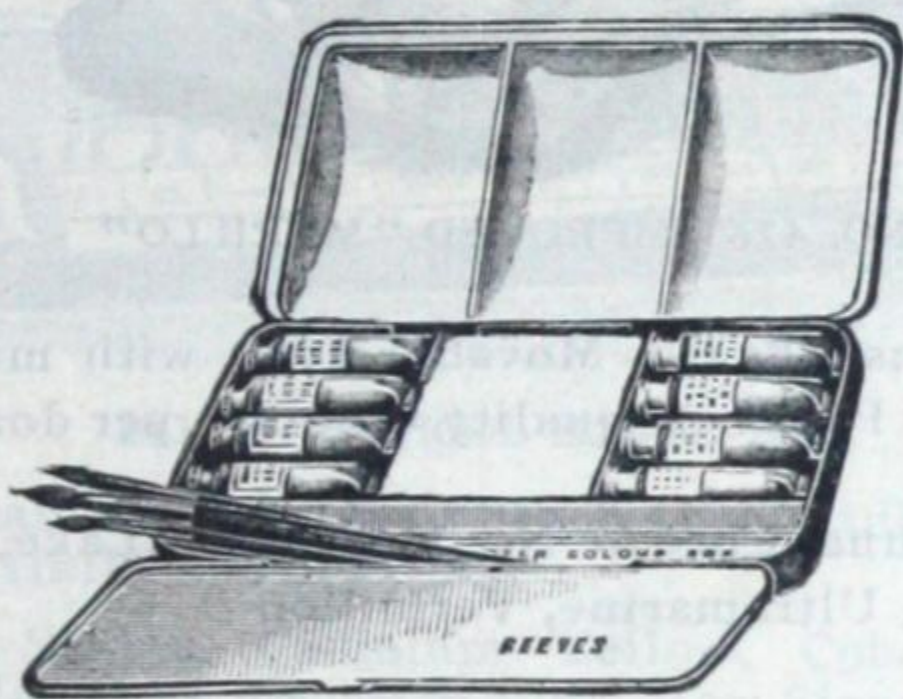
NO. 62

No. 62. Box contains Japanned Water Cup, China Palette,
3 Camel Hair Brushes, 1 Tube Chinese White and 27 Half
Pans of Colors each, \$4.00

Colors: Brown Madder, Burnt Sienna, Burnt Umber, Carmine, Chrome, Deep; Chrome Orange, Chrome, Pale; Cobalt Blue, Crimson Lake, Emerald Green, Gamboge, Green Bice, Hooker's Green, Deep; Ivory Black, Light Red, Mauve, Olive Green, Prussian Blue, Raw Sienna, Rose Madder, Sap Green, Scarlet Lake, Sepia, Ultramarine Blue, Vandyke Brown, Vermilion, Yellow Ochre

These Colors are suitable for Artists, Students and Amateurs. The Colors in these Boxes can be replaced with Frost & Adams' or Winsor & Newton's Half Pans

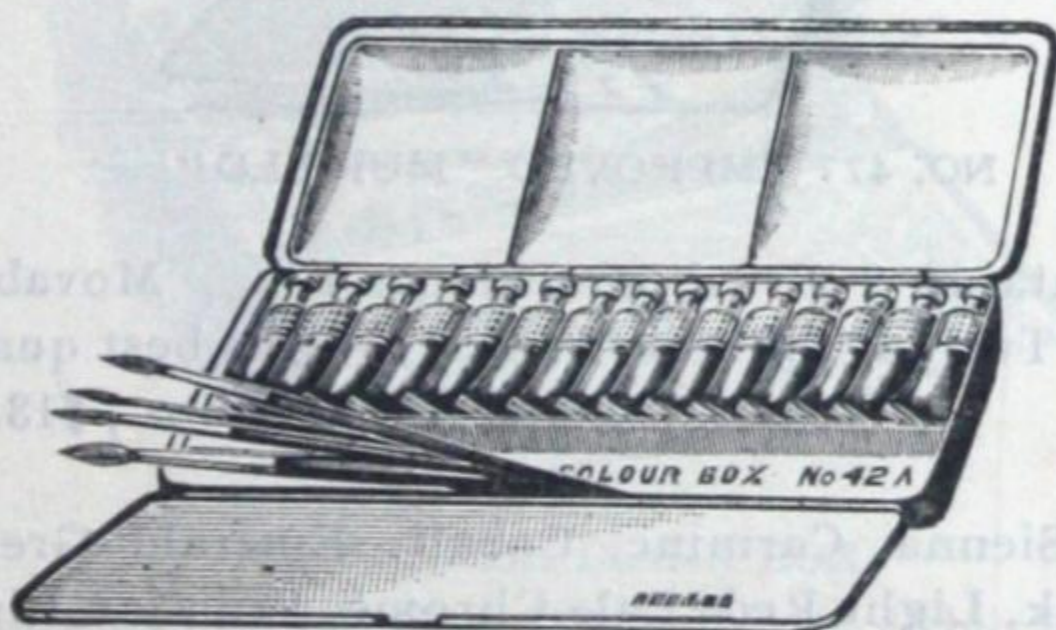
FROST & ADAMS CO'S
**STUDENTS' JAPANNED TIN, TUBE MOIST WATER
 COLOR BOXES**
 THREE INCH TUBES



NO. 42

No. 42. Box contains 2 Camel Hair Brushes and 8 Tubes of
 Colors, 3 inches long each, \$1.50

Colors: Burnt Sienna, Crimson Lake, Gamboge, Green Bice, Prussian
 Blue, Sepia, Ultramarine Blue, Yellow Ochre

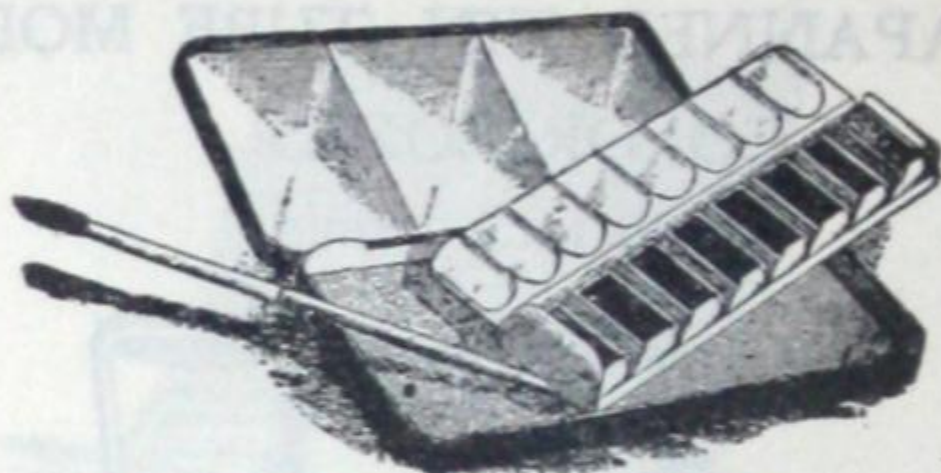


NO. 42A

No. 42A. Box contains 3 Camel Hair Brushes and 12 Tubes
 of Colors, 3 inches long each, \$2.00

Colors: Burnt Sienna, Chrome Yellow, Crimson Lake, Gamboge,
 Green Bice, Light Red, Prussian Blue, Sepia, Ultramarine Blue, Van-
 dyke Brown, Vermilion, Yellow Ochre

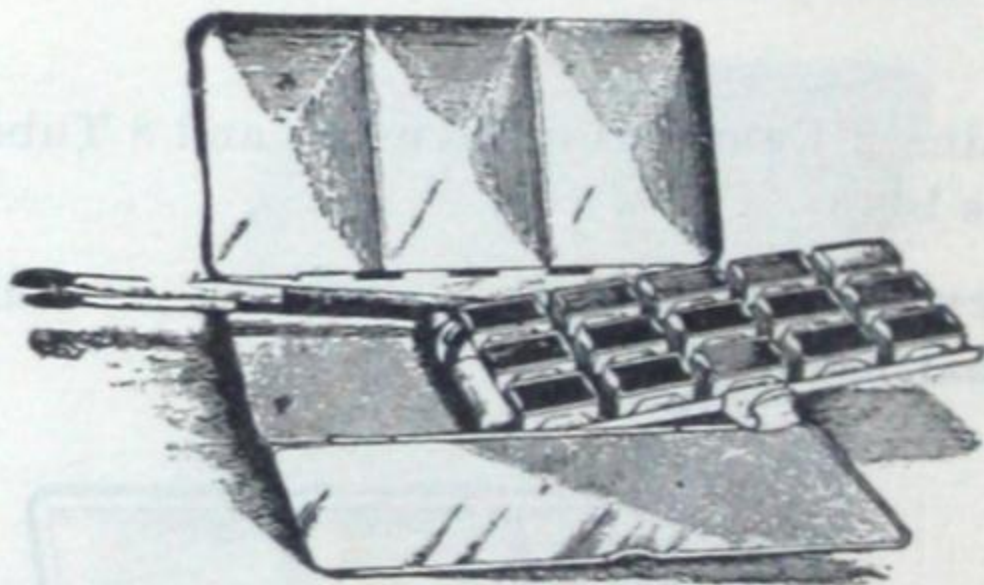
FRENCH MOIST WATER COLOR BOXES



NO. 476 IMPROVED "MURILLO"

No. 476. Box contains 1 Brush, Movable Tray, with mixing spaces, holding 8 Pans best quality Colors per doz., \$7.50 each, .75

Colors: Burnt Sienna, Chrome No. 1, Crimson Lake, Emerald Green, Prussian Blue, Sepia, Ultramarine, Vermilion



NO. 477 IMPROVED "MURILLO"

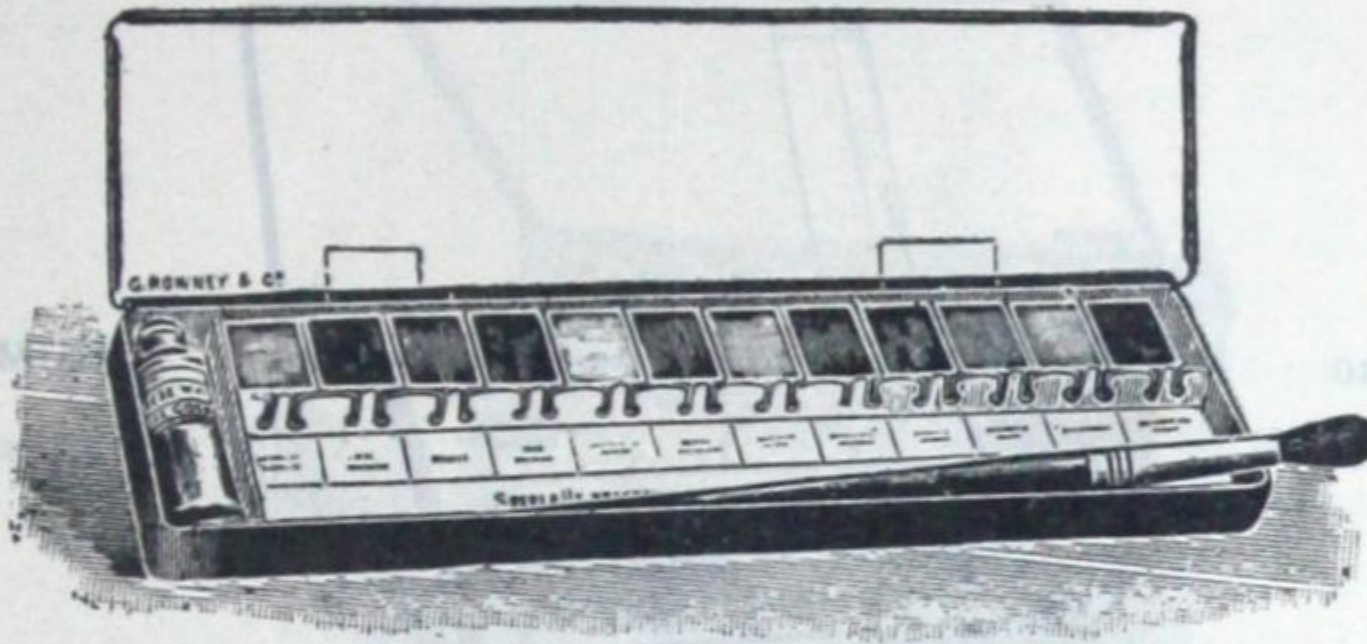
No. 477. Box contains 2 Brushes, Palette Flap, Movable Tray, holding Tube of Chinese White, 15 Pans best quality Colors per doz., \$13.50 each, \$1.25

Colors: Burnt Sienna, Carmine, Cobalt, Emerald Green, Gamboge, Indigo, Ivory Black, Light Red, Pale Chrome, Prussian Blue, Sap Green, Sepia, Ultramarine, Vermilion, Yellow Ochre

SEPARATE COLORS FOR BOXES NOS. 476 AND 467

Cobalt and Carmine	per doz., \$1.80 each .20
All other colors	" 1.20 " .15
Chinese White in tubes (for No. 477 boxes)	" 1.20 " .15

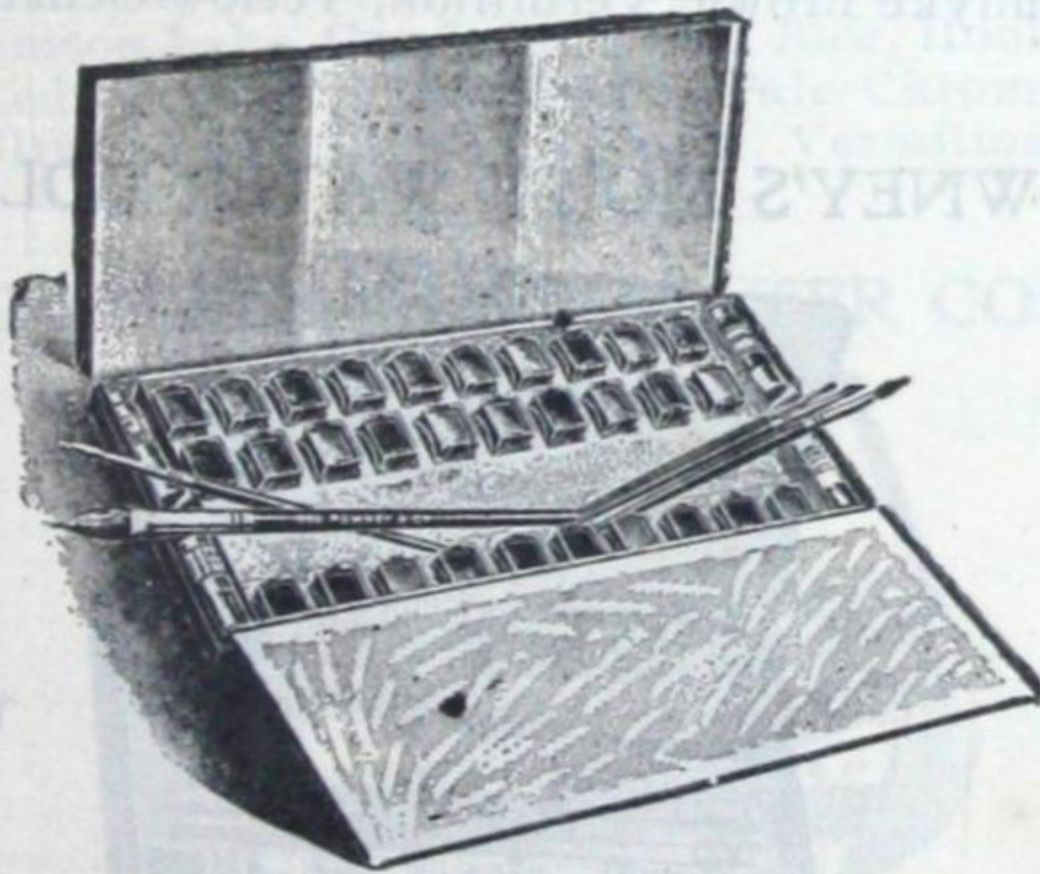
GEO. ROWNEY'S MOIST WATER COLOR BOXES



NO. 36. SCHOOL BOARD BOX

No. 36. Box contains 1 Camel Hair Brush No. 5, 1 tube Chinese White and 12 Half Pans of Colors each, \$1.50

Colors: Burnt Sienna, Cadmium Yellow, Cobalt, Crimson Lake, Indian Red, Madder Lake, Prussian Blue, Raw Sienna, Sap Green, Vermilion, Warm Sepia, Yellow Ochre



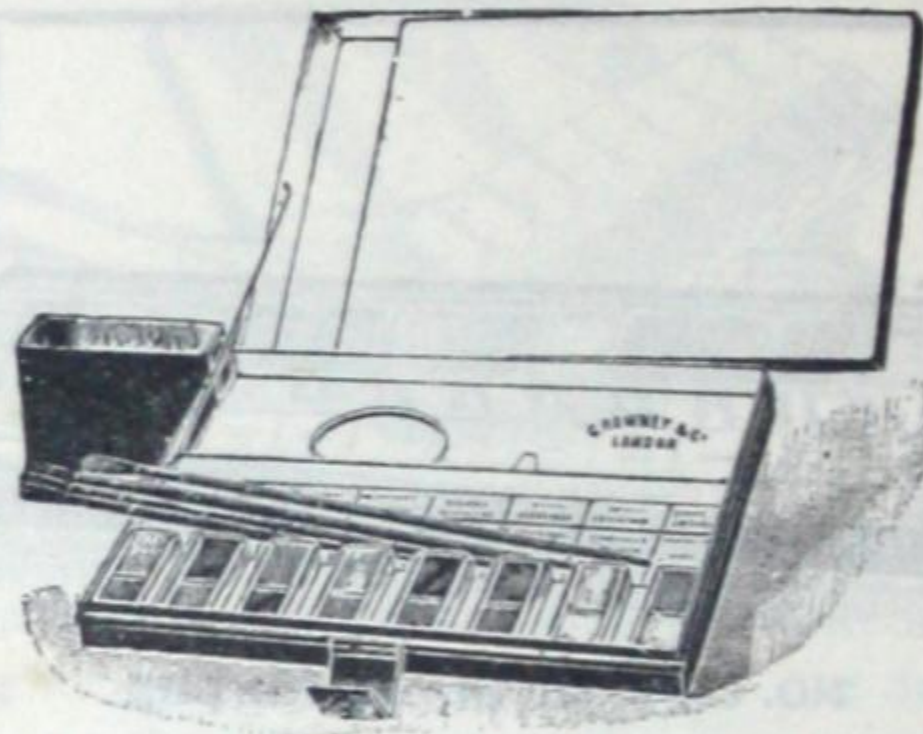
NO. 41. THE DIANA BOX

No. 41. Box contains 1 Camel Hair Wash Brush, $\frac{3}{8}$ in.; 5 Camel Hair Brushes assorted 1 to 6, 1 Tube each Chinese White, Cobalt, Light Red, Sepia and 30 Half Pans of Colors each, \$4.00

Colors: Antwerp Blue, Burnt Sienna, Burnt Umber, Carmine, Chrome Orange, Chrome No. 1, Chrome No. 2, Crimson Lake, Emerald Green, French Ultramarine, Gamboge, Green Bice, Hooker's Green, Indian Red, Indigo, Ivory Black, Lemon Yellow, Madder Brown, Mauve, Naples Yellow, Neutral Tint, Prussian Blue, Purple, Raw Sienna, Raw Umber, Rose Madder, Sap Green, Vandyke Brown, Vermilion, Yellow Ochre

GEO. ROWNEY'S MOIST WATER COLOR BOX

NO. 30



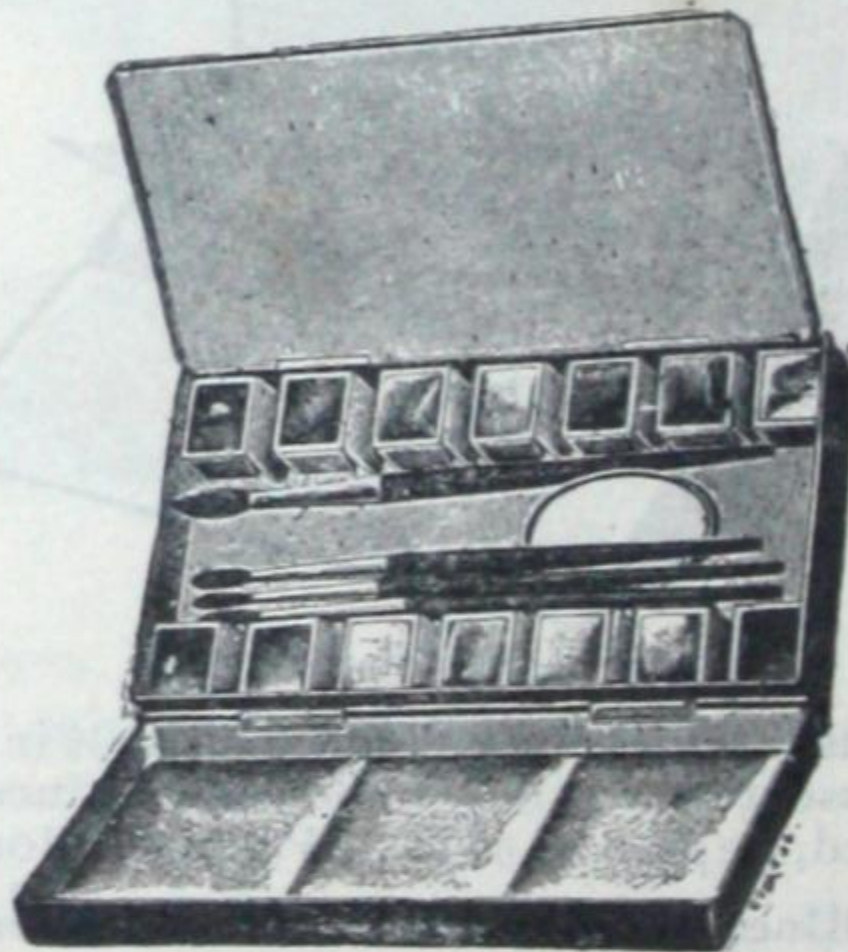
THUMB-HOLE

No. 30. Contains 16 Half Pans, 4 Brushes, Tin Water Can,
1 Block Paper for sketches each, \$2.50

Colors: Burnt Sienna, Chrome Yellow No. 1, Chrome Yellow No. 2,
Chrome Yellow No. 3, Chinese White, Crimson Lake, Emerald Green,
French Ultramarine Blue, Gamboge, Light Red, Prussian Blue, Sap
Green, Sepia, Vandyke Brown, Vermilion, Yellow Ochre

GEO. ROWNEY'S MOIST WATER COLOR BOX

NO. 29

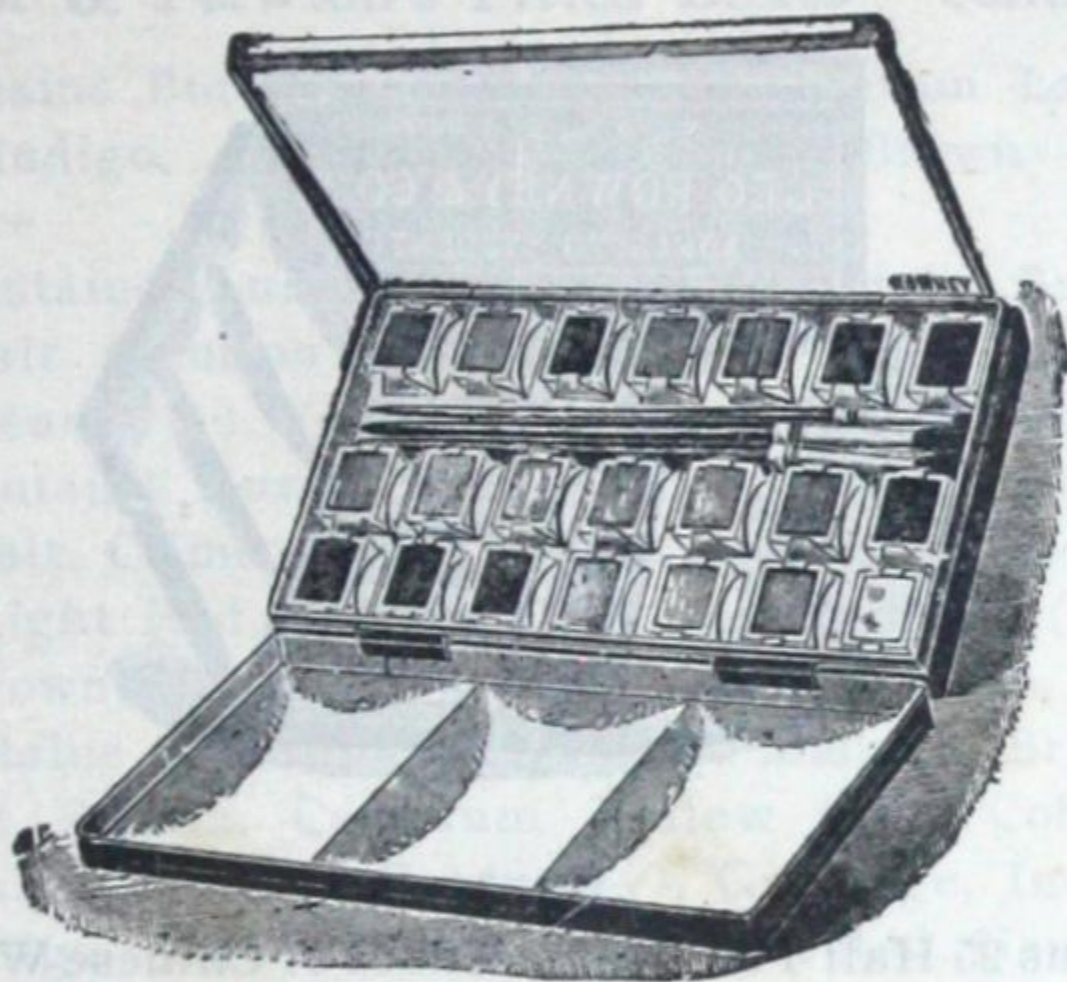


THUMB-HOLE

No. 29. Contains 14 Half Pans, 4 Brushes each, \$2.00

Colors: Burnt Sienna, Chrome Yellow No. 2, Chrome Yellow No. 3,
Crimson Lake, Emerald Green, French Ultramarine Blue, Gamboge,
Light Red, Prussian Blue, Sap Green, Sepia, Vandyke Brown, Vermil-
ion, Yellow Ochre

GEO. ROWNEY'S MOIST WATER COLOR BOX



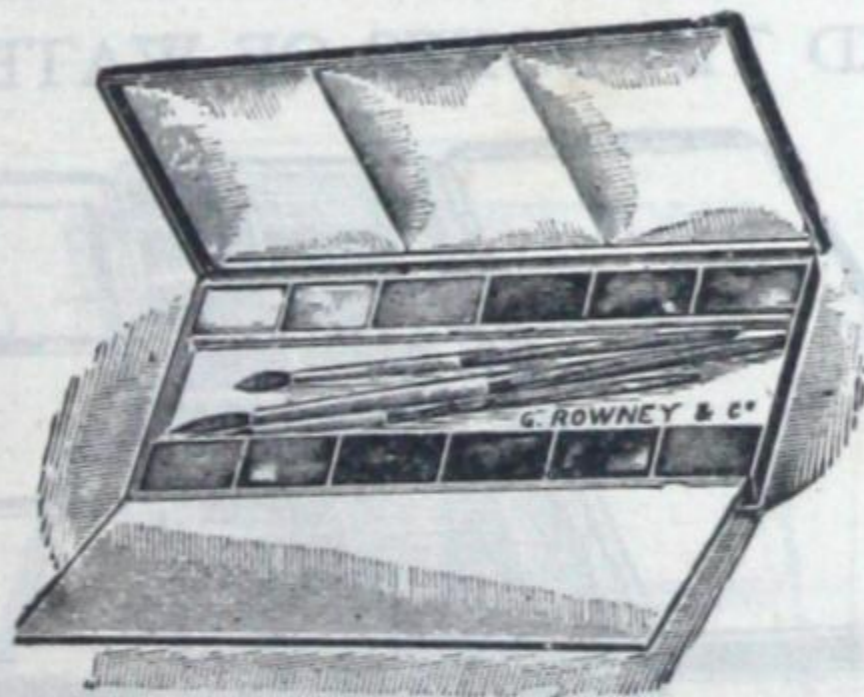
NO. 29

NEW PATTERN

No. 29. Contains 21 Half Pans, 4 Camel Hair Brushes, . . . each, \$2.25

Colors: Brown Madder, Burnt Sienna, Carmine, Chrome Orange, Cobalt Blue, Crimson Lake, Gamboge, Green Bice, Hooker's Green, Ivory Black, Light Red, Mauve, Olive Green, Pale Chrome, Prussian Blue, Scarlet Lake, Ultramarine, Vandyke Brown, Vermilion, Yellow Ochre

GEO. ROWNEY'S MOIST WATER COLOR BOX



NO. 27. SCHOOL OF ART BOX

No. 27. Box contains 3 Wells in Cover and 1 flap Palette for mixing tints, 3 Camel Hair Brushes and 12 pans of Colors . . . per doz., \$5.00 each, .45

Colors: Burnt Sienna, Chrome Yellow, Crimson Lake, Emerald Green, Gamboge, Light Red, Prussian Blue, Sepia, Ultramarine, Vandyke Brown, Vermilion, Yellow Ochre

GEO. ROWNEY'S "ADVANCED STUDENT'S" BOX

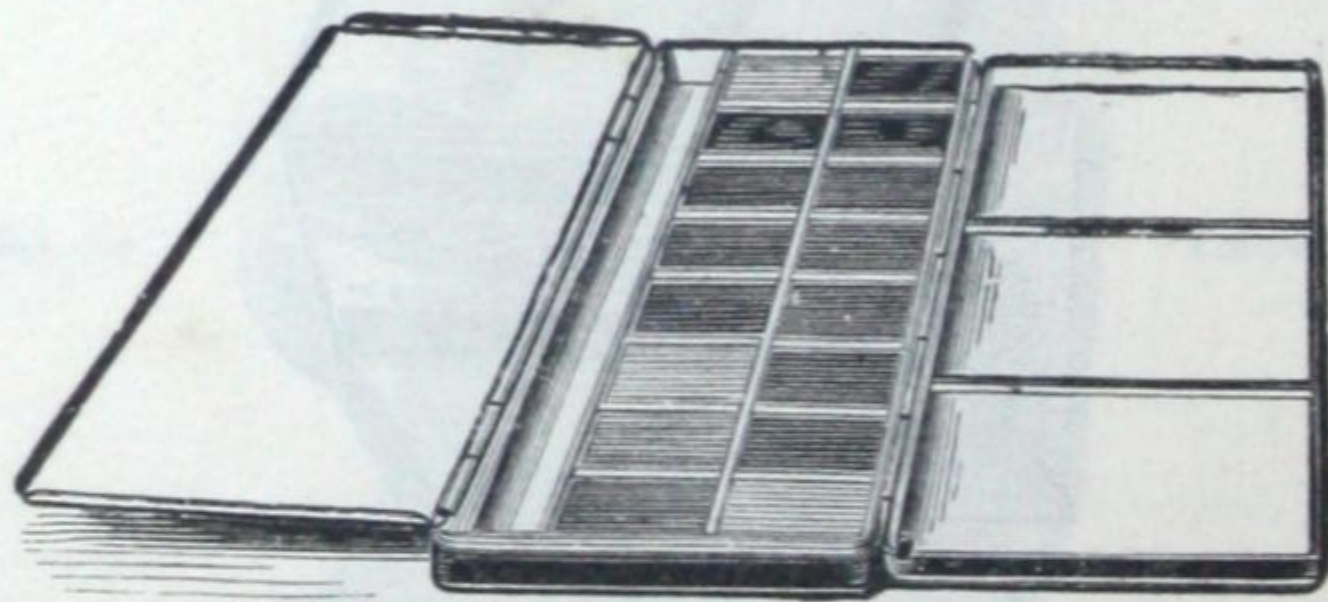


NO. 31

No. 31. Contains 25 Half Pans, large Tubes of Chinese White and Sepia and 4 Camel Hair Brushes, complete . . . each, \$3.00

Colors: Brown Madder, Burnt Sienna, Chrome Green, Chrome Yellow, L., M. and D.; Cobalt, Crimson Lake, Emerald Green, Gamboge, Indigo, Lamp Black, Light Red, Naples Yellow, Prussian Blue, Purple, Raw Sienna, Raw Umber, Rose Madder, Sap Green, Scarlet Lake, Ult. Blue, Vandyke Brown, Vermilion and Yellow Ochre

WINSOR & NEWTON'S
JAPANNED TIN BOXES OF WATER COLORS



WHOLE PAN BOX

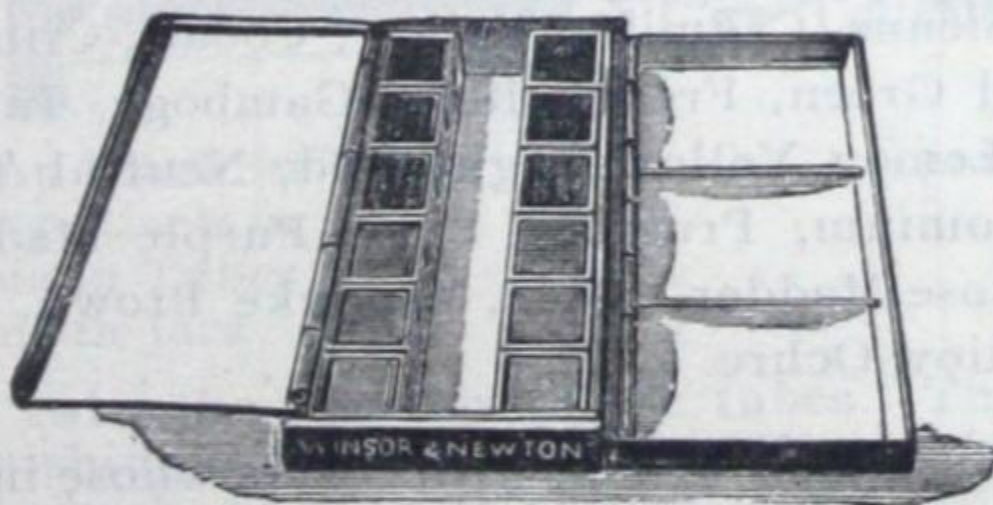
- 4 Pan Box contains Cobalt, Light Red, Raw Sienna and Vandyke Brown . . . each, \$2.50
- 6 Pan Box contains Crimson Lake, Gamboge, Light Red, Prussian Blue, Vandyke Brown and Yellow Ochre . . . each, 3.00

Winsor & Newton's Fitted Boxes — continued

- 8 Pan Box contains Burnt Sienna, Cobalt, Crimson Lake, Gamboge, Indigo, Light Red, Vandyke Brown and Yellow Ochre each, \$3.90
- 10 Pan Box contains Aureolin ($\frac{1}{2}$), Brown Pink, Burnt Sienna, Cobalt, Crimson Lake, Gamboge, Indigo, Light Red, Raw Sienna ($\frac{1}{2}$), Vandyke Brown and Yellow Ochre each, 4.95
- 12 Pan Box contains Aureolin ($\frac{1}{2}$), Brown Pink, Burnt Sienna, Cobalt, Crimson Lake, Gamboge, Indigo, Indian Red ($\frac{1}{2}$), Light Red, Neutral Tint, Raw Sienna ($\frac{1}{2}$), Vandyke Brown, Vermilion ($\frac{1}{2}$) and Yellow Ochre . . . each, 5.50
- 16 Pan Box contains Aureolin ($\frac{1}{2}$), Brown Madder, Brown Pink, Burnt Sienna, Cadmium Yellow ($\frac{1}{2}$), Cobalt, Crimson Lake, Emerald Green ($\frac{1}{2}$), Gamboge, Indian Red ($\frac{1}{2}$), Indigo, Lemon Yellow ($\frac{1}{2}$), Light Red, Neutral Tint, Raw Sienna ($\frac{1}{2}$), Rose Madder, Vandyke Brown, Vermilion ($\frac{1}{2}$), Viridian ($\frac{1}{2}$) and Yellow Ochre . . . each, 8.90
- 18 Pan Box contains Aureolin ($\frac{1}{2}$), Brown Madder, Brown Pink, Burnt Sienna, Cadmium Yellow ($\frac{1}{2}$), Cobalt, Crimson Lake, Emerald Green ($\frac{1}{2}$), Gamboge, Indian Red ($\frac{1}{2}$), Indigo, Lemon Yellow ($\frac{1}{2}$), Light Red, Neutral Tint, Purple Lake, Raw Sienna ($\frac{1}{2}$), Rose Madder, Sepia, Vandyke Brown, Vermilion ($\frac{1}{2}$), Viridian ($\frac{1}{2}$) and Yellow Ochre each, 9.95

WINSOR & NEWTON'S

JAPANNED TIN BOXES OF WATER COLORS



HALF PAN BOX

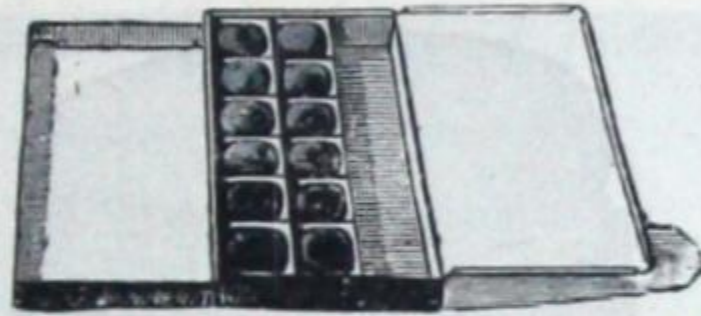
- 6 Half Pan Box contains Crimson Lake, Gamboge, Light Red, Prussian Blue, Vandyke Brown, and Yellow Ochre each, \$2.10

Winsor & Newton's Fitted Boxes—continued

- 8 Half Pan Box contains Burnt Sienna, Cobalt, Crimson Lake, Gamboge, Indigo, Light Red, Vandyke Brown and Yellow Ochre each, \$2.60
- 10 Half Pan Box contains Brown Pink, Burnt Sienna, Cobalt, Crimson Lake, Gamboge, Indigo, Light Red, Raw Sienna, Vandyke Brown and Yellow Ochre each, 3.00
- 12 Half Pan Box contains Brown Madder, Brown Pink, Burnt Sienna, Cobalt, Crimson Lake, Gamboge, Indigo, Light Red, Raw Sienna, Vandyke Brown, Vermilion and Yellow Ochre each, 3.45
- 16 Half Pan Box contains Aureolin, Brown Madder, Brown Pink, Burnt Sienna, Cadmium Yellow, Cobalt, Crimson Lake, Gamboge, Indian Red, Indigo, Light Red, Neutral Tint, Raw Sienna, Vandyke Brown, Vermilion and Yellow Ochre each, 4.95
- 18 Half Pan Box contains Aureolin, Brown Madder, Brown Pink, Burnt Sienna, Cadmium Yellow, Cobalt, Crimson Lake, Emerald Green, Gamboge, Indian Red, Indigo, Light Red, Neutral Tint, Raw Sienna, Rose Madder, Vandyke Brown, Vermilion and Yellow Ochre each, 5.64
- 20 Half Pan Box contains Aureolin, Brown Madder, Brown Pink, Burnt Sienna, Cadmium Yellow, Cobalt, Crimson Lake, Emerald Green, French Blue, Gamboge, Indian Red, Indigo, Light Red, Neutral Tint, Oxide of Chromium, Raw Sienna, Rose Madder, Vandyke Brown, Vermilion and Yellow Ochre each, 6.65
- 24 Half Pan Box contains Aureolin, Brown Madder, Brown Pink, Burnt Sienna, Cadmium Yellow, Cobalt, Crimson Lake, Emerald Green, French Blue, Gamboge, Indian Red, Indigo, Lemon Yellow, Light Red, Neutral Tint, Oxide of Chromium, Prussian Blue, Purple Madder, Raw Sienna, Rose Madder, Sepia, Vandyke Brown, Vermilion and Yellow Ochre each, 8.55

These Boxes are light and strong, with covers whose inner surfaces are enamelled with a dead white serving as palettes. The selections of Moist Colors placed in them have been made with much care, and after due study of the various lists of the first Water Color Artists.

WINSOR & NEWTON'S
BOXES OF MOIST WATER COLORS



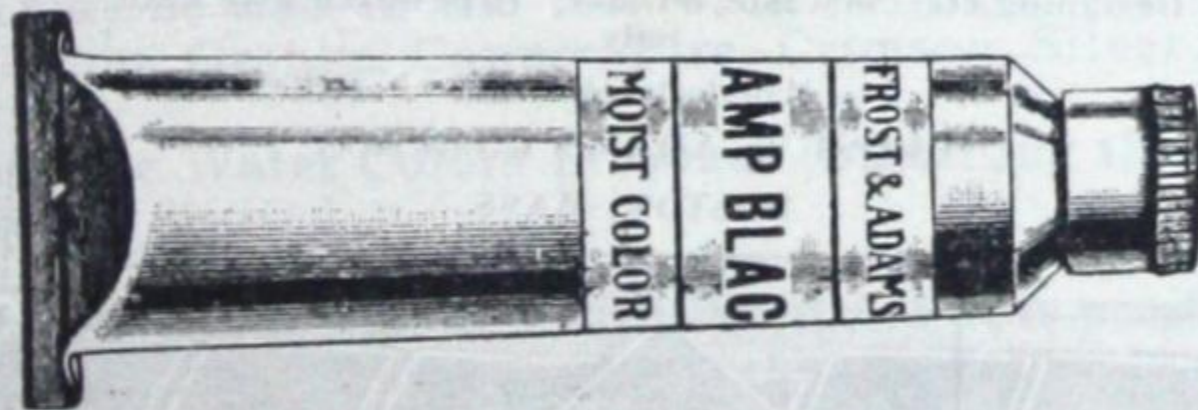
QUARTER CAKE BOX

Box with 6 Quarter Cakes each, \$1.50	Box with 16 Quarter Cakes each, \$3.50
" 8 " " 2.00	" 18 " " 3.75
" 10 " " 2.20	" 20 " " 4.00
" 12 " " 2.50	" 24 " " 5.00
" 14 " " 3.00	" 30 " " 6.50

WINSOR & NEWTON'S
JAPANNED TIN EMPTY QUARTER CAKE BOXES

Box for 6 Quarter Cakes each, \$1.10	Box for 16 Quarter Cakes each, \$2.00
" 8 " " 1.25	" 18 " " 2.10
" 10 " " 1.35	" 20 " " 2.25
" 12 " " 1.50	" 24 " " 2.35
" 14 " " 1.75	" 30 " " 2.50

FROST & ADAMS CO'S
AIR BRUSH LAMP BLACK AND SEPIA



Air Brush Lamp Black in Tubes	per doz., \$2.75 each, .25
Air Brush Lamp Black in Jars	" 4.80 " .40
Air Brush Sepia in Tubes	" 2.75 " .25
Air Brush Sepia in Jars	" 4.80 " .40

Jars contain twice the quantity of the tubes. The best Colors in the market for finishing Solar Prints, being the exact tones required and can be erased nearly as easy as crayon. Especially recommended for the Fountain Air Brush, being free from grit, very finely ground, and contain but little gum.

Beware of colors not sufficiently ground for Air Brush use

FROST & ADAMS CO'S METALLIC WATER COLORS

IN ROUND SAUCERS



Metallic Water Colors are put up in round China-saucers, 10 saucers in a box, and may be had in the following brilliant shades: Pale Gold, Rich Gold, Lemon, Orange, Copper, Fire, Crimson, Silver, Patent-Green and Patent-Blue

We furnish these Water Colors in boxes containing the assortment, or any one shade, as desired

To be mixed with water only, no waste, no odor; used by Architects, Designers, Artists, Amateurs and Professionals; it is positively the only satisfactory "Metallic" Water-Color on the market

Single Saucer	each, .10
Box of 10 Saucers	per box, 1.00

METALLIC PREPARATIONS FOR ILLUMINATING

Gold Snells	each .20	Silver Shells	each, .10
Gold Saucers, 1 inch	" .25	Silver Saucers, 1 inch	" .15
" 1 1/2 "	" .35	" 1 1/2 "	" .52
" 2 "	" .50		

DUNNE'S TRANSPARENT PASTEL COLORS IN TUBES

CLASS A		Per Tube, .10
Apple Green	Dirt Color	Olive Green
Blue Green	Emerald Green	Pink
Brick	Flesh	Purple
Bronze Green	Gold	Rose Madder
Brown Madder	Gray Green	Ruby Red
Burnt Sienna	Hunter's Green	Sepia
Carmine	Ivory Black	Silver Gray
Cherry	Lemon Yellow	Terra Cotta
Cobalt Blue	Light Tan	Violet
Dark Tan	Navy Blue	
CLASS B		Per Tube, .15
Blue Black	Drab	Prussian Blue
Bottle Green	Golden Brown	Raw Umber
Brown Ochre	Indigo Blue	Seal Brown
Burnt Umber	Light Red	Slate
Cardinal Red	Neutral Tint	Steel Gray
Charcoal Gray	Old Gold	Straw Color
Dark Blue	Orange	Vandyke Brown
CLASS C		Per Tube, .20
Bismarck	Indian Red	Peacock Blue—Plum
Blood Red	Lavender	Prussian Green
Burnt Carmine	Lilac	Quaker Green
Cadmium Orange	Magenta	Raw Sienna
Cadmium Yellow	Mahogany	Sage Green
Chrome Yellow	Maple Green	Sea Green
Cologne Earth	Marine Blue	Scarlet Lake
Corn Color	Moss Green	Scarlet Vermilion
Crimson Lake	Myrtle Green	Strawberry
Davy's Gray	Naples Green	Terre Verte
Ecru	New Blue	Turquoise Blue
Flame Red	Oak	Vermilion
Gobelin Blue—Garnet	Orange Vermilion	Wine
Hooker's Green	Payne's Gray	Yellow Ochre
CLASS D		Per Tube, .25
Alizarin Crimson	French Ultramarine Blue	Pink Sunset
Alizarin Green	Golden Sunset	Red Brown for Rocks
Auburn Hair	Heliotrope	Red Gold Hair
Aureolin — Amber	Italian Sky Blue	Rembrandt's Madder
Bronze Gold for Rocks	Light Brown Hair	Reuben's Madder
Canary Yellow	Light Gold Hair	Royal Blue
Cerulean Blue	Maize — Mauve	Sea Foam
Cobalt Green	Marechal Niehl	Sea Shell Pink
Dark Brown Hair	Nile Green	Ultra. Ash Gray
Fawn Color	Old Rose	Ven. Red — Viridian
Flaxen Hair	Pearl Gray	Wild Rose Pink

DUNNE'S TRANSPARENT PASTEL COLOR BOX

Just What You Need for Coloring Photographs and Lantern Slides

Complete Box of 12 tubes, assorted colors	each, \$1.25
Extra tubes of color for this box	“ .10
New Medium, 1 oz. bottles	“ .15
Old Medium, 1 oz. bottles	“ .15
Crystal Polish 1 oz. bottles	“ .25
Pastel Ivory Black Liquid, in tubes	“ .10
Pastel Ivory Black, 1 oz. bottles	“ .40
Pastel Ivory Black, 2 oz. bottles	“ .80
Book of Instructions	“ .25

Made especially for transparent work, and without preparation except moistening surface with clear water to make color apply perfectly even. Will readily color Lantern Slides and every paper manufactured, except



Artiso Platino and all collodion surfaces, for which two excellent mediums are furnished called "Old" and "New," as it is strictly necessary to use a milder quality on pictures or slides taken less than four months. These mediums are also invaluable for lessening or removing color from same surfaces when mistakes occur. When ordering, always specify which is desired, as "Old" is too strong for new

surfaces and will injure them. For collodion photos use Crystal Polish after picture is colored; must be used only on these papers

These colors may also be used on Ivory, Leather, Burnt Wood, Silk, Satins, Velvets and other fabrics

They are called "Pastel Colors" because they give the soft mellow effect of dry pastel, and are partially composed of a fine powder, though they will not wash off as dry pastel does, and are the only transparent colors on the market that furnish every shade desired, ready mixed for use, there being more than one hundred and twenty-five colors

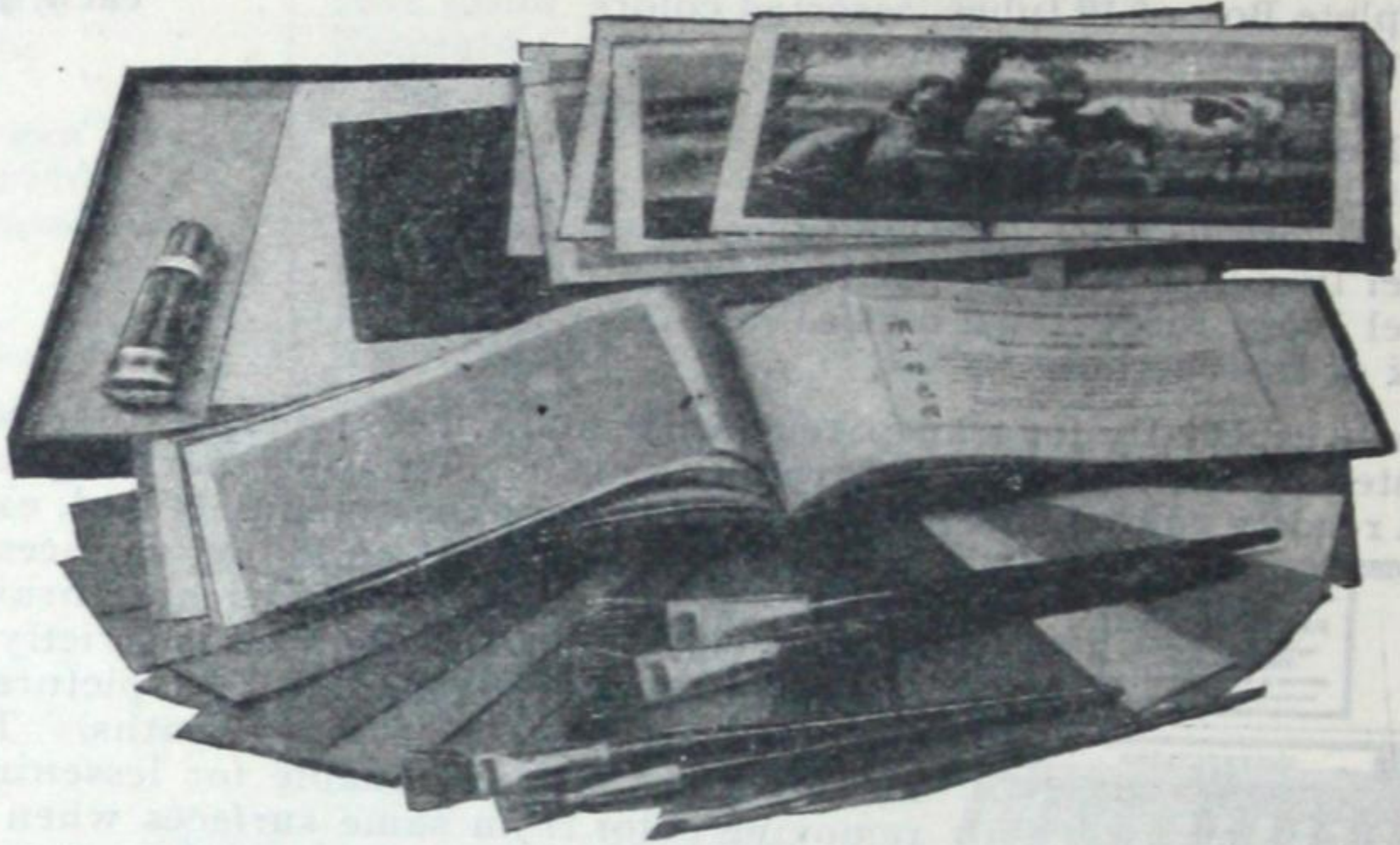
Dunne's Complete Box contains the following tubes of Colors: Cobalt Blue, Flesh, Gold, Gray Green, Hunter's Green, Ivory Black, Lemon Yellow, Purple, Rose Madder, Ruby Red, Sepia and Silver Gray, which are the most necessary shades for general use, with such complete instructions for coloring both lantern slides and pictures, that, if followed, any one can have nice results with very little practice. Amateur and Artist will find them indispensable and no one with a camera should be without them. For economy and convenience the 21-recessed china covered palette should be used, as colors left over are good until used, if kept from dust. Use Russian or Red Sable Oil Brushes, Nos. 5, 7, 10.

DONT MISS THIS

Have you tried Dunne's Transparent, Pastel Ivory Black Liquid Color for retouching and building out defective negatives and prints. If not, you have missed something great. Try it

JAPANESE TRANSPARENT WATER COLORS

THE SELF BLENDING COLORS



For the Artistic Tinting of Photographs, Lantern Slides and Reproductions, where a Perfectly Transparent Color is required

- No. 1. Complete Booklet containing following 15 colors, each color being preceded by a descriptive page . . . each, .75
- | | |
|---|--|
| <p>No. 1. Brilliant Yellow
 2. Deep Yellow
 3. Orange Yellow
 4. Flesh Tint
 5. Geranium Pink
 6. Japonica Scarlet
 7. Royal Crimson
 8. Mahogany Brown</p> | <p>No. 9. Sepia Brown
 10. Light Green
 11. Dark Green
 12. Sky Blue
 13. Deep Blue
 14. Wistaria Violet
 15. Pearl Gray</p> |
|---|--|
- No. 2. School Edition containing following 4 primary colors with instructions for using . . . each, .25
 Brilliant (Chrome Yellow) Orange Yellow (Chrome Orange)
 Sky Blue (Prussian Blue) Japonica Scarlet (Carmine)
- No. 3. Student's Palette, containing 10 small films of color with brief instructions . . . each, .25
- No. 4. Separate Color Films for Complete Booklets, adjustable to stubs in book . . . each, .08
- No. 5. Japanese Sizing Films for surfaces that resist water colors . . . each, .08
- No. 6. Instructions for Coloring Lantern Slides with Japanese Water Colors, in pamphlet form . . . each, .10

PERLESS JAPANESE TRANSPARENT WATER COLORS

Extra Color Films, size 3 x 6 inches

CLASS A Each, .10

Blue	Corn Color	Maize	Raw Umber
Swamp Blue	Deep Blue	Magenta	Red Earth
Red	Deep Tan	Maple Green	Roman Ochre
Black	Delft Blue	Mauve	Royal Blue
Light Green	Emerald Green	Moss Green, L	Ruby Red
Black Red	Gamboge	Moss Green, D	Sap Green
Brown for Rocks	Garnet	Mountain Green	Seal Brown
Brown Ochre	Golden Yellow	Naples Yellow	Straw
Light Sienna	Grass Green	Navy Blue	Terra Cotta Red
Light Umber	Hooker's Green, L	Neutral Tint	Vandyke Brown
Light Red	Hooker's Green, D	New Blue	Venetian Red
Light Red	Indian Red	Nile Green	Vermilion
Light Lemon	Indigo	Olive Green	Violet
Light Deep	Italian Blue	Opaque White	Willow Green
Light Orange	Ivory Black	Payne's Gray	Wine
Light Green, L	Lamp Black	Prussian Blue	Yellow Earth
Light Green, D	Light Red	Prussian Green	Yellow Lake
Light Yellow	Light Tan	Raw Sienna	Yellow Ochre

CLASS B Each, .15

Light Red	Cerulean Blue	Lavender	Sage Green
Light Blue	Crimson Lake	Lemon Yellow	Scarlet Lake
Light Blue	Cobalt	Madder Carmine	Scarlet Vermilion
Light Pink	Ecru	Marine Blue	Sea Green
Light Pink	Flame Red	Myrtle Green	Sea Shell Pink
Light Blue	French Blue	Oak	Sepia
Light Blue	Geranium Lake	Old Rose	Turquoise Blue
Light Brown	Gobelin Blue	Oxide of Chromium	Violet Carmine
Light Yellow	Green Lake	Peacock Blue	Viridian
Light Orange	Heliotrope	Robin's Egg Blue	Warm Sepia
Light Yellow	Hunter's Green	Rose Madder	Wild Rose Pink
Light Green	Indian Yellow	Royal Purple	
Light Indigo	Jaqueminot Red	Ruben's Madder	

CLASS C (Special Hair Colors) Each, .20

Light Brown	Chestnut	Light Brown	Red Golden
Light Golden	Dark Brown	Light Golden	Titian
	Flaxen		

There are many new and beautiful shades. Their brilliancy and absolute transparency are unequalled by any water color in the world. Each contains color equal to two pans or tubes of ordinary water colors

THE ACME TRANSPARENT WATER COLORS

For Coloring and Painting Photo-Portraits on all kinds of Paper, Views, Lanterns, Transferotypes, Transparencies, Engravings, Artotypes and prints of all kinds, Tapestry, Paris Tinting and all kinds of Dye or Fabric Painting, Coloring Unmounted Photos for Transferring to Convex, or Plain Glass, Sketching, etc. In separate double pans and boxes



- Large Box contains Palette and Instructions, and 16 Colors:
 Blue Black, Blue Gray, Brown Madder, Carmine, Chinese Opaque White, Dark Green, Dark Brown, Deep Blue, Deep Yellow, Flesh, Gold, Neutral Tint, New Rose, New Violet, Pink Madder, Scarlet each, \$2.50
- Amateur Box contains Palette and Instructions, and 6 Colors:
 Dark Blue, Dark Brown, Deep Yellow, Flesh, Scarlet and White " 1.00
- Acme Medium in Pans, with Instructions " .35
- Acme Guide to Coloring, 50 pages " .25

Acme Pody, or Surface Colors, each, .15

Acme Black	Chinese White	Cobalt Blue
Carmine, 35 cents	Chrome Yellow	Vermilion

Acme Transparent Tinting Colors, each, 25

Blue, Bright	Green, Dark	Purple
Blue, Dark	Green, Light	Rose
Blue, Gray	Green, Olive	Scarlet
Brown, Dark	Madder Red	Violet
Brown, Light	Neutral Tint	Wine
Black, Blue	Orange	Yellow, Deep
Crimson Carmine	Flesh	Yellow, Lemon
Gold		

These colors are in solid, but moist form, and are a substitute for the ordinary fugitive liquid, or dye colors; are easy to apply and very effective, producing all tints, and are the only colors that will make a fast Indelible Black on Albumen Paper for Hair, Drapery, etc., and the set contains the only colors of this class guaranteed fast to light

With a view to greater permanency, many changes have recently been made in the composition of these colors, but still retaining the original names

PERMATEX STENCIL COLORS — Large Jars

Contains one jar each of Prussian Blue, Burnt Sienna, Chrome Green, Moss Green, Permanent Red, Chrome Yellow, Golden Ochre, Stencil White, one Stencil, one Stencil Brush, and Directions.

The box is of heavy cardboard, 6¾ × 4½ × 3 inches with hinged cover and drop front.



PERMATEX STENCIL SET

Permatex Stencil Set of 8 Colors, per set, \$2.25

Permatex Stencil Colors in 1 oz. glass jars with lacquered tin tops

Class A each, .20

- Ivory Black
- Raw Sienna
- Burnt Sienna
- Burnt Umber
- Golden Ochre
- Stencil White

Class B each, .25

- Chrome Green, med.

Class B continued

- Thall Green
- Moss Green
- Chrome Yellow, lem.
- Chrome Yellow, med.

Class C each, .30

- Cobalt Blue
- Prussian Blue
- Ultramarine Blue

Class C continued

- Permanent Red
- Rose Pink
- Rose Lake
- Turkey Red
- Geranium Lake
- Mauve Lake

Class D each, .35

- Carmin

Half ounce bottles, Class A, .12 Class B, .15 Class C, .18 Class D, .21

PLAN OF A COLORED CHART FOR WATER-COLOR PAINTING

Showing an easy method of acquiring the knowledge of Mixing and Blending Colors into Tints.
by Mr. FREDERICK OUGHTON

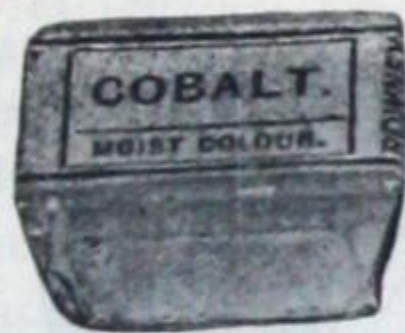
1 Indigo, Vandyke Brown, Crimson Lake	2 French Blue, Brown Madder	3 Cobalt, Sepia, Crimson Lake	4 Cobalt, Light Red	5 Cobalt, Rose Madder Yellow Ochre	6 Cobalt, Raw Sienna	7 Cobalt, Rose Madder Aureolin
8 Cobalt, Yellow Ochre	9 Sepia, Gamboge	10 Indigo, Yellow Ochre	11 Indigo, Gamboge	12 Indigo, Sepia	13 Prussian Blue, Burnt Sienna	14 Prussian Blue Burnt Sienna Gamboge
15 Prussian Blue, Aurora Yellow	16 Prussian Blue, Aureolin	17 French Blue, Crimson Lake	18 Cobalt, Rose Madder	19 Rose Madder, Yellow Ochre	20 Vermilion Gamboge	21 Vermilion, Yellow Ochre

The Warm and Cool Grays (Nos. 1 to 7) are for Clouds, Hills, Mountains and distant effects; and are also useful in Buildings, Old Walls, Etc. Nos. 6 and 7 for the Grays in Flowers, Etc.; the Cobalt predominating if a Blue Gray be required. No. 6 is an especially useful Gray for working over Shadows in Flesh. Nos. 8 to 12 are for distance and middle distance Trees Etc. Nos. 13 to 16 for foreground Trees. Nos. 17 and 18 are Purple used in Flowers, Fruit and foreground Shadows. Nos. 19, 20 and 21 can be used for warming up Greens, and as Flesh Tints, also for Flowers, Fruit and Drapery.

Size 14 x 8 inches. Each, .50

FROST & ADAMS CO'S SUPERIOR
FINELY PREPARED ARTISTS' WATER COLORS

IN CHINA



HALF PANS

Per Doz., \$.60

Each, \$.05

Alizarin Crimson
Antwerp Blue
Brown Pink
Burnt Sienna
Burnt Umber
Cadmium Yellow
Cadmium Yellow, Pale
Carmine
Charcoal Gray
Chinese White
Chrome Green
Chrome Orange, No. 3
Chrome Yellow
Chrome Yellow, Pale
Cobalt Blue
Crimson Lake
Emerald Green
Gamboge

Gold
Green Bice
Hooker's Green, No. 1
Hooker's Green, No. 2
Indian Red
Indian Yellow
Indigo
Ivory Black
Lamp Black
Lemon Yellow
Light Red
Madder Brown
Mauve
Naples Yellow
Neutral Tint
New Blue
New Green
Olive Green

Payne's Gray
Permanent Blue
Prussian Blue
Purple Lake
Raw Sienna
Raw Umber
Rose Madder
Sap Green
Scarlet Lake
Sepia
Silver
Ultramarine
Vandyke Brown
Venetian Red
Vermilion
Violet
Warm Sepia
Yellow Ochre

Used by the Leading Schools of the United States

Extra finely ground by machinery. This series is prepared for the use of students, designers, etc. The colors are made in some cases entirely, and in others partly, from the true artists' pigments

Packed one dozen in a box. Write for sample cards. All dealers in Artists' Materials sell them

HALF PANS

WINSOR & NEWTON'S MOIST WATER COLORS



CLASS A

Per Doz., \$1.65

Each, .13

Antwerp Blue
Bistre
Blue Black
Brown Ochre
Brown Pink
Burnt Sienna
Burnt Umber
Charcoal Gray
Chinese White
Chinese Blue
Chrome Deep
Chrome Lemon
Chrome Orange
Chrome Yellow
Cologne Earth
Cyprus Umber
Dragons' Blood

Emerald Green
Flake White
Gamboge
Hooker's Green, No. 1
Hooker's Green, No. 2
Indian Red
Indigo
Italian Pink
Ivory Black
King's Yellow
Lamp Black
Light Red
Mauve
Naples Yellow
Naples Yellow, Deep
Neutral Tint
New Blue

Olive Green
Payne's Gray
Permanent Blue
Prussian Blue
Prussian Green
Raw Sienna
Raw Umber
Roman Ochre
Sap Green
Steel
Terre Verte
Vandyke Brown
Venetian Red
Vermilion
Yellow Lake
Yellow Ochre

CLASS B

Per Doz., \$3.00

Each, .23

Alizarin Carmine
Alizarin Crimson
Alizarin Green
Alizarin Orange
Alizarin Scarlet
Alizarin Yellow
Brown Madder
Carmine Lake
Cerulean Blue
Crimson Lake
Cyanine Blue

Indian Yellow
Leitch's Blue
Madder Carmine, Alizarin
Mars Yellow
Neutral Orange
Orange Madder, Alizarin
Orange Vermilion
Permanent Brown
Permanent Crimson
Purple Lake
Roman Sepia

Rose Madder, (Alizarin)
Rubens' Madder
Ruby Madder, (Alizarin)
Scarlet Lake
Scarlet Madder, (Alizarin)
Scarlet Vermilion
Sepia
Spectrum Red
Spectrum Violet
Spectrum Yellow
Warm Sepia

Winsor & Newton's Moist Water Colors, Half Pans — continued

CLASS C		Per Doz., \$3.75	Each, .28
Cadmium Orange	French Blue	Oxide of Chromium	
Cadmium Yellow, Extra Pale	French Ultramarine	Oxide of Chromium, Transparent	
Cadmium Yellow, Pale	Indian Purple	Permanent Mauve	
Cadmium Yellow, Middle Opaque	Intense Blue	Permanent Violet	
Cadmium Yellow, Deep	Lemon Yellow	Permanent Yellow	
Cobalt Blue	Mars Orange	Pure Scarlet	
Cobalt Green	Mineral Gray	Ultramarine Ash, Gray	
Cobalt Violet	Mineral Violet	Veronese Green	
Emerald Oxide of Chrom.	Orient Yellow	Viridian	

CLASS D		Per Doz., \$6.38	Each, .45
Aureolin	Gallstone	Rose Doré	
Aurora Yellow	Madder Carmine	Rose Madder	
Burnt Carmine	Madder Lake	Rose Madder, (Pink Shade)	
Carmine	New Olive Green	Scarlet Madder	
Cobalt Yellow	Pink Madder	Violet Carmine	
Field's Orange Vermilion	Primrose Aureolin	Yellow Carmine	
	Purple Madder		

CLASS E		Per Doz., \$9.00	Each, .75
Smalt	Ultramarine Ash		

CLASS B		Per Doz., \$6.00	Each, .45
Rose Madder, (burnt)	Indian Yellow	Alexandrian Carmine	
Rubens' Madder	Leitch's Blue	Alexandrian Crimson	
Ruby Madder, (burnt)	Madder Carmine, (burnt)	Alexandrian Green	
Scarlet Lake	Mars Yellow	Alexandrian Orange	
Scarlet Madder, (burnt)	Neutral Orange	Alexandrian Scarlet	
Scarlet Vermilion	Orange Madder, (burnt)	Alexandrian Yellow	
Sepia	Orange Vermilion	Brown Madder	
Spectrum Red	Permanent Brown	Carmine Lake	
Spectrum Violet	Permanent Crimson	Cerulean Blue	
Spectrum Yellow	Purple Lake	Crimson Lake	
Warm Sepia	Roman Sepia	Cyanine Blue	

WHOLE PANS

WINSOR & NEWTON'S MOIST WATER COLORS



CLASS A

Per Doz., \$3.00

Each, .25

Antwerp Blue
 Bistre
 Blue Black
 Brown Ochre
 Brown Pink
 Burnt Sienna
 Burnt Umber
 Charcoal Gray
 Chinese White
 Chinese Blue
 Chrome Deep
 Chrome Lemon
 Chrome Orange
 Chrome Yellow
 Cologne Earth
 Cyprus Umber
 Dragons' Blood

Emerald Green
 Flake White
 Gamboge
 Hooker's Green, No. 1
 Hooker's Green, No. 2
 Indian Red
 Indigo
 Italian Pink
 Ivory Black
 King's Yellow
 Lamp Black
 Light Red
 Mauve
 Naples Yellow
 Naples Yellow, Deep
 Neutral Tint
 New Blue

Olive Green
 Payne's Gray
 Permanent Blue
 Prussian Blue
 Prussian Green
 Raw Sienna
 Raw Umber
 Roman Ochre
 Sap Green
 Steel
 Terre Verte
 Vandyke Brown
 Venetian Red
 Vermilion
 Yellow Lake
 Yellow Ochre

CLASS B

Per Doz., \$6.00

Each, .45

Alizarin Carmine
 Alizarin Crimson
 Alizarin Green
 Alizarin Orange
 Alizarin Scarlet
 Alizarin Yellow
 Brown Madder
 Carmine Lake
 Cerulean Blue
 Crimson Lake
 Cyanine Blue

Indian Yellow
 Leitch's Blue
 Madder Carmine, Alizarin
 Mars Yellow
 Neutral Orange
 Orange Madder, Alizarin
 Orange Vermilion
 Permanent Brown
 Permanent Crimson
 Purple Lake
 Roman Sepia

Rose Madder, (Alizarin)
 Rubens' Madder
 Ruby Madder, (Alizarin)
 Scarlet Lake
 Scarlet Madder, (Alizarin)
 Scarlet Vermilion
 Sepia
 Spectrum Red
 Spectrum Violet
 Spectrum Yellow
 Warm Sepia

Winsor & Newton's Moist Water Colors, Whole Pans — continued

CLASS C		
	Per Doz., \$7.50	Each, .55
Cadmium Orange	French Blue	Oxide of Chromium
Cadmium Yellow, Extra Pale	French Ultramarine	Oxide of Chromium, Transparent
Cadmium Yellow, Pale	Indian Purple	Permanent Mauve
Cadmium Yellow, Middle Opaque	Intense Blue	Permanent Violet
Cadmium Yellow, Deep	Lemon Yellow	Permanent Yellow
Cobalt Blue	Mars Orange	Pure Scarlet
Cobalt Green	Mineral Gray	Ultramarine Ash, Gray
Cobalt Violet	Mineral Violet	Veronese Green
Emerald Oxide of Chrom.	Orient Yellow	Viridian

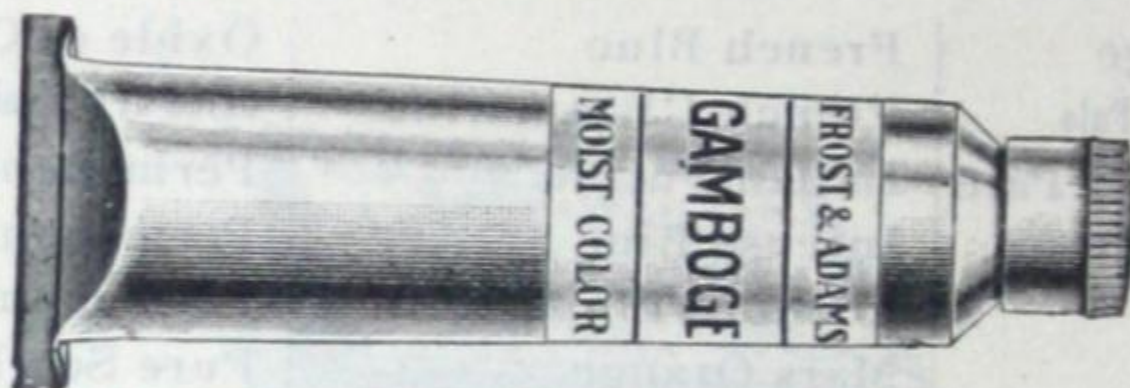
CLASS D		
	Per Doz., \$12.75	Each, .90
Aureolin	Gallstone	Rose Doré
Aurora Yellow	Madder Carmine	Rose Madder
Burnt Carmine	Madder Lake	Rose Madder, (Pink Shade)
Carmine	New Olive Green	Scarlet Madder
Cobalt Yellow	Pink Madder	Violet Carmine
Field's Orange Vermilion	Primrose Aureolin	Yellow Carmine
	Purple Madder	

CLASS E		
	Per Doz., \$18.00	Each, 1.50
Ultramarine Ash		

This is a grade of Moist Water Colors, in tubes, we manufacture especially for schools and amateur use. The colors are made in some cases entirely and in other cases partly from the true artists' pigments. Packed one dozen in a box. Write to us for sample cards. All dealers in Artists' Materials sell them.

FROST & ADAMS CO'S MOIST WATER COLORS

In 3 Inch Tubes, for School Use



Per Doz., \$1.20

Each, .10

Alizarin Crimson	Green Bice	Payne's Gray
Antwerp Blue	Hooker's Green, No. 1	Permanent Blue
Brown Pink	Hooker's Green, No. 2	Prussian Blue
Burnt Sienna	Indian Red	Purple Lake
Burnt Umber	Indian Yellow	Raw Sienna
Cadmium Yellow	Indigo	Raw Umber
Cadmium Yellow, Pale	Ivory Black	Rose Madder
Carminc	Lamp Black	Sap Green
Charcoal Gray	Lemon Yellow	Scarlet Lake
Chinese White	Light Red	Sepia
Chrome Green	Madder Brown	Ultramarine
Chrome Orange, No. 3	Mauve	Vandyke Brown
Chrome Yellow	Naples Yellow,	Venetian Red
Chrome Yellow, Pale	Neutral Tint	Vermilion
Cobalt Blue	New Blue	Violet
Crimson Lake	New Green	Warm Sepia
Emerald Green	Olive Green	Yellow Ochre
Gamboge		

This is a grade of Moist Water Colors, in tubes, we manufacture specially for schools and amateur use

Extra finely ground by machinery. This series is prepared for the use of students, designers, etc. The colors are made in some cases entirely and in other cases partly from the true artists' pigments

Packed one dozen in a box. Write to us for sample cards

All dealers in Artists' Materials sell them

HALF TUBES

WINSOR & NEWTON'S MOIST WATER COLORS



CLASS A

Per Doz., \$1.65

Each, .13

Swamp Blue
 Ultramarine
 Ivory Black
 Brown Ochre
 Brown Pink
 Burnt Sienna
 Burnt Umber
 Charcoal Gray
 Chinese White
 Chinese Blue
 Rome Lemon
 Rome Yellow
 Rome Deep
 Rome Orange
 Loge Earth
 Prus Umber
 Navy's Gray

Dragon's Blood
 Emerald Green
 Flake White
 Gamboge
 Hooker's Green, No. 1
 Hooker's Green, No. 2
 Indian Red
 Indigo
 Italian Pink
 Ivory Black
 King's Yellow
 Lamp Black
 Light Red
 Mauve
 Naples Yellow
 Naples Yellow, Deep
 Neutral Tint

New Blue
 Olive Green
 Payne's Gray
 Permanent Blue
 Prussian Blue
 Prussian Green
 Raw Sienna
 Raw Umber
 Roman Ochre
 Sap Green
 Terre Verte
 Vandyke Brown
 Venetian Red
 Vermilion
 Yellow Lake
 Yellow Ochre

CLASS B

Per Doz., \$3.00

Each, .23

Alizarin Carmine
 Alizarin Crimson
 Alizarin Scarlet
 Brown Madder
 Carmine Lake
 erulean Blue
 Crimson Lake
 Vanine Blue
 Indian Yellow
 Hitch's Blue

Madder Carmine (Alizarin)
 Mars Yellow
 Neutral Orange
 Orange Vermilion
 Permanent Brown
 Permanent Crimson
 Purple Lake
 Roman Sepia
 Rose Madder (Alizarin)

Rubens' Madder
 Ruby Madder (Alizarin)
 Scarlet Lake
 Scarlet Madder (Alizarin)
 Scarlet Vermilion
 Sepia
 Spectrum Red
 Spectrum Yellow
 Warm Sepia

Winsor & Newton's Moist Water Colors, Half Tubes — continued

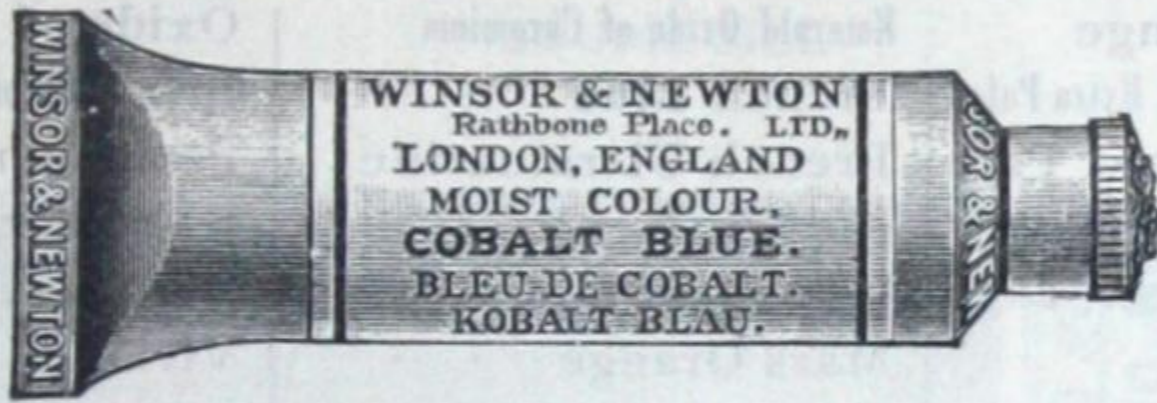
CLASS C		Per Doz., \$3.75	Each, .28
Cadmium, Orange	Emerald Oxide of Chromium	Oxide of Chromium	
Cadmium Yellow, Extra Pale	French Blue	Oxide of Chromium, Transparent	
Cadmium Yellow, Pale	French Ultramarine	Permanent Yellow	
Cadmium Yellow, Middle Opaque	Indian Purple	Ultramarine Ash, Gray	
Cadmium Yellow, Deep	Lemon Yellow	Veronese Green	
Cobalt Blue	Mars Orange	Viridian	
Cobalt Green	Mineral Gray		
Cobalt Violet	Orient Yellow		

CLASS D		Per Doz., \$6.38	Each, .45
Aureolin	Gallstone	Rose Doré	
Aurora Yellow	Madder Carmine	Rose Madder	
Burnt Carmine	Madder Lake	Rose Madder (Pink Shade)	
Carmine	New Olive Green	Scarlet Madder	
Cobalt Yellow	Pink Madder	Violet Carmine	
Field's Orange, Vermilion	Primrose Aureolin	Yellow Carmine	
	Purple Madder		

CLASS E		Per Doz., \$9.00	Each, .75
Smalt	Ultramarine Ash		

WHOLE TUBES

WINSOR & NEWTON'S MOIST WATER COLORS



CLASS A

Per Doz., \$3.00

Each, .25

Swamp Blue
 Ultramarine
 Ivory Black
 Brown Ochre
 Brown Pink
 Permanent Sienna
 Permanent Umber
 Charcoal Gray
 Chinese Blue
 Chrome Lemon
 Chrome Yellow
 Chrome Deep
 Chrome Orange
 Clogne Earth
 Prussian Umber
 Navy's Gray
 Dragon's Blood

Emerald Green
 Flake White
 Gamboge
 Hooker's Green, No. 1
 Hooker's Green, No. 2
 Indian Red
 Indigo
 Italian Pink
 Ivory Black
 King's Yellow
 Lamp Black
 Light Red
 Mauve
 Naples Yellow
 Naples Yellow, Deep
 Neutral Tint
 New Blue

Olive Green
 Payne's Gray
 Permanent Blue
 Prussian Blue
 Prussian Green
 Raw Sienna
 Raw Umber
 Roman Ochre
 Sap Green
 Terre Verte
 Vandyke Brown
 Venetian Red
 Vermilion
 Yellow Lake
 Yellow Ochre

CLASS B

Per Doz., \$6.00

Each, .45

Alizarin Carmine
 Alizarin Crimson
 Alizarin Scarlet
 Brown Madder
 Carmine Lake
 Cobalt Blue
 Cobalt Lake
 Chinese Blue
 Chinese Yellow
 Dutch's Blue

Madder Carmine (Alizarin)
 Mars Yellow
 Neutral Orange
 Orange Vermilion
 Permanent Brown
 Permanent Crimson
 Purple Lake
 Roman Sepia
 Rose Madder (Alizarin)
 Rubens' Madder

Ruby Madder (Alizarin)
 Scarlet Lake
 Scarlet Madder (Alizarin)
 Scarlet Vermilion
 Sepia
 Spectrum Red
 Spectrum Yellow
 Warm Sepia

Winsor & Newton's Moist Water Colors, Whole Tubes—continued

CLASS C		Per Doz., \$7.50	Each, .55
Cadmium, Orange	Emerald Oxide of Chromium	Oxide of Chromium	
Cadmium Yellow, Extra Pale	French Blue	Oxide of Chromium, Transparent	
Cadmium Yellow, Pale	French Ultramarine	Permanent Yellow	
Cadmium Yellow, Middle Opaque	Indian Purple	Ultramarine Ash, Gray	
Cadmium Yellow, Deep	Lemon Yellow	Veronese Green	
Cobalt Blue	Mars Orange	Viridian	
Cobalt Green	Mineral Gray		
Cobalt Violet	Orient Yellow		

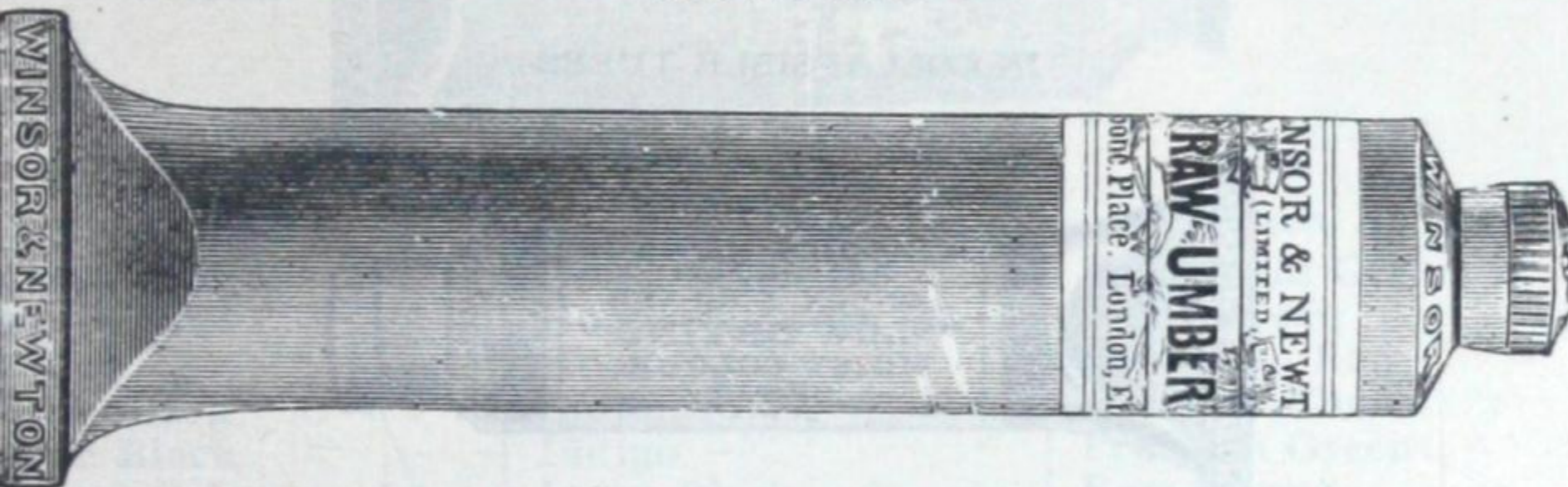
CLASS D		Per Doz., \$12.75	Each, .90
Aureolin	Gallstone	Rose Doré	
Aurora Yellow	Madder Carmine	Rose Madder	
Burnt Carmine	Madder Lake	Rose Madder (Pink Shade)	
Carmine	New Olive Green	Scarlet Madder	
Cobalt Yellow	Pink Madder	Violet Carmine	
Field's Orange	Primrose Aureolin	Yellow Carmine	
Vermilion	Purple Madder		

CLASS E		Per Doz., \$18.00	Each, 1.50
Smalt	Ultramarine Ash		

WINSOR & NEWTON'S

MOIST WATER COLORS

STUDIO SIZE



CLASS A

Each, .75

Antwerp Blue	Hooker's Green No. 1	Olive Green
Brown Pink	Hooker's Green No. 2	Payne's Gray
Burnt Sienna	Indian Red	Prussian Blue
Burnt Umber	Indigo	Raw Sienna
Charcoal Gray	Ivory Black	Raw Umber
Chrome Lemon	Lamp Black	Sap Green
Chrome Yellow	Light Red	Vandyke Brow
Chrome Deep	Mauve	Venetian Red
Chrome Orange	Naples Yellow	Vermilion
Emerald Green	Neutral Tint	Yellow Lake
Gamboge	New Blue	Yellow Ochre

CLASS B

Each, \$1.50

Alizarin Crimson	Crimson Lake	Sepia
Brown Madder	Indian Yellow	Warm Sepia
Cerulean Blue	Scarlet Lake	

CLASS C

Each, \$1.90

Cadmium Orange	Cadmium Yellow, Pale	Lemon Yellow
Cadmium Yellow	Cobalt Blue	Viridian (Veronese Green)
	French Blue (French Ultramarine)	

CLASS D

Each, \$3.25

Carmines	Rose Madder
----------	-------------

HORADAM'S PATENT MOIST WATER COLORS

WHOLE



TUBES

CLASS A

Per Doz., \$3.00

Each, .25

Antwerp Blue	Green Lake, L	Permanent Green, M
Azure Blue	Hooker's Green, 1	Plant Green
Bistre	Hooker's Green, 2	Pompeian Red
Blue Black	Indian Red	Prussian Blue
Bone Black	Indigo	Prussian Green
Brown Ochre	Ivory Black	Raw Sienna
Brown Pink	Jaune Brilliant, D	Raw Umber
Burnt Gold Ochre	Jaune Brilliant, L	Roman Ochre
Burnt Light Ochre	Japanese Yellow	Roman Sepia
Burnt Sienna	Lamp Black	Sap Green
Burnt Terre Verte	Lemon Yellow	Saturn Red
Burnt Umber	Light Ochre, 1	Sepia
Caput Mortuum	Light Ochre, 2	Sepia Color
Cassel Brown	Light Red	Terra Puzzuoli
Chrome Green	Magenta (Aniline)	Terre Verte
Chrome Yellow, D	Malachite Green	Vandyke Brown
Chrome Yellow, L	Mauve (Aniline)	Venetian Red
Chrome Yellow, Orange	Mineral Blue	Vermilion Chinese
Cologne Earth	Naples Red	Vermilion, L
Dragon Blood	Naples Yellow	Vermilion Orange
Emerald Green	Naples Yellow, Reddish	Vermilion Scarlet
English Green	Neutral Black	Vert Paul Veronese
Florentine Brown	Olive Green	Vine Black
Gamboge	Payne's Gray	Yellow Lake
Gold Ochre	Permanent Blue	Zinnober Green, D
Graphite	Permanent Green, D	Zinnober Green, L
Green Lake, D	Permanent Green, L	

CLASS B

Per Doz., \$4.00

Each, .30

Burnt Lake	Mars Orange	Rose Lake, Light (Aniline)
Carmine Lake	Mars Yellow	Scarlet Lake
Crimson Lake	Rose Carthame (Aniline)	Solferino
Geranium Lake (Aniline)	Rose Lake, Deep (Aniline)	Violet Lake

CLASS C

Per Doz., \$6.00

Each, .35

Alizarine Crimson	Brown Madder	Cobalt Green, D
Alizarine Green, D	Cadmium Yellow, D	Cobalt Green, L
Alizarine Green, L	Cadmium Yellow, Orange	Indian Yellow
Alizarine Red, D	Cadmium Yellow, L	Jaune Capucine
Alizarine Red, L	Cerulean Blue	Madder Lake, D
Alizarine Violet	Cobalt Blue	Madder Lake, L

Horadam's Patent Moist Water Colors — continued

CLASS C

Per Doz., \$6.00

Each, .55

Madder Lake, Rose
Oxide of Chromium
Pink Madder
Purple Lake

Ruben's Madder
Ultramarine Blue
Ultramarine Red
Ultramarine Violet

Vandyke Red
Vert Emeraude
Yellow Ultramarine

CLASS D

Per Doz., \$9.00

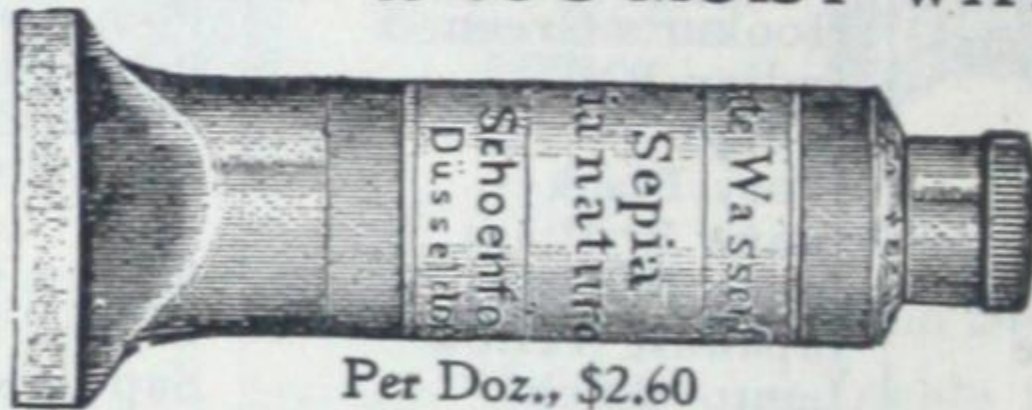
Each, .50

Aureolin
Burnt Carmine
Carmine

Madder Carmine
Oxide Blue Green

Purple Madder
Violet Carmine

DR. FR. SCHOENFELD & CO'S MOIST WATER COLORS



CLASS A

Per Doz., \$2.60

Each, .25

Aniline Magenta
Aniline Mauve
Antwerp Blue
Bone Brown
Brilliant Yellow, L
Brown Pink
Burnt Light Ochre
Burnt Sienna
Burnt Umber
Carmine Lake, 2
Chrome Yellow, D
Chrome Yellow, L
Chrome Orange
Dragon's Blood
Emerald Green
Gamboge
Gold Ochre
Hooker's Green, No. 1
Hooker's Green, No. 2

Indigo
Indian Red
Ivory Black
Lamp Black
Lemon Yellow
Light Red
Naples Yellow
Neutral Tint
New Blue
Olive Green
Permanent Green, D
Permanent Green, L
Permanent Green, M
Payne's Gray
Prussian Blue
Purple Lake
Raw Sienna
Raw Umber

Roman Ochre
Sap Green
Saturn Red
Sepia
Terre Verte
Vandyke Brown
Venetian Red
Vermilion, D
Vermilion, L
Veronese Green
Violet Lake
Warm Sepia
Yellow Ochre, 1
Yellow Ochre, 2
Zinc Yellow
Zinnober Green, D
Zinnober Green, L
Zinnober Green, Yellow

CLASS B

Per Doz., \$2.80

Each, .30

Asphaltum
Carmine Lake, No. 1
Crimson Lake

Mars Yellow
Mars Orange
Rose Lake, L

Safflower Red
Scarlet Lake
Scarlet Vermilion

CLASS C

Per Doz., \$5.40

Each, .50

Brown Madder
Cadmium Yellow, D
Cadmium Yellow, L
Cadmium, Orange

Cobalt Blue
Indian Yellow
Madder Lake, D
Malachite Green

Pink Madder
Rose Madder
Ruben's Madder
Ultramarine Blue

BOURGEOIS' FRENCH WATER COLORS



WHOLE TUBE



GLASS POT

CLASS A Tubes Per Doz., \$2.40 Each, .25 Pots Per Doz., \$3.60 Each, .35

Anwerp Blue	Emerald Green	Olive Green
Bistre	Flake White	Payne's Gray
Blue Black	Gamboge	Prussian Blue
Brown Ochre	Green Lake	Prussian Green
Brown Pink	Gold Ochre	Raw Sienna
Burnt Sienna	Hooker's Green	Raw Umber
Burnt Umber	Indian Red	Roman Ochre
Chinese White	Indigo	Sap Green
Chrome Green, L	Italian Pink	Sepia
Chrome Green, M	Ivory Black	Sky Blue
Chrome Green, D	Lamp Black	Vandyke Brown
Chrome Yellow, Light	Lemon Yellow	Venetian Red
Chrome Yellow, Middle	Light Red	Warm Sepia
Chrome Yellow, Deep	Naples Yellow	Yellow Lake
Chrome Yellow, Lemon	Naples Yellow, Greenish	Yellow Ochre
Dragon's Blood	Neutral Tint	

CLASS B Tubes Per Doz., \$3.60 Each, .35 Pots Per Doz., \$6.00 Each, .55

Brilliant Yellow	Purple, D	Ultramarine Blue, D
Crimson Lake, L	Trans. Green Blue	Vermilion, L
Crimson Lake, D	Trans. Green, L	Vermilion, D
New Blue	Trans. Green, D	Violet, L
Purple, L	Ultramarine Blue, L	Violet, D

CLASS C Tubes Per Doz., \$4.80 Each, .45 Pots Per Doz., \$9.00 Each, .80

Brown Madder	Cypress Green, No. 1	Rose Carthame
Carmin No. 2	Cypress Green, No. 2	Rose Madder
Cerulean Blue	Geranium Rose	Scarlet Lake
Cherry Madder	Pink Madder	Veronese Green

CLASS D Tubes Per Doz., \$9.00 Each, .80 Pots Per Doz., \$15.00 Each, \$1.30

Cadmium Yellow, Lemon	Cadmium, Yellow, M	Cobalt Blue
Cadmium Yellow, L & D	Cadmium Yellow, Orange	Indian Yellow

CHINESE AND FLAKE WHITE

Double Tubes per doz., \$3.60 each, .35

UNIVERSAL GOUACHE COLORS

For Artists, Architects, Decorators, Flower Painters, Art Institutes, and for sketches of any kind. These colors can be used on any surface such as Paper, Canvas (for imitation Gobelin Tapestry), Silk, Leather, Wood, Plaster, Mortar, etc. These packages contain much more than those of other brands



SCREW TOP

GLASS JARS

Per Jar, .30

Antwerp Blue
Brilliant Black
Brown Ochre
Burnt Ochre
Burnt Sienna
Burnt Umber
Carmine Lake, No. 2
Cassel Brown
Chinese White
Chrome Green
Chrome Yellow, D
Chrome Yellow, L
Chrome Yellow, Orange
Dragon Blood
Emerald Green
English Red
Gamboge

Gold Ochre
Hooker's Green, No. 1
Hooker's Green, No. 2
Indian Red
Indigo
Ivory Black
Jaune Brilliant, D
Jaune Brilliant, L
Lamp Black
Lemon Yellow
Light Ochre
Naples Yellow
Naples Yellow D
Naples Yellow, Reddish
Paris Blue
Payne's Gray

Permanent Blue
Permanent Green, D
Permanent Green, L
Prussian Blue
Raw Sienna
Raw Umber
Sap Green
Saturn Red
Sepia
Terre Verte
Vandyke Brown
Warm Sepia
Yellow Lake
Zinc White
Zinnober Green, D
Zinnober Green, L

Per Jar, .50

Carmine Lake, No. 1
Crimson Lake
French Blue
Geranium Lake

Mauve
New Blue
Rose Carthame
Scarlet Lake

Ultramarine Blue, D
Ultramarine Blue, L
Vermilion
Violet

Per Jar, .60

Brown Madder
Carmine
Cobalt Blue

Madder Lake, D
Madder Lake, Rose
Ox. of Chromium Blue Green

Purple Lake
Vert Emeraude

Per Jar, .75

Cadmium Yellow, L

Cadmium Yellow, M

Indian Yellow

These colors have qualities not possessed by any others, the result of the application of an important invention

SCHOENFELD'S PERMANENT WATER COLORS
AND CHINESE WHITE



THE CHINESE WHITE
IS IN SCREW
CAP JARS



CLASS A

Per Doz., \$4.00
Per Bottle, .30

Antwerp Blue
Asphalt
Brilliant Yellow, D
Brilliant Yellow, L
Bone Brown
Brown Ochre
Brown Pink
Burnt Gold Ochre
Burnt Sienna
Burnt Terre Verte
Burnt Umber
Cassel Earth
Charcoal Gray
Chrome Green
Chrome Yellow, D
Chrome Yellow, L
Chrome Yellow, M
Chrome Yellow, Orange
Chinese White, Permanent
Cologne Earth
Cremintz White
Dragon's Blood
Emerald Green
Flake White

CLASS B

Crimson Lake
French Blue
Geranium Lake

CLASS C

Brown Madder
Cadmium, Citron
Cadmium, L
Cadmium, Orange

Gamboge
Gold Ochre
Gold Yellow
Green Lake, D
Green Lake, L
Hooker's Green, No. 1
Hooker's Green, No. 2
Indian Red
Ivory Black
Indigo
Japan Yellow
Lamp Black
Lemon Yellow
Light Red
Mauve
Mineral Blue
Naples Yellow
Naples Yellow, Reddish
Neutral Tint, No. 1
Neutral Tint, No. 2
New Blue
Olive Green
Payne's Gray
Permanent Blue

Per Doz., \$5.00

Mars Yellow
Mars Orange
Rose Carthame

Per Doz., \$3.50

Cerulean Blue
Cobalt Blue
Emeraude Green
Indian Yellow
Madder Lake, L

Permanent Green, D
Permanent Green, L
Permanent Green, M
Prussian Blue
Raw Sienna
Raw Umber
Roman Ochre
Sap Green
Sepia
Terre Verte
Ultramarine Yellow
Vandyke Brown
Venetian Red
Vermilion, L
Vermilion, Chinese
Warm Sepia
Yellow Lake, D
Yellow Lake, L
Yellow Ochre, No. 1
Yellow Ochre, No. 2
Zinc White
Zinnober Green, D
Zinnober Green, L
Zinnober Green, M

Per Bottle, .50

Scarlet Lake
Scarlet Vermilion

Per Bottle, .70

Madder Lake, Rose
Madder Lake, Deep Rose
Malachite Green
Ultramarine Blue

WINSOR & NEWTON'S
WINCHESTER BRUSH-WORK WATER COLORS



ACTUAL SIZE OF JAR

Winchester Brush-Work Water Colors		per doz., \$4.80 per jar, .40
Alizarin Green	Emerald Oxide Chromium	New Blue
Brown Madder	Hooker's Green, No. 1	Permanent Crimson
Burnt Sienna	Hooker's Green, No. 2	Permanent Green
Burnt Umber	Indian Red	Permanent Scarlet
Charcoal Gray	Indian Yellow	Prussian Blue
Chinese White	Lamp Black	Raw Sienna
Chrome Deep	Light Red	Raw Umber
Chrome Lemon	Light Ultramarine	Sepia
Chrome Orange	Mauve, Blue Shade	Vandyke Brown
Chrome Yellow	Mauve, Purple Shade	Vermilion
Cologne Earth	Middle Ultramarine	Viridian
Deep Ultramarine	Naples Yellow	Yellow Ochre
Emerald Green	Neutral Tint	

For Scholars and Art Students, also adapted for Decorative Designing, Illustrating, Wall Paper Pattern Making, Designs for Cotton, Muslin Printing, Air Brush Work, and many uses where high-grade Artists' Colors are now called for.

SEMPLER'S WHITE IN PORCELAIN GLASS JARS



Semple's White is a moist water color for all artistic water color purposes. It remedies every trouble experienced in the use of other whites: proved after four years' practical test

It can be used in any way: As a water color wash, a body color, in the air brush, or as your fancy may dictate

It flows easily from the brush, mixes with all other water colors except other whites, has the smoothness and slickness of oil color, and will not crack, peel or blister

No matter how hard it may dry in the palette it will moisten up immediately with water; can

be used as thick as desired; makes no difference as to the working of other colors over it

Another thing: You can work over this white before it is wholly dry without the white working up, which affords a saving of minutes that ultimately stand to represent profit. It affords a faster daily production and work of a higher character

This white when used pure, or mixed with other colors, will not rub or smut, stays where it is put and is an especial winner in retouching photos for halftone reproduction, because it removes every last difficulty that this kind of work has been heir to. Evidence of this lies in the fact that 80 per cent of the largest photo-engraving concerns in the United States are using it to the exclusion of all other whites. In halftone reproduction the necessity for a white that would afford as good results by electric light as by daylight has been a long recognized want. This want is fully and squarely met by Semple's White. A halftone negative from copy, treated with this white, maintains values down to the most delicate tones without any forcing or fussing, and these values are maintained uniform under all conditions, either by daylight or electric light. Many of the best artists and engravers consider this alone reason enough for its use

We know that the use of Semple's White will insure the profit you must have. Don't fail to try this good white and give it the hardest trial you can think of. Prove our claims in your own way

Twenty-five cents worth of this white will go further and afford more pleasing results than any other similar quantity of white made by anyone anywhere

Semple's White, Glass Jars, with nickel plated screw cap	per doz., \$3.00	each, .30
Semple's White, Half pound Jars		" 1.75

We are New England Agents for Semple's White

WINSOR & NEWTON'S
LIQUID WATER COLOR MEDIUMS AND WHITES



SCREW CAP JAR

Prepared Gum Water
Water Color Megilp
Matt Gold Size, in pots
Burnish Gold Size, in pots
Prepared Ox Gall, in pots
doz., \$3.75 each, .35
Prepared Ox Gall, in small
pots doz.. \$1.90 each, .20

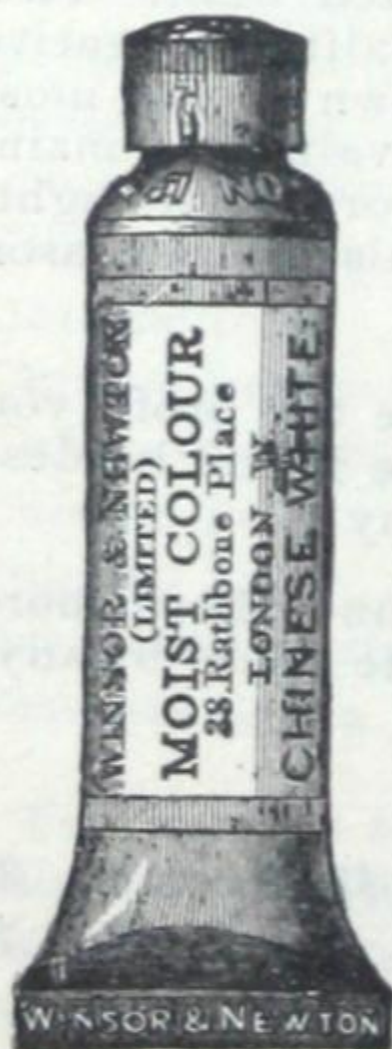


SMALL BOTTLE

Chinese White, small Bottle	per doz., \$1.90 each, .20
Chinese White, large Jar	" 3.75 " .35
Chinese White, extra large Jar	" 7.50 " .65

WINSOR & NEWTON'S
MOIST WATER COLORS
CHINESE WHITE

IN SMALL AND LARGE TUBES



SMALL TUBE

Small size Tube
per doz., \$1.90 each, .20
Large size Tube
per doz., \$3.75 each, .35
Extra large size Tube
per doz., \$7.50 each, .65



LARGE TUBE

WINSOR & NEWTON'S
 "ALBANINE" AND "PROCESS BLACK"

For Drawing in Black and White for Reproduction



Albanine a pure photographic white, in bottles per doz., \$3.75 each, .35
 Process-Black a dead black of great density " 3.75 " .35

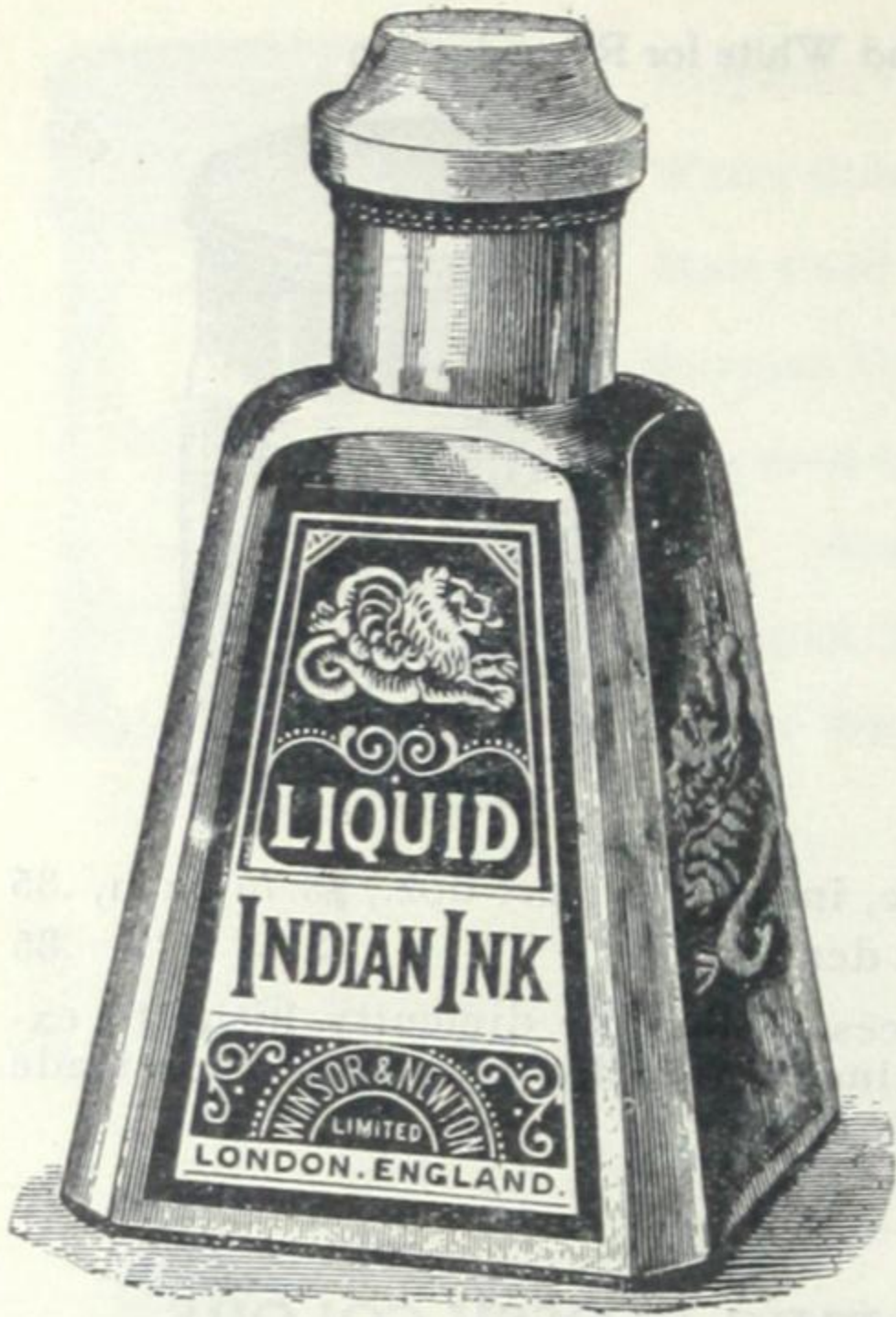
By the use of Albanine and Process-Black the difficulty hitherto experienced of preserving the true values of the lights, in drawings made for Process reproduction, is entirely obviated

TALENS' PHOTOGRAPHIC GLOSSY COLORS
 FOR PHOTO ENGRAVERS



Per Doz., \$3.00		Per Tube, .25	
Albumen White 1	Burnt Sienna	Retouch 1 (reddish)	
Albumen White 2	Sepia	Retouch 2 (brownish)	
Albumen White 3	Yellow Ochre	Retouch 3 (blackish)	
Per Doz., \$7.50		Per Tube, .75	
Carmine	Scarlet	Cobalt	

WINSOR & NEWTON'S
LIQUID WATER COLORS, INKS, ETC.



FULL SIZE BOTTLE



SMALL SIZE BOTTLE

	FULL SIZE		HALF SIZE	
Asphaltum	per doz., \$3.75	each, .30	per doz., \$1.90	each, .15
Carmine	3.75	“ .30	1.90	“ .15
Crimson Lake	3.75	“ .30	1.90	“ .15
Gold Ink	3.75	“ .30	1.90	“ .15
Indelible Brown Ink	3.75	“ .30	1.90	“ .15
India Ink	3.75	“ .30	1.90	“ .15
Lamp Black	3.75	“ .30	1.90	“ .15
Ox Gall, colorless (liquid)	3.75	“ .30	1.90	“ .15
Prout's Brown	3.75	“ .30	1.90	“ .15
Prussian Blue	3.75	“ .30	1.90	“ .15
Sepia	3.75	“ .30	1.90	“ .15
Silver Ink	3.75	“ .30	1.90	“ .15
Vermilion	3.75	“ .30	1.90	“ .15

INKOFF — TRACING CLOTH ERASING FLUID

Inkoff Outfit, complete	net, each, \$1.00
“ “ “ small	“ “ .35

The outfit consists of one Bottle Inkoff, Sponges, Cloths and Directions for use. For erasing black waterproof drawing ink lines and figures without injury to the tracing cloth

DIRECTIONS FOR USING INKOFF

1. Inkoff can be used repeatedly over the same surface without injury to the tracing cloth, and erases quickly without friction. New lines can be drawn immediately even if the tracing cloth is moist
2. Always insert a clean blotter underneath the tracing cloth to prevent the liquid coming in contact with the drawing or drawing board
3. To cut off the ends of lines clean and sharp, place a piece of heavy paper over the portion that is to remain. Apply the cloth folded to a point slightly moistened with Inkoff
4. Use a sponge saturated with the liquid for removing large sections. A cloth is more desirable for erasing small or intricate parts. Fold to a point, moisten with Inkoff and apply. Use a clean blotter to absorb the surplus
5. Inkoff will not stain the tracing cloth; any discoloration due to dissolved ink can be wiped off with a clean cloth or sponge moistened with the liquid. Care must be taken to have cloth or sponge perfectly clean when making erasures
6. Inkoff contains no acids injurious to the hands or tracing cloth. It is intended for black drawing inks, but will also erase many colored inks if the color has not penetrated the fibre of the cloth
7. Erasures on old tracings are slower than immediate corrections
8. On old tracings, permit the liquid to remain for a moment to dissolve the ink, which can then be absorbed with clean blotter, and the tracing cloth thoroughly cleansed by wiping with clean cloth folded to a point slightly moistened with Inkoff. If unfamiliar with the use of Inkoff make an experimental test on the edge of the tracing



POMEROY'S SNOW WHITE INK



In 1 oz. Bottles per doz., \$1.50 each, .15

LARRABEE WHITE INK

In 1 oz. Bottles per doz., \$3.00 each, .25



For Black and Dark Shades of Bristol Board or Paper

FROST & ADAM'S CO'S

BLUE PRINT WRITING AND ERASING FLUID

1 oz. Bottles per doz., \$1.80 each, .15

For making alterations or additions in clear white lines, upon blue prints. Flows freely from a drawing pen

BOURGEOIS' FRENCH DRAWING INKS

No. 304	Trial size Bottle	.	.	per doz., \$1.50 each, .15
303	Small Bottle	.	"	2.25 " .25
303bis.	Medium Bottle	.	"	3.00 " .30
302	Large Bottle	.	"	4.00 " .40



DAVIDS' LETTERINE



READY
FOR
USE

A
WATER
COLOR

A Rapid Drying and Lustrous Show Card Ink

	QUARTS		PINTS		HALF PINTS		2 OUNCE	
	Doz.	Bottle	Doz.	Bottle	Doz.	Bottle	Doz.	Bottle
Black	\$18.00	1.00	\$10.50	.60	\$6.00	.40	\$1.75	.15
Red	18.00	1.00	10.50	.60	6.00	.40	1.75	.15
Blue	18.00	1.00	10.50	.60	6.00	.40	1.75	.15
Green	18.00	1.00	10.50	.60	6.00	.40	1.75	.15
Violet	18.00	1.00	10.50	.60	6.00	.40	1.75	.15
Yellow	18.00	1.00	10.50	.60	6.00	.40	1.75	.15
White	18.00	1.00	10.50	.60	6.00	.40	1.75	.15
Gold								.25



Letterine will enable any person of intelligence to make his own show cards, price tickets, etc.

Can be used with brush or pen

An excellent ink for shading pens



HELIOS ERASING FLUID

For Alterations and Additions in Blue Prints

White Erasing Fluid	per doz.,	\$2.40	each,	.25
Red Erasing Fluid	"	2.40	"	.25
Yellow Erasing Fluid	"	2.40	"	.25

CARTER'S
VELVET SHOW CARD COLORS

Always ready for the brush
Velvet in name Velvet in finish



INDELIBLE INK

Show Card Ink, 1½ ounce bottle	each, .10
“ “ “ 2½ “	“ .15
“ “ “ ½ pint bottle	“ .40
“ “ “ pint bottle	“ .75
“ “ “ quart bottle	“ 1.40

Black	Dark Blue	Light Red	Light Green
Brown	Dark Red	Lustre Black	Orange
Dark Green	Light Blue	Lavender	White
			Yellow

Wide mouth bottles with screw caps, absolutely air tight
These colors give the desired rich, flat surfaces for price tickets, store cards, signs, etc. Specially adapted to writing on glass windows, lantern slides, etc. They flow evenly and smoothly from the brush

Rich effects done with artists' expensive water colors can be duplicated by using VELVET and have an added advantage over tube colors, by their natural creamy consistency

HOUSEHOLD INDELIBLE INK

Square Bottle, ½ oz., enclosed in an oblong cardboard box, with polished wooden stretcher, pen and holder. Six boxes mounted on an ornamental easel display card per doz., \$3.00 each, .25

An absolutely indelible black ink of unequalled intensity. The best home ink for marking linen and cotton, requiring no heat to set writings

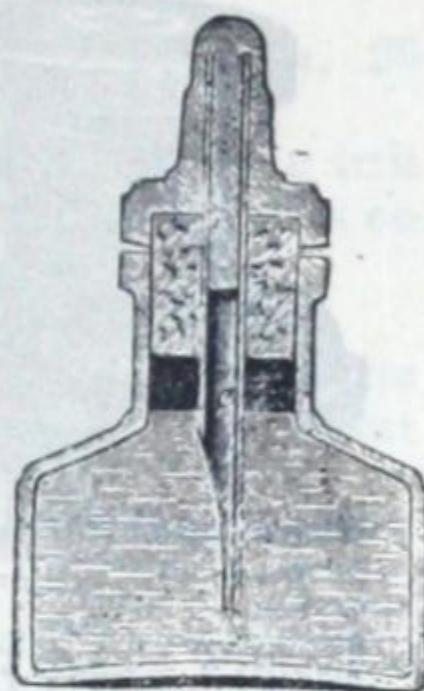
HIGGINS' AMERICAN DRAWING INKS

EMPTY BOTTLES AND STOPPERS

Empty Bottles, $\frac{3}{4}$ oz.,
with Quill Stoppers per doz., \$1.25

Empty Bottles, $\frac{3}{4}$ oz. " " .65

Quill Stoppers " " .65



BLACK INKS

WATERPROOF AND GENERAL

The Waterproof Drawing Ink (white label) is insoluble when dry, and is best for working drawings which have to stand handling, moisture or color washes

The General Drawing Ink (red label) is soluble, and is best for India Ink tints and washes, for tracing, for patent office and photo drawings and all fine line work

The Standard Liquid Drawing Ink of the world

COLORED INKS, ALL WATERPROOF

Blue	Carmine	Orange	Violet
Brick-Red	Green	Scarlet	Yellow
Brown	Indigo	Vermilion	

Blacks or Colors, $\frac{3}{4}$ ounce Bottle each, .25

BLACKS AND COLORS IN HALF PINTS, PINTS AND QUARTS

Black, Waterproof, insoluble when dry

" General, soluble when dry

COLORED INKS, ALL WATERPROOF

Blue	Green	Vermilion
Brick-Red	Indigo	Violet
Brown	Orange	Yellow
Carmine	Scarlet	
Half Pint Bottle	each, \$2.00	
Pint "	" 3.75	
Quart "	" 7.00	

The $\frac{3}{4}$ ounce bottles packed one dozen to the box ; other sizes singly



HIGGINS' ETERNAL INK



2 ounce Bottle	.	per doz., \$1.20	each, .10
Half pint	.	" 4.20	" .35
Pint	.	" 7.20	" .60
Quart	.	" 12.00	" 1.00

The 2 is ounce packed one dozen to the box ; other sizes singly

A fine, fluent Carbon Writing Ink for general use. Black from the pen point and eternally remains so, proof to age, air, sunshine, chemicals and fire. The indestructible Ink of the Ancients revived. May be diluted for use in fountain pens

The right Ink for bank, legal and corporation use, business writing, general correspondence, and State, County and Town Records

HIGGINS' ENGROSSING INK

2 ounce Bottle	.	per doz., \$2.40	each, .20
Half Pint "	.	" 7.20	" .60
Pint "	.	" 12.00	" 1.00
Quart "	.	" 21.00	" 1.75

The 2 ounce Bottles packed one dozen to the box ; other sizes singly

A dense black Indestructible Ink, specially adapted for all important writings, records and engrossing, and for fancy penmanship, card writing, etc. Waterproof when dry



All important documents or records intended to last undimmed by time should be written with the Engrossing Ink. All of the best writing inks now in common use (made of iron and nutgalls) fade into a dim brown or yellow in from fifty to ninety years. Our Inks will never alter in time, as carbon never fades. The Carbon Ink in ancient manuscripts hundreds or thousands of years old is found to be as bright and black today as though freshly written

"TESCO" WATERPROOF DRAWING INK

"Tesco" Waterproof Drawing Ink, $\frac{3}{4}$ oz. bottle . . . each, .25

The "Tesco" bottle is a departure from the conventional drawing ink bottle. It has no machine made ridges to collect and hold dirt and is so made that the draftsman can get at the last drop of ink with ease

The stopper top is heavy and no matter how placed or dropped the quill point will always point upward and cannot topple over, roll about and smear the paper. This little idea is a valuable one, for many drawings have been ruined by the turning over of stopper tops

Waterproof Black, Soluble or Non-Waterproof Black, Carmine, Crimson, Scarlet, Brick Red, Orange, Yellow, Indigo, Blue, Violet, Green, Brown

DRAFTSMAN'S PEN-FILLING INKSTAND

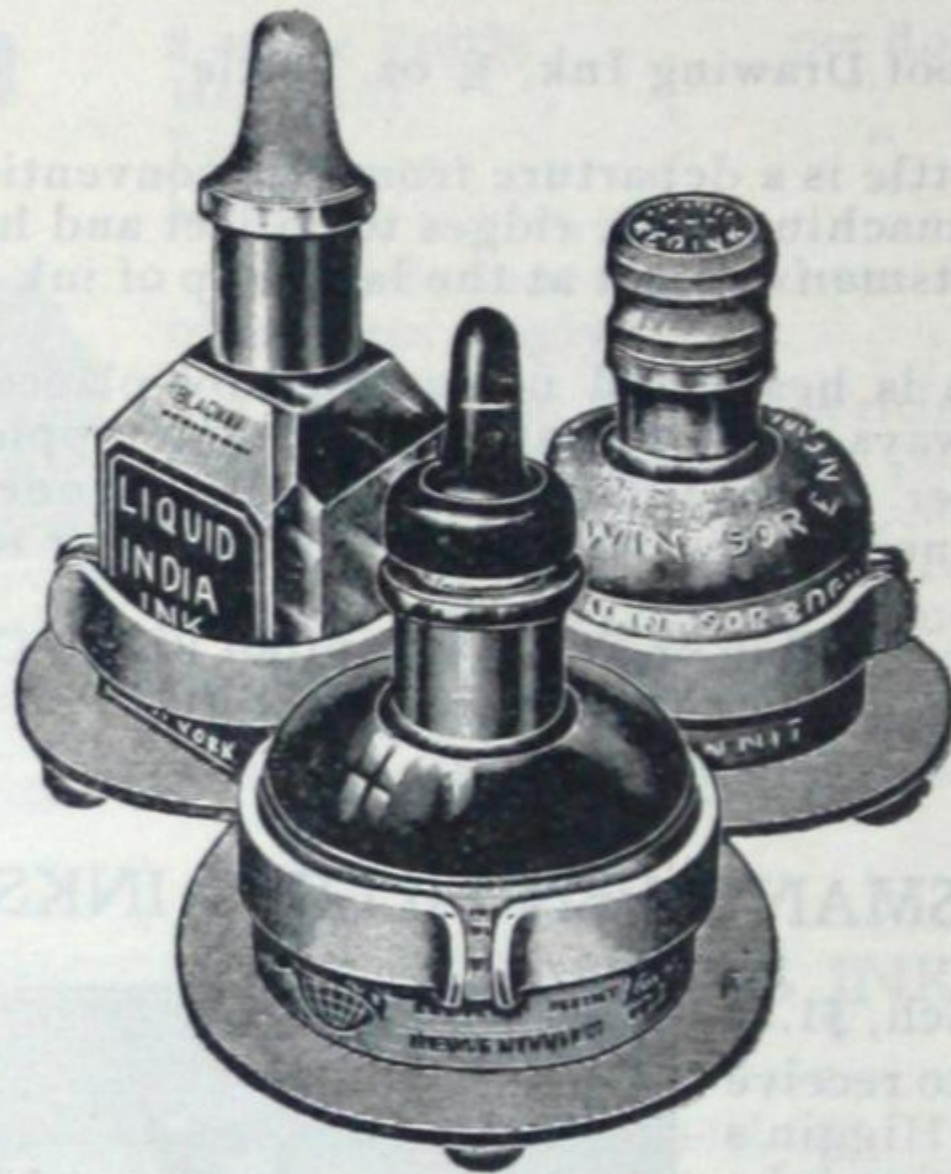
Price . . . each, \$1.50

A base, recessed to receive standard size (Higgin's type) bottle of drawing ink; a forked brass spring to securely hold the bottle in place; a lever arm, pivoted to the base, having at the one end a dipper and a cover for the bottle, and at the other a rest for the hand. Made of cast iron, japanned. Weight 21 oz.

It operates with certainty, supplies always the right amount, and the same quantity. Whether the bottle is full or partially emptied the dipper invariably delivers a uniform charge of ink. It positively will not "clog" or refuse to operate. No evaporation, the rubber cap is efficient. Nothing to wear out, noncorrosive. It averts "accidents" as a bottle holder, as its weight prevents readily upsetting. To fill the pen you simply reach for the ink, place hand on the rest to raise the dipper, and the instant the loop is inserted between the blades the pen fills. No wiping after filling. The dipper never fails to place the ink between the blades, and none on the outside. One hand only is used, the other is entirely at liberty to retain its hold of the triangle or tee-square. You can't leave the bottle open. When the hand is taken from the rest the cap automatically closes the bottle



CLOVER INKSTAND

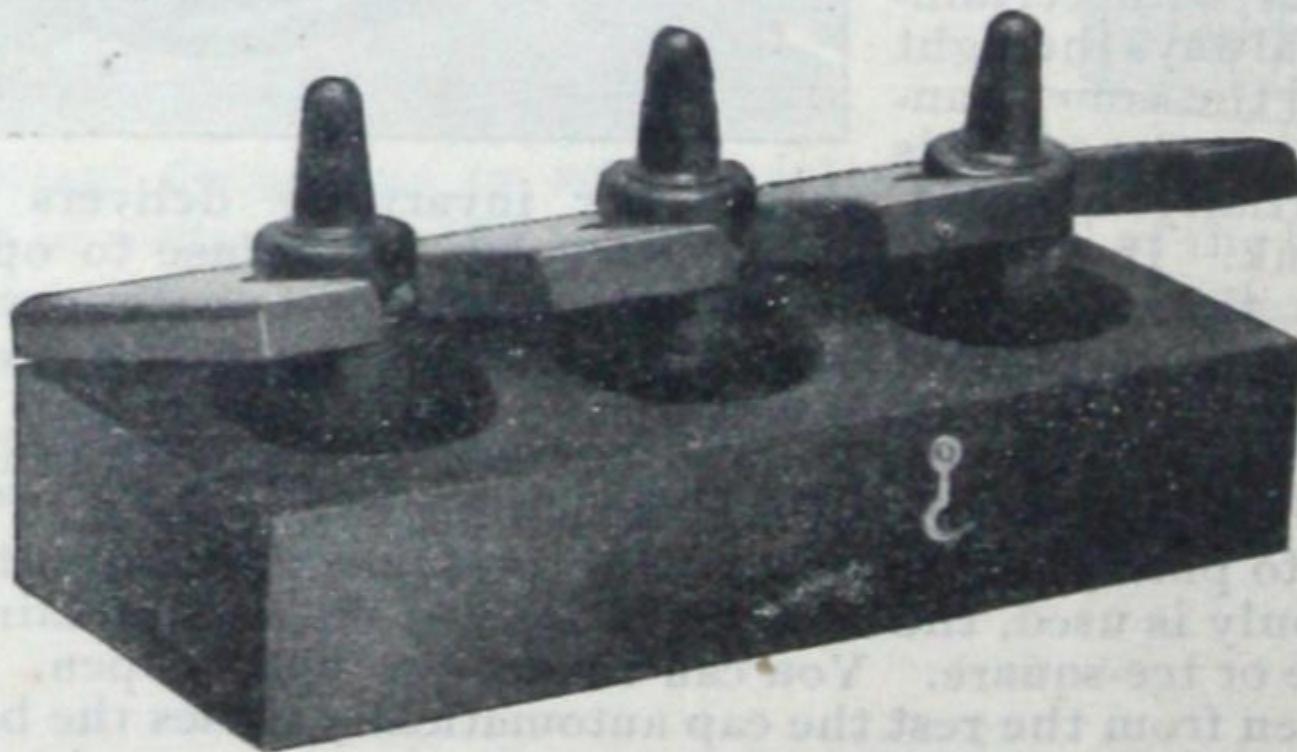


Clover Inkstand each, .50

HOLDS ANY BOTTLE OF DRAWING INK

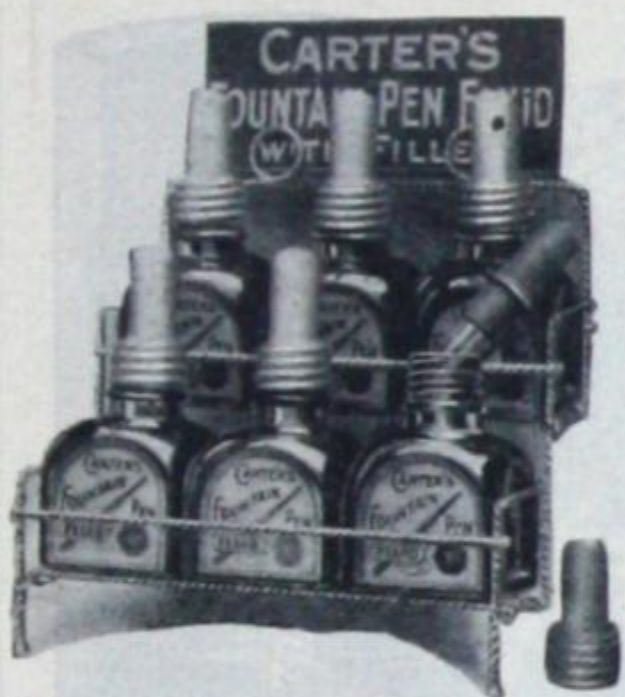
The Clover Inkstand is a boon to users of drawing inks, who desire a bottle holder that it is almost impossible to upset or in any way dislodge the bottles held therein. Adjusts itself to various shapes and sizes of bottles. Each bottle is held independently and may be instantly removed by simply opening the clasp spring

HOLDER FOR THREE BOTTLES HIGGINS' INK



No. 3. Holder with 3 Wells and Hinge Cover each, .75

THE CARTER'S FOUNTAIN PEN FLUID

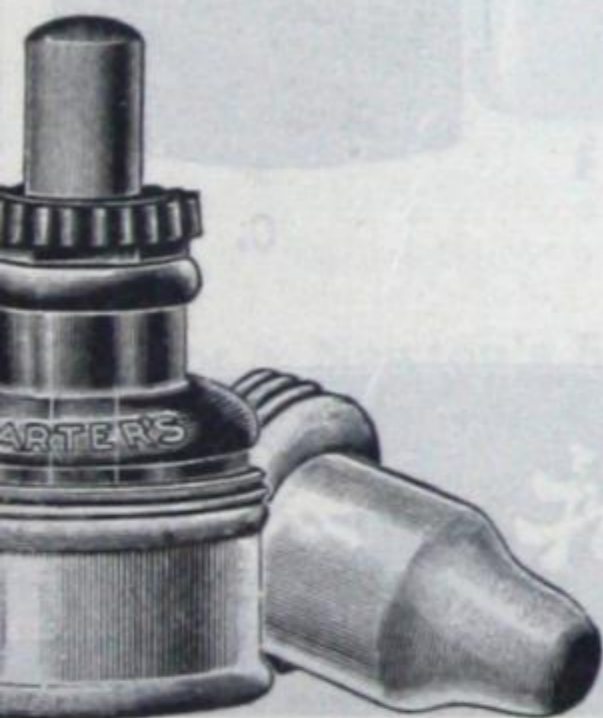


242. COUNTER DISPLAY RACK

NO. 246. 2 OZ. PANEL BOTTLE

242. 4 oz., French Panel, with combined Stopper and Filler and Aluminum Screw Cap, 1 dozen in box per doz., \$3.00 each, .25

246. 2 oz. French Panel, Hard Rubber Top, 3 dozen in box per doz., \$1 20 each, .10



NO. 511. ALUMINUM TRAVELLERS' CASE

NO. 517. WOODEN TRAVELLERS' CASE

511. 1 oz. Round, Fountain Pen Fluid, with filler, Aluminum Case, 1 dozen in box per doz., \$3.00 each, .25

517. 2 oz., Round, Fountain Pen Fluid, with filler, Birchwood Case. 1 dozen in box per doz., \$3.00 each, .25

STICK INDIAN INK



A.



B.



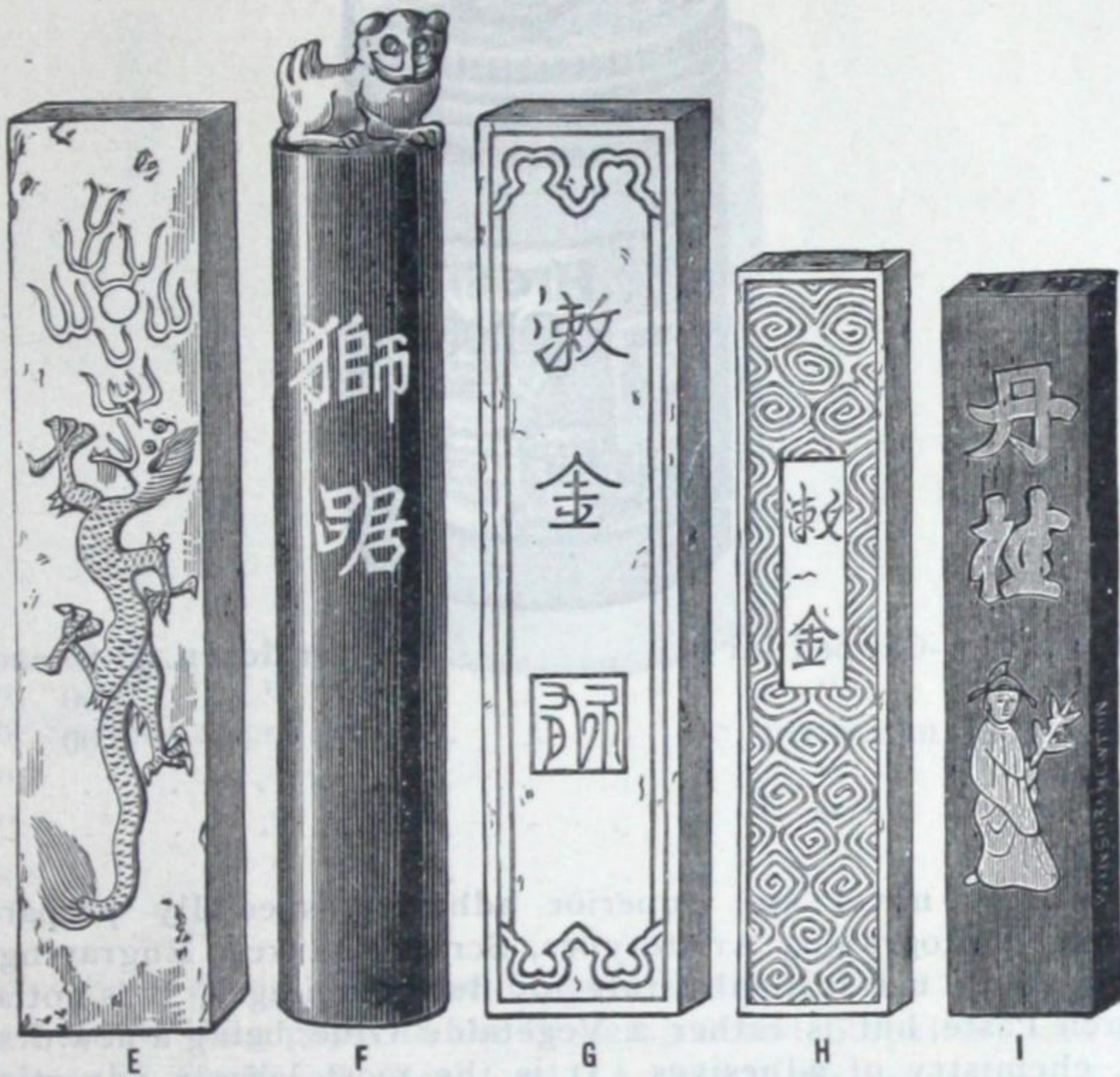
C.



D. SUPER SUPER INDIA INK

A.	Pearl, very rich	per stick, \$3.00
B.	Half size, "Super Super"	1.00
C.	Black,	2.50
D.	Winsor & Newton's "Super Super"	2.00

Stick Indian Ink — continued



Winsor & Newton's Square Gilt	per stick, .50
“ “ Oval Lion's Head	“ .60
“ “ Choice Square	“ .40
“ “ Best, small size	“ .20
Winsor & Newton's Good, small size	“ .15
Best Imitation Winsor & Newton's "Super Super"	“ 1.50
Choice Square Gilt, size of E	“ .35
Medium quality Lion's Head Gilt	“ .40
“ “ Black	“ .25
Small Lion's Head Black	“ .15
Ordinary, size I	“ .10
Japan Ink, flat sticks, size A	“ .50
Blue, Red, or Yellow	“ .40

HIGGINS' PHOTO MOUNTER



3 ounce Screw-Capped Jar	.	.	.	per dozen, \$1.80 each,	.15
6 " " "	.	.	.	" 3.00 "	.25
14 " " "	.	.	.	" 6.00 "	.50
1/2 Gallon " "	.	.	.	" "	2.00
1 " " "	.	.	.	" "	3.50

An entirely novel and superior adhesive, specially prepared for Mounting Photographs, Aristotypes, Scrap Pictures, Engravings, etc., and for general use as a substitute for fluid mucilage. It is not a Flour or Starch Paste, but is rather a Vegetable Glue, being a new discovery in the chemistry of adhesives. It is the most largely advertised and best known of all so-called "White Pastes," and is an original and Patented Product

SPECIAL NOTICE

There are many imitations and infringements of this article on the market, against which dealers are warned

GUARANTEE

The manufacturers' guarantee these goods absolutely against mold or other deterioration, but do not guarantee them against drying out or other changes if kept an unreasonable length of time or under improper conditions

It is a condition of the manufacturers' guarantee that these goods be properly stored, and that old lot be sold before any later or fresher lot

The 3 ounce and 6 ounce, packed one dozen to the box, the 14 ounce 1/2 dozen to the box; other sizes singly

HIGGINS' DRAWING BOARD AND LIBRARY MUCILAGE



3	ounce	Screw-Capped Jar	.	.	.	.	per dozen, \$1.80 each, .15
"	"	"	.	.	.	"	3.00 " .25
"	"	"	.	.	.	"	6.00 " .50
1	gallon	"	.	.	.	.	" 2.00
"	"	"	.	.	.	.	" 3.50

Novel Semi-Fluid Adhesive of great strength and body, specially prepared for sticking paper to the Drawing Board, Repairing and Label-Books, and for Wood, Cloth and Leather Work generally. For use in ordinary Mucilage or Paste it may be diluted with 25 to 50 per cent water

IMPORTANT NOTICE TO DEALERS

Screw-capped jars are the most convenient packages for goods of ready and quick sale, such as these, but they are not absolutely air-tight. Hence the manufacturers do not guarantee these goods against drying or evaporation if kept too long in stock or if stored under improper unusual conditions

CAUTION— Therefore do not expose these goods to unusual dry heat, direct sunlight or cellar dampness

Do not store them away upside down

Do not fail to sell the oldest lot first, before newer and fresher lots

The 3 ounce and 6 ounce packed one dozen to the box; 14 ounce, 1/2 dozen to the box; other sizes singly

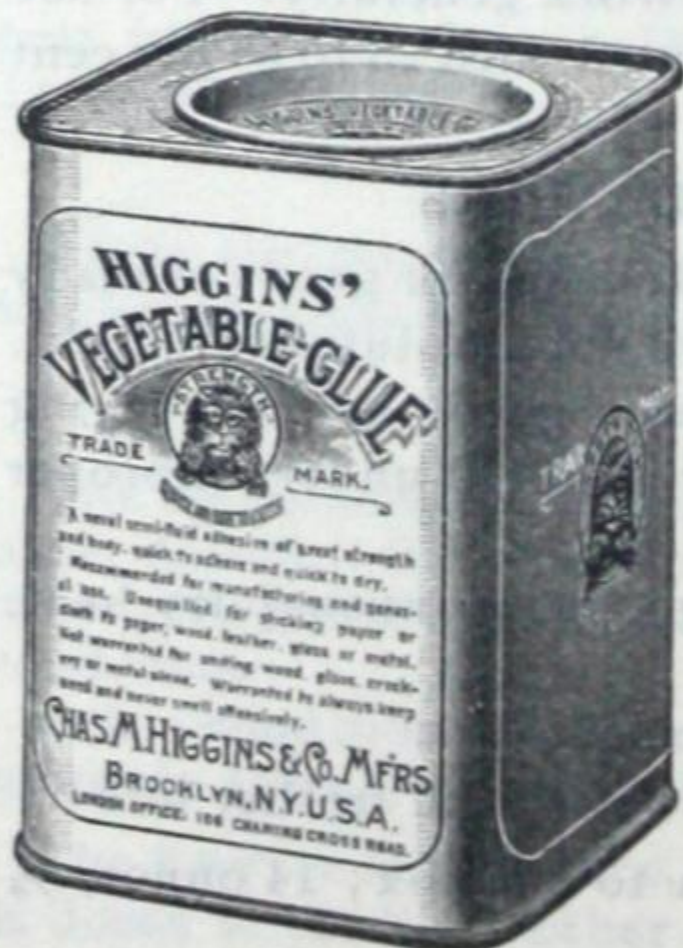
HIGGINS' OFFICE PASTE

4 ounce Bottle	per doz., \$1.80 each, .15
8 " "	" 3.00 " .25
1/2 gallon Jar	" 1 50
1 " "	" 2.75

The 4 and 8 ounce packed one dozen to the box; other sizes singly



HIGGINS' VEGETABLE GLUE



1/2 lb. Cans	per doz., \$1.80 each, .15
1 lb. " "	" 3.00 " .25
2 lb. " "	" 6.00 " .50
5 lb. " "	" 1.00
10 lb. " "	" 1.75

The 1/2 lb., 1 lb. and 2 lb. Cans packed 1 dozen to the box; other sizes singly.

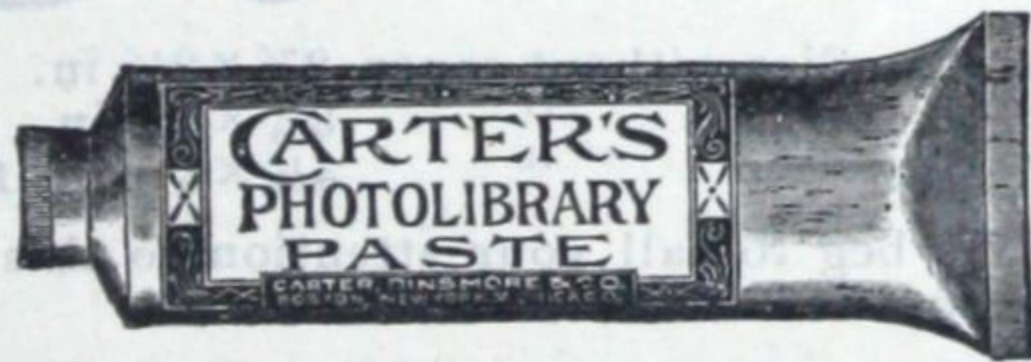
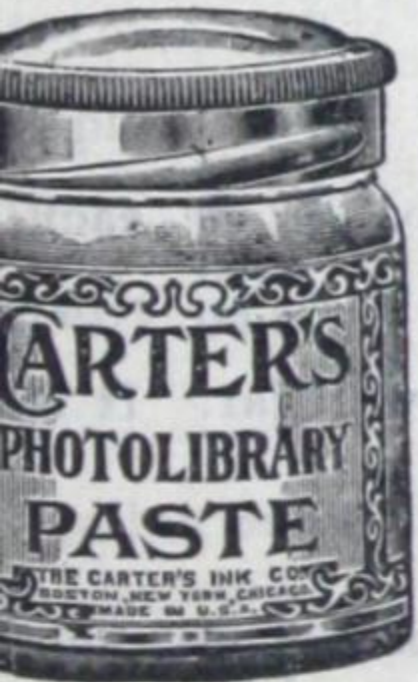
WEIS BRUSH TUBE AND WHITE MUCILAGE

(Library Paste)



Small size Tube	per dozen, .60 each, .05
Medium size Tube	1.20 " .10
Large size Tube	3.00 " .25

CARTER'S PHOTO-LIBRARY PASTE



Small size Tube	each, .05
Medium size Tube	" .10
Large size Tube	" .25
Small Jar, screw cap, 4 ounce	" .20
" patent hinge cover and brush, 7 ounce	" .25
" screw cap, pint	" .50
" " quart	" .75
" " and cup, quart	" 1.00
Large Jar	" 2.50

Standard Paste for mounting Photographs, Engravings, Etchings,
 or on drawing boards, or anything where paste is needed

DAY'S WHITE PASTE

WEIS BRUSH TUBES



3 dozen to a Case, 1 dozen in Counter Display Box
per doz., \$1.50 each, .10

COLLAPSIBLE TUBES

1½ oz. Tubes, 2 dozen in Counter Display Box per doz., .80 each, .05
3 " " 1 " " " " " " " " " " 1.50 " .10

It is very convenient for school use, household purposes and photographers

HANDY PASTE JARS



Jar A. Size without cover, 27/8 x 2 1/4 in. 4 oz. per doz., \$2.50 each, .15
" B. " " " 3 1/4 x 2 1/4 in. 6 " " 4.00 " .25
" D. " " " 4 1/2 x 3 in. 10 " " 9.00 " .50

We beg to call your attention to this new water well jar. It is, we claim, the best on the market

SCREW CAP JARS

Jars, 2 oz.	.	.	.	3 dozen to Case	.	per doz.,	.80	each,	.05
" 6 "	.	.	.	3 " "	.	"	1.50	"	.10
" 10 " Full half pint,	1	"	"	" "	.	"	3.50	"	.25
" 20 " " pint	1	"	"	" "	.	"	6.00	"	.50
" 40 " " quart	1	"	"	" "	.	"	11.00	"	.75
Pails, 6 pounds	.	.	.	1 " "	.	"	18.00	"	1.00

Our jars are all full size and are larger than those listed as same size by many manufacturers. Please make comparison

The paste we guarantee is equal, if not superior, to any white paste. The jars, covers, brushes and labels have been made regardless of expense and the package complete is, we believe, the most attractive on the market. These jars are packed with patent corrugated paper packing, insuring a neat, clean jar for sale

HIGGINS' TAURINE MUCILAGE



ounce Bottle, with improved Brush	per dozen, \$1.20 each,	.10
" " " " " "	" 2.40 "	.20
½ pint " " " " " "	" 3.60 "	.30
pint " " " " " "	" 6.00 "	.50
quart " " " " " "	" 9.60 "	.80
gallon Safety Shipping Can (Including Can)	each,	\$2.75
" " " " " "	"	5.00
" " " " " "	"	11.50

An entirely new departure avoiding the defects of the cheap and nasty extrine and the dear and dirty gum mucilages. It is stronger, catches quicker and dries quicker than other mucilage, and is perfectly clear, clean, non-corrosive, non-sedimentary, and pleasant to sight and scent

The Bottles are packed one dozen to the box; the Cans singly

LePAGE'S LIQUID GLUE



1 OZ. BOTTLE



1/2 GILL CAN

1 ounce Bottle, 1 dozen in box	per dozen, \$1.20 each, .10
2 " " " "	1.80 " .15
Small Size Tubes, 1 dozen in box	\$1.20 " .10
Large Size Tubes, " "	1.80 " .15

PATENT TIN CANS WITH ADJUSTABLE BRUSH

1/2 gill, 1 dozen in box	per dozen, \$1.80 each, .15
1 " " " "	2.40 " .25

Packed 6 dozen in a case

PATENT TIN CANS FOR MECHANICS

1/2 Pints, 2 dozen in case	per dozen, \$3.25 each, .30
Pints 1 " " "	5.50 " .50
Quarts 1 " " "	9.50 " .80

IN TIN CANS FOR MECHANICS AND MANUFACTURERS

1/2 Gallons, 1/2 dozen in case	per dozen, \$18.50 each, \$1.60
1 Gallon " " "	33.00 " 3.00

WESTERN CEMENT — MENDS EVERYTHING



COUNTER DISPLAY BOX

Western Cement, in Bottles per doz., \$2.50 each, .25

This preparation will mend anything that is broken and will hold with a tenacity that is truly wonderful and without an equal. It is being used exclusively in the repair departments of the largest crockery, jewelry, glassware, and manufacturing houses in the world and is far superior to anything of its kind ever produced

Try this. None like it. Take no other. Takes hold at once. No waiting or holding. Requires no strings or ropes for 48 hours. A trial will convince you that this cement will accomplish all we claim and is not misrepresented

It is the ideal cement for the household and business and should always be within reach

We absolutely guarantee that Western Cement will mend china, glass, bone, lava, stone, ivory, shell, pearl, terra cotta, wood, meershaum, marble, jewelry settings, leather and cast iron. It will never break in the same place. It restores the original strength, durability and appearance. It brings back to mended articles their original sound or ring. It is the only cement that restores the cohesive attraction between broken parts. It leaves no trace of cement upon the surface. It will resist cold or warm water. It is useful for mending lamp shades or gas globes, as dry heat produces no effect. It is transparent and has a pleasant odor. It contains no acid to eat the ware or injure the article mended. It will not evaporate or dry up in the bottle, every drop can be used

FROST & ADAMS CO.'S
CROW QUILL PENS

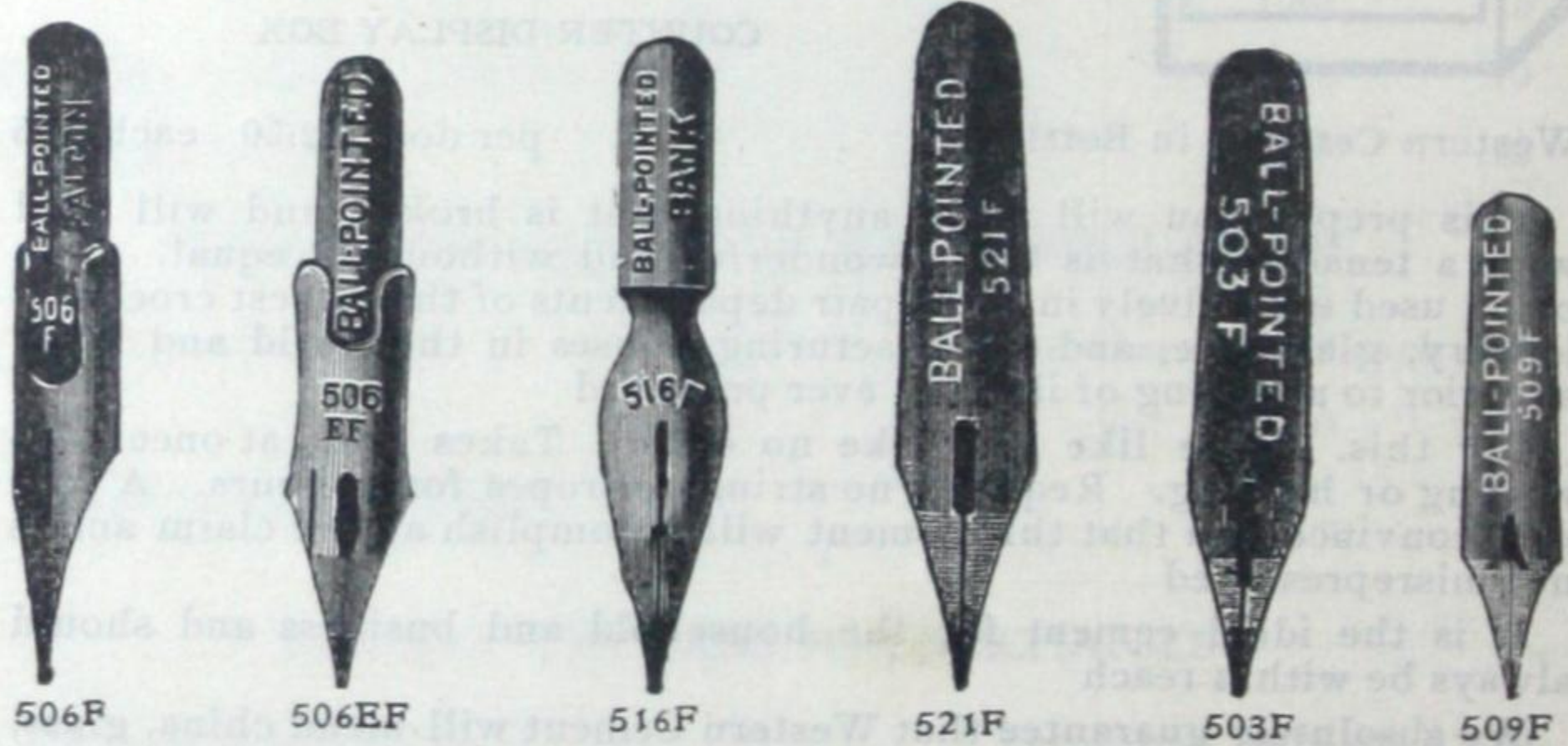


Frost & Adams Co.'s Crow Quill Pens, each in Improved Holder with Cork Finger Piece, card of 12 pens per card, \$1.00 each, .10

HUNT'S HAWK QUILL PENS
ROUND POINTED

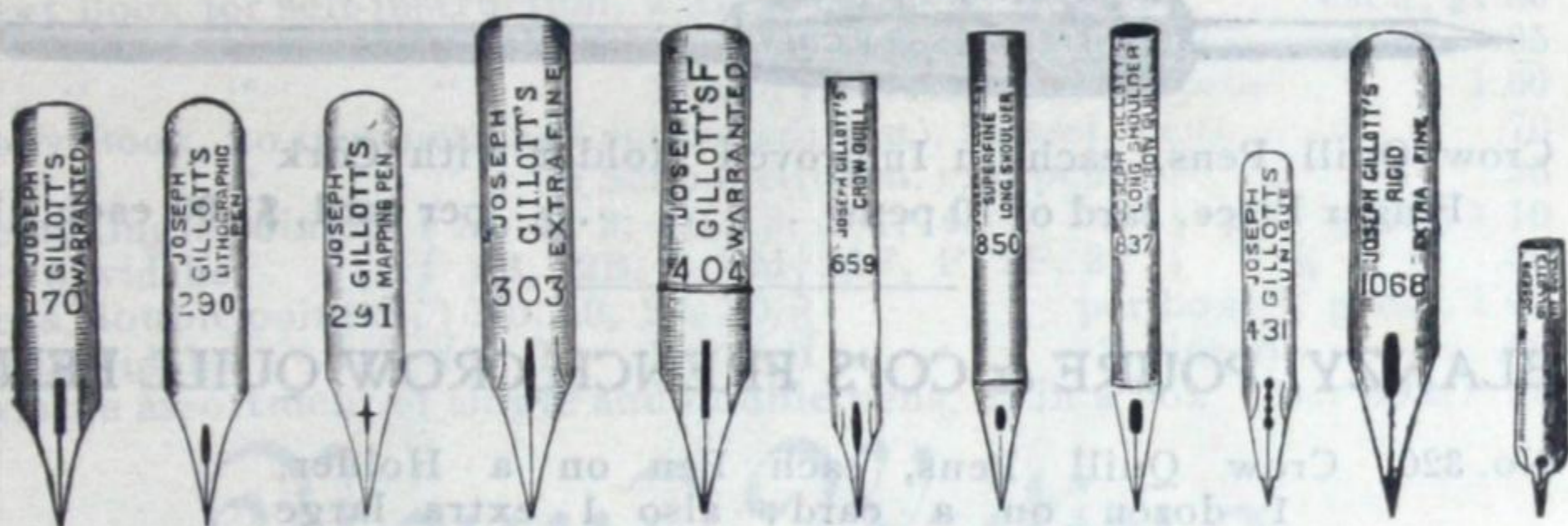
No. 107. Hunt's Hawk Quill Pens, each in holder, card of 12 pens per card, .75 each, .06

BALL POINTED STEEL PENS



No. 506F.	Medium Fine, Gray	per gro., \$1.50	per doz., .20
506EF.	Extra Fine	1.50	.20
516EF.	Extra Fine	1.50	.20
516F.	Fine	1.50	.20
521F.	Medium Fine	1.50	.20
503F.	Medium Fine	1.50	.20
509F.	Medium Fine	1.50	.20

JOSEPH GILLOTT'S STEEL PENS



IN ONE GROSS BOXES—12 PENS ON A CARD

No. 290.	Lithographic and Drawing Pen, superfine points . . .	per gro., \$ 6.50 per doz., .60
291.	Mapping, Drawing and Engraving Pen . . .	per gro., \$ 6.50 per doz., .60
431.	Points between the fineness of No. 170 and 290 . . .	per gro., \$ 4.00 per doz., .40
659.	Crow Quill, superfine drawing points . . .	per gro., \$ 6.50 per doz., .60
837.	Long Shoulder Crow Quill, medium drawing points . . .	per gro., \$ 8.10 per doz., .75
850.	Long Shoulder Crow Quill, superfine points . . .	per gro., \$ 8.10 per doz., .75
1000.	Tit Quill. The finest points . . .	per gro., \$11.00 per doz., 1.00
1068.	Rigid Extra Fine. An especially smooth pen for unshaded extra fine writing . . .	per gro., \$ 1.50 per doz., .15

IN ONE GROSS BOXES—PENS LOOSE

No. 170.	Ladies' Pen, extra fine points . . .	per gro., \$ 1.05 per doz., .15
290.	Lithographic and Drawing Pen, superfine points . . .	per gro., \$ 4.95 per doz., .50
291.	Mapping, Drawing and Engraving Pen . . .	per gro., \$ 4.95 per doz., .50
303.	The original extra fine pen . . .	per gro., \$ 1.45 per doz., .15
404.	Public Pen with bead, fine p'ts . . .	per gro., .85 per doz., .10
659.	Crow Quill, superfine drawing points . . .	per gro., \$ 5.50 per doz., .50

GILLOTT'S HIGH CLASS PENHOLDERS

No. 607.	Satinwood, for ordinary slip pens . . .	per doz., .20 each .02
667.	Rosewood, for Pen Nos. 659, 837, and 850 (Crow Quills) . . .	per doz., .50 each .05
1003.	Ebony, new style for Crow Quill Pens, Nos. 659, 837 and 850 . . .	per doz., 1.50 each .10
Cork Pen Holders . . .		per doz., 1.20 each .10

KEUFFEL & ESSER CO.'S CROW QUILL PENS

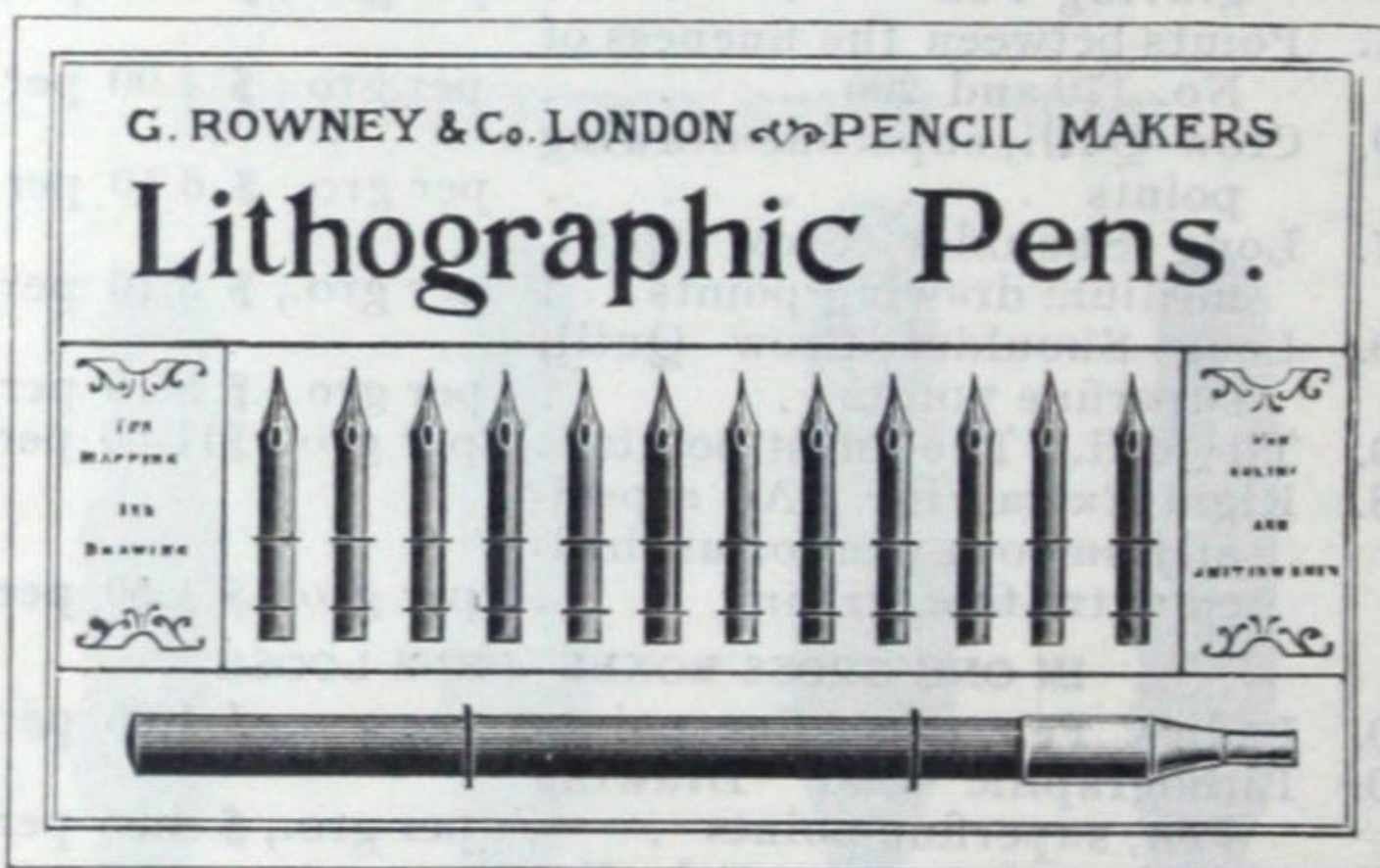


Crow Quill Pens, each in Improved Holder with Cork
Finger Piece, card of 10 pens per card, \$1.00 each, .10

BLANZY, POURE & CO.'S FRENCH CROW QUILL PENS

No. 320. Crow Quill Pens, each Pen on a Holder,
1 dozen on a card; also 1 extra large
Holder per gro., \$3.30 per doz., .30

GEO. ROWNEY & CO.'S CROW QUILL PENS



Lithographic Pens, 1 dozen Pens and 1 Holder on a
card per doz., .40 each, .04
Mapping Pens, each Pen on a Holder, 1 dozen on a
card per gro., \$5.00 per doz., .50 each, .05

SOENNECKEN'S ROUND WRITING PENHOLDERS



No. 3560. Penholder for Round Writing Pens each, .10

F. SOENNECKEN'S SYSTEM OF ROUND WRITING

Text Book for self-instruction, with 25 assorted pens	each, \$1.00
“ “ “ without pens	“ .65
“ “ “ bound in cloth, with 25 pens	“ 1.60
Copy Book, no instructions (School edition), 25 asst. pens	“ .70
“ “ “ (School edition,) no pens	“ .35
Pens, single pointed, } No. 1, 2, 2½, 3, 3½, 4, 5, 6	} per gross, 1.10
8 widths, } 3B, 2B, B, M, MF, F, 2F, 3F		“ ¼ “ .35
Pens, double pointed, } No. 10, 20, 30,	} per box, ¼ gross, 1.00
3 widths, } B M F		“ dozen, .50
Sample assortment of single and double pens, 25 in a box	per box, .35

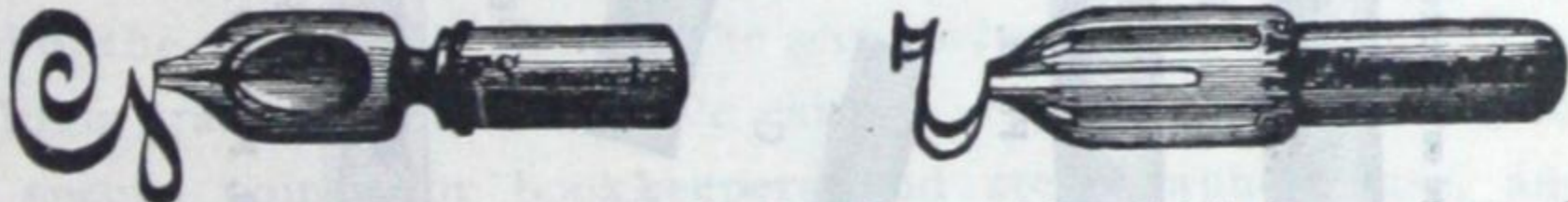
Round Writing

is desirable in every profession. Engineers, Architects and Draughtsmen will use it for titles and lettering on drawings. Book headings, policies, contracts, leases, etc., are distinct and ornamental written in this style. This System has met with unexpected and flattering success. An edition in English is published under the following titles:

- A.—Handbook for Self-instruction and Exercise
- B.—Copybook for Instruction in Schools

The handbook is a guide to the whole system; how to form the letters and to avoid mistakes; 28 finely lithographed plates, with numbers, alphabets, etc., for exercise. The copybook for schools contains the plates only, reserving the explanation for the teacher.

SINGLE AND DOUBLE POINT ROUND WRITING PENS



Especially made for this kind of script, with which it can be written as rapidly as common handwriting. All who wish to acquire perfection in this style of writing should buy the Book for Self-instruction if there is no competent teacher. The use of the pens without the proper guide will discourage the beginner.

SOENNECKEN'S FLUENT WRITING PENS

Nos., per gross, \$1.10; ¼ gross, .35. Sample box, 25 pens, assorted, .25. Constructed on the principle of the Round Writing Pens, they have the following important features. 1.—The pen requires no pressure, and, therefore, writes easier and more rapidly than other pens. 2.—The above peculiarity and the shape of the points prevent scratching entirely, even on rough paper. 3.—They give the writing the appearance of uniformity and steadiness not equalled with other pens. 4.—They require no pressure, wear slightly, outlast others, and are thus cheaper.

WATERMAN'S IDEAL FOUNTAIN PEN

(These cuts are two-thirds of actual length and size of No. 14 Pen.)



Fig. 1. Pen closed for the Pocket.



Fig. 2. Pen ready for writing, with Cap on top.

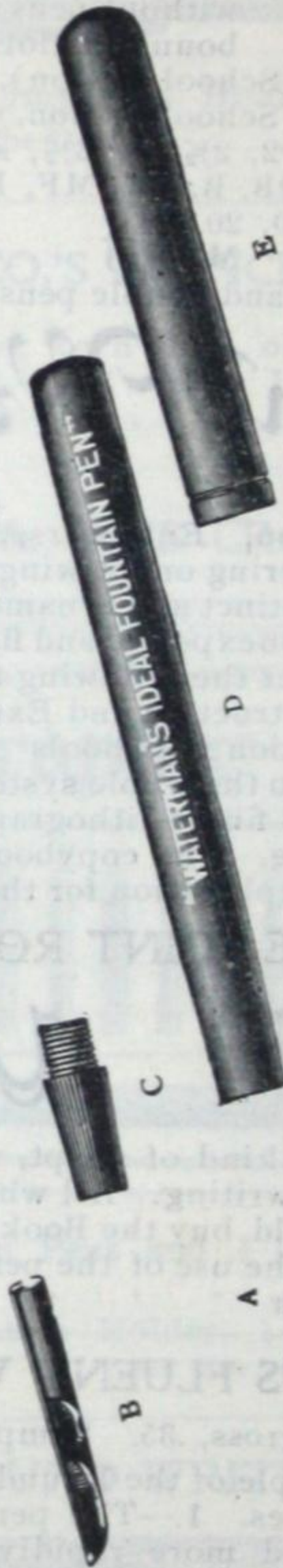


Fig. 3. The four parts of Pen-holder.

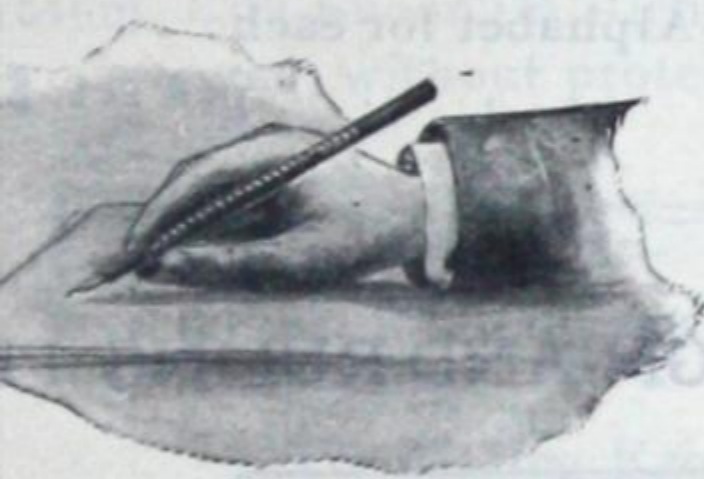


Fig. 4. Sectional view of Pen.

A. Gold Pen. B. Feed Bar. C. Point Section (or neck). D. Barrel. E. Cap.

Waterman's Ideal Fountain Pen — continued

2, 12 and 22 . . .	each, \$2.50	Nos. 2 and 22, Gold Mounted, each,	\$3.50
3, 12 " 23 . . .	" 3.50	5 " 23, " "	4.50
4, 14 " 24 . . .	" 4.50	4 " 24, " "	5.00
5, 15 " 25 . . .	" 5.00	5 " 25, " "	6.00
6, 16 " 26 . . .	" 6.00	6 " 26, " "	7.00



The demand for Fountain Pens for business purposes as well as for pocket convenience is now universal. It is recognized, however, that the purchase of anything short of the best, because it is cheap, is the poorest kind of economy.

A Fountain Pen must be manufactured according to scientific principles by expert workmen, employing the very highest quality of material. It must not leak or blot; it must be ready to write the moment it touches the paper and in fact must fulfil every demand made of it by the most critical writer.

We have selected for our stock, therefore, the Waterman Ideal Fountain Pen, which has for many years maintained its position as the standard of the world. Its name is the accepted synonym for everything of the highest grade in this line. We carry a very large assortment, including special points for bookkeepers' and stenographers' use, and folding nibs for carbon copying, all of which are offered at the uniform retail prices maintained throughout the world. Every pen is absolutely guaranteed and is sold with the understanding

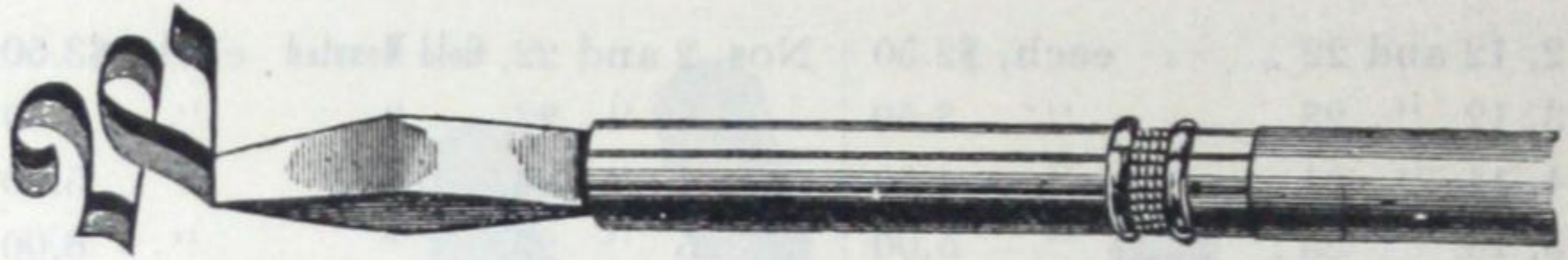
that if it does not give perfect satisfaction it may be exchanged or returned.

It is a pleasure to us to show these goods to our customers and we will spare no pains to fit the hands of our customers, sending to the manufacturer for assortments of special points if necessary.



ary

AUTOMATIC SHADING PENS



Assorted sizes, Nos. 0, 1, 2, 3, 4, 5	per dozen, \$3.00 each, .25
" " 6 and 8	" 3.50 " .35
Set of 6 Pens, assorted sizes (including an Alphabet for each pen)	per set, \$1.50

THE BALLANCE RESERVOIR SIGN AND RULING PEN



NO. G. S. B. 33

No. G.S.B.33. Box contains Set of 8 Pens, $\frac{1}{8}$ to 1 inch	per set, \$2.25
B. Separate Pens, $\frac{1}{8}$ to $\frac{1}{2}$ inch	per doz., \$3.00 each, .25
B. " " $\frac{5}{8}$ to 1 "	" 3.75 " .40
BB. Double End Pens, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$	" 3.00 " .25

The pens will carry enough thin fluid to rule a line 6 to 12 feet in length, or 20 to 40 letters or figures, with ink, water, turpentine, oil or varnish colors. For forming letters characters, figures, symbols, designs and ruling even edge lines and widths. Notice the reservoir between the pen blades

FLAT KOH-I-NOOR POCKET PENCILS



- 1546s. Koh-i-noor Half-length Pencil, flat, HB, sharpened, with nickel point protector, boxed in dozens per doz., \$1.00 each, .10
- 1546m. Koh-i-noor Half-length Pencil, flat, HB, sharpened, without protector, doz. in box per doz., .50 each, .05

THE AIR PENCIL

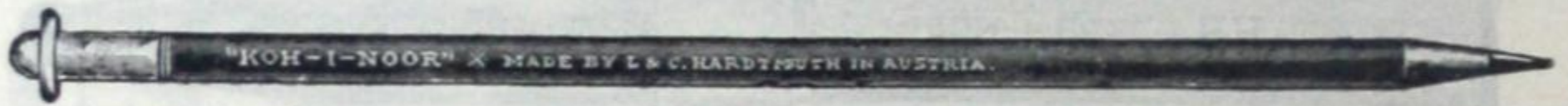
For Making Raised Letters and Relief Work



- Kit complete, in neat box, containing Air Pencil, Dry Medium and Liquid per dozen, \$9.00 each, .75
- Medium No. 1 (Liquid) bottles " 2.40 " .20
- Medium No. 2 (Dry Powder) boxes " 2.40 " .20

To be applied to Plaques, Vases, Fancy Boxes, Dance Cards, Menus and Ornaments of all kinds. By the use of the Air Pencil the most beautiful effects in Raised Lettering can be produced

KOH-I-NOOR POCKET BOOK PENCILS



NO. 1516. MIDDLE

No. 1516. Koh-i-noor Pocket Book Pencil, round, HB,
bone top, extra thick, thick and middle,
3 dozen in a box . . . per doz., \$1.00 each, .10



NO. 1515c. THICK

No. 1515c. Koh-i-noor Pocket Book Pencil, hexagon, HB,
bone top, extra thick, thick and middle,
3 dozen in a box . . . per doz., \$1.00 each, .10



NO. 1515m. EXTRA THICK

No. 1515m. Koh-i-noor Pocket Book Pencil, hexagon, HB,
nickle top, extra thick, thick and middle,
3 dozen in a box . . . per doz., \$1.00 each, .10



No. 1561½. Koh-i-noor Copying Pencil, round, thick,
violet, celluloid top, 3 dozen in a box
per doz., \$1.00 each, .10

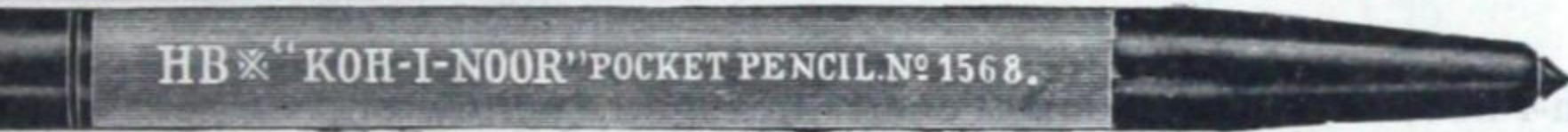
No. 1515b. Koh-i-noor Pocket Book Pencil, hexagon, HB,
bone top, extra thick, thick and middle,
3 dozen in a box . . . per doz., \$1.00 each, .10

KOH-I-NOOR PROPELLING POCKET PENCILS



NO. 1528

- 1528. Koh-i-noor HB, yellow polished, nickel ends, 3½ in. each, .35
- 1528a. " " " " 5 in. " .40
- 2201. Koh-i-noor Refills, for 1528, 12 in tin box . per box, .40
- 2202. " " " 1528a, 6 " . " .35

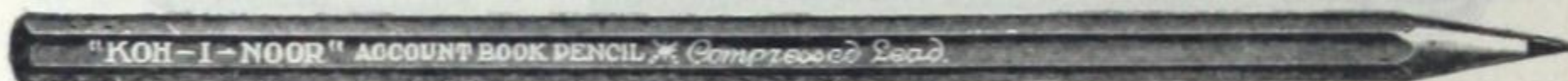


NO. 1568

- 1568. Koh-i-noor HB or Copying, yellow polished, ebonized ends, 4 in. each, .35
- 1568a. Koh-i-noor HB or Copying, yellow polished, ebonized ends, 5 in. each, .40
- 2202a. Koh-i-noor HB Refills, for 1568 and 1568a, in a flat box of 6 refills per box, .25
- 1570. Koh-i-noor Copying Refills, for 1568 and 1568a in flat box of 6 refills per box, .25
- 1578. Koh-i-noor Copying Refills for 1568 and 1568a, in a flat box of 6 refills per box, .25
- 1527. Koh-i-noor Half-length Pencil, 4 in box with protector per box, .35
- 1515b. Koh-i-noor Pocket Book Pencil, hexagon, HB, bone top, middle thick and extra thick, 3 dozen in box per doz., \$1.00 each, .10
- 29a. Koh-i-noor Short Pencils, HB, with metal screw, nickel holder, and 6 refills in box per box, .75
- 1519a. Koh-i-noor Refills, for above, 12 in box per box, .60

KOH-I-NOOR ACCOUNT BOOK PENCILS

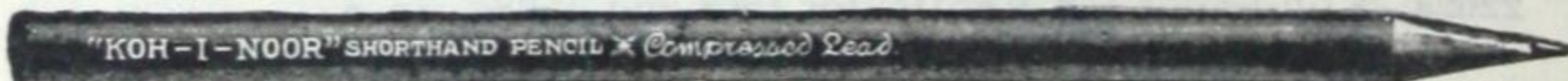
Compressed Lead, Hexagonal



Koh-i-noor Account Book Pencil, hexagon, yellow polished, gold stamped one degree . . . per doz., \$1.00 each, .10

KOH-I-NOOR SHORTHAND PENCILS

Compressed Lead, Round



Koh-i-noor Shorthand Pencil, round, yellow polished, gold stamped, one degree . . . per doz., \$1.00 each, .10

L. & C. HARDTMUTH'S

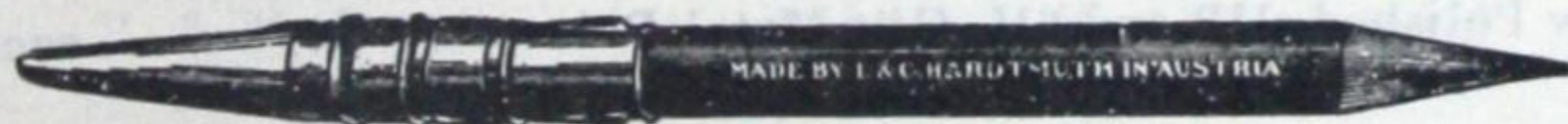
FAMOUS "KOH-I-NOOR" DRAWING PENCILS



MADE IN 16 DEGREES. FINELY GRADUATED

1500.	F to 9H, 1 dozen in box	.	.	per dozen, \$1.00 each,	.10
	4B,	"	"	1.25 "	.12
	5B and 6B,	"	"	1.50 "	.15
	HB, Rubber Tip	.	.	1.75 "	.15

B	Extra soft and very black, double thick lead for large bold Pencil Drawing	H	Hard for Sketching
B	Extra soft and very black	2H	Harder for Outlines
B	Very soft and very black	3H	Very hard for Architects
B	Soft and very black	4H	Extra hard for Engineers
B	Soft and black	5H	Extra hard for Draughtsmen
B	Black for shading	6H	Extra extra hard for Draughtsmen
B	Medium hard and black for ordinary Drawing or Writing	7H	Still harder
F	Firm for fine Drawing	8H	A shade harder than 7H
		9H	Exceptionally hard, for fine line work



HALF LENGTH, NICKEL POINT PROTECTOR

1517.	Half length "Koh-i-noor" Pencil, HB Degree,	
	Patent Nickel Point Protector, 1 dozen in box,	per dozen, \$1.00 each, .10

In order that the "Koh-i-noor" may be readily distinguished from other Drawing Pencils, it is made in a special Yellow Polish. The lead is immeasurably superior to anything hitherto produced. By a new process of manufacture the Graphite assumes a highly compressed form, which secures for it remarkable lasting qualities. Every pencil is stamped with the name "Koh-i-noor," which is a registered trade mark in all countries.



L. & C. HARDTMUTH'S
KOH-I-NOOR COPYING PENCIL

No. 1562. Half length "Koh-i-noor" Copying Pencil, Patent Nickel Point Protector, 1 dozen in box

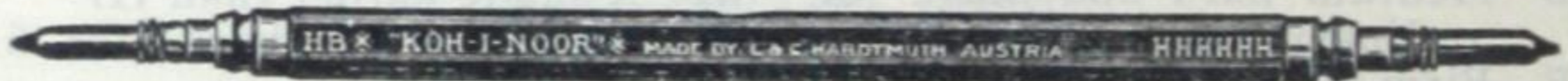
per dozen, \$1.00 each, .10

KOH-I-NOOR RENEWABLE RUBBER TIP PENCIL



Hexagon, HB degree only, ex. quality rubber tips per doz., \$1.75 each, .15
Rubber Tip Renewals " .15 " .02

KOH-I-NOOR ARTIST'S TUBULAR PENCIL



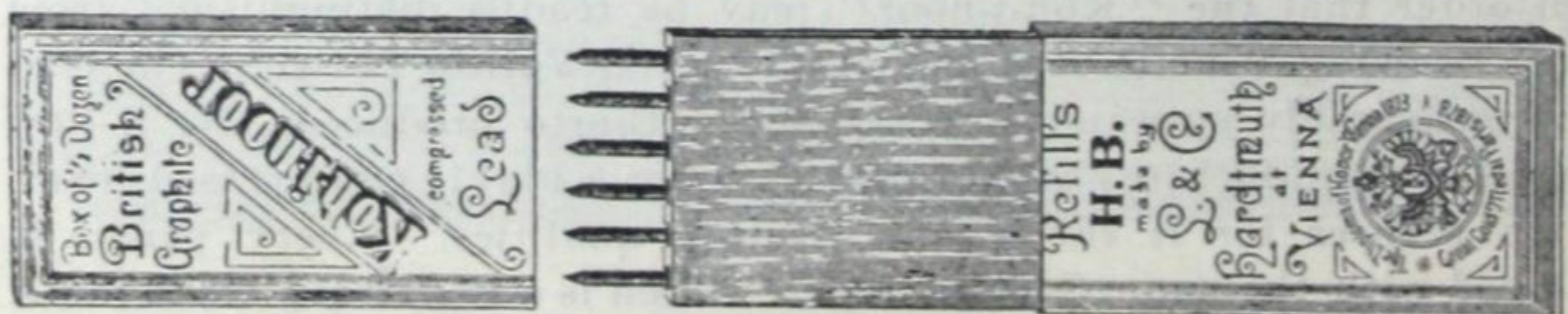
DOUBLE POINTED

Yellow Polished, HB and 6H, Gilt Metal Points each, .40

SINGLE POINTED

Yellow Polished, H to 9H and HB to 6B, 17 deg., Gilt Metal Point. Specially useful for retouching, etc. each, .25

KOH-I-NOOR LEADS FOR ARTIST'S TUBULAR PENCIL



6 Leads in Cedar Box, H to 9H, HB to 6B, 17 degrees
per doz. boxes, \$8.40 per box, .60

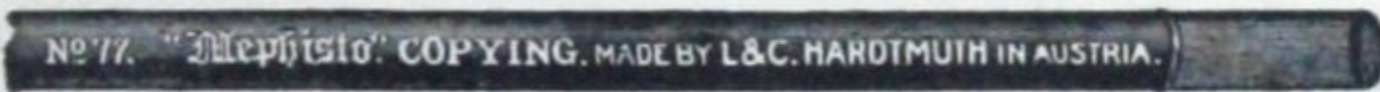
HARDTMUTH'S "MEPHISTO" COPYING INK PENCIL



NO. 73B

Violet	per dozen, .50	each, .05	Red, Red	per dozen, .50	each, .05
Blue, Blue	" .50	" .05	Green, Green	" .50	" .05
Black, Black	" .50	" .05			

"MEPHISTO" COPYING INK PENCIL



NO. 77

No. 77. Made in Violet only per dozen, .50 each, .05

With red tip, or mouthpiece, which enables railway conductors to hold the pencil between the teeth (frequently done while punching tickets), without soiling tongue or lips with violet coloring. This is an improvement on the Famous 73B Copying Pencil now in use by all leading railway companies

"MEPHISTO" DRAWING PENCIL

Made in six degrees, expressed by letter and number on each pencil

3B. No. 1, Very Soft	each, .05	2H. No. 4, Hard	each, .05
B. " 2, Soft	" .05	3H. " 5, Very Hard	" .05
HB. " 3, Medium	" .05	4H. " 6, Extra Hard	" .05

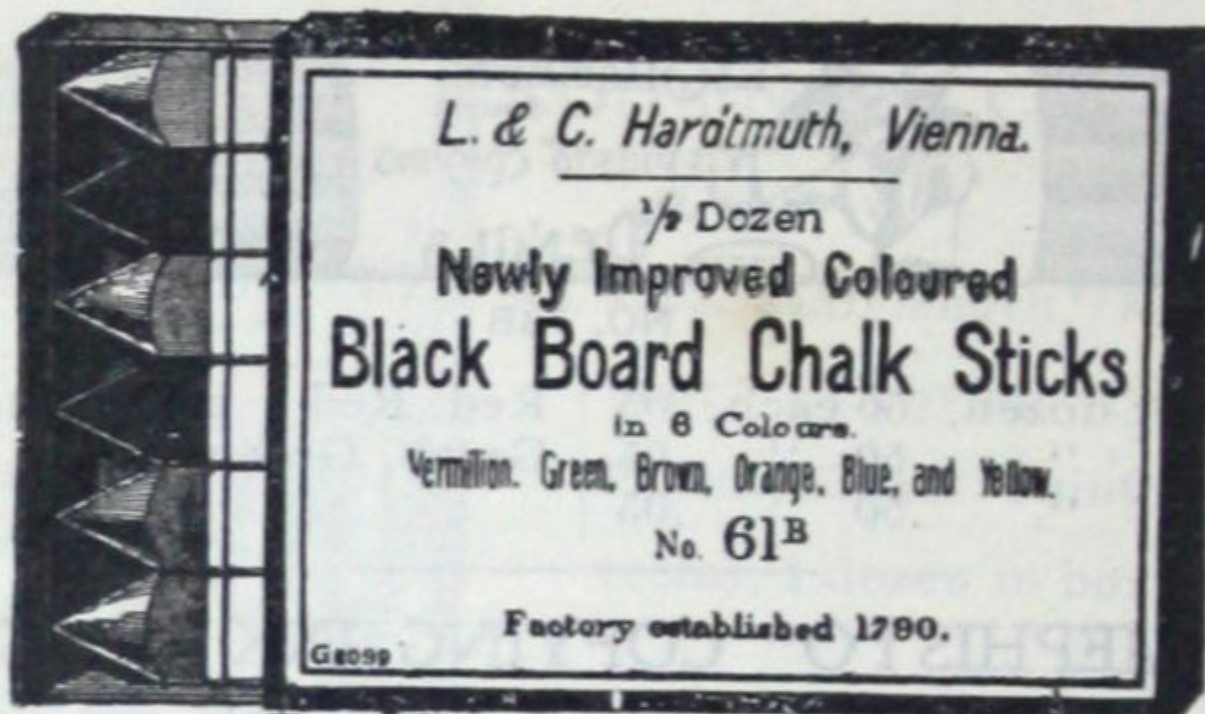
HARDTMUTH'S CELEBRATED "NEGRO" PENCIL

Black Polished Cedar. Made in Five Degrees

"Negro" Pencils. No. 1, Very Soft; No. 2, Soft; No. 3, Medium; No. 4, Hard; No. 5, Very Hard per dozen, \$1.00 each, .10

This remarkable Pencil combines all the best qualities of the Drawing Chalk, Crayon, Charcoal and Carbon Pencil, with the smoothness and fluency of the high-class drawing Lead, thus rendering it the most useful Pencil ever produced for Art Students, Illustrators and Retouchers. It is strongly recommended by leading Drawing Masters on account of the complete absence of grit in its composition and because of the soft, jet black, velvety effect produced by its use. "Negro" Pencils are also preferred by Photographers for retouching and spotting Platinotypes and Carbon-Prints

HARDTMUTH'S DIAGRAM CHALKS



No. 61B in Paper Box. 6 Colors: Green, Brown, Vermilion,
 Orange, Blue and Yellow per dozen, \$3.60 each, .30

HARDTMUTH'S ARTISTS' COLORED WAX CRAYONS

Or Creta Leavis, for Drawing or Sketching. 48 Colors

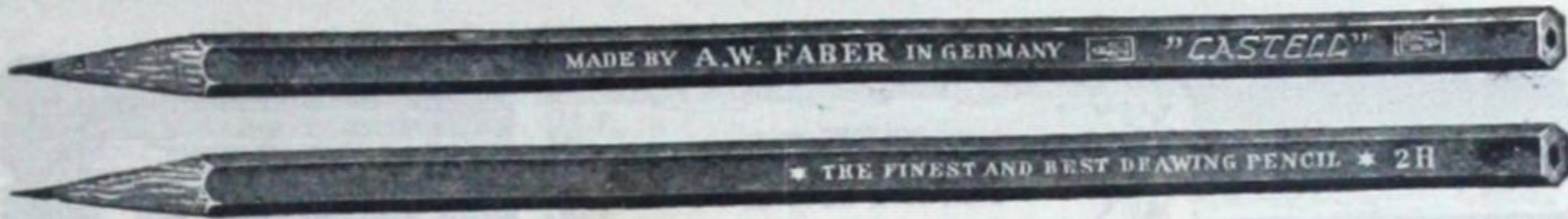
Per Dozen, \$1.00. Each, .10

50 Chrome Yellow	66 Dark Green	82 Purple Violet
51 Gamboge	67 Sap Green	83 Vienna Lake
52 Orange Chrome	68 Leaf Green	84 Scarlet
53 Yellow Ochre	69 Emerald Green	85 Vermilion
54 Olive Green	70 Chrome Green	86 Carmine
55 Bronze Green	71 Light Green	87 Rose Madder
56 Light Brown	72 Light Chrome Green	88 Madder Lake
57 Raw Sienna	73 Mineral Blue	89 Pink Madder
58 Venetian Red	74 Sky Blue	90 Flesh Tint
59 Mars Orange	75 Cobalt Blue	91 Gray Brown
60 Vandyke	76 Mauve	92 Purple Brown
61 Cassel Earth	77 Ultramarine	93 Purple
62 Burnt Sienna	78 Dark Blue	94 Lemon Yellow
63 Sepia	79 Blue Black	95 Brown Ochre
64 Lamp Black	80 Violet Carmine	96 Florence Brown
65 Neutral Blue	81 Light Violet Car.	97 Lake

Sample Cards furnished

A. W. FABER'S

"CASTELL" DRAWING PENCILS



"Castell" Drawing Pencil, Green Polish,

Gold Stamp, Hexagon per gross, \$20.00 per doz., \$1.00 each, .10

This new Series of Finest Drawing Pencils is the fruit of investigations and experiments of a technical nature, which have been carried on for a number of years, and it exhibits, in all their superiority, the magnificent qualities of a Graphite in itself faultless to a nicety. The new product thus stands easily foremost among the manufactures of its kind. The 16 degrees in which it can be supplied: from 6 B, yielding the rich color of India Ink, to the extremely hard 8 H, fit for drawing on stone, are adapted to all the various purposes of professional employment and daily life and fill every want of the artist, designer, civil engineer or architect

An exceedingly fine point, firm and durable, to which these pencils may be sharpened, is suitable for the most delicate as well as the most vigorous work and, withal, wears off but little, thus rendering more service than that of any other lead pencil ever offered to the public

E. FABER'S COLORED SCHOOL CRAYONS

Fine Polish Pencils



Round, full length, 7 in a box, assorted colors per box, .35

A. W. FABER'S SIBERIAN LEAD PENCIL

For Designing, Architectural Purposes, Stenography, Offices and Schools



Siberian 2B, B, HB, F, H, 2H	per dozen, \$1.00 each,	.10
“ 3H, 4H, 5H, 6H, 7H, 8H	“ 1.00	“ .10
“ 3B, 4B, 5B	“ 1.20	“ .12
“ 6B	“ 1.40	“ .15

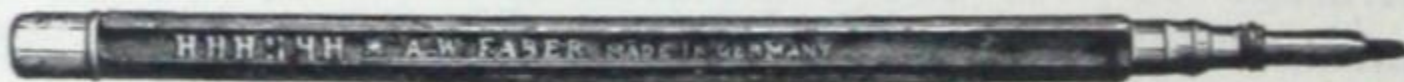
Hexagon, Natural Polished, in 16 Degrees

A. W. FABER'S SIBERIAN ARTISTS' TUBULAR PENCIL

With Moveable Leads



DOUBLE POINTED



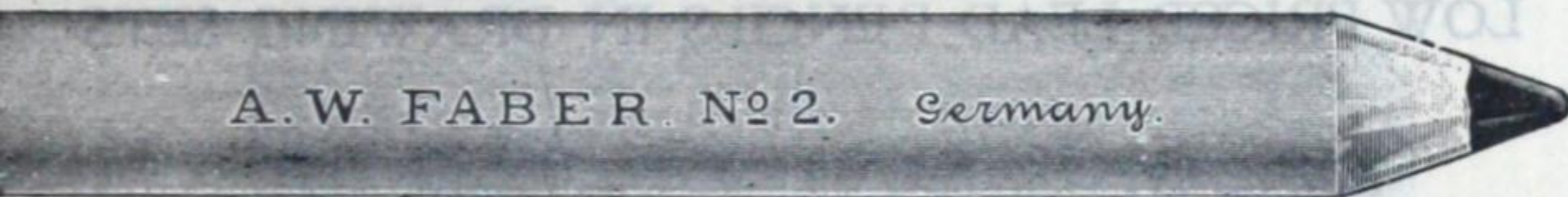
SINGLE POINTED

Siberian Artists', short, HB	3 inches long, each,	.15
“ medium, HB	5 “ “	.20
“ long, graded 2B to 8H	6 “ “	.25
“ “ graded 3B, 4B, 5B	6 “ “	.30
“ “ 6B	6 “ “	.35
“ with double ends, F and 2H	6½ “ “	.40
“ “ “ 2B and HB	6½ “ “	.40

Natural Polished. Ivory Head on single pointed

A. W. FABER'S CARPENTERS' PENCILS

Oval, With Broad Leads



No. 5460.	Lead Pencils, Nos. 1 and 2, 2 grades,	7½ in.	per doz.,	.40
5461.	Red " " " " " "	7½ " "	" "	.65
6704.	Blue " " " " " "	7½ " "	" "	.55
6706.	Red and Blue Pencils	8½ " "	" "	.50
6708.	Lead Pencil in whitewood, red polished, Nos. 1 and 2	7½ " "	" "	.45

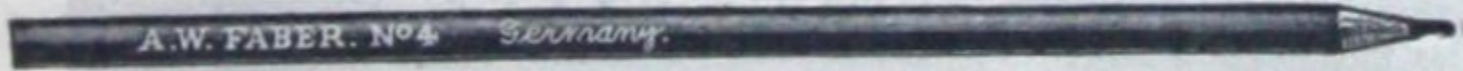
In whitewood, not polished, blue stamp, A. W. FABER

A. W. FABER'S LEADS FOR ARTIST'S PENCILS



Black Leads for Siberian Artists' Tubular Pencils,	H to 6H	per box,	.60
" " " " " "	HB, B, 2B, F	" "	.60
" " " " " "	3B to 5B	" "	.65
" " " " " "	6B	" "	.70

A. W. FABER'S COMPASS PENCIL



Compass Pencils, round, black polished, No. 4 per dozen, .50 each, .05

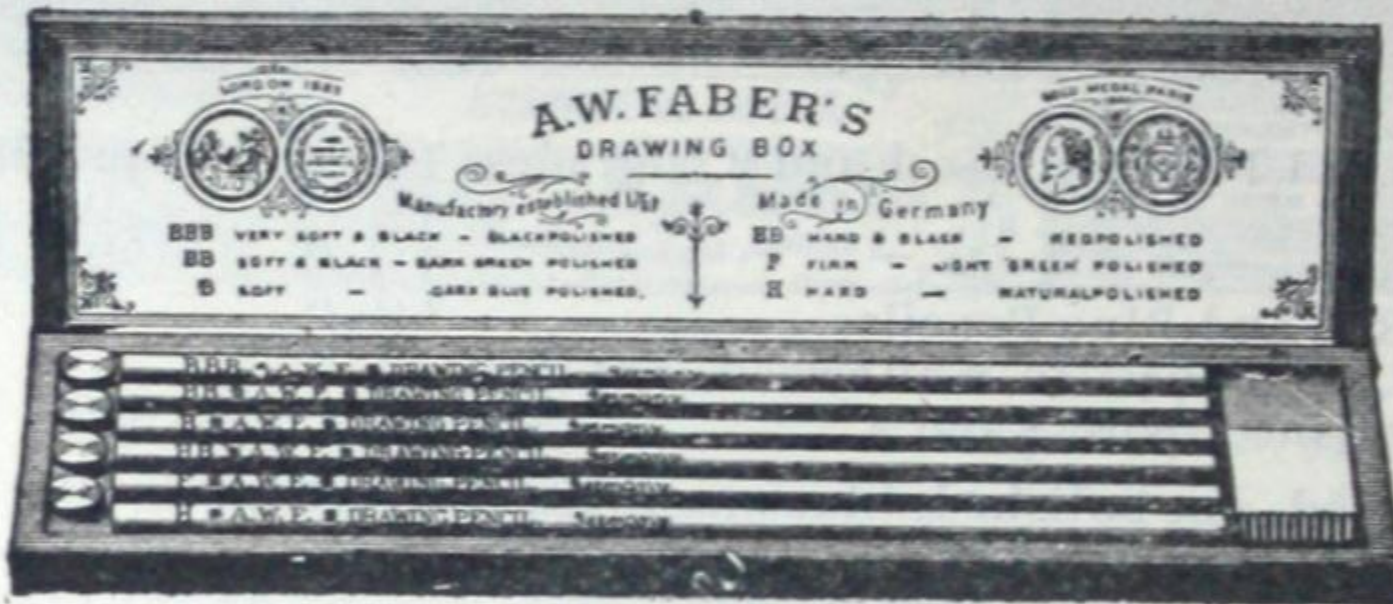


Compass Pencils, hexagon, red polished, No. 4 per dozen, .75 each, .08

These pencils are used in mathematical instruments, and will be found to retain their points for a long time

A. W. FABER'S

LOW-PRICED LEAD PENCILS IN DRAWING SETS



No. 5180. 6 Low-priced Lead Pencils, A. W. F., in set,
graded from H to 3B, with four drawing pins and rubber
eraser per dozen sets, \$4.50 each, .40

A. W. FABER'S "ROUND GILT" PENCIL



BLACK POLISH

"Round Gilt," Nos. 1, 2, 3, 4 and 5 per dozen, .50 each, .05

These pencils rank directly after the "Hexagon Gilt" pencils in popularity. They are round, black polished, with gold stamp, and are made in five degrees of hardness, from No. 1 to 5

A. W. FABER'S "ENGLISH" DRAWING PENCIL

For Draughtsmen, Artists and Art Schools



No. 5060. "English," round, natural polish, 4B to 6H per doz., .50 each, .05

These pencils are made in 12 degrees of hardness to meet all practical requirements. They are round, natural polished

A. W. FABER'S LEAD POINTS

For Gold and Gold-Plated Pencil Cases

No. 5940.	A, B, C, D, E, F, G, H, I, K, L, M, N, O, P, Q, R, S	per box, .05		
5941.	No. 30	per box, .10	No. 5970.	No. 4B
5942.	70	" .10	5971.	6B
5943.	300	" .05	5972.	2B
5944.	9M	" .05	5974.	50
5945.	6	" .10	5975.	80
5946.	7	" .10	5976.	10
5947.	102	" .10	5977.	1
5948.	8	" .05	5978.	12
5968.	200	" .05		

A. W. FABER'S CHALKS IN WOOD

No. 5205. Black Chalk, white wood, Nos. 1, 2, 3 per dozen, .50 each, .05

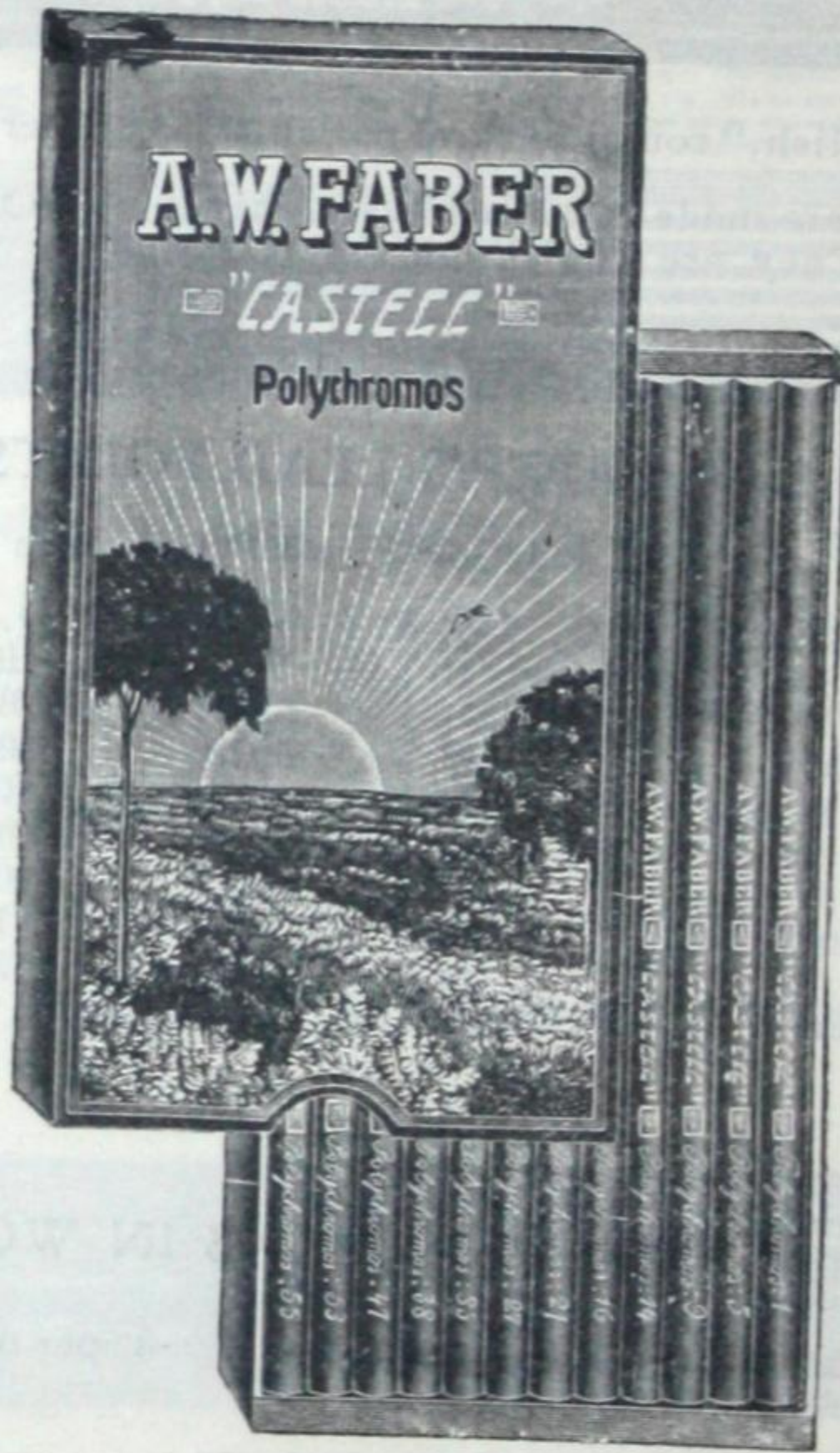
A. W. FABER'S BLACK CHALK POINTS

For Pencils with Movable Black Chalk

No. 5230. Black Chalk Points, for pencils, 6 in box, Nos. 1,
2, 3 per box, .15

A. W. FABER

"CASTELL" POLYCHROMOS COLORED PENCILS
IN SETS



Assorted Colors Artists' Pencils, 12 in cardboard box	.	per box, \$1.00
" " " 18 " "	.	" 1.50
" " " 24 " "	.	" 2.00
Assorted colors, full length, 12 in Metal box, hinge cover	.	per box, \$1.00
" " half " 12 " "	.	" .50

A. W. FABER

POLYCHROMOS COLORED PENCILS IN SETS

A.W. FABER. SKETCHING PENCILS

<i>Meadow</i>	MEADOW-GREEN.	14
<i>Canal</i>	STREET 1 st CLASS.	35
<i>Station</i>	FIELD PATH WOODEN BRIDGE	5
<i>Pit</i>	LANE-BROWN.	45
<i>Sand</i>	WATER.	27
<i>Heath</i>	STONE BUILDINGS	38
<i>Mixed Forest</i>	GARDEN-GREEN.	16
<i>Coniferous Forest</i>	HEATH SAND.	9
<i>Deciduous Forest</i>	MIXED FOREST.	58
<i>Cutting Tunnel</i>	CORNIFEROUS FOREST.	52
<i>Stone Bridge</i>	DECIDUOUS FOREST.	29
<i>Signal Box</i>	MAGENTA RAILWAY.	30

In producing this new series of Polychromos Pencils the principle has been followed of bringing the colors in unison with those usually employed in the form of water colors. It often happens that Colored Pencils are desired to agree in tint with existing water colors

4 1/4 inches long

Assorted Colors Artist's Pencils, for sketching,	12	in	box		per box, .60
“ “ Electrician's Pencils,	12	“	“	“	.60
“ “ Draftsmen's Pencils,	12	“	“	“	.60

A. W. FABER "CASTELL"

Polychromos Non-Fading Colored Pencils

Polychromos Non-Fading Colored Pencils . per doz., \$1.00 each, .10

BROWNS

- 40. Light Ochre
- 41. Raw Sienna
- 42. Gold Ochre
- 43. Burnt Yellow Ochre
- 44. Brown Ochre
- 45. Burnt Sienna
- 51. Raw Umber
- 52. Bistre
- 53. Van Dyke Brown
- 54. Burnt Umber
- 55. Sepia
- 56. Warm Sepia

YELLOWS

- 2. Zinc Yellow
- 3. Lemon Cadmium
- 4. Light Chrome
- 5. Light Cadmium
- 6. Dark Cadmium
- 7. Naples Yellow
- 8. Dark Chrome
- 9. Orange

GREENS

- 10. Terre Verte
- 11. Olive Green
- 12. Mineral Green
- 13. French Green
- 14. Green Bice
- 15. Sap Green
- 16. Hooker's Green, No.1
- 17. Hooker's Green, No.2
- 18. Viridian
- 19. Vegetable Green
- 20. Prussian Green

BLUES

- 21. Light Blue
- 22. Sky Blue
- 23. Cobalt Blue
- 24. Ultramarine
- 25. Paris Blue
- 26. Prussian Blue
- 27. Indigo
- 28. Delft Blue

REDS

- 31. Pink Madder Lake
- 32. Madder Carmine
- 33. Rose Pink
- 34. Carmine Lake
- 35. Carmine Extra Fine
- 36. Scarlet Lake
- 37. Saturn Red
- 38. Pale Vermilion
- 39. Dark Vermilion
- 46. Venetian Red
- 47. Brick Red
- 48. Terra Cotta
- 49. Indian Red
- 50. Burnt Carmine

VARIOUS

- 1. White
- 29. Red Violet Lake
- 30. Blue Violet Lake
- 57. Light Gray
- 58. Neutral Tint
- 59. Payne's Gray
- 60. Ivory Black

"CASTELL" POLYCHROMOS ASSORTMENTS

These assortments are packed in handsome leatherette boxes

9209.	"Castell"	Assortment contains	6 pencils	.	per box	.90
9210.	"Castell"	"	12 "	.	"	1.30
9211.	"Castell"	"	18 "	.	"	2.00
9212.	"Castell"	"	24 "	.	"	2.75
9213.	"Castell"	"	36 "	.	"	3.60
9214.	"Castell"	"	48 "	.	"	4.75
9215.	"Castell"	"	60 "	.	"	6.75

A. W. FABER'S

PENCILS FOR WRITING ON GLASS, PORCELAIN, ETC.



No. 5700.	Blue Pencils, Blue Polished . . .	per dozen, \$1.50 each, .15
5701.	White Pencils, White Polished . . .	" 1.50 " .15
5702.	Yellow Pencils, Yellow Polished . . .	" 1.50 " .15
5703.	Red Pencils, Red Polished . . .	" 1.50 " .15
5705.	Blue Pencils, not in Wood . . .	" 1.50 " .15
5706.	Red Pencil, not in Wood . . .	" 1.50 " .15

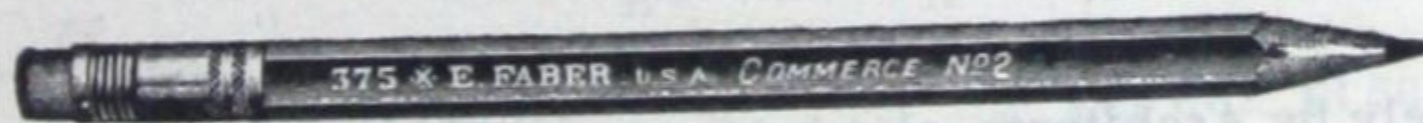
These new Colored Pencils are made for writing or drawing on smooth, polished surfaces, where other pencils will *not* write. They are particularly adapted for Glass, Porcelain, Polished Metal, Wood, or Oil Cloth

The writing is not affected by the influences of temperature, and can be easily removed with a piece of cloth

In sharpening these pencils it is advisable to give them a short point

They are made in four colors, Blue, White, Yellow or Red and polished in colors accordingly. 7 inches long

E. FABER'S "COMMERCE" PENCIL



"Commerce," Hexagon, Natural Polish, Grades Nos. 2, 3, 4,

Rubber inserted Nickel Tip . . . per dozen, .50 each, .05

EBERHARD FABER'S
NEW COLORED CRAYON ASSORTMENT



No. 663. Box contains 1 dozen Round, Assorted Colored Crayons in Wood, 1/2 dozen boxes in carton . . . each, .60

FROST & ADAMS COMPANY COLORED PENCILS

White	in large leads, whitewood finish	per doz., .75 each, .10
Vermilion Red	" " "	" .75 " .10
Brick Red	" " "	" .75 " .10
Blue	" " "	" .75 " .10
Green	" " "	" .75 " .10
Yellow	" " "	" .75 " .10

Used largely by Architects, also by Cotton Mills for marking goods

EBERHARD FABER MONGOL DRAWING SET



No. 483. Contains 1/2 dozen of the famous Mongol Pencils, assorted, grades BB, B, HB, H, 2H, 4H, 1/2 dozen boxes in a carton per box, .35

EBERHARD FABER MONGOL HEXAGON PENCILS



No. 481. "Mongol," hexagon, yellow polish, grades BB to 6H per doz., .50 each, .05
 No. 482. "Mongol," hexagon, yellow polish, black and gilt tip, red rubber, grades 1 to 4 per doz., .60 each, .06
 One dozen in a yellow box, 1/2 gross in a carton

EBERHARD FABER STYLUS



NO. 0030

No. 0030. Taper, Hard Rubber Chased Handles, Agate Points per doz., \$3.50 each, .30
 00105. Taper, Ebony Handle, Gold Plated Tip, Agate Points per doz., 9.00 each, .75
 0021. Taper, Black Enameled Handle, reverse, Agate Points per doz., 3.00 each, .25
 One dozen in a box

JOHANN FABER'S
FINEST SIBERIAN LEAD PENCILS



No. 300 Siberian per dozen, \$1.00, each, .10

Hexagon, Natural Polish, in fourteen degrees, 6B, 5B, 4B, 3B, 2B, B, HB, F, H, 2H, 3H, 4H, 5H, 6H

All Johann Faber's Genuine Siberian Lead Pencils are stamped in Gold on one side: "Johann Faber's Siberian Lead Pencil," and on reverse side: "Warranted to contain Siberian Graphite," and Degree and Trade Mark

JOHANN FABER'S
SILVER STAMP LEAD PENCILS



No. 235. Hexagon per dozen, .50 each, .05

Natural Polish, rubber tip. In two degrees, Nos. 2 and 3

JOHANN FABER'S
COLORED PENCILS IN CEDAR



No. 512. Blue, Round, Blue Polish per dozen, \$1.50 each, .15

513. Red, " Red " " " " 1.50 " .15

Extra Large, Round, Very Thick Lead, Finest Quality

JOHANN FABER'S ARTISTS' TUBULAR PENCILS

With Movable Leads



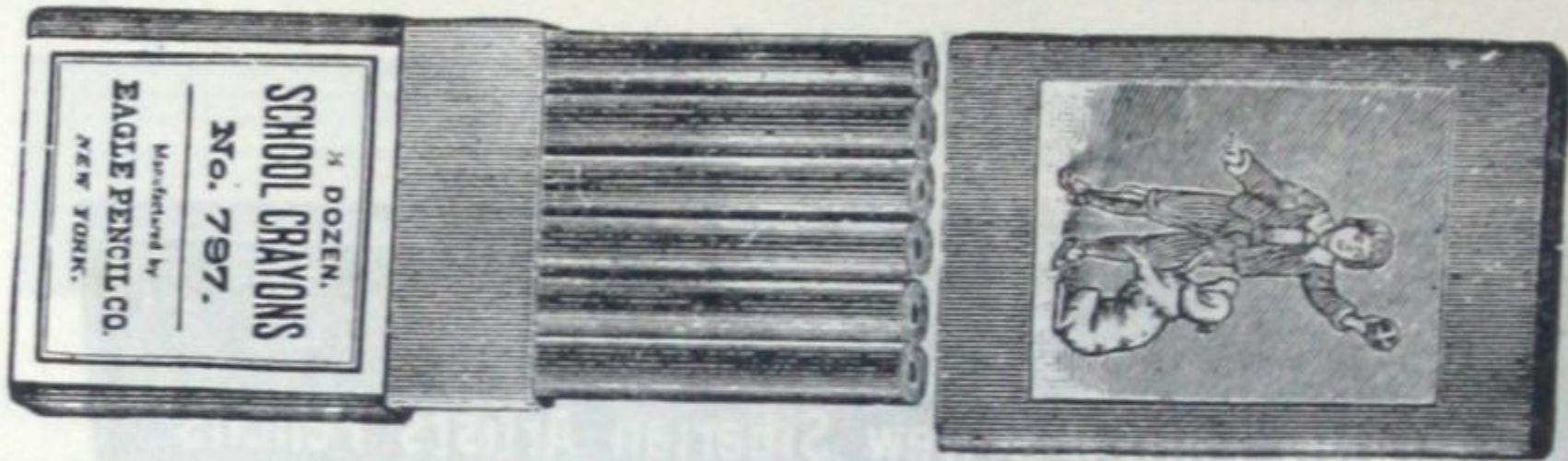
No. 702. Siberian Artists' Pencils, natural polished, 14 degrees, 6B, 5B, 4B, 3B, 2B, B, HB, F, H, 2H, 3H, 4H, 5H, 6H per doz., \$2.50 each, .20

JOHANN FABER'S LEADS FOR ARTISTS' PENCILS



No. 801. Siberian Artists' Leads, 6 leads in box, 14 degrees, 6B, 4B, 3B, 2B, B, HB, F, H, 2H, 3H, 4H, 5H, 6H per box, .50

COLORED SCHOOL PENCILS IN BOXES



- No. 797. Box of 6 Pencils, assorted Colors, 4½ in. long per box, .10
 798. " 12 " " " " " " " .20

SUPERFINE CRAYON ASSORTMENT NO. 116

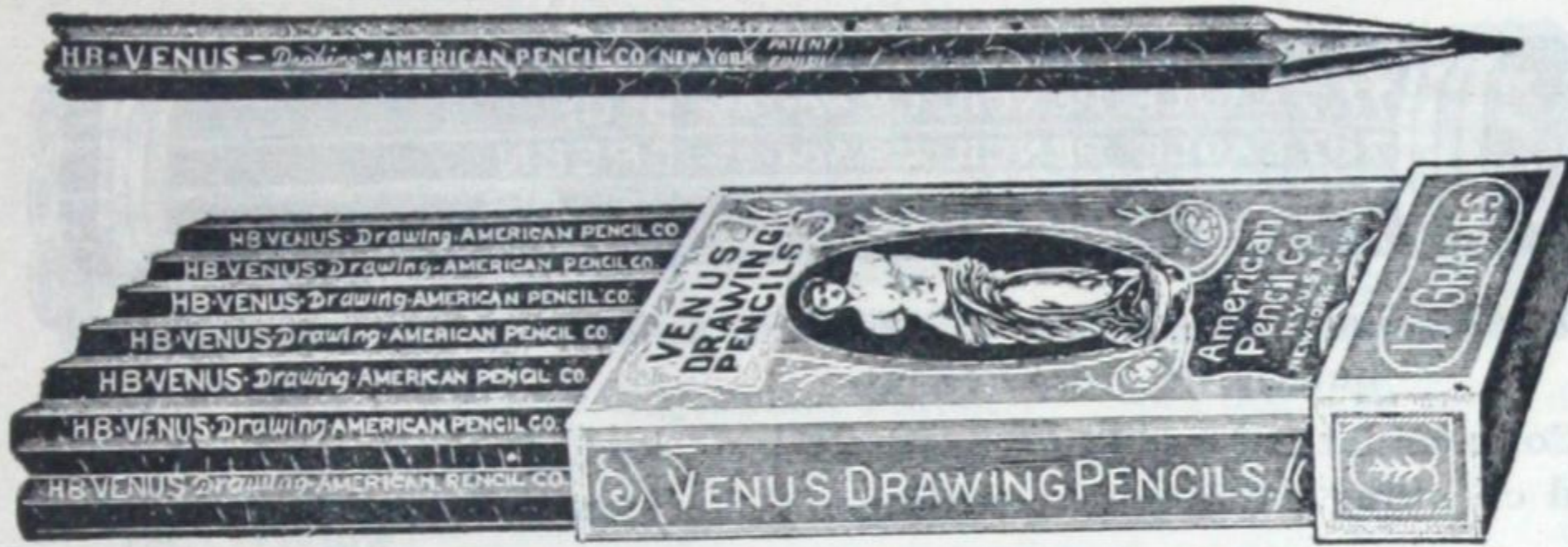
One Dozen in a Box with Glass Cover



- No. 116. Box of 12 Crayons, Assorted Colors, Round, Glass Finish, polished in corresponding shades . . . per box, .60

Black	Dark Brown	Orange	Sea Green
Carmine	Dark Green	Purple	Sky Blue
Dark Blue	Light Brown	Rose	Yellow

VENUS DRAWING PENCILS



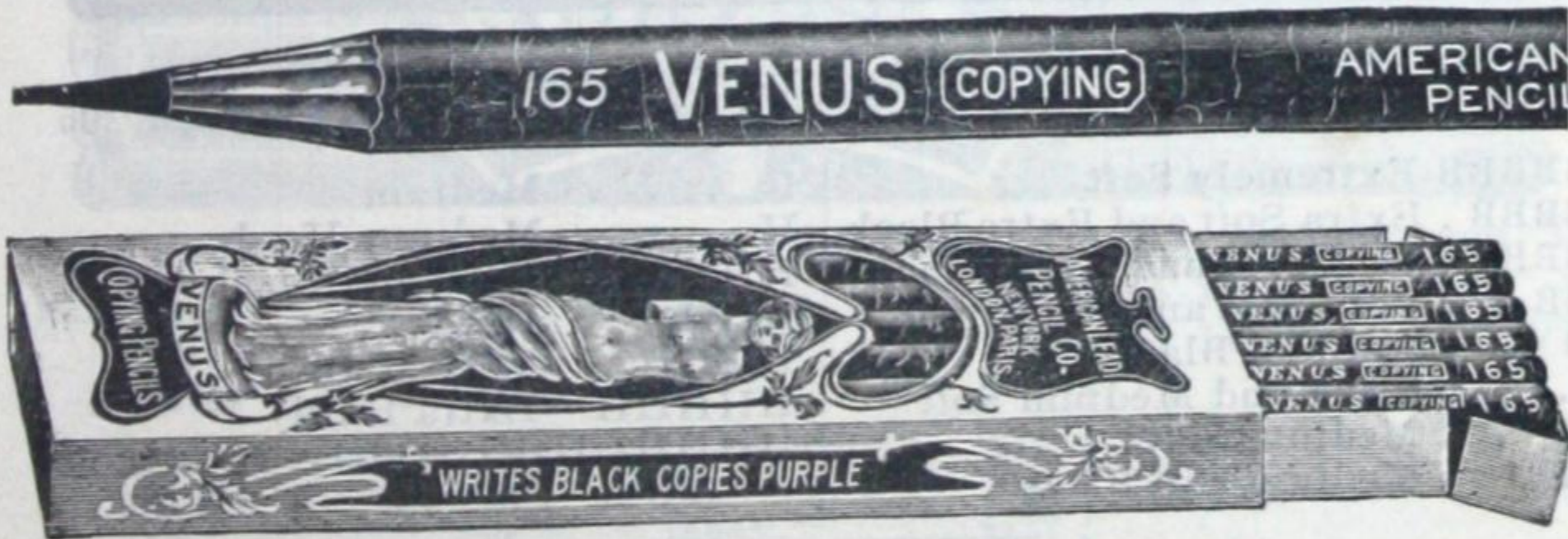
STYLE OF PACKAGE

17 Grades, 6B Softest to 9H Hardest . . . per doz., \$1.00 each, .10

- | | | | |
|----|--|----|--|
| H | Hard for Sketching | 6B | Extra soft and very black, double thick lead for large bold Pencil Drawing |
| 2H | Harder for Outlines | 5B | Extra soft and very black |
| 3H | Very hard for Architects | 4B | Very soft and very black |
| 4H | Extra hard for Engineers | 3B | Soft and very black |
| 5H | Extra hard for Draughtsmen | 2B | Soft and black |
| 6H | Extra extra hard for Draughtsmen | B | Black for shading |
| 7H | Still harder | HB | Medium hard and black for ordinary Drawing or Writing |
| 8H | A shade harder than 7H | F | Firm for Fine Drawing |
| 9H | Exceptionally hard, for fine line work | | |

Contain the smoothest and longest lasting lead ever produced
 A grade for every purpose of the Business or Professional Man

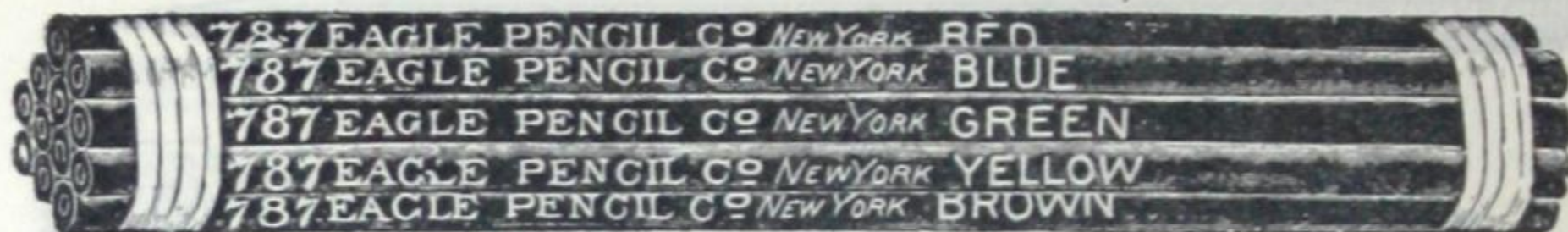
VENUS COPYING PENCIL



STYLE OF PACKAGE

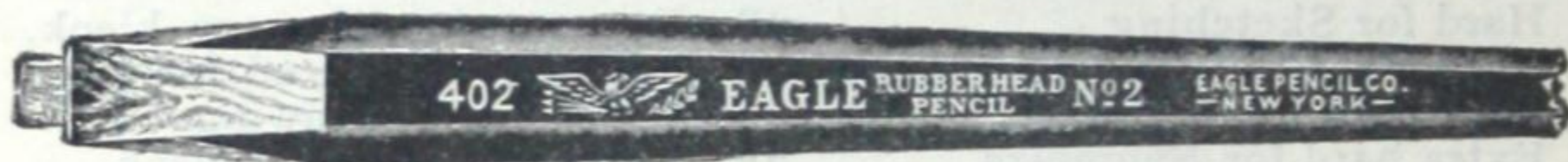
No. 165. Venus Copying Pencil, purple, gloss finish . . . per doz., .75 each, .07

EAGLE COLORED PENCILS



No. 787. One dozen Pencils, Assorted Colors, tied in bundle, 1/2 gross in a box . . . per doz., .50 each, .05
 Commercial Colors: Blue, Brown, Green, Red, Yellow. For marking and checking. Smooth in writing and marking and durable in point

EAGLE INSERTED RUBBER HEAD PENCILS



No. 402. No. 2 Hexagon, Maroon Gold . . . per doz., \$1.00 each, .10
 403. " 3 " " " " " " " 1.00 " .10

These Pencils contain about one inch of the best erasive rubber, which being encased in wood is perfectly protected against being soiled, and may be sharpened to a point for erasing fine lines

EAGLE ORLOFF DRAWING PENCILS



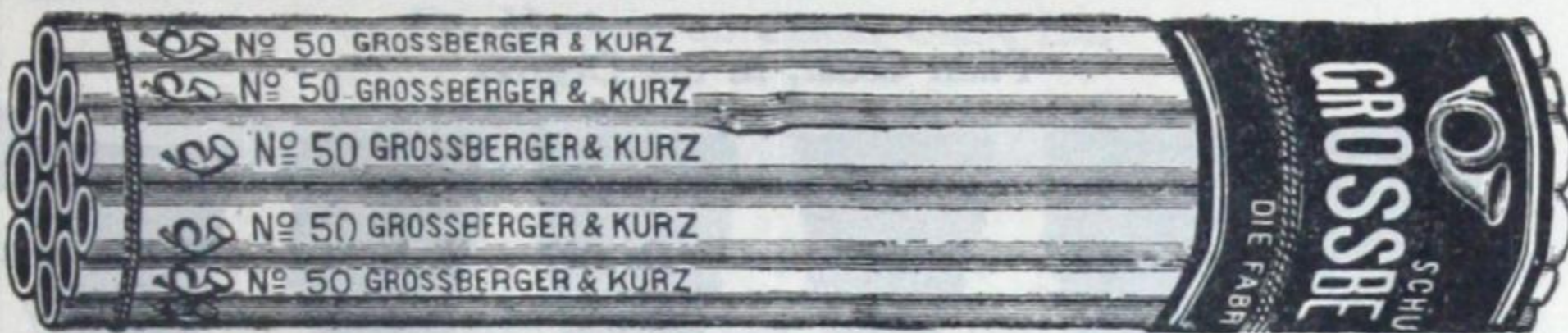
No. 843. Orloff, accurately graded in 15 degrees of hardness . . . per doz., .60 each, .05

BBBBBB-Extremely Soft	F . . . Medium
BBBBB . Extra Soft and Extra Black	H . . . Medium Hard
BBBB . Very Soft and Very Black	HH . . Hard and Black
BBB . . Very Soft and Black	HHH . . Hard
BB . . Soft and Black	HHHH . Very Hard
B . . Black and Medium Soft	HHHHH Extra Hard
HB . . Medium Soft	HHHHHH-Extremely Hard and Firm
FHB . Medium and Black	

EAGLE ATLANTIC PENCILS

Atlantic, plain cedar, rubber inserted . . . per gro., \$1.50 per doz. .15

GROSSBERGER & KURZ COLORED PENCILS



No. 666.	White Lead, in Whitewood Finish	per doz.,	.50	each,	.05
683.	Red	"	.50	"	.05
697.	Blue	"	.50	"	.05
721.	Yellow	"	.50	"	.05
725.	Green	"	.50	"	.05
731.	Black	"	.50	"	.05
32.	Black in black polished wood	"	1.00	"	.10

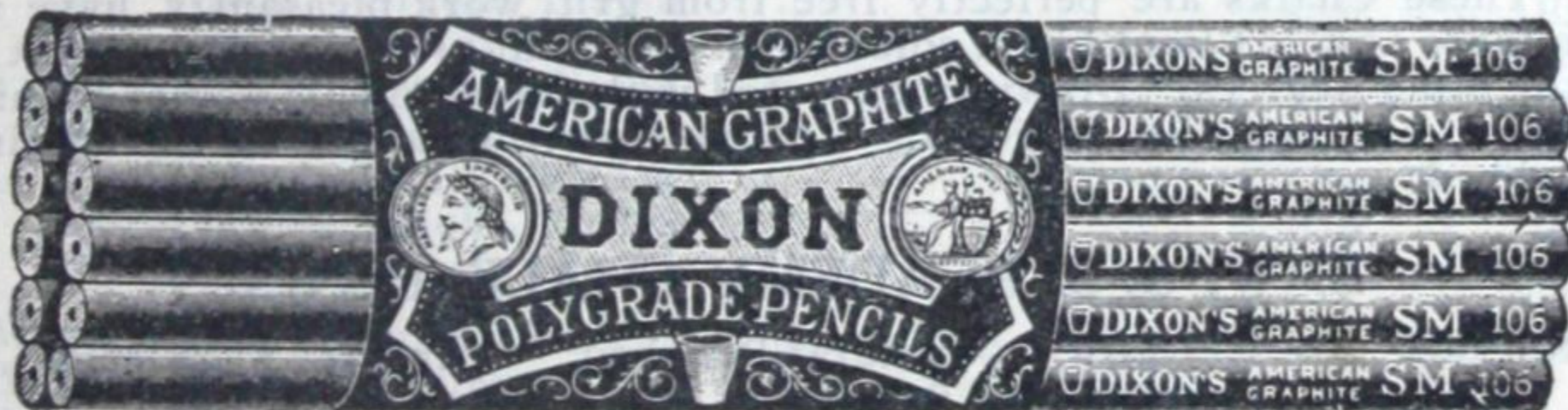
Used largely by Cotton Mills for marking goods

DIXON'S GRAPHITE SKETCHING CRAYON



No. 341.	Made in round shape only, in the finest Cedar finish, and stamped in gold	per doz.,	\$1.00	each,	.10
----------	---	-----------	--------	-------	-----

DIXON'S FINE ROUND PENCILS



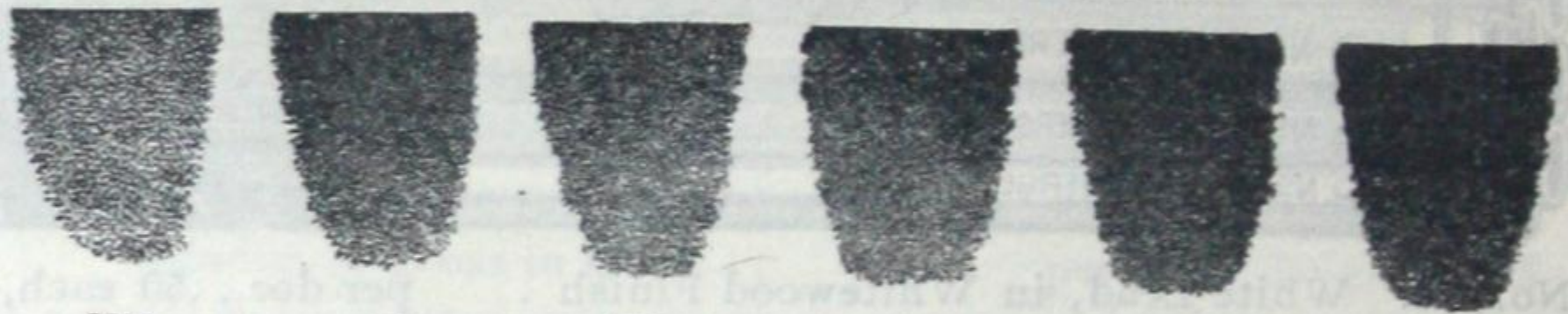
Dixon's Pencils, Natural Cedar, Satin Finish		per doz.,	.60	each,	.05
No. 141.	S	No. 143.	M	No. 144.	H
142.	SM	143½.	MH	145.	VH
142½.	MB				
No. 151.	S	No. 152½.	MB	No. 154.	H
151½.	SB	153.	M	155.	VH
152.	SM	153½.	MH		

Accurately graded in 8 degrees of hardness

S—Soft SB—Soft Black SM—Soft Medium MB—Medium Black
 M—Medium MH—Med.Hard H—Hard VH—Very Hard

E. WOLFF & SON'S CARBON DRAWING PENCILS

Plain Cedar, in Six Degrees



HH

H

HB

B

BB

BBB

No. 151.	HH—Very hard, for Architectural Drawing, etc.	per doz., \$1.25 each, .10
	H—Moderately Hard, for Light Outlines	" 1.25 " .10
	HB—Middle Degree, for Free Sketching and Light Shading	" 1.25 " .10
	B—Black, for Shading	" 1.25 " .10
	BB—Very Black, for Deep Shading	" 1.25 " .10
	BBB—Extra Thick, Intensely Black, for very Deep Shading	" 1.25 " .10

E. W. & S. PERMANENT BLACK CHALK PENCILS

No. 150.	BB—Very Black, for foreground	per doz., \$1.25 each, .10
	HB—Middle Tint	" 1.25 " .10
	N—Neutral Tint, for distances	" 1.25 " .10

These Chalks are perfectly free from grit, work pleasantly, have an intense and brilliant black color in the BB, and great delicacy of tint in the other degrees. Drawings executed with these Pencils do not require fixing, and may be carried in a portfolio without fear of their being rubbed

E. W. & S. ACADEMY CHALK PENCILS

No. 152.	No. 1. Hard, Natural Polished	per doz., \$1.25 each, .10
	" 2. Medium, Brown	" 1.25 " .10
	" 3. Soft, Soft	" 1.25 " .10

These Pencils are especially suited to the use of Students for the purpose of copying Lithographic Studies, sketching from Nature, and Model Drawing. In tone, quality, and correctness of degree, the Academy Chalk Pencil will be found superior to the Conté Chalks

E. W. & S. INDELIBLE SOLID INK PENCILS

Finest Quality, in Plain Cedar

No. 116.	Indelible Black Lead	per doz., \$1.25 each, .10
	Indelible Blue Lead	" 1.25 " .10

BLAISDELL PAPER PENCILS

For Marking on China, Glass, Etc.



No. 163. China-Marking Pencil . . . per doz., \$1.25 each, .10

Wrapped in Black Paper. 7 inches long. Gilt stamp. Black finish, highly polished. 1 dozen in box, 1/2 gross in carton

No. 163 is the only pencil made that will satisfactorily write on China, Glass, Celluloid, Polished Metals and other articles of similar character. The same economy exists in their use as in all our pencils, as these have the same method of sharpening

This number is now used largely by China Decorators, and for other purposes where marking on smooth surfaces is required. They do not scratch or mar the finest surface, and the marks may be removed without leaving the slightest trace

BLAISDELL COLORED CRAYON PENCILS



No. 151.	Blue,	Blue	Finish	. . .	per doz., \$1.00 each, .10
152.	Black,	Black	Finish	. . .	" 1.00 " .10
153.	Green,	Green	Finish	. . .	" 1.00 " .10
154.	Yellow,	Yellow	Finish	. . .	" 1.00 " .10
155.	Brown,	Brown	Finish	. . .	" 1.00 " .10
156.	White,	White	Finish	. . .	" 1.00 " .10
161.	Red,	Red	Finish	. . .	" 1.10 " .10
162.	Pink,	Black	Finish	. . .	" 1.10 " .10
167.	Purple,	Purple	Finish	. . .	" 1.10 " .10

Wrapped in Parchment Paper. 7 inches long. Silver stamp. 1 dozen in box, 1/2 gross in carton

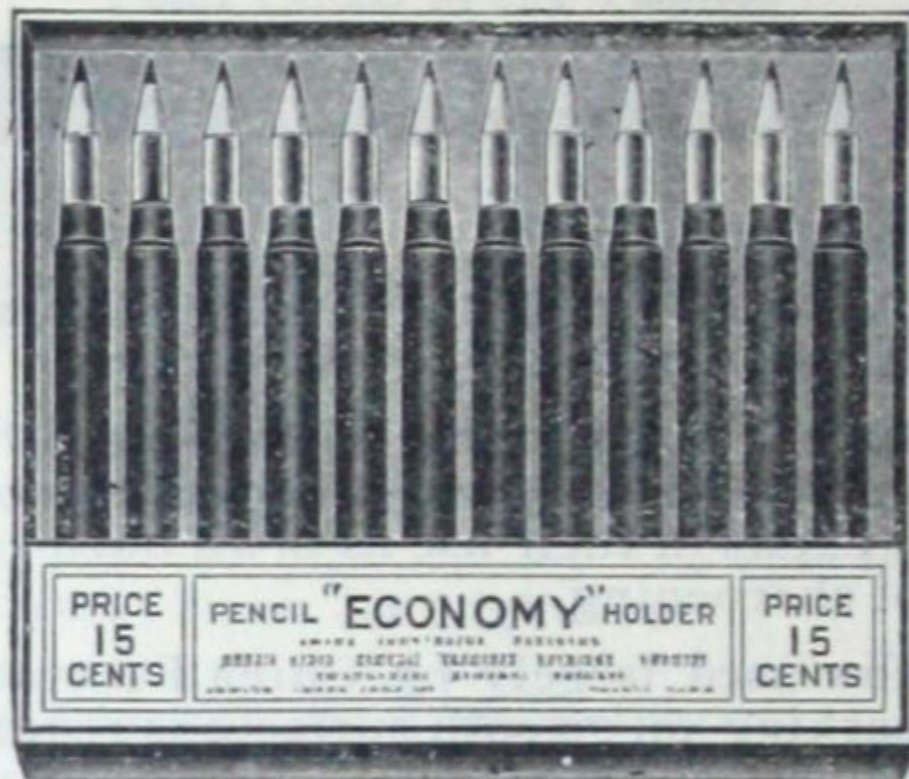
Blaisdell Colored Crayons stand pre-eminent. This has been established by their superior quality, the economy and cleanliness in their use, and the many other points of advantage which they possess over crayons encased in wood.

The sharpening or exposing a new point is very quickly accomplished by cutting one thickness of paper between the perforations and removing the narrow strip, thus saving the time, the waste and the dirt usually caused by whittling the point

None of the lead is cut away, and the consumer is thus enabled to use the entire crayon

THE ECONOMY PENCIL HOLDER

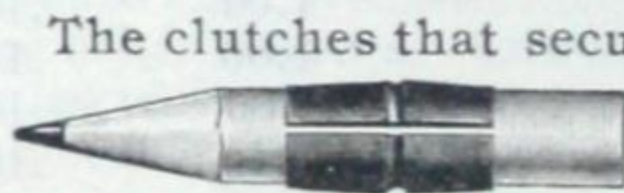
Companion to the Fountain Pen



Length of Barrel 4 inches

The Economy Pencil Holder	per doz., \$1.80	each, .15
“ “ “ with Safety Clip	“ 3.00	“ .25

The above cut shows our New Economy Pencil Holder, the simplest and most effective article of the kind ever offered. It is made wholly of hard rubber—fountain pen stock—Each holder is hand turned and handsomely chased.



The clutches that secure the pencil and erasive tip are both made of hard rubber. The pencil clutch will accommodate either hexagon or round pencils of varying sizes and is reversible so that the point may be protected or a double pointed pencil used.



The eraser clutch is made to take a standard size erasive tip—which can be used down to small proportions and then renewed.

This holder makes possible the use of the pencil down to the last $\frac{3}{4}$ inch, a saving of nearly 40% to the average user. In addition to its saving features The Economy is as attractive in appearance as a fine fountain pen and affords the user a pleasing and uniform pencil service.

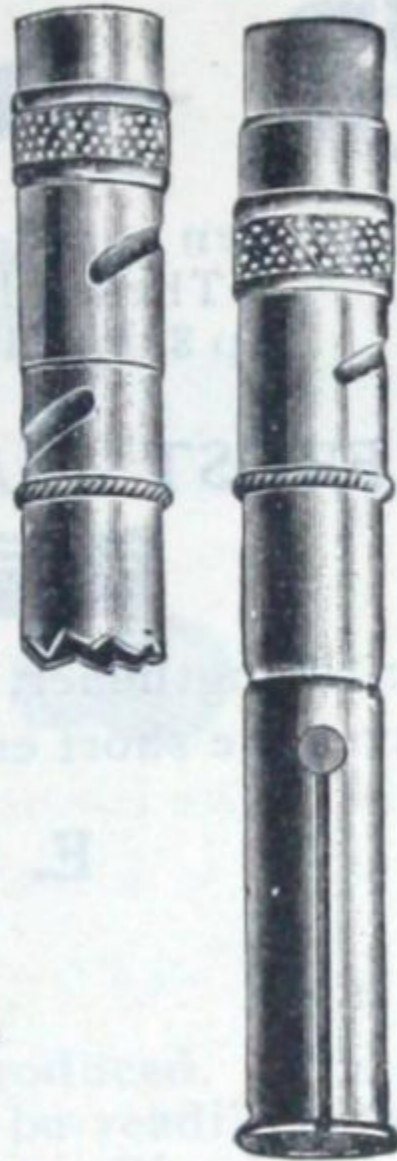
Each holder is fitted with pencil and good erasive tip

The Economy appeals to every business man, and particularly to architects, draughtsmen, stenographers, expressmen, conductors, clerks, trainmen, students and in fact any one who has occasion to use or carry a lead pencil

EBERHARD FABER'S PENCIL POINT PROTECTORS



- No. 1600. Round, Nickel Plated, with Gray Rubber, 2³/₈ in. long . . . per doz., .30 each, .03
- 1610. Hexagon, Nickel Plated, with Red Rubber, 2³/₈ in. long . . . per doz., .30 each, .03
- 1613. Round, Gilt, Fluted, with Red Rubber, 2³/₈ in. long . . . per doz., .35 each, .03
- 1630. Round, Nickel Plated, with Red Rubber, 3 in. long, with Adjustable Band . . . per doz., .40 each, .04
- 1640. Round, Nickel Plated, with Gray Rubber, 2¹/₈ in. long, for thin pencils . . . per doz., .30 each, .03
- 1615. Round, Nickel Plated, Spiral Tip, with Red Rubber, 2¹/₂ in. long per doz., .40 each, .04



1 dozen in box, 1/2 gross in carton

EAGLE PENCIL PROTECTORS

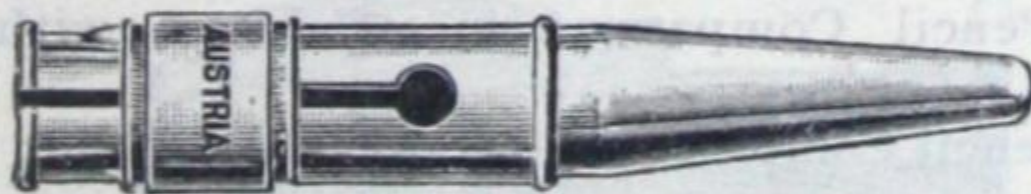
With Rubber Erasers



NO. 562

- No. 562. Pilot Protector with Clasp Eraser, one gross in box per gross, \$5.00 per dozen, .50 each, .05

KOH-I-NOOR NICKEL PROTECTORS



NO. 563

- No. 563. Koh-i-noor Protectors with Slide Catch per gross, \$5.00 per dozen, .50 each, .05

THE NEW "MODERN B" PEN AND PENCIL CLIPS
ADJUSTABLE



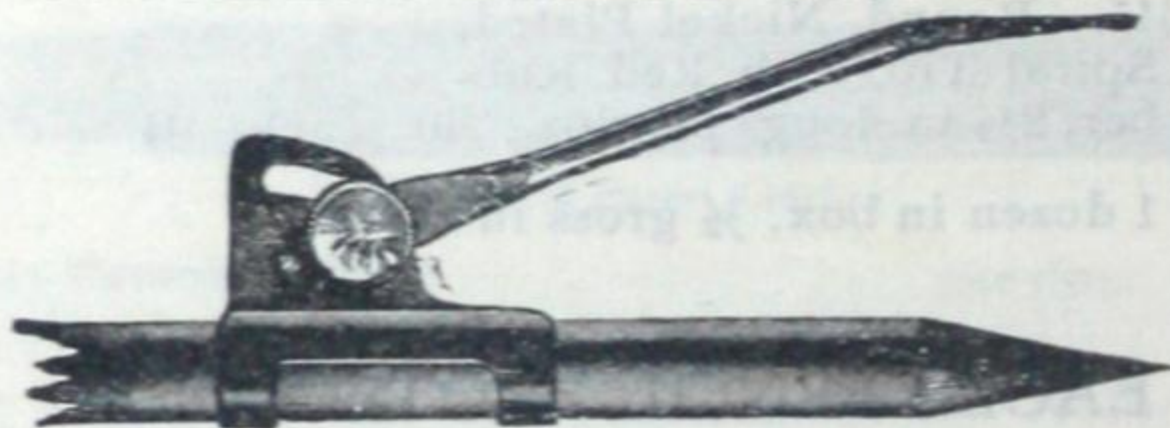
Pen and Pencil Clips, 2 sizes per gro., \$7.20 per doz., .50 ea., .05
These Clips can be adjusted to fit any size cap or pencil. Put
up 3 dozen in a handsome display box

FROST & ADAMS CO'S PENCIL LENGTHENER



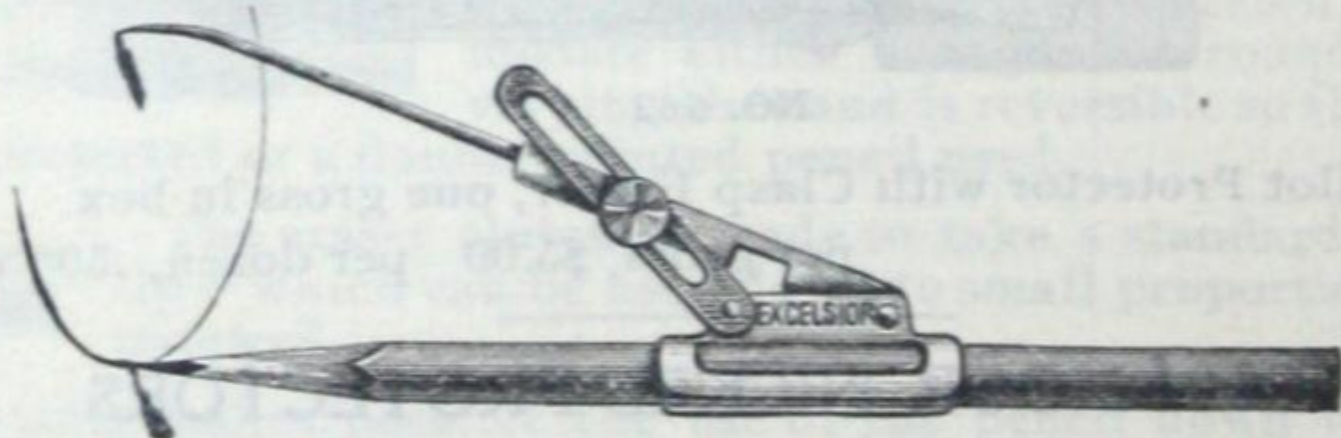
Pencil Lengthener, Hexagon, Natural Polish per dozen, \$1.00 each, .12
Saves the short ends that otherwise would be thrown away

E. FABER'S PENCIL COMPASS



Compass with pencil	. . . . .	per dozen, \$1.20 each, .12
" only	. . . . .	" 1.00 " .10

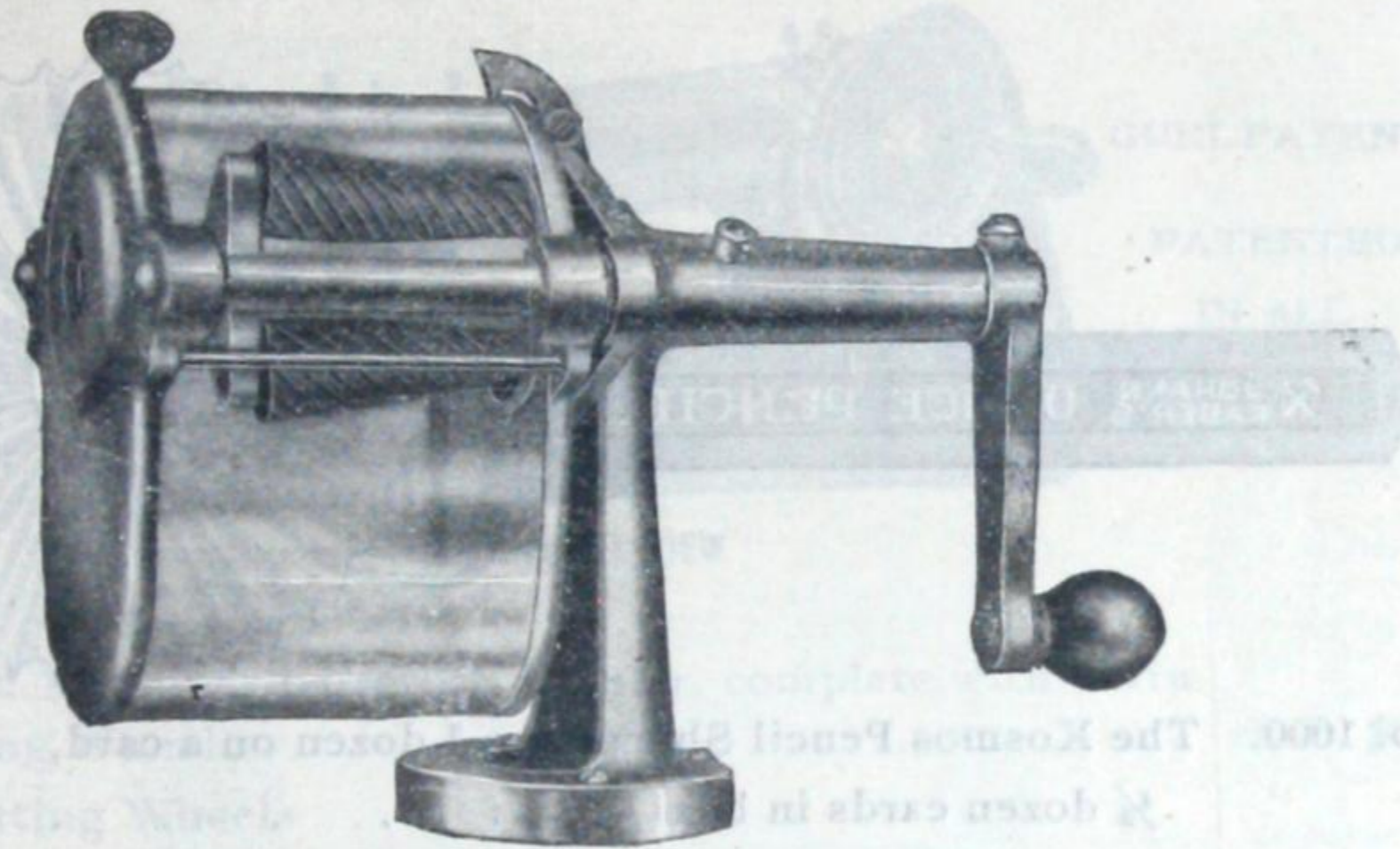
EXCELSIOR PENCIL COMPASS



8997.	Excelsior Pencil Compass, 3 in., 1 dozen, with 1 pencil, on a card	per card, \$1.80
8998.	Excelsior Pencil Compass, 3 in., loose	per dozen, 1.60
8999.	" " 3 3/4 in., "	" 1.80
9000.	" " 3 3/4 " 1 dozen, with 1 pencil, on a card	per card, 2.00

Better and more durable than others. The solid steel leg and arm with clamp screw, makes them very strong and steady

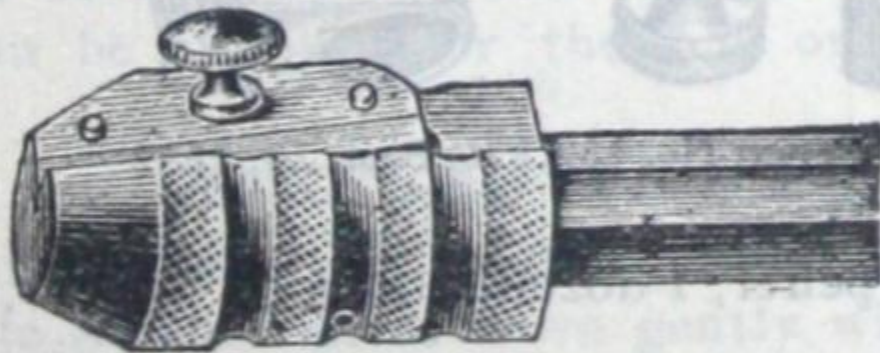
THE BOSTON PENCIL POINTER



The Boston Pencil Pointer each, \$6.50

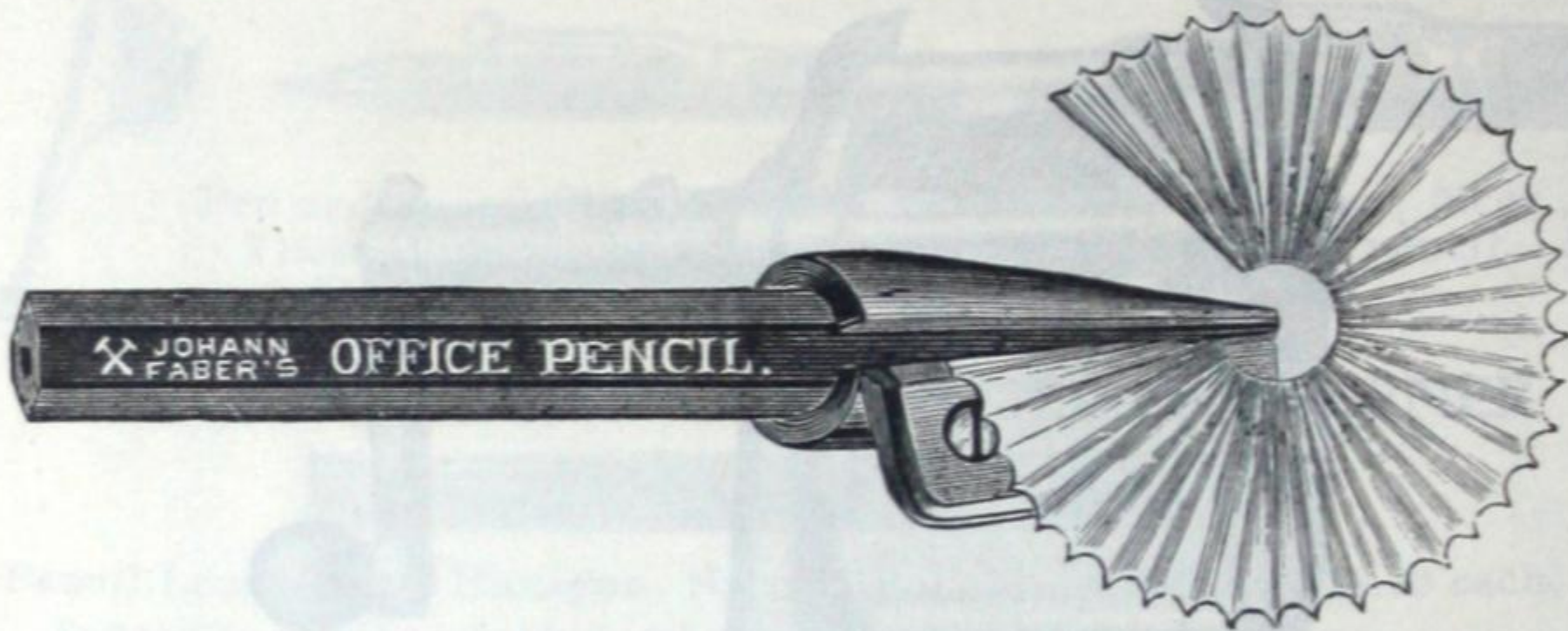
This is the latest and best pencil sharpener yet produced. It is made of steel with celluloid shavings collector which can be readily detached for emptying and cleaning. No knives to dull, it has a mill grind, needs no adjustment; sharpens any pencil. It will out-wear any sharpener made, and you cannot break the points in sharpening the pencil
 (Guaranteed to stay sharp one year)

"EXCELSIOR" PENCIL SHARPENER



A perfect sharpener for the pocket; will cut to a needle point without breaking the lead each, .25
 Extra Blades " .15

THE KOSMOS PENCIL SHARPENER

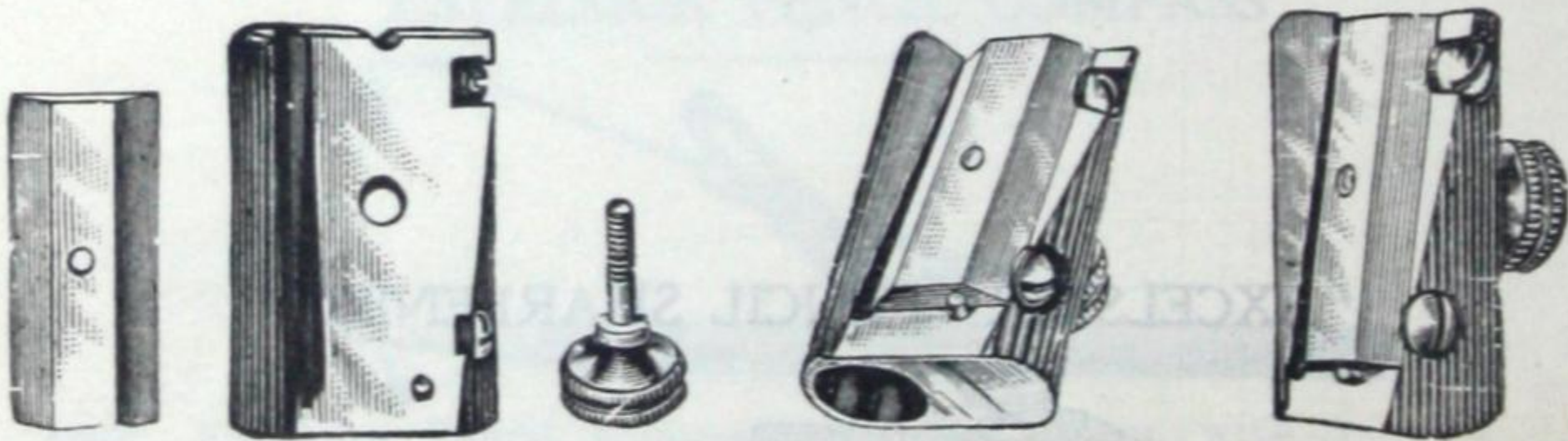


No. 1000. The Kosmos Pencil Sharpener, 1 dozen on a card,
 ½ dozen cards in box each, .15

The best fifteen cent pencil sharpener in the market

NEW ACME PENCIL SHARPENER

Double Edged Reversible Blade. Combines Simplicity with Perfection



Patent No. 482,826, Sept. 20, 1892

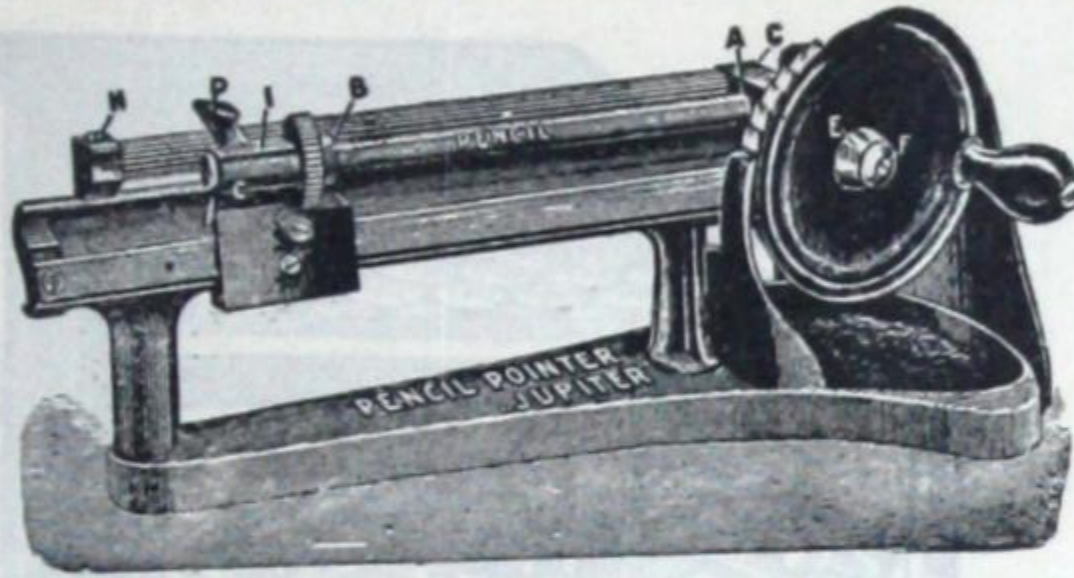
No. 1001. Acme Sharpener, 1 dozen in box each, .25

EXTRA BLADES FOR ACME PENCIL SHARPENERS

No. 1002. Double Edge, 2 in small box each, .10

THE "JUPITER" PENCIL POINTING MACHINE

PATENTED IN
U. S.
NOV. 2, 1897
PATENT NO.
593,093



GUHL PATENT
PATENTED
IN ALL
COUNTRIES

FRONT VIEW

"Jupiter" Machine, pattern N regular, complete with extra	
Cutting Wheel	each, \$6.00
Extra Cutting Wheels	" .50

Any part of the "Jupiter" Machine that may become broken, can be obtained, separately, at small cost. Pattern D Machine is especially adapted for sharpening Colored Chalk Pencils

The "Jupiter" is the only practical machine for sharpening pencils, ever offered to the trade and public. It is constructed on scientific principles, and it will do all that is claimed for it. A child can operate it equally as well as an adult

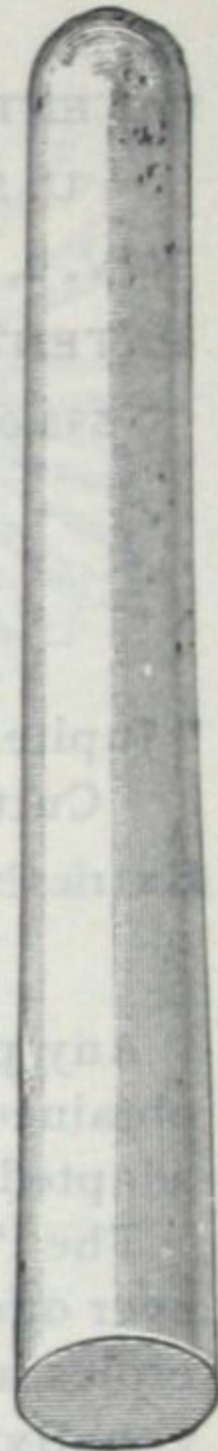
The "Jupiter" Machine will sharpen any shape of pencil, short or long, thick or thin, round or angular, and as it collects its own shavings and graphite chips, the pencil is sharpened without soiling the hands, table or floor

With ordinary care, the "Jupiter" Machine will last a lifetime, and as the cutting-wheels are made of the best quality steel, they do not often require sharpening. The cutting-wheel is made reversible, so that when one side becomes dull, the other side may be used, after which a new cutting-wheel can be supplied, or the old one sharpened, at small expense

DIRECTIONS FOR USING

Place the pencil into the two receiving holes A and B (the end to be pointed, into hole A) then press down gently with the thumb of your left hand on lever D, while you turn the cutting-wheel rapidly with your right hand. A little practice will enable you to cut to a very fine point, for drawing, or to a medium point, for ordinary writing

AMERICAN SCHOOL CRAYONS FOR BLACKBOARDS



ONE COLOR IN EACH BOX

HARD DUSTLESS CRAYON, WHITE

Hygeia Hard Dustless Crayons . per gross, .40
Packed in one gross wooden boxes

DUSTLESS

Dustless Crayon is as near perfect as can be made and is entirely free from all greasy substances or grit, makes a clean white mark and is as free from dust as a proper bite upon the blackboard will allow. It lasts longer than the ordinary chalk crayons and is in every way free from the objections made to the so-called dustless crayons heretofore put upon the market

ROUND POINTED

SOLID COLORED CHALK CRAYONS

Black	per gross, \$1.20	Light Pink	per gross, .75
Buff	" .75	Light Rose	" .80
Crimson	" 2.20	Light Yellow	" 1.00
Dark Blue	" 1.00	Magenta	" 1.50
Dark Green	" 1.25	Medium Blue	" .90
Dark Pink	" .75	Medium Green	" 1.10
Dark Red	" .65	Medium Yellow	" 1.00
Dark Yellow	" 1.00	Purple	" .85
Extra Light Green	" .75	Scarlet	" 2.20
Gray	" .75	Ultramarine Blue	" 1.00
Light Blue	" .80	Umber	" .85
Light Green	" 1.00	White	" .25

Assorted Colors, in box per gross, .85

LECTURERS' SMALL CRAYONS

White	$\frac{1}{2} \times \frac{1}{2} \times 3$ inches	per doz., .20
Assorted Colors,	" "	" .40
Crimson	" "	" .65
Scarlet	" "	" .65

Especially adapted for Caricaturists, Blackboard Illustrators, etc.

Black	Full Flesh	Medium Yellow
Crimson	Light Blue	Purple
Dark Blue	Light Green	Scarlet
Dark Green	Light Yellow	Umber
Dark Red	Magenta	Ultramarine Blue
Dark Yellow	Medium Blue	
Flesh	Medium Green	

LECTURERS' LARGE CRAYONS

White	$1 \times 1 \times 3$ inches	per doz., .50
Assorted Colors,	" "	" 1.25
Scarlet	" "	" 1.80
Crimson	" "	" 1.80

Black	Flesh	Medium Yellow
Crimson	Light Blue	Purple
Dark Blue	Light Green	Scarlet
Dark Green	Light Yellow	Ultramarine Blue
Dark Red	Magenta	Umber
Dark Yellow	Medium Blue	
Dull Flesh	Medium Green	

FRANKLIN'S DRAWING CRAYONS



No. 72½.	" Rainbow,"	14 Colors	.	.	per dozen, \$1.20 each,	.10
73½.	"	7 "	.	.	" .60 "	.05

The Prism Colors are Yellow, Orange, Red, Violet, Green and Blue, with an Indigo shade produced by blending the Blue and Red

Made of fine materials, as bright, clear colors as are contained in the highest grade lead pencils and will do good practical work

FRANKLIN'S EDUCATIONAL DRAWING CRAYONS



No. 74.	10 Standard Colors in flat box	per dozen, \$1.20 each,	.10
75.	12 Colors like No. 73 " Radiant "	" 1.40 "	.12
75½.	14 " ½ inch longer	" 1.50 "	.15
76.	15 " in Box	" 1.50 "	.15

FRANKLIN'S DRAWING CRAYONS



No. 120. "Rainbow" Colors in round wood box, with fancy label, 7 Colors per dozen, .60 each, .05

Made of the finest Materials, the best and brightest colors. Noted for smooth and uniform quality

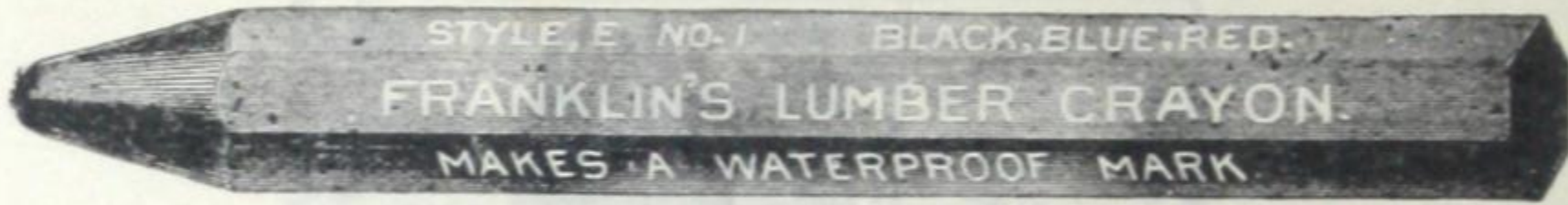
FRANKLIN DRAWING CRAYONS



No. 112x. "Radiant" Colors, 2½ inches long, 3/8 diameter, round wood box, fancy label, paper wrapped, 14 Colors per dozen, .60 each, .05

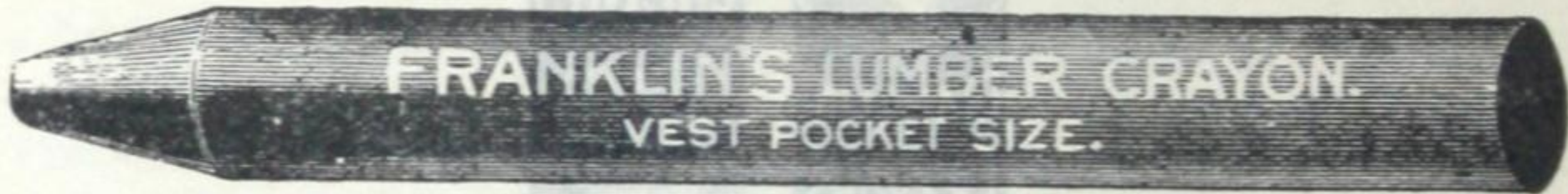
The Colors are scientifically correct, and extra bright and lasting

FRANKLIN'S LUMBER CRAYONS



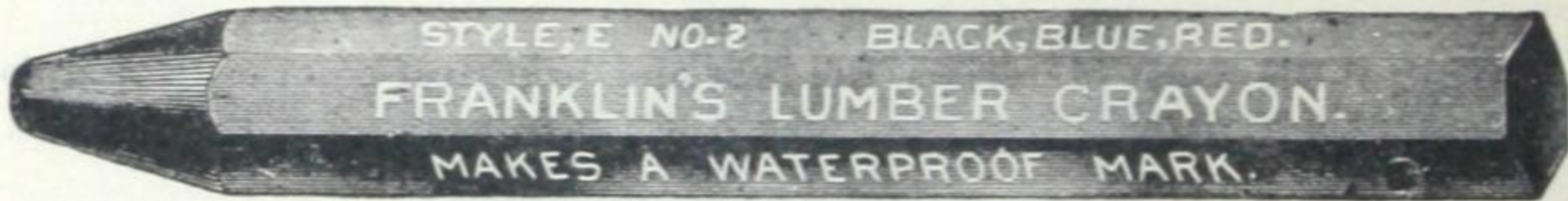
STYLE E, No. 1. Hexagon, 1/2 inch Diameter, 4 1/4 inches Long

No. 20. Black	per dozen, .60	No. 22. Dark Red	per dozen, .75
21. Blue	“ .75	23. Light Red	“ .90



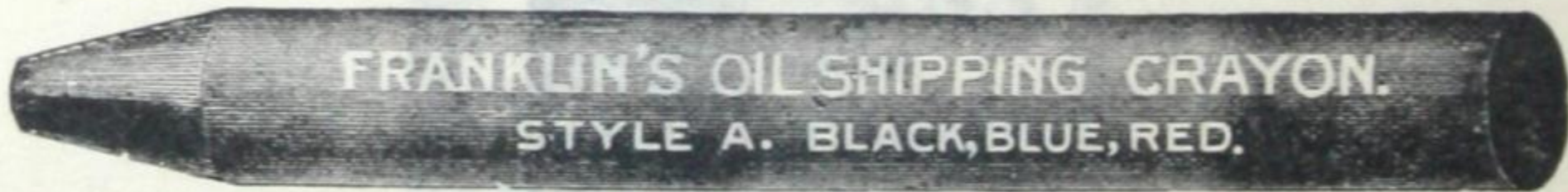
STYLE F. Round

No. 24. Black	per dozen, .50	No. 26. Light Red	per dozen, .65
25. Blue	“ .60		



STYLE E, No. 2. Hexagon

No. 27. Black	per dozen, .60	No. 29. Dark Red	per dozen, .65
28. Blue	“ .65	30. Light Red	“ .75



STYLE A. Round

No. 40. Black	per dozen, .60	No. 22. Red	per dozen, .75
41. Blue	“ .65		



STYLE B. Round

New Era, Five Colors	per dozen, .50
----------------------	----------------

FRANKLIN'S OIL CHECKING CRAYON



STYLE C

Franklin's Oil Checking Crayon, 7 colors, Black, Blue, Red, Green, Brown, Purple, Yellow per doz., .50

FROST & ADAMS CO.'S LUMBER CRAYONS



Red Lumber Crayons, Square, 1/2 in. x 1/2 in. x 3 5/8 in. long per doz., .75

DIXON'S LUMBER PENCILS



No. 361.	Hexagon Lumber Pencil, 4 1/4 in. long	Black	per doz.,	.75
496.	" " " " " "	Yellow	"	1.25
497.	" " " " " "	Terra Cotta	"	1.25
520.	" " " " " "	Red	"	1.25
521.	" " " " " "	Blue	"	1.25
522.	" " " " " "	Green	"	1.25

RAILROAD CRAYONS

For the Use of Car Inspectors, Warehousemen, Baggage-men and Mechanics

Railroad Crayons, size, 5 1/2 x 1/2 inch	per gross,	\$2.50
Dustless " " " " " "	"	.50

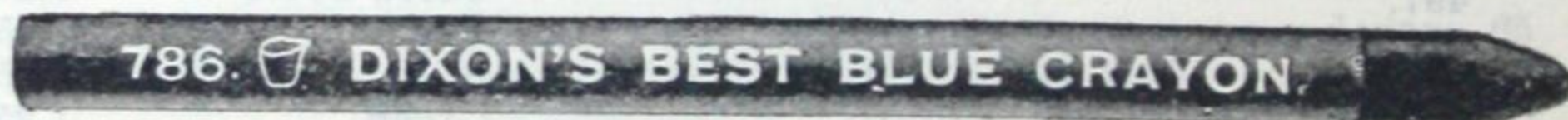
For marking on rough surfaces. Foundrymen will find it much more useful and nicer to handle than the old style piece of chalk. It does not soil the hands or clothing. The mark will not wash off in the rain, but can be rubbed off as easy as chalk. The mark is fireproof, making it useful for Blacksmiths or Ironworkers. It will last longer than any substance used for marking, and being the most durable it is actually the cheapest for rough work. We furnish samples and price, free to railroads and large shops.

DIXON'S BEST COLORED CRAYON PENCILS



No. 320.	Light Blue, highly finished, round 7 in.	.	per doz., \$1.00 each, .10
321.	Lake Red,	" "	1.00 " .10
322.	Pink,	" "	1.00 " .10
323.	Violet,	" "	1.00 " .10
324.	Orange,	" "	1.00 " .10
325.	Olive Green,	" "	1.00 " .10
330.	Indigo Blue,	" "	1.00 " .10
335.	Sepia,	" "	1.00 " .10
343.	Brown,	" "	1.00 " .10
349.	Red,	" "	1.00 " .10
350.	Blue,	" "	1.00 " .10
351.	Terra Cotta,	" "	1.00 " .10
353.	Yellow,	" "	1.00 " .10
354.	Green,	" "	1.00 " .10

DIXON'S BEST SOLID CRAYONS



No. 786.	Best Blue,	solid round Crayon	per doz., \$1.00 each, .10
380.	" Terra Cotta,	" "	1.00 " .10
382.	" Green,	" "	1.00 " .10
384.	" Black,	" "	1.00 " .10
385.	" Yellow,	" "	1.00 " .10
386.	" Red,	" "	1.00 " .10
387.	" Brown,	" "	1.00 " .10
1500.	" Violet,	" "	1.00 " .10
1501.	" Pink,	" "	1.00 " .10
1502.	" Orange,	" "	1.00 " .10
1503.	" Sepia,	" "	1.00 " .10

Not covered with wood, but solid round leads $\frac{5}{16}$ inch diameter, paper covered. 1 dozen in box and 6 boxes in carton

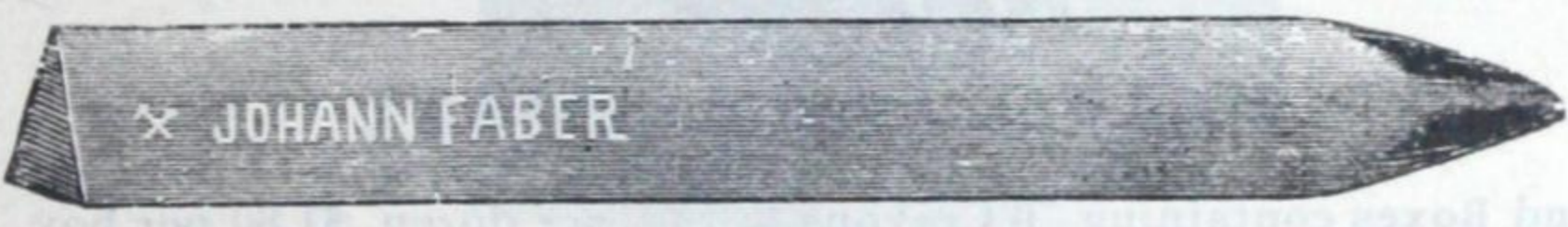
FRANKLIN'S TIMBER CRAYON



Style G. Red Venetian Timber Crayon per doz., .50

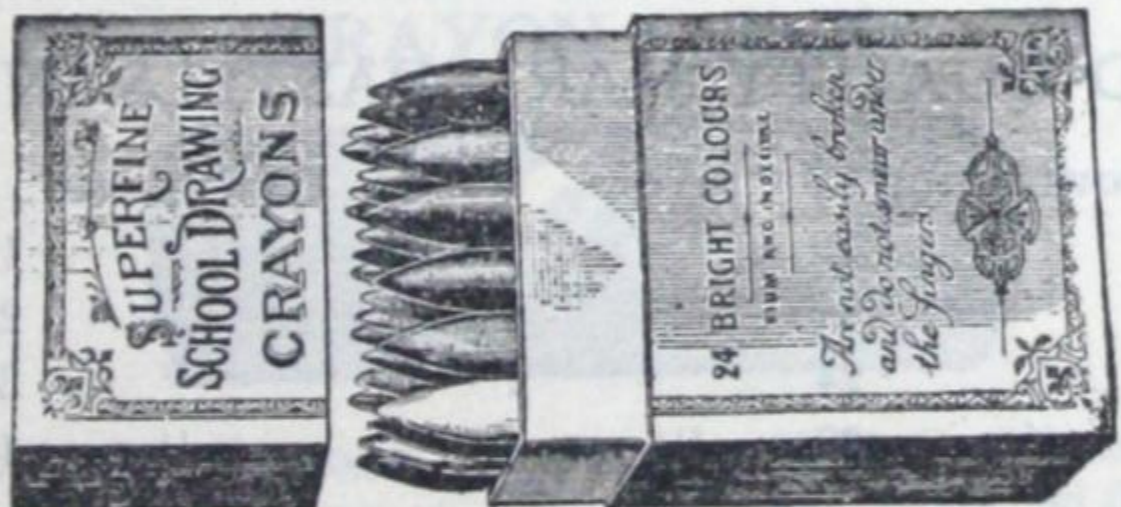
For marking on logs, timber, surveyor's stakes, stone, marble, etc.
Organic color. Will not fade

TRIANGULAR MARKING CRAYONS



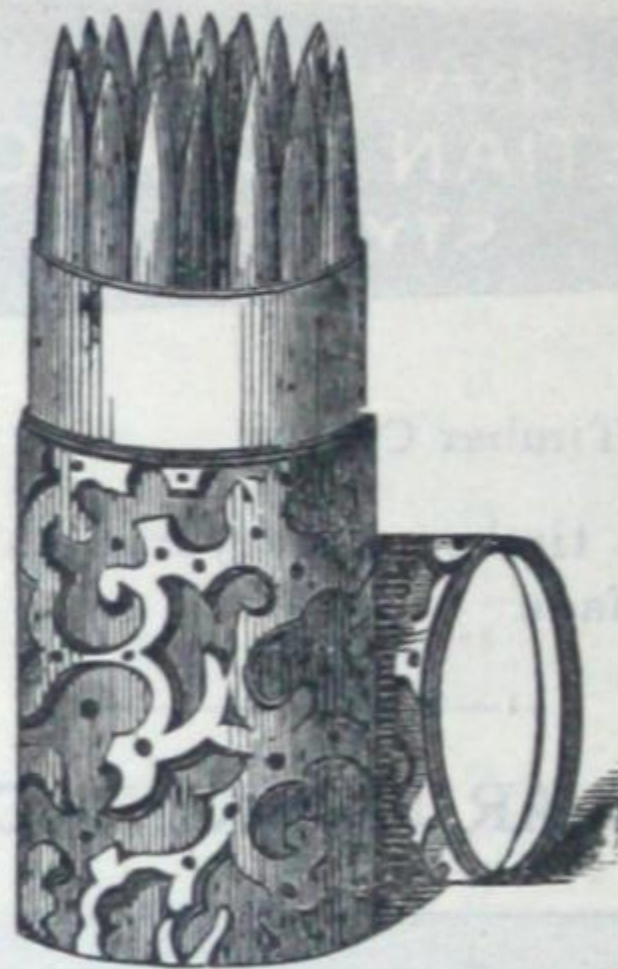
No. 353. Triangular, 3 1/4 inch Blue and Red per doz., .40

"RAPHAEL" FRENCH COLORED DRAWING CRAYONS



Large Pastel Wax Crayons	5 in box	per doz. boxes, .60 each, .05
"	6 "	" .75 " .10
"	12 "	" 1.50 " .15
"	18 "	" 2.25 " .20
"	24 "	" 3.00 " .25

LEFRANC'S FIRST QUALITY HARD PASTELS IN BOXES



ASSORTED COLORS

Round Boxes containing	6 Crayons	.	per dozen, \$1.80 per box,	.15
"	" 12	"	" 2.40	" .30
"	" 18	"	" 3.60	" .40
"	" 24	"	" 4.80	" .50
"	" 30	"	" 6.60	" .60
"	" 36	"	" 8.40	" .80
"	" 48	"	" 12.00	" 1.10

SECOND QUALITY HARD PASTELS IN BOXES

Round Boxes containing	6 Crayons	.	per dozen, .60 per box,	.10
"	" 12	"	" 1.20	" .20
"	" 18	"	" 2.40	" .25
"	" 24	"	" 3.60	" .35
"	" 30	"	" 4.80	" .40

CHAMOIS PALETTES

Oblong—for Crayon Work

No. 1. Size 4 x 6 in.	each, .20	No. 4. Size 4 x 6 in, folding	each, .40
2. " 4½ x 6½ "	" .25	5. " 4½ x 6½ "	" " .45
3. " 5½ x 8 "	" .30	6. " 5½ x 8½ "	" " .50

MATERIALS FOR CRAYON AND CHARCOAL DRAWING



Conté's Square Black Crayons, No. 1, hard	per gross, \$1.60	per doz., .18
" " " " 2, medium	" 1.60	" .18
" " " " 3, soft	" 1.60	" .18
" Square White " 1, 2 or 3	" 1.60	" .18
" Round Black " Varnished	" 4.50	" .42
" Square Red " "	" 1.60	" .18

CRAYON SAUCE



Conté's Velvet Sauce Crayons, wrapped in Foil, in boxes of $\frac{1}{4}$ gross	per gross, \$8.00	per dozen, .60
Conté's Velvet Sauce Crayons, large	"	1.20
Philadelphia Sauce Crayons, wrapped in Foil, in boxes of $\frac{1}{4}$ gross	per gross, \$6.00	per dozen, .60
Perfection Sauce Crayons, in Vials, soft and transparent; give a rich gray tone	per dozen, \$1.00	each, .10
"Peerless" Crayon Sauce, in Vials; superior	" 3.00	" .25

WINSOR & NEWTON'S
COMPRESSED PREPARED RUSSIAN CHARCOAL



ONE DOZEN STICKS TO A BOX

No. 00.	The softest and darkest shade . . .	per box, .75	stick, .07
0.	Soft like 00, but of a lighter shade. (The No. 0 grade is more easily rubbed out than any of the other grades)	“ .75	“ .07
1.	Not so soft as Nos. 00 and 0, and even lighter in shade than No. 2 . . .	“ .75	“ .07
2.	Harder but darker than No. 1 . . .	“ .75	“ .07
3.	Harder and lighter in shade than No. 2 . . .	“ .75	“ .07
4.	Harder and lighter in shade than No. 3 . . .	“ .75	“ .07
5.	Harder and lighter in shade than No. 4 . . .	“ .75	“ .07

Smooth, even grain Compressed Charcoal Sticks, much superior to the French Charcoal. Will wear longer and give better results

FRENCH CHARCOAL IN BOXES



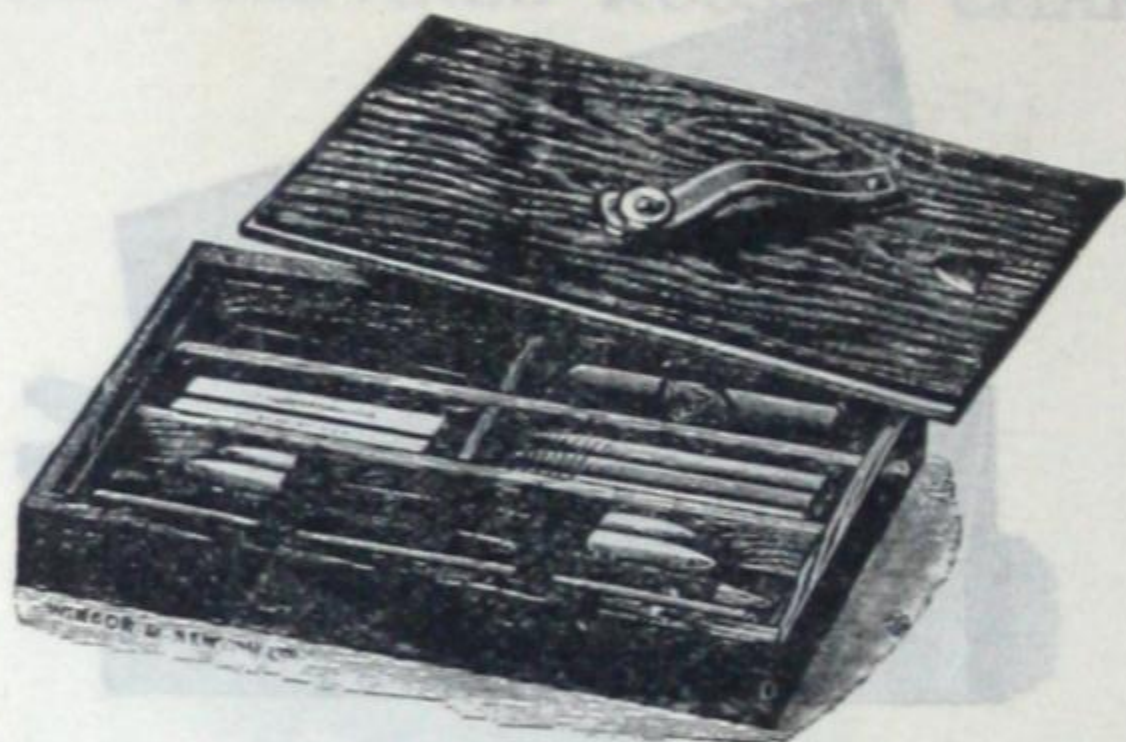
Ordinary, 50 sticks in box	per box, .25
Conté's Venetian, 50 sticks in box	“ .50
Extra large, 8 inches long, 3/8 inch thick	“ .50
“ 8 “ 1/2 “	“ .75
Rouget's Extra Fine, Nos. 1, 2 and 3, 25 sticks in box	“ .50
Berville Charcoal, 50 sticks in box, hard	“ .50
P. A. Extra Venetian Charcoal, 50 sticks to box, extra hard, the finest selected charcoal ever offered	“ .50

CONTÉ'S CRAYON PENCILS

In Polished Cedar

Conté's Black Crayon Pencils, No. 1, hard	per gross, \$6.50 each, .08
“ “ “ “ 2, medium	“ 6.50 “ .08
“ “ “ “ 0, extra fine, very hard	“ 10.00 “ .10
“ “ “ “ 1, “ hard	“ 10.00 “ .10
“ “ “ “ 2, “ medium	“ 10.00 “ .10
“ “ “ “ 3, “ soft	“ 10.00 “ .10
“ “ “ Velvet, Velours	“ 13.50 “ .10
“ White Crayon	“ 6.50 “ .08
“ Lithographic Crayon Pencils, Nos. 1, 2 and 3	“ 10.80 “ .10

WINSOR & NEWTON'S
"HANDY" PALETTE CHALK BOX

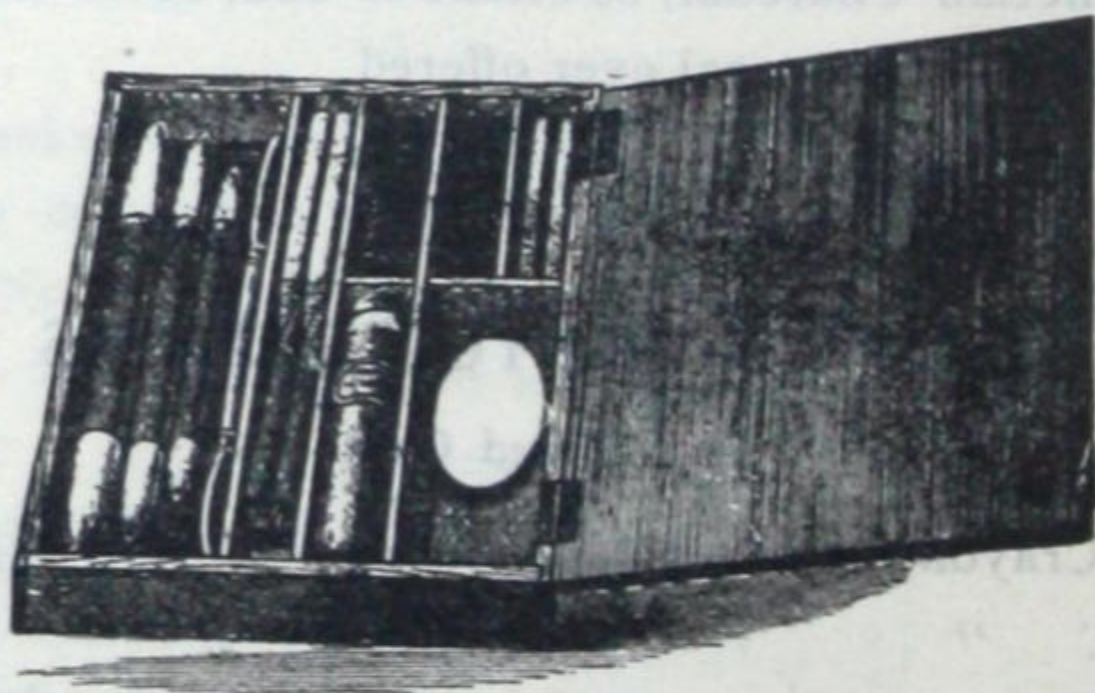


Fitted Complete each, .60

The Box contains Conté square Black Crayons, White Crayons, one Bottle Velour Sauce, Paper Stumps, Leather Stumps, White and Gray Tortillon Stumps and Brass Portcrayon. The lid is covered inside with Chamois Leather for stumping, arranged to be used for a Palette

NEW PALETTE CHALK BOX

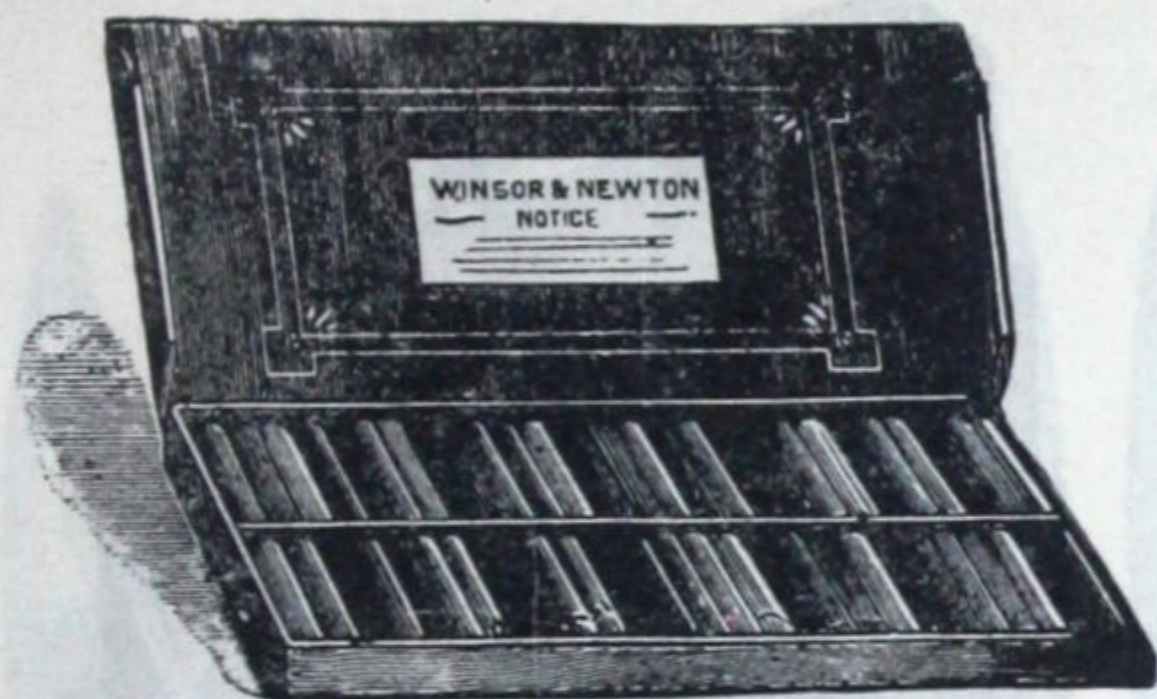
For Students, Schools of Art, Etc.



Fitted Complete each, \$1.25

The Box contains 4 each Nos. 1, 2 and 3 Square Black Conté Crayons, 2 each Nos. 1 and 2 Lemoine's Round White Crayons, 1 Bottle Stumping Chalk (Velour Sauce), 1 each Nos. 4 and 6 White Paper Stumps, 1 No. 2 White Leather Stump, 4 White and 4 Gray Tortillon Stumps, 1 Brass Portcrayon. Weight, under 8 ounces; or about the same as an ordinary 12-inch Mahogany Palette. The lid is covered inside with Chamois Leather for Stumping, and the thumb-hole so arranged that the Box may be held as comfortably as a Palette

LEFRANC'S SOFT FRENCH PASTELS



No. 1.	Contains 26 First Quality Pastels, assorted	per box, .80
2.	42 " " "	1.10
3.	56 " " "	2.00
4.	62 " " "	2.70
5.	129 " " "	4.50
6.	156 " " "	5.50
Double and extra size Boxes, ranging from		\$8.00 to \$15.00
Separate Pastels, according to color		per stick, .06 to .50
Box of 26 Pastels, containing an assortment of either Blue, Brown, Gray, Green, Yellow, etc.,		per box, \$1.50

GIRAULT'S EXTRA SOFT FRENCH PASTELS

No. 6.	28 Pastels, White	per box, .60	No. 6.	28 Pastels, Lake asst. shades	box, .60
6.	28 " Black	.60	6.	28 " Ochre	.60
6.	28 " Blue asst. shades	.60	6.	28 " Violet	.60
6.	28 " Em. Green	.60	6.	28 " Warm Gray	.60
6.	28 " Flesh Tint	.60	6.	28 " Yellow	.60
6.	28 " Gray	.60	6.	28 " Brown	.60
6.	28 " Green	.60	6.	28 " Asst. Colors	.60
No. 6.	28 Pastels, Purple, asst. shades	per box, .75			
6.	28 " Red	.75			
6.	28 " Rose	.75			
6.	28 " Vermilion	1.00			
5.	44 " Quarter size, Assorted Colors	1.00			
4.	56 " " with carmine	1.50			
3.	64 " Half size	2.25			
6.	28 " Eighth size, Carmine, asst. shades	3.00			
2 1/2	88 " Three quarter size, Assorted Colors	3.25			
2.	132 " Full size, Assorted Colors	4.00			
1.	164 " Double size	6.00			
0.	272 " " "	8.00			
00.	390 " " "	12.00			

FROST & ADAMS CO'S FINE BACKGROUND PASTELS



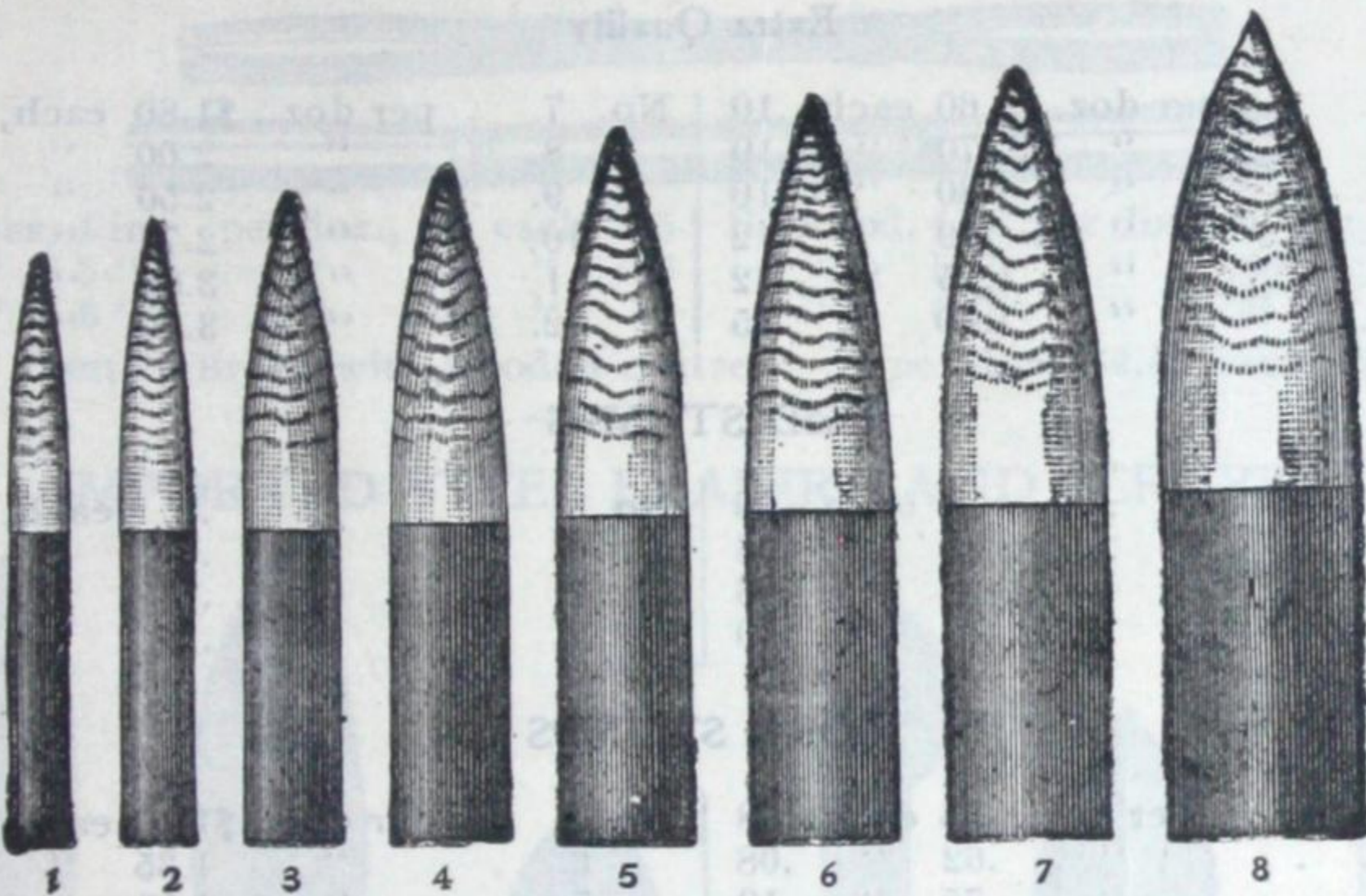
Large, Square Sticks, 3 inches Long, 1 inch Square each, .25

Apple Greens	Nos. 430 to 435 inclusive	Gobelin Greens	190 to 194 inclusive
Beaver	440 " 445 "	Golden Browns	Nos. 450 " 455 "
Black, Blue Black,		Greenish Grays	310 " 315 "
White, Grays	Nos. 1 to 12 "	Grayish Blues	210 " 215 "
Blue Grays	180 " 185 "	Light Olives	360 " 365 "
Bronze Greens	410 " 415 "	Old Golds	260 " 262 "
Cadet Blues	280 " 285 "	Old Roses	460 " 465 "
Castor Drabs	290 " 295 "	Olive Greens	390 " 395 "
Dark Browns	265 " 269 "	Peacock Blues	160 " 165 "
Dark Olives	420 " 425 "	Peacock Greens	170 " 175 "
Dark Cadet Blues	400 " 405 "	Plums	223 " 225 "
Dark Olive Browns	300 " 305 "	Red Browns	350 " 355 "
Dark Crimson	220 " 222 "	Sage Greens	270 " 275 "
Dead Nile Greens	340 " 345 "	Sky Blues	150 " 155 "
Dregs of Wine	235 " 250 "	Snuff Browns	263 " 265 "
Flesh Pinks	135 " 140 "	Ultramarine Blues	200 " 205 "
Gobelin Blues	380 " 385 "	Wood Browns	320 " 331 "

The following are odd shades not running in lines and only 1 or 2 shades of each

Army Blue	No. 1006	Lilacs	Nos. 1013 and 1014
Canary	1010	Medium Red Purple	1017
Dark Blue Purple	1016	Medium Olive Green	1001
Dark Buff	1007	Naples Yellow	1008
Dark Peacock Green	1002	Olive Drab	1011
Gold Ochre	1009	Very Dark Beaver	1005
Light Buff	1006	Very Dark Blue Slate	1004
Light Gobelin Green	1015		

FRENCH STUMPS, FOR CRAYON SHADING



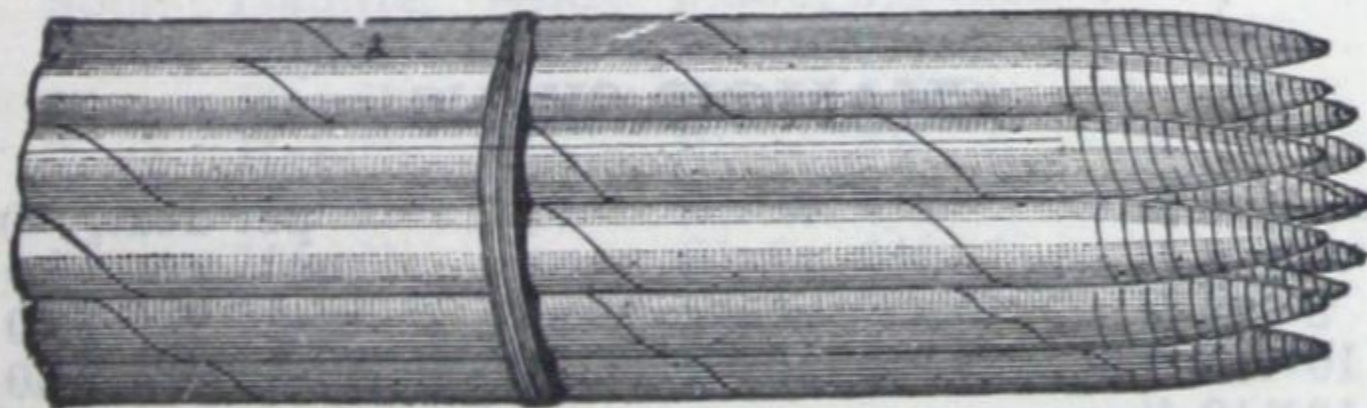
RED LEATHER

1.	per doz., .55	each, .05	No. 5.	per doz., \$1.10	each, .10
2.	" .65	" .06	6.	" 1.35	" .12
3.	" .75	" .07	7.	" 1.50	" .15
4.	" .85	" .08	8.	" 1.75	" .18
Assorted, 1 to 8			per doz., .95		

GRAY PAPER

1.	per doz., .11	each, .02	No. 5.	per doz., .22	each, .04
2.	" .13	" .02	6.	" .25	" .04
3.	" .15	" .03	7.	" .30	" .05
4.	" .20	" .03	8.	" .35	" .05
Assorted, 1 to 8			per doz., .20		

TORTILLON STUMPS



White per gro., .55 per doz., .10 | Gray per gro., .50 per doz., .10

YELLOW LEATHER CHAMOIS STUMPS

Extra Quality

No. 1.	per doz.,	.60	each,	.10	No. 7.	per doz.,	\$1.80	each,	.20
2.	"	.70	"	.10	8.	"	2.00	"	.22
3.	"	.80	"	.10	9.	"	2.50	"	.25
4.	"	.90	"	.12	10.	"	2.75	"	.28
5.	"	1.15	"	.12	11.	"	3.00	"	.30
6.	"	1.40	"	.15	12.	"	3.50	"	.35

KID STUMPS

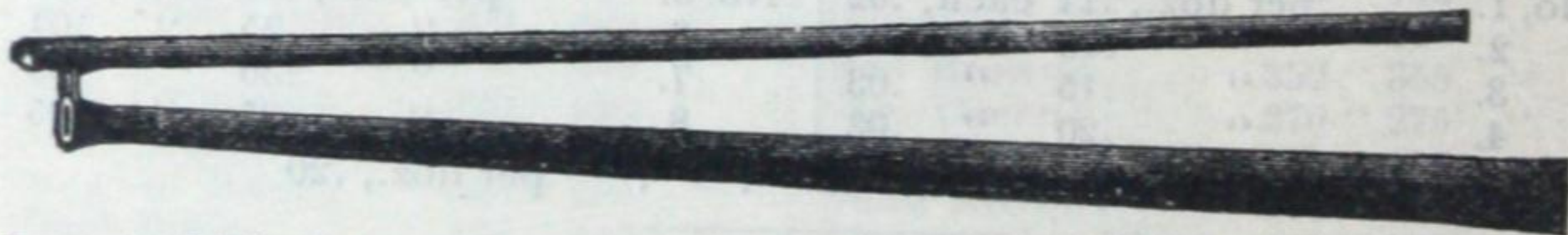
No. 1.	each,	.08	No. 5.	each,	.12
2.	"	.08	6.	"	.12
3.	"	.08	7.	"	.15
4.	"	.10	8.	"	.15

CORK STUMPS

No. 1.	per doz.,	.55	each,	.08	No. 5.	per doz.,	\$1.10	each,	.12
2.	"	.62	"	.08	6.	"	1.35	"	.12
3.	"	.75	"	.10	7.	"	1.50	"	.15
4.	"	.90	"	.10	8.	"	1.75	"	.17
Assorted, 1 to 8					per doz.,	.95			

FOLDING ATOMIZERS

For Spraying Fixatif on Crayon and Charcoal Drawings

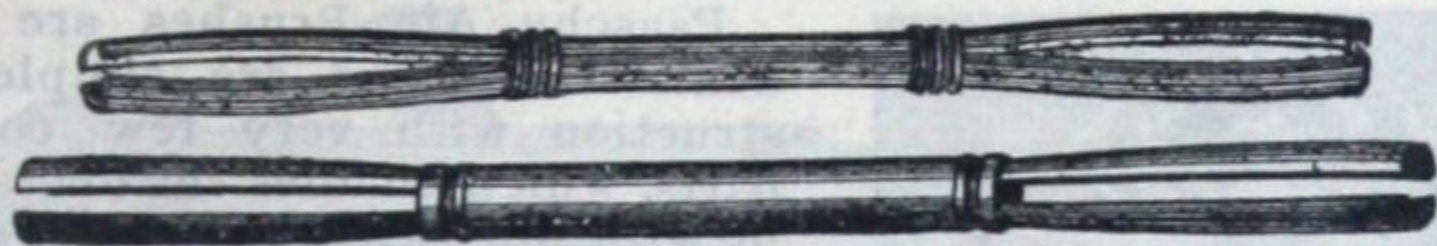


Japanned Tin Tube Atomizer per doz., \$1.50 each, .25

CHAMOIS SKINS

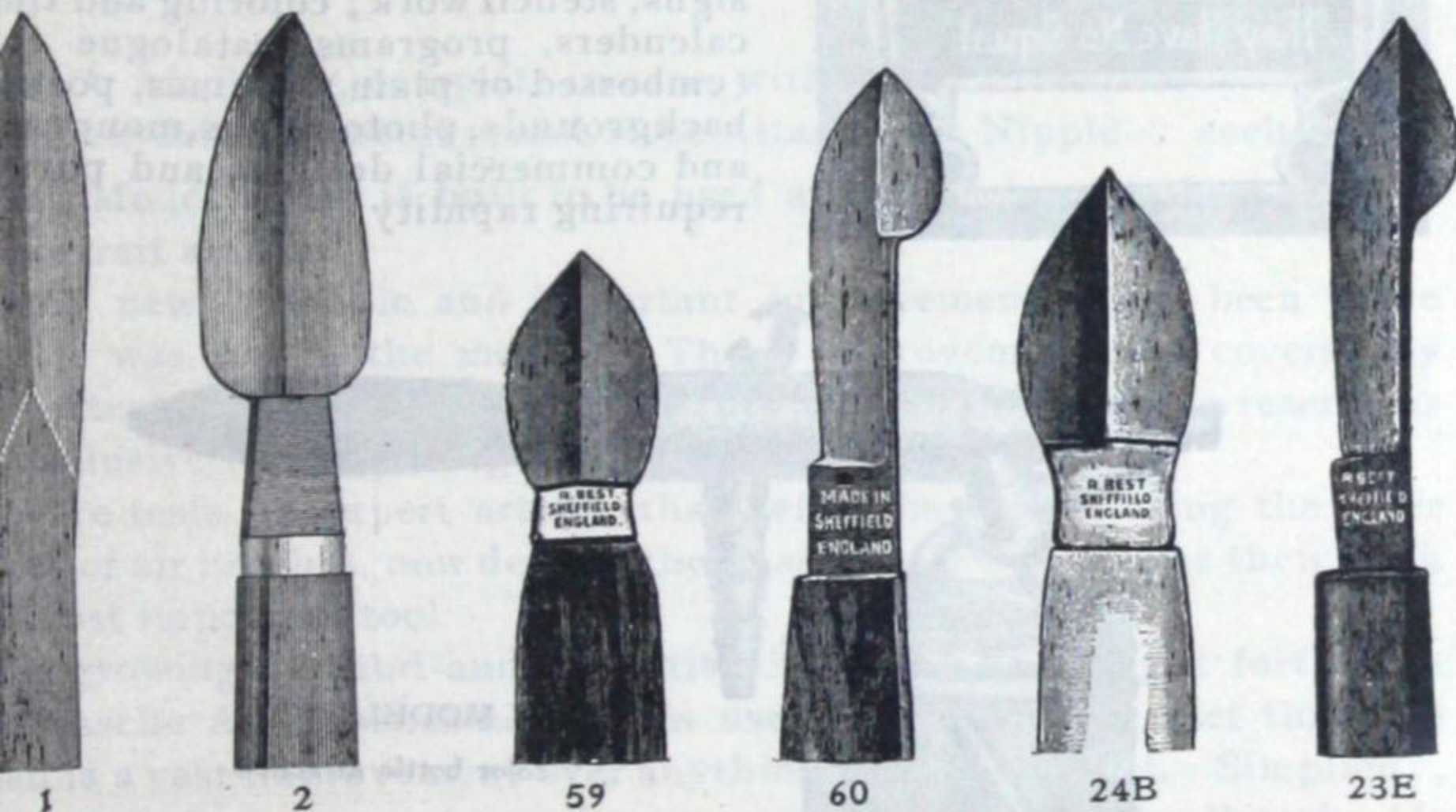
No. 0.	Size 4x 6 in.	per doz.,	.50	each,	.05
1.	" 5x 8 "	"	.70	"	.06
2.	" 8x 12 "	"	1.40	"	.15
3.	" 10x 15 "	"	2.30	"	.25
5.	" 12x 19 "	"	4.00	"	.40
9.	" 16x 24 "	"	7.50	"	.75

FROST & ADAMS CO.'S PORTE CRAYON HOLDERS



Mass, 4 in.	per doz., .40	each, .05	Silvered, 4in.	per doz., .50	each, .05
" 5 "	" .45	" .08	" 5 "	" .60	each, .08
" 6 "	" .50	" .10	" 6 "	" .65	" .12
Conté's Brass, with wooden centre			per doz., \$2.40 each, .25		

IMPORTED STEEL ERASERS AND SCRAPERS



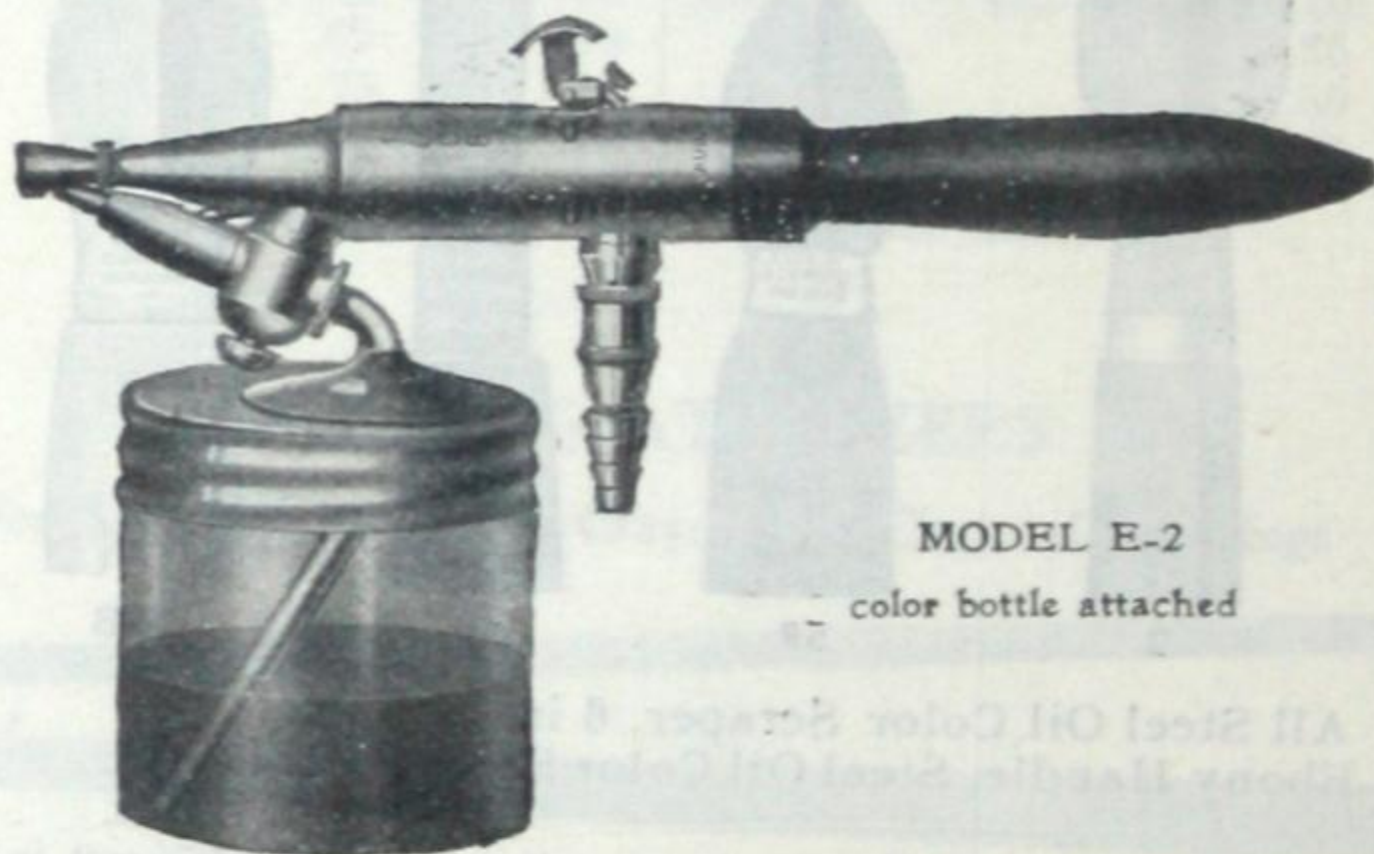
1.	All Steel Oil Color Scraper, 6 in.			each, .25
2.	Ebony Handle, Steel Oil Color Scraper,	Blade 1 1/4 in.		.40
2.	" " " " " "	" 1 5/8 in.		.45
2.	" " " " " "	" 1 7/8 or 2 in.		.50
2.	" " " " " "	" 2 1/4 in.		.55
2.	" " " " " "	" 3 in.		.60
23B.	Bone Handle, Knife Blade, 6 1/2 inch			.75
23C.	Cocoa Handle, Knife Blade, 6 1/2			.55
23E.	Ebony Handle, Knife Blade, 6 1/2			.55
24B.	Bone Handle, Spear Blade, 6 1/4			.50
24C.	Cocoa Handle, Spear Blade, 6 1/4			.45
24E.	Ebony Handle, Spear Blade, 6 1/4			.45
59.	Cocoa Handle, Spear Blade, 5			.40
60.	Cocoa Handle, Knife Blade, 5 7/8			.40

Manufactured specially for this market, in Sheffield, England
 Strong and handsomely mounted. The best goods in the market

PAASCHE AIR BRUSHES



Paasche Air Brushes are in great demand. They are simple in construction with very few complicated parts, which enables the operator to get by with practically no interruptions due to breakdowns, etc. Where water colors, dyes and pigments of medium consistency are used, we recommend the Model E-2 Air Brush as the handiest, most practical and serviceable. This model is extensively used for lettering, designing, making of show cards, price-tickets, signs, stencil work; coloring and tinting calenders, programs, catalogue covers (embossed or plain), plumes, portraits, backgrounds, photographs, monumental and commercial designs, and purposes requiring rapidity

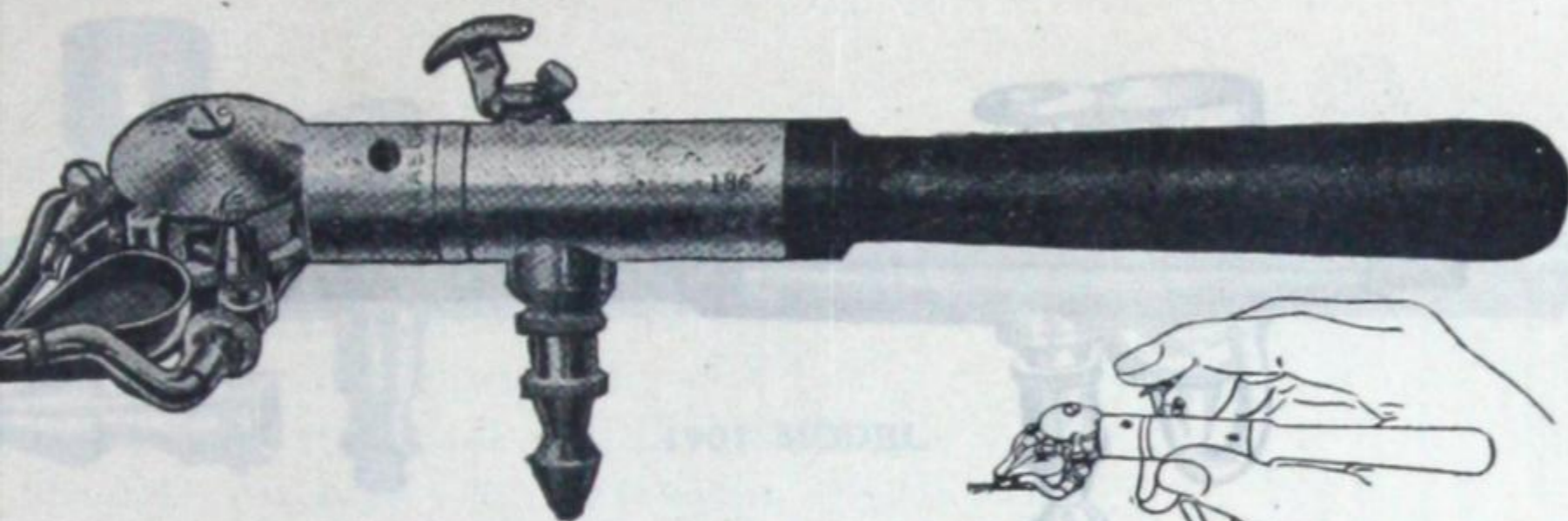


MODEL E-2

color bottle attached

Model E No. 2 Air Brush in leatherette case, with set No. 2 color adjusting parts, No. 1 Model E-2 color cup with strainer, $\frac{1}{2}$ -oz. color bottle with strainer, air brush hanger, screw driver, hose attachment nipple, and complete directions for its care and handling	each, \$22.00
Set of Model E-2 color adjusting parts, either size	" 2.50
Model E-2, color cup No. 1 with strainer	" .75
Without strainer	" .60
Model E-2, color cup No. 2 with strainer	" 1.00
Without strainer	" .85
Model E-2, $\frac{1}{2}$ -oz. or 1-oz. color bottle with strainer	" .65
Without strainer	" .50

THE PAASCHE AIR BRUSH—MODEL A



OPERATING POSITION

Model A Air Brush, complete in case, with 1 dozen Needles,
Screw-driver, Tweezers and Hose Attachment Nipple each, \$28.00

This Model Brush is built to be used at the easel and is best adapted
for portrait artists

Many new, valuable and important improvements have been made
since it was put in the market. These improvements are covered by
U.S. patents No. 797,315. Other patents are pending. These reserve us
the exclusive right of using same

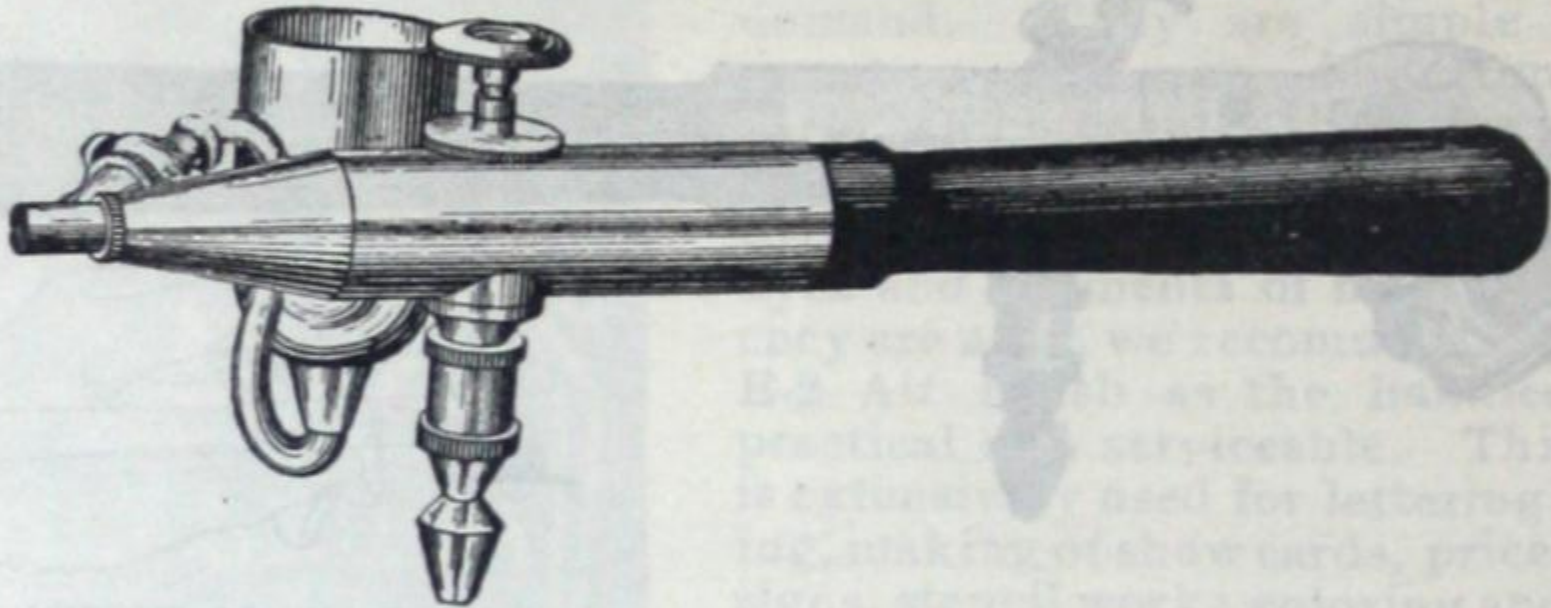
After severe tests by expert artists, that before have been using the other
kinds of air brushes, now declare the Paasche Air Brush to be their main
and most important tool

The growing demand and the satisfactory results brought forth with
the Paasche Air Brushes already in use, is a convincing fact that this
brush is a vast improvement over anything previously used. Simplicity,
accuracy and permanency are the governing qualities of the Paasche Air
Brush. These insure the best possible results and where particularly close
and fine work or skill is required, this brush enables the operator in a
better and surer way, with less effort and time, to produce variety of
effects and detail work before unknown to the Air Brush operators.
The brush will work equally well on any surface used for the production
of Art Work. For example, Paper of any kind, Canvas, Stone, Porcelain,
Metal, Silk and Cloth are all adapted to be worked on with the Paasche
Air Brush

As there is nothing that can clog or stop up the brush, colors of any
description, thick or thin, are used successfully. Oil Paints, Chinese
Ink, India Inks and any makes of mineral or water colors can be ap-
plied with the Paasche Air Brush

We are the New England Agents for the Paasche Air Brush.

PAASCHE AIR BRUSH—MODEL F



Model F Air Brush including Case, One No. 1 Cup, Air Brush
Hanger and Hose Attachment Nipple each, \$14.00

The Model "F" Paasche Air Brush is the simplest and best brush for making Show Cards, Air Brush Signs, Coloring of Postal Cards, Artificial Flowers, Draperies and many other like purposes

It is the only Air Brush that can produce a variety of effects ranging from the finest spray to the coarsest stipple. This gives to its users a special feature not obtainable in any other Air Brush and which enables a new class of attractive work to be done

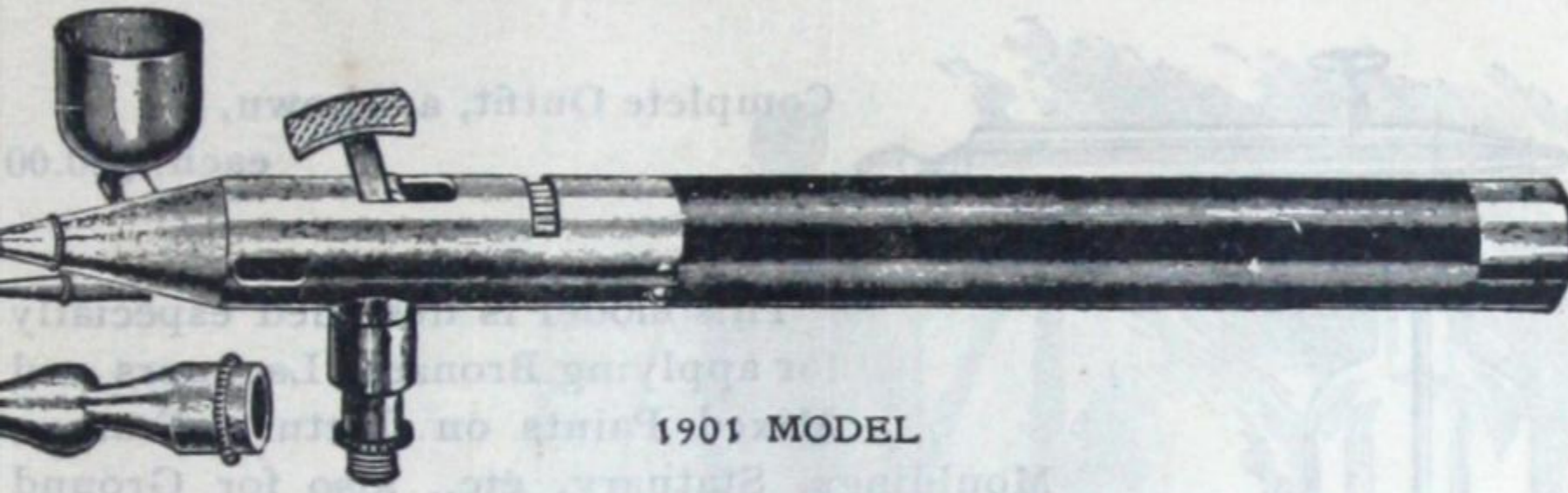
The uniform spray is under perfect control and can instantly be adjusted to produce any width or size of spray desired

The variety of work which can be done with this brush is unlimited, the simplicity of its construction makes this brush the most practical tool, free from getting out of order, free from clogging of colors, and a saving in time and money before unknown to air brush users

Each brush is carefully tested before leaving the factory. We guarantee all brushes and cheerfully replace any part that should show sign of defect within one year. Directions accompany brush

We are the New England Agents for the Paasche Air Brush

IMPROVED FOUNTAIN AIR BRUSH



1901 MODEL

Size. Improved Fountain Air Brush, 1901 Model, hand piece	each, \$20.00
Improved Fountain Pump, Tank and Tubing	" 10.00
Fountain Air Guage	" 2.00
Complete Outfit	" 32.75
Tubing	per foot, .08

This model is the outgrowth of nine years of constant study and experimenting. It is covered by four patents, and embodies all the best that we know about Air Brushes. We have overcome in this model several objectionable features that are in the earlier Brush.

The principal new features are, the outside detachable color receptacle which holds twice the amount of the earlier pattern. The outside needle rest, which makes possible the instant changing of the size of the initial spray. The spray regulator, which allows changing the quality of the spray (fine or coarse) without varying the air pressure. The partitions forward the levers which prevent the color from following the needle back into the operative parts. The rest which can touch the paper to help steady when lining, this can be removed from the Brush by unthreading if not wanted. The swiveled connection nipple, which makes easy the removing of the Brush from the tubing leading to pump. The head of the 1899 model can be removed so that it can be cleaned of lint and other accumulations.

There are a number of other changes, which, combined with those enumerated, constitutes as perfect an air brush as we are able to make.

Special Catalogue of all models A to F furnished on application.

Send for our complete catalogue of Fountain Air Brushes

FOUNTAIN AIR BRUSH—MODEL P



Complete Outfit, as shown,
each, \$20.00

This model is designed especially for applying Bronzes, Lacquers and Mixed Paints on Picture Frames, Mouldings, Statuary, etc., also for Ground Laying and Glazing in Potteries

Requires air supplied by power to operate. Full directions accompany each brush

Send for our Complete Catalogue of Fountain Air Brushes

FRISKET, OR AIR BRUSH TRACING PAPER

Frisket Paper, 20×24 inches, very transparent per doz., \$2.00 per sheet, .15

POWDER COLORS FOR AIR BRUSH

Screw Top Cans, 1 ounce each, .25

Black	Light Brown	Rose Pink
Bright Red	Light Yellow	Straw Yellow
Cherry	Magenta	Ultramarine Blue
Deep Blue	Malachite Green	Violet
Emerald Green	Orange	

Soluble in Water or Alcohol. Put up in screw top cans containing one ounce. Contents of can will make about a gallon of strong color.

PAASCHE FOOT PUMP OUTFIT



Paasche Foot Pump Outfit, complete, consisting of Paasche foot pump, air tank with gauge and air cock, fittings and ten feet of the best air-brush tubing	each, \$12.00
Paasche Foot Pump only, finished in blended enamel	7.00
Air Tank, tested for 60 lbs. air pressure, with hose fittings	2.35
Air Tank with gauge, air cock and fittings	4.75
Air Gauge	2.50

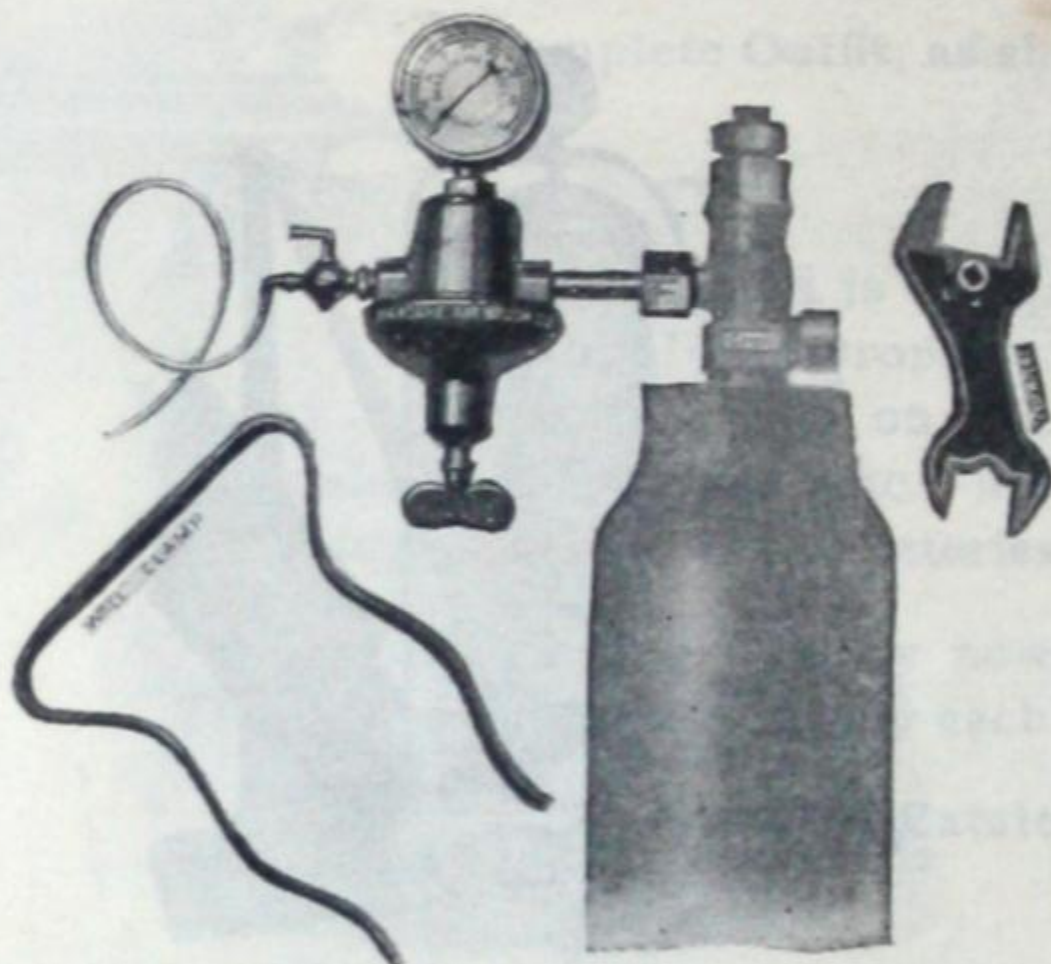
This outfit was originated by us and made a hit from its first appearance and with its new improvements, it is the latest, best and easiest working outfit of its kind. It works noiselessly and will furnish 40 lbs. pressure without any exertion

Weight, packed for shipment, 35 pounds

Send for Complete Catalogue of Air Brushes

We are the New England Agent for the Paasche Air Brush

PAASCHE LIQUID CARBONIC GAS OUTFIT



Liquid Carbonic Gas Outfit (less drum), with wall clamp, wrench and eight feet air brush tubing	each, \$10.00
20 lb. drum of Liquid Carbonic Gas (in our city)	2.00
Wrench only	.25
Wall Clamp only, for 20 lb. drum	.35

This outfit is especially designed and made for air brush purposes. It is very compact, the most durable of its kind, and absolutely guaranteed in every particular to give the best of service.

Liquid Carbonic Gas is the most commonly used among beginners and where only one air brush is in operation, for the reason that it furnishes a steady pressure without having to do any pumping. A drum of gas (which costs \$2.00 in our city), will last about three weeks, figuring the air brush is used about six hours a day.

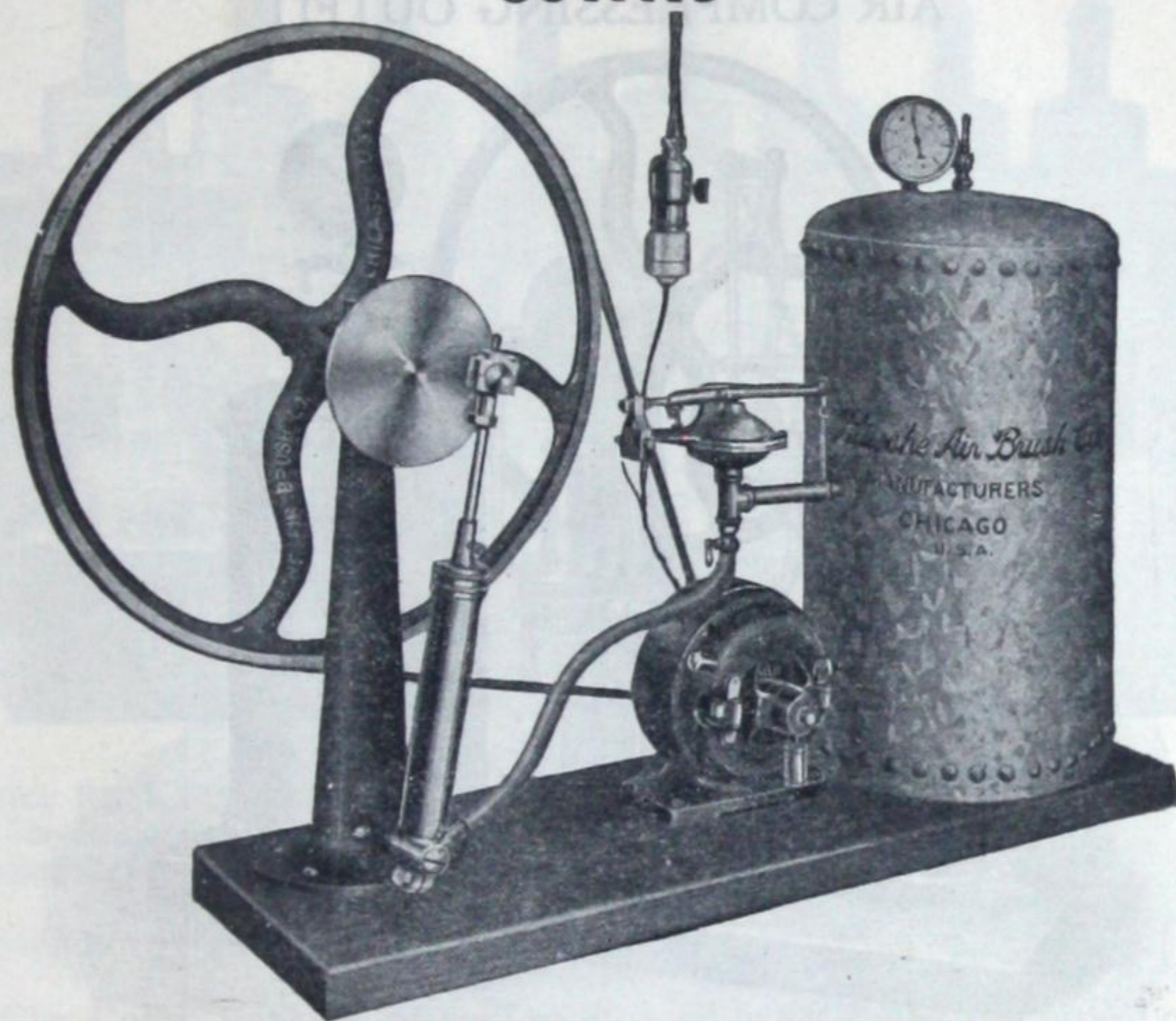
To out-of-town customers we only send the Liquid Carbonic Gas Regulator complete with gauge, wall clamp, wrench and tubing, as the supply of gas is obtainable from any soda fountain or saloon supply house in cities of a fair population, whose address we furnish you with when ordering, thereby doing away with cartage on the heavy drum from Boston.

Weight of regulator complete, packed for shipment, 10 pounds

Send for Complete Catalogue of Air Brushes

We are New England Agents for the Paasche Air Brush

PAASCHE AUTOMATIC ELECTRIC AIR COMPRESSOR
OUTFITS



No. 6. Air Compressor (with grease and oil cups), $\frac{1}{8}$ H. P., 110 or 220-volt direct current motor, 8-gal. air tank, 40 lb. air guage, fittings, No. 1 automatic electric cut out, 12 ft. of electric wire with attachment plug, belt and baseboard each, \$50.50

No. 7. Outfit has $\frac{1}{8}$ H.P., 110 or 115 volt, 60 cycle alternating current motor, otherwise same as No. 6 " 64.00

Nos. 6 and 7 Outfits, without motor " 38.50

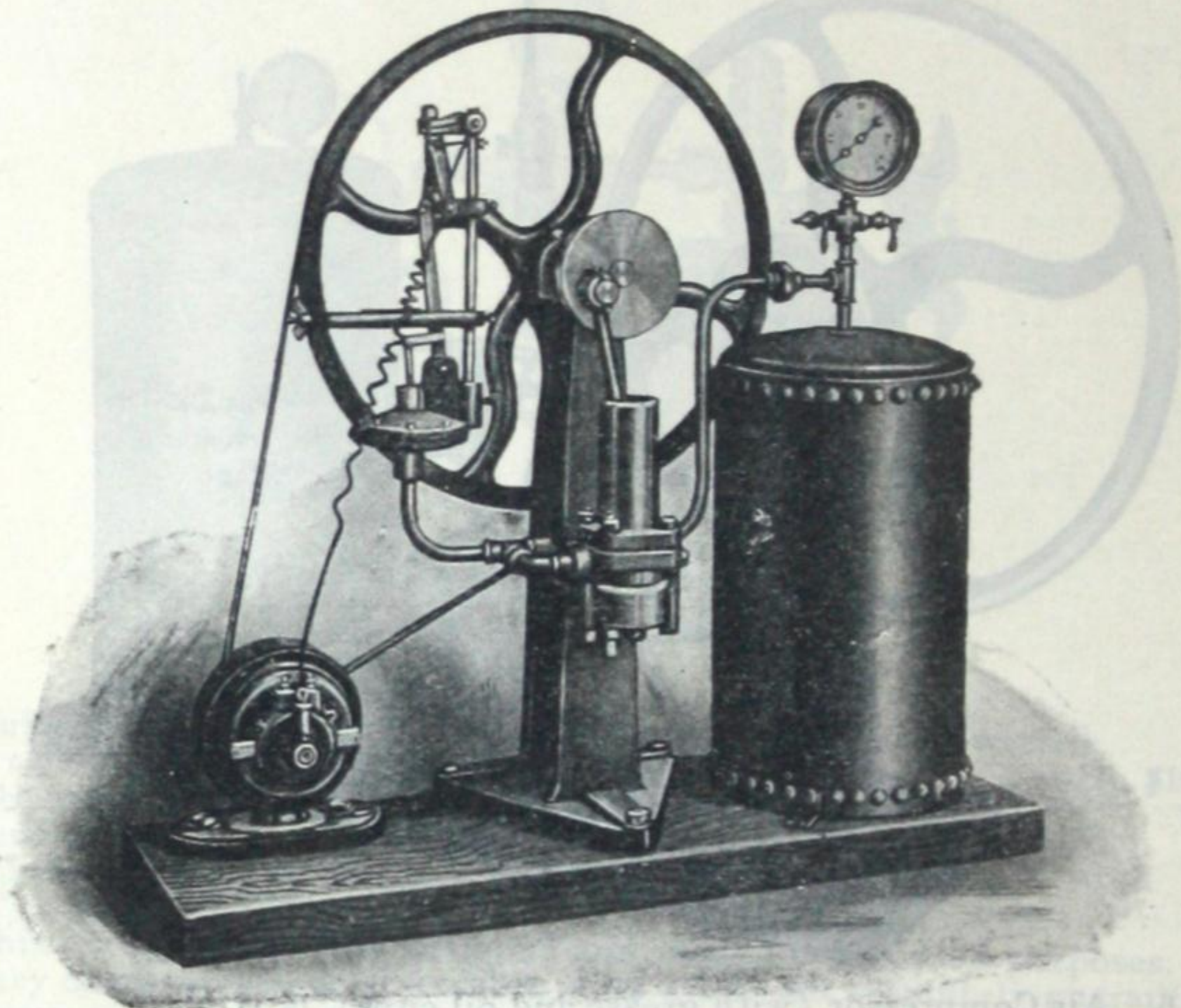
No. 8. Air Compressor (with grease and oil cups) and $\frac{1}{6}$ H.P., 110 or 220 volt, direct current motor, otherwise same as No. 6 Outfit " 59.25

This Outfit will furnish sufficient air pressure for seven artists' air brushes

No. 9. Outfit has $\frac{1}{6}$ H.P., 110 or 115 volt, 60 cycle, alternating current motor, otherwise same as No. 8 " 71.00

Nos. 8 and 9 Outfits, without motor " 41.25

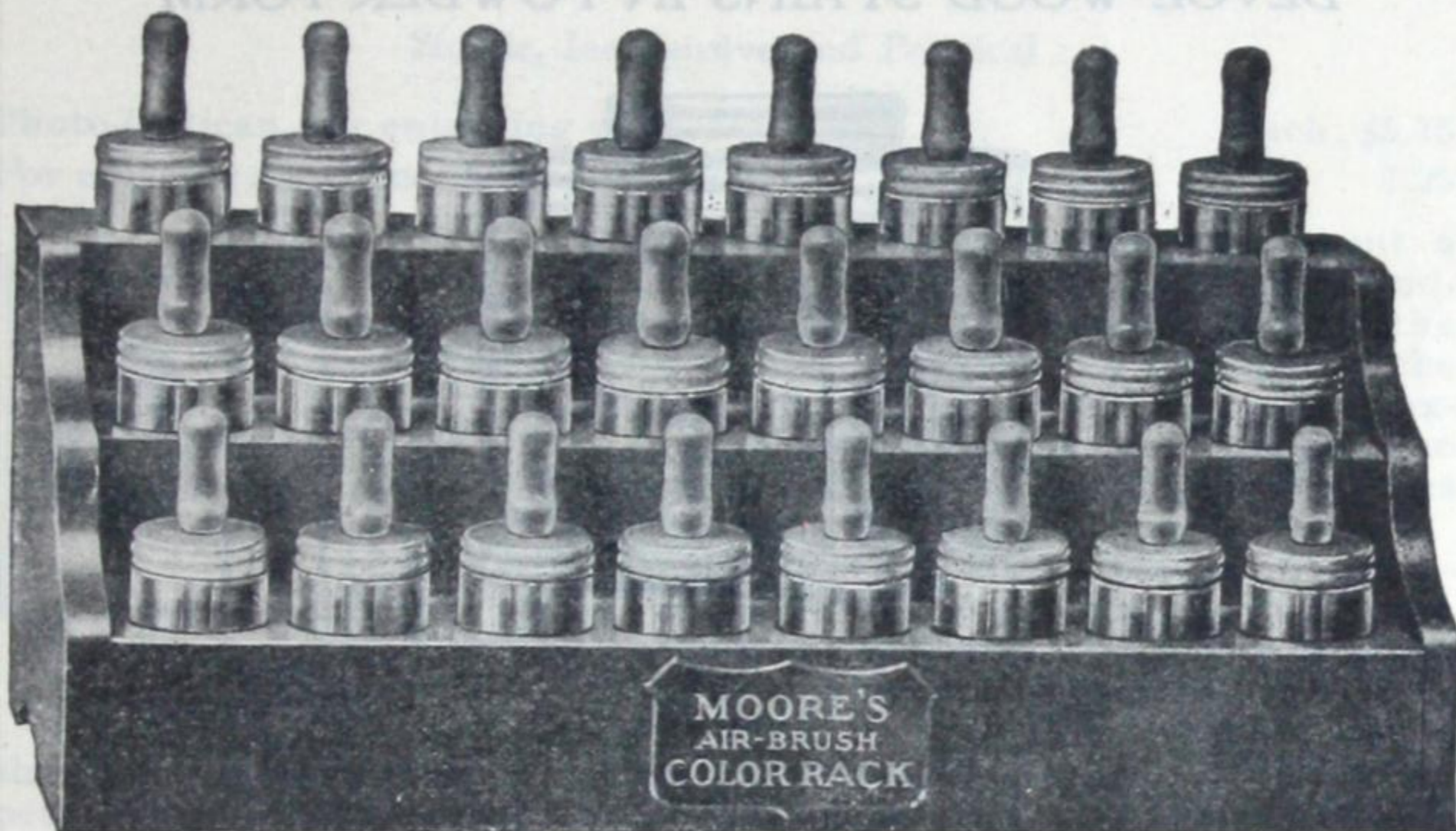
TROJAN COMPLETE AUTOMATIC ELECTRIC AIR COMPRESSING OUTFIT



- Trojan No. 1 A. Complete Outfit with $\frac{1}{8}$ h. p. 110 volt, series wound, D. C. motor. Capacity 5 artists using portrait size air brushes. Any pressure up to 40 lbs. each, \$57.00
- Trojan No. 1 C. Complete Outfit with $\frac{1}{8}$ h. p. 110 volt, D. C. motor. Capacity, 7 to 8 artists each, \$61.50
- Trojan No. 1 E. Complete Outfit with $\frac{1}{8}$ h.p., 100 to 115 volt, 60 cycle A. C. motor and centrifugal clutch pulley and self-starting, up to 25 lbs. tank pressure. Capacity, 7 to 8 artists each, \$84.25
- Trojan No. 1 F. Complete Outfit with $\frac{1}{8}$ h.p., 100 to 115 volt, 60 cycle A. C. motor each, \$75.00

The entire outfit is bolted to a wooden base board, 10 by 30 inches. It has a 4-gallon tank, air gauge, all necessary pipe connections, motor, belt, 10 feet of lamp wire, plug to fit any lamp socket, and patent automatic switch, which serves to start and stop the motor by variation of pressure in the tank. Switch works on about 8 lbs. variation, much less than most devices of this kind, and has a quick snap, not liable to arc at time of break. Successful use for 7 years

MOORE'S AIR BRUSH COLOR RACK



Color Rack fitted with 18 Bottles and Stoppers	\$2.50
Color Rack fitted with 24 Bottles and Stoppers	3.00
Metal Cover complete with Strainer for connecting any bottle with Air Brush direct . . . . .	.75
Extra Bottle and Stopper with Cover . . . . .	.15

The Color Rack is of seasoned wood with holes machine bored to uniform diameter and depth, fitted with bottles having non-coating aluminum tops, which unscrew easily to permit of cleaning. A glass filler for transferring color to the Air Brush Cup is inserted in the caps, and when in place serves to close the bottle and prevent waste from dust, evaporation or spilling, saving many dollars in the course of a few months. This is not attained except by the use of our Color Rack

The Color Racks are found indispensable by Photo-Colorists, Commercial Portrait Colorists, Show Card Writers, Designers, or Retouchers of Photographs in Engraving Work, keeping the colors conveniently and constantly before them

The Bottles and Stoppers may be had separate from the Color Racks. Metal Covers with strainers attached, made to readily connect the bottles direct to the Air Brush, allow constant use for hours on one class of work, with a single color, without the loss of time taken to frequently fill the cup, and without fear of the color being heavy or light, or changing consistency, as is now the case by any other method than the use of our attachable bottles

DEVOE WOOD STAINS IN POWDER FORM



Devoe Wood Stains, all colors per package, .50

Fumed Oak
Weathered Oak
Brown Oak
Tavern Oak
Green Oak

English Oak
Antwerp Oak
Light Oak
Flemish Oak
Walnut

Mahogany
Ebony
Rosewood
Cherry

In imitation of the above woods, put up in attractive tin packages, each containing two ounces

The contents of a package, added to one gallon of water, will make a gallon of stain

This applies to all shades except Flemish Oak. This stain is produced by adding the contents of a package to one quart of water

DIRECTIONS FOR STAINING

The wood should be made smooth with sandpaper. Always sandpaper with the grain. Apply the stain to the wood with a sponge or soft brush, as evenly as possible

All paint and varnish should be removed by Devoe Paint and Varnish Remover before applying the stain, because all these stains must always be applied to bare wood

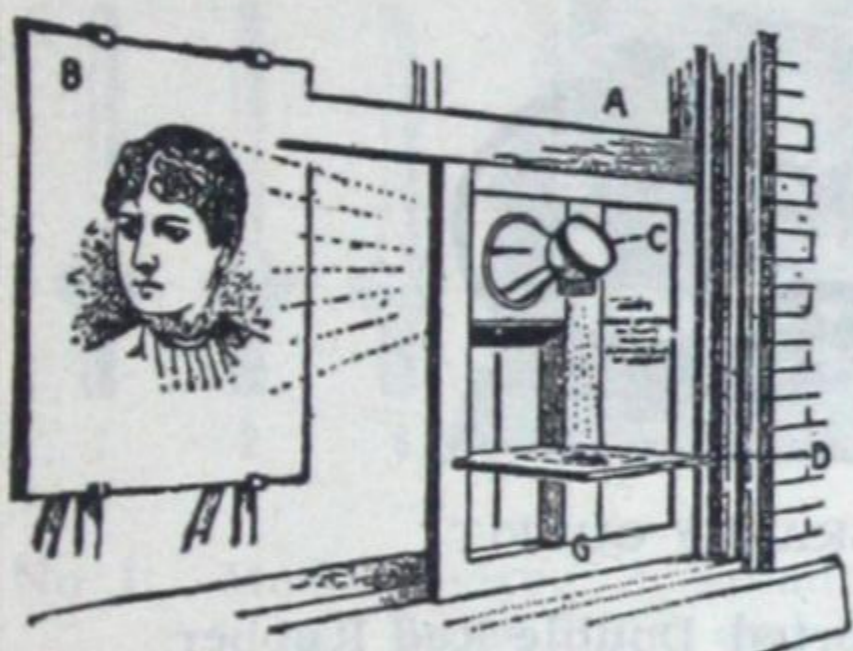
When a varnished finish is desired, Devoe Pale Interior Varnish should be applied after staining, and on floors use Devoe Marble Floor Finish after staining

As these are water stains, varnish should never be applied until the stain is thoroughly dry and all the moisture has left the wood

ALOE'S PHOTO-OPTICAN

Simple, Inexpensive and Practical

Photo-Optican, for enlarging purposes	each, \$5.75
For enlarging and reducing purposes	" 7.35



With this wonderful instrument a child can make a perfect portrait, landscape or intricate drawing, without the use of a negative. The cost of the instrument is absolutely the only expense to which the user is put, no artificial light, chemicals or negatives are required.

A bunch of flowers placed in the instrument can be thrown on your paper, canvas or whatever you desire to draw or paint upon; the flowers will appear in their natural colors, each delicate

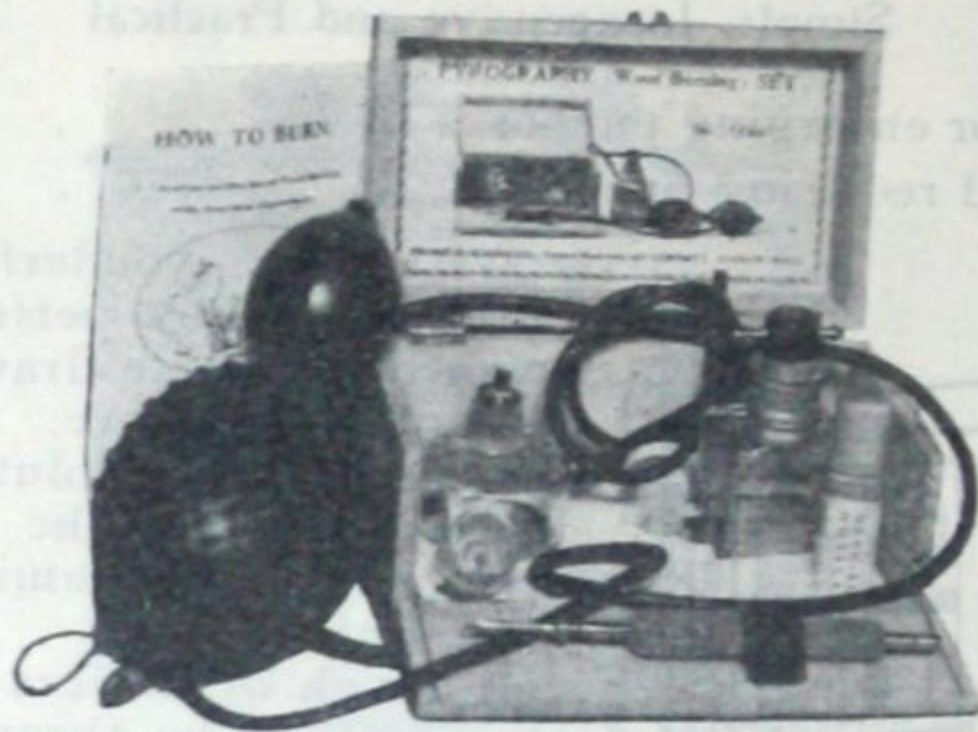
shade, perfectly portrayed. Should there chance to be a dew drop on petal or leaf it will sparkle in the picture in all its original brilliancy. By a simple adjustment the original may be enlarged many times or reduced at will. A photograph, tintype, woodcut, drawing, colored picture, or study may be reproduced twenty times the size of the original or, in fact almost any size from one inch to twelve feet, and the picture is not reversed.

DIRECTIONS FOR USE

Place frame in south window, if possible; lower window-sash until it rests firmly on top of Photo-Optican frame (see cut); exclude all light possible from the room, as the darker the room the better the results; hang a heavy dark curtain from bottom of window-sash A, to exclude the light that would come in through the side of window not occupied by Photo-Optican. Do not fasten this curtain to side of Photo-Optican as it is necessary to pass the hand through this opening to place photographs or different objects on movable platform D. Although not essential, it is preferable to have the sun shine directly on platform D. Before placing the Photo-Optican in window, see that head C is fastened to instrument with lens pointing to platform D. See that screen, canvas or strainer B is perpendicular and square with the instrument. Now place photograph or object to be enlarged on platform D, set screen B at such distance that image will appear the desired size; move knob attached to sliding platform D up or down until image is distinct, and secure in that position by turning knob to the right. Now sketch in picture with pencil or brush.

Screw reducing attachment to threads found on head C, and proceed in same manner as outlined above. If picture to be reduced is very large draw out shelf D and place picture somewhat below the instrument itself, at right angles with wall of the house.

IMPORTED PYROGRAPHY OUTFITS



NO. 1166C. SPECIAL PYROGRAPHY OUTFIT

No. 1166C. Special Outfit contains Imported Double Red Rubber Bulb with 40 inch Tubing No. 4 Cork Handle No. 1168, Hard Rubber Union No. 53, Glass Alcohol Lamp No. 53, 3 oz., Benzine Bottle with Hook and Glass Stopper No. 54, piece Red Rubber Tubing 48 inches, Imported Platinum Point No. 3, set of 6 Colored Stains, Instruction Book "How to Burn" . . . each, \$5.00

No. 1166D. Outfit same as C with No. 8 Point . . . " 5.50

In a drop front Designed Basswood Box with compartment in the bottom for holding materials in place, size $4\frac{3}{4} \times 8 \times 4\frac{3}{8}$

No. 5. Special Outfit contains Imported Double Red Rubber Bulb with 24 inch Tubing No. 1, Cork Handle No. 1168, Metal and Cork Union No. 60A, Glass Alcohol Lamp No. 53, Benzine Bottle with Cork Stopper No. 54B, piece Red Rubber Tubing 24 inches, Imported Platinum Point No. 28 . . . each, \$2.50

No. 5A Outfit. Same as No. 5 Outfit with No. 21 Point each, \$2.75

No. 5B Outfit. Same as No. 5 Outfit with No. 22 Point . . . each, \$3.00

No. 5C Outfit. Same as 5B, No. 2 Bulb . . . each, \$3.25



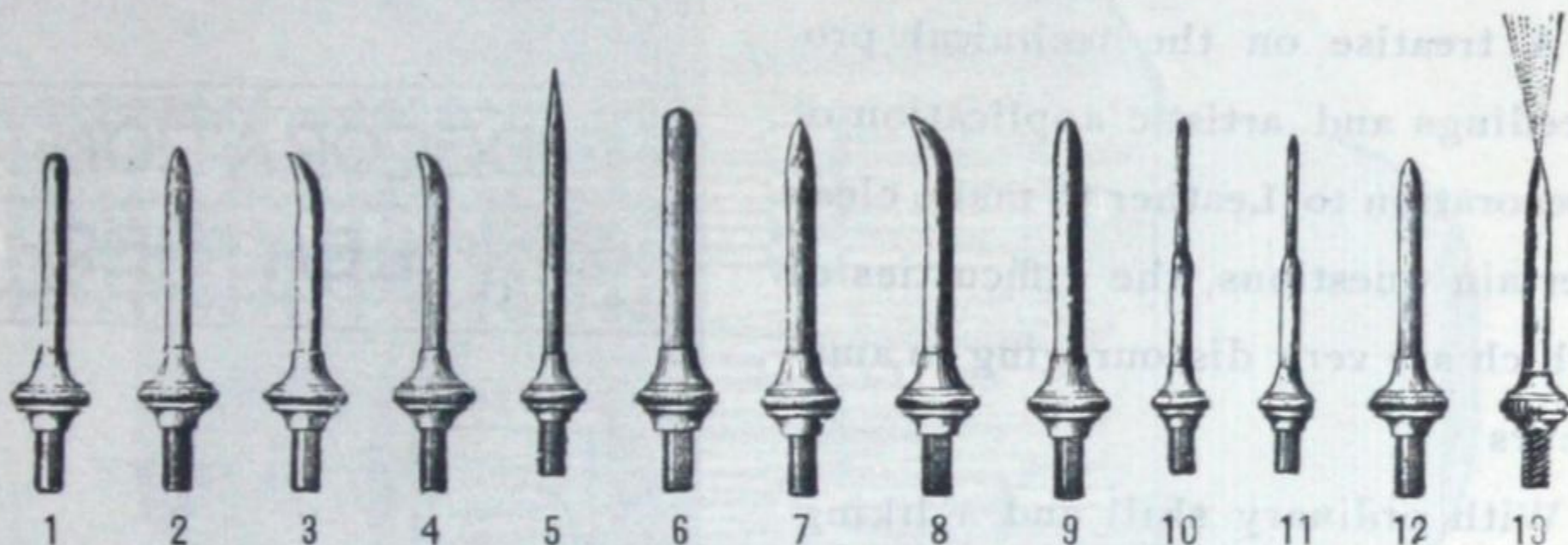
NO. 5. SPECIAL PYROGRAPHY OUTFIT

Neatly put up in a Designed Basswood Box, size $4\frac{3}{4} \times 6\frac{1}{2} \times 4\frac{1}{2}$ with directions

General Catalogue of Pyrography Materials furnished on application

SUPERIOR QUALITY IMPORTED PLATINUM POINTS

For Wood and Leather Burning



- No. 1. Medium size. A Broad Spatulate Shape, for Heavy and Broad Lines and Background Work . . . each, \$2.50
- 2. Medium size. Simply Pointed, for All Line Work. Not good for Shading or Broad Work . . . " 2.50
- 3. Medium size. Curved Combination Point, suitable for a variety of Line and Background Work . . . " 2.50
- 4. Medium size. Curved and Pointed for Scorching, only useful in Shading, Imitating Water Colors, etc. . . . " 2.50
- 5. Large size. Extra Long Needle Point, for Designs done entirely in Lines and No Background. . . . " 3.00
- 6. Large size. Heavy, Broad, Spatulate Shape. Corresponds with No. 1, but Larger and Heavier . . . " 3.00
- 7. Large size. Simply Pointed. Corresponds with No. 2 but Larger and Heavier . . . " 3.00
- 8. Large size. Combination Point. Corresponds with No. 3 but Larger and Heavier . . . " 3.00
- 9. Large size. Blunt End, well adapted for Large and Strong Outlining . . . " 3.00
- 10. Small size. Flat and Blunt, Small and Light for Line Work only . . . " 2.00
- 11. Small size. Small Pointed for Line Work only . . . " 2.00
- 12. Medium size. Blunt End, corresponds with No. 9 but Smaller . . . " 2.50
- 13. Medium size. Pointed Scorcher for Portrait, Figure, Shading, etc. . . . " 2.50

NOTE.—All our Platinum Points are thoroughly tested before leaving our establishment and none will be exchanged

General Catalogue of Pyrography Materials furnished on application

A BOOK ON THE DECORATION OF LEATHER

A treatise on the technical proceedings and artistic application of Decoration to Leather to make clear certain questions, the difficulties of which are very discouraging to amateurs

With ordinary skill and a liking for design, which is inborn in the amateur and friends of this Art, the field is unlimited and possibilities unusual, when the work is sincerely done, either from original designs or from the study of old master-pieces in this line of work



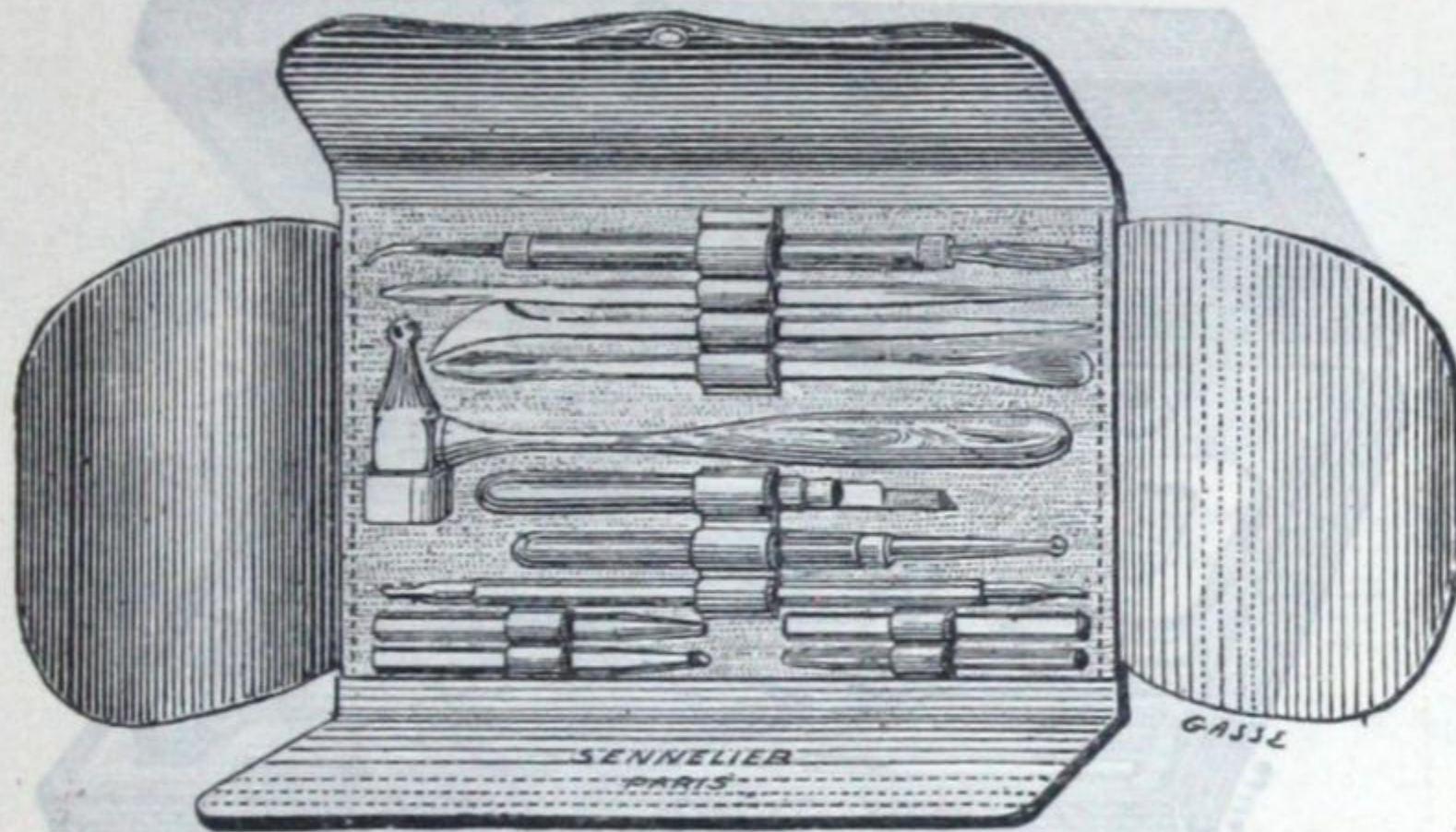
Decoration of Leather, an Instruction Book per copy, .35

An Instruction Book by Monsieur L. LeBesgue, translated from the French, published by Frost & Adams Co. Lessons in Leather Work, with explanations of the uses of Tools and Materials.

CONTENTS

Preface	VII. Stippling
I. The Leather in General	VIII. Use of White Leather
II. Preparation of Leather	IX. Leather Mosaic
III. Different Kinds of Leather	X. Dyes and Colorings
IV. Designs and Tools Used	XI. Decolorating Liquids
V. Engraving	XII. Leather Carving
VI. Modeling Leather	XIII. Uses of Nails as Ornaments

TOOLS FOR LEATHER WORK



NO. 2903

No. 2903. Complete Outfit, Pocket Folding Case, $4\frac{1}{4} \times 8\frac{1}{4}$ inches, (Natural Leather which can be decorated) each, \$7.00

Case contains 12 Tools: 2 Modeling Tools, 1 Steel Hammer, 2 Embossing Tools, 1 Punch, 1 Embossing Ball Tool, 1 Cutting and Trimming Knife, 4 Chasing and Pearlning Tools. Very compact outfit, having all tools most essential to leather decoration

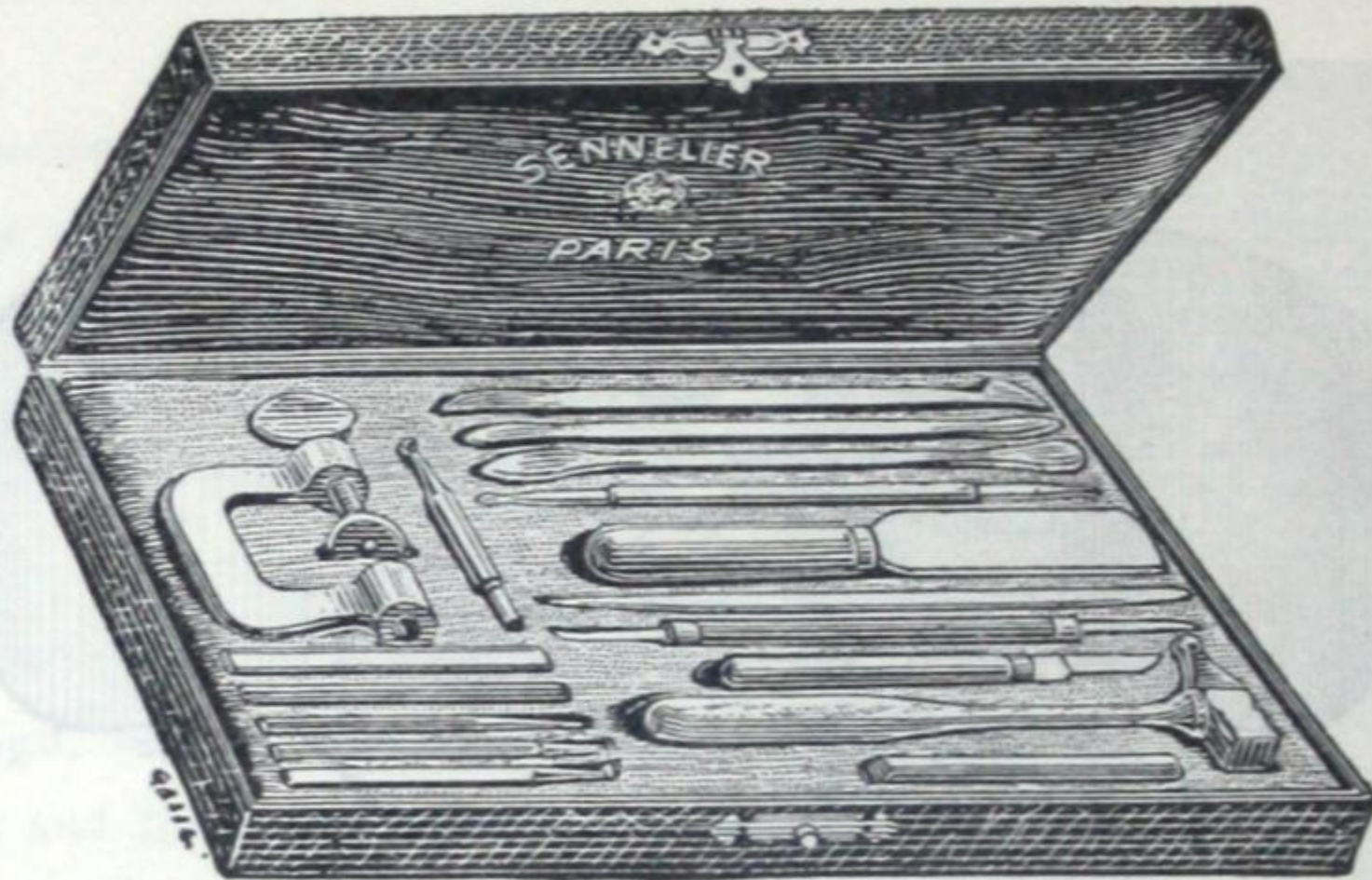


NO. 3054

No. 3054. Complete Outfit, Wood Case, 6×9 inches, Velvet Lined, Morocco Covered, each, \$5.00

Case contains 11 Tools: 1 Punch, 2 Modeling Tools, 1 Burnisher, 1 Cutting and Trimming Knife, 1 Hammer, 1 Embossing Ball Tool, 4 Chasing and Pearlning Tools

Tools for Leather Work — continued



NO. 3055

No. 3055. Complete Outfit, Wood Case, $8\frac{1}{4} \times 12$ inches
Velvet Lined, Morocco Covered, each, \$10.00

Case contains 16 Tools: 1 Clamp, 1 Embossing Ball Tool, 5 Chasing and Pearling Tools, 1 Punch, 1 Steel Burnisher, 4 Modeling Tools, 1 Hammer, 1 Paring Knife, 1 Cutting Knife, 1 Trimming Knife. A very complete outfit having all the necessary tools for every grade of work. Its range is unlimited.



NO. 2691

No. 2691. Tracing Tool, Steel, Polished Wood Handle each, .50



NO. 2620-2

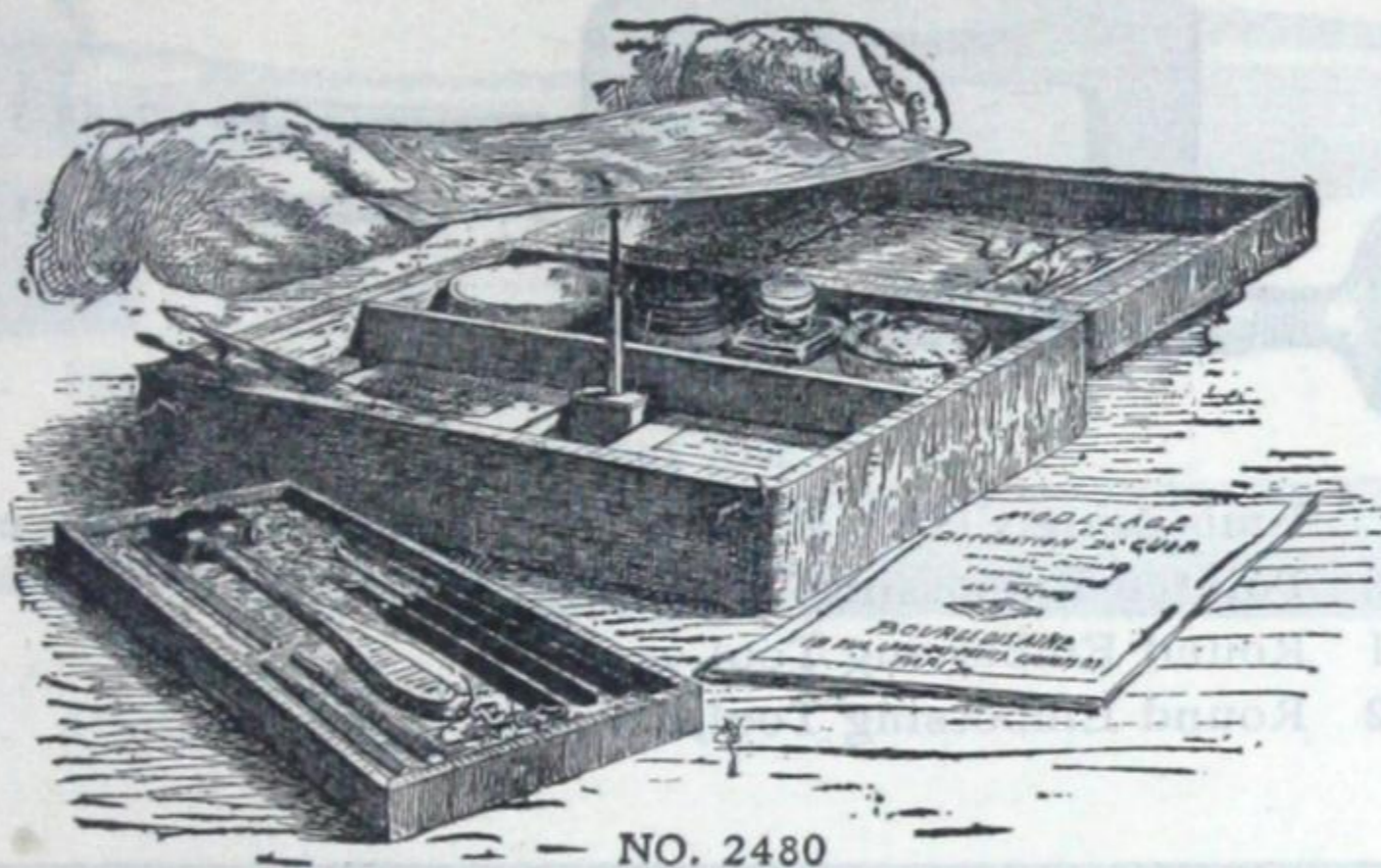
No. 2620-2. Embossing Tool, Steel, Polished Wood Handle each, .50



NO. 2601

No. 2601. Undercutting Tool, Steel, Polished Wood Handle each, .50

Tools for Leather Work — continued



NO. 2480

No. 2480. Complete Outfit, Polished Wood Case, 3×8×10¼ inches, Hinged Cover and Half Tray Section, as shown in illustration each, \$8.00

The Combination Box and Tool Holder contains the following articles:
 1 Embossing Ball Tool, 3 Chasing and Pearling Tools, 1 Hammer, 2 Tracing Tools, 1 Undercutting Tool, 4 Sticks Modeling Wax, 1 Box Filling Powder, 1 Box Powder, 1 Bottle Stain, 1 Trimming Knife, 1 Glass for Brushes, 1 Jar Encaustic, 1 Bristle Brush, 1 Sable Brush, 1 Sample Decorated Leather, 6×8 inches, 1 Porcelain Cup, 1 Instruction Book

This Outfit combines Embossing Tool Holder and Outfit Box, thus doing away with Clamp



NO. 2646

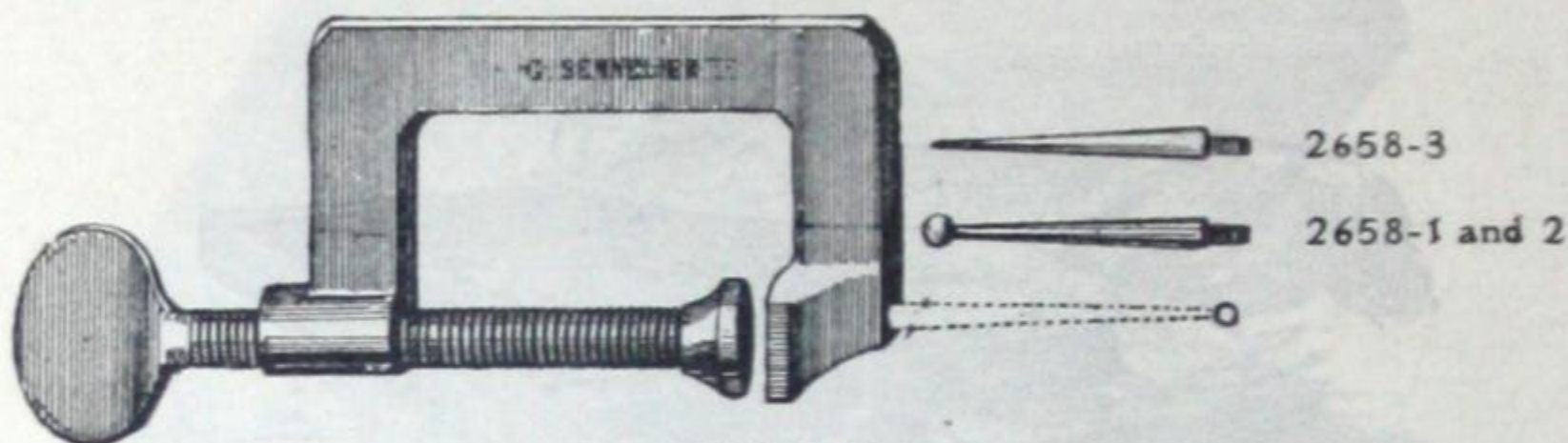
No. 2646. Spatula Form, Curved Point, Polished Steel, Double Ends, Polished Wood Handle each, .75



NO. 2600

No. 2600. Spatula Form, Curved Point, Polished Steel, Double Ends, Polished Wood Handle each, .75

Tools for Leather Work — continued



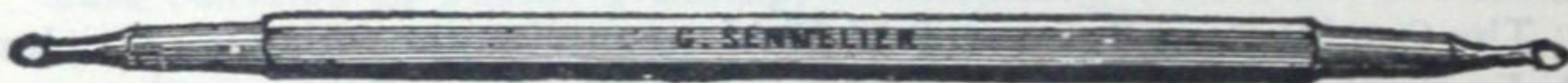
NO. 2657

No. 2657	Embossing Clamp	. . . . .	each, \$1.00
2658-3	Pointed Embossing Tool	. . . . .	" .50
2658-1	Round Embossing Tool, small	. . . . .	" .50
2658-2	Round Embossing Tool, large	. . . . .	" .60



NO. 2690

No. 2690.	Cutting and Trimming Knife	each, .50
-----------	----------------------------	-----------	-----------



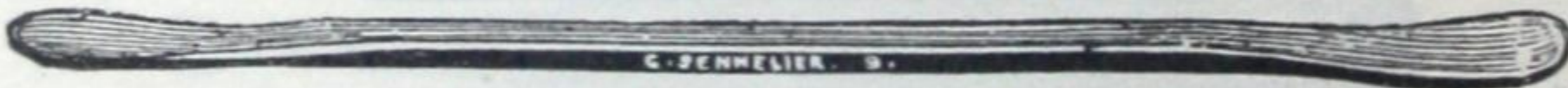
NO. 2606

No. 2606.	Modeling Tool, All Steel, Polished, 6¾ in. long		each, .50
-----------	---	--	-----------



NO. 2885-7

No. 2885-7.	Modeling Tool, All Steel, Polished, 6¾ in. long		each, .50
-------------	---	--	-----------



NO. 2885-9

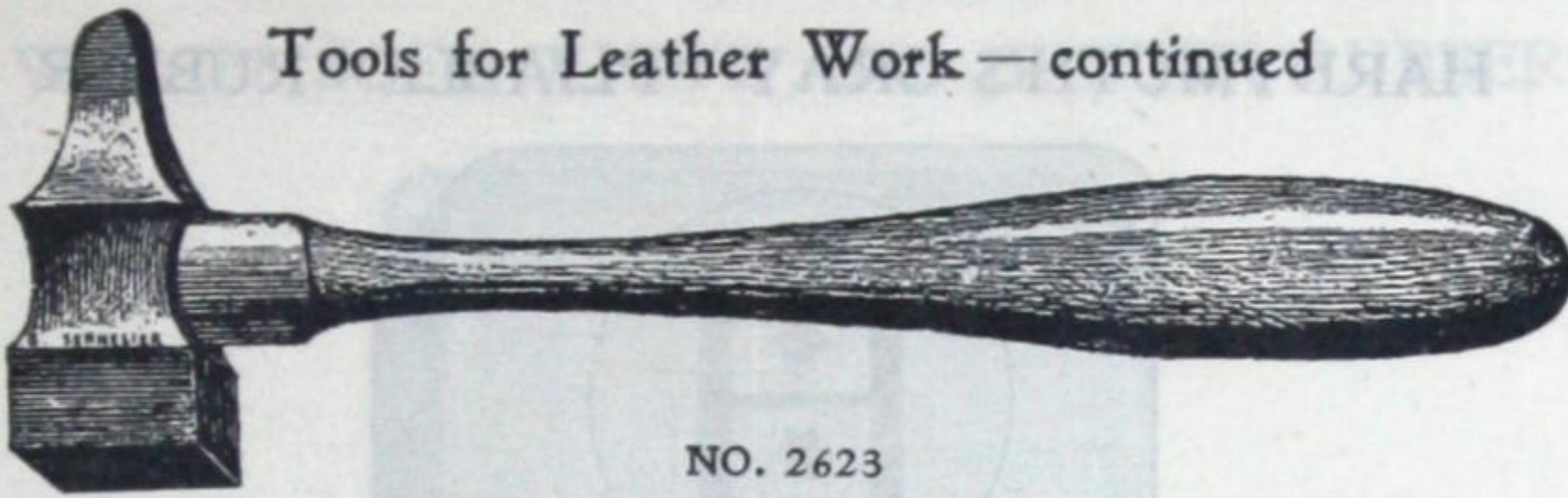
No. 2885-9.	Modeling Tool, All Steel, Polished, 6¾ in. long		each, .50
-------------	---	--	-----------



NO. 2939

No. 2939.	Modeling Tool, All Steel, Polished, 6¾ in. long		each, .50
-----------	---	--	-----------

Tools for Leather Work — continued



NO. 2623

No. 2623. Steel Hammer for Leathers each, .80



NO. 2602

No. 2602. Undercutting Knife each, .60

STEEL CHASING AND PEARLING TOOLS



2700-8 2700-12 2700-31 2700-36 2700-38 116 117

No. 116.	Steel Chasing and Pearling Tools	. . . . .	each, .60
117.	“ “ “	. . . . .	“ .60
2700-8.	“ “ “	. . . . .	“ .60
2700-12.	“ “ “	. . . . .	“ .60
2700-31.	“ “ “	. . . . .	“ .60
2700-36.	“ “ “	. . . . .	“ .60
2700-38.	“ “ “	. . . . .	“ .60

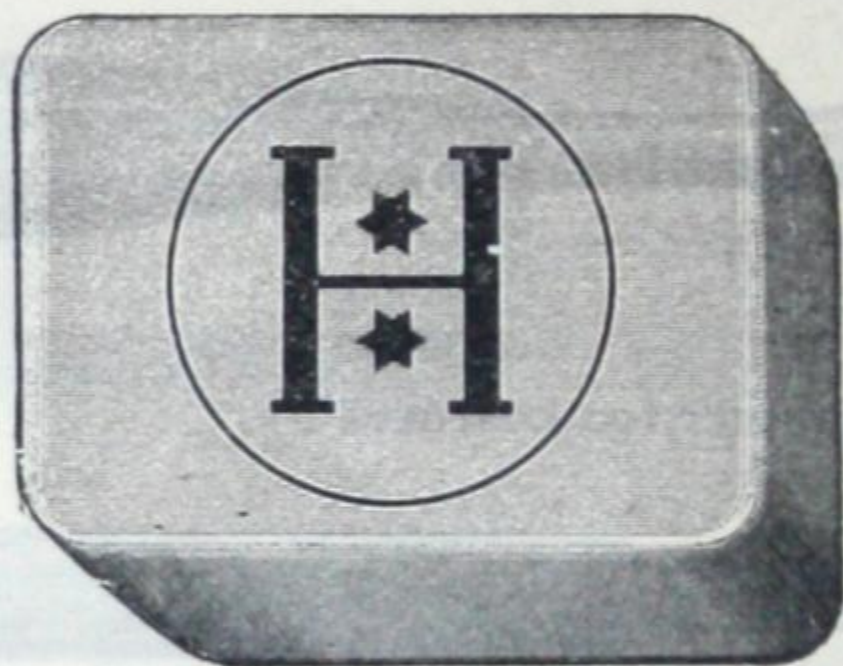


2700-93 2700-95 2700-99 2700-109 2700-112 2700-114 2700-116

No. 2700-93.	Steel Chasing and Pearling Tools	. . . . .	each, .60
2700-95.	“ “ “	. . . . .	“ .60
2700-99.	“ “ “	. . . . .	“ .60
2700-109.	“ “ “	. . . . .	“ .60
2700-112.	“ “ “	. . . . .	“ .60
2700-114.	“ “ “	. . . . .	“ .60
2700-116.	“ “ “	. . . . .	“ .60

Note.—Thickness of Rubber varies according to size

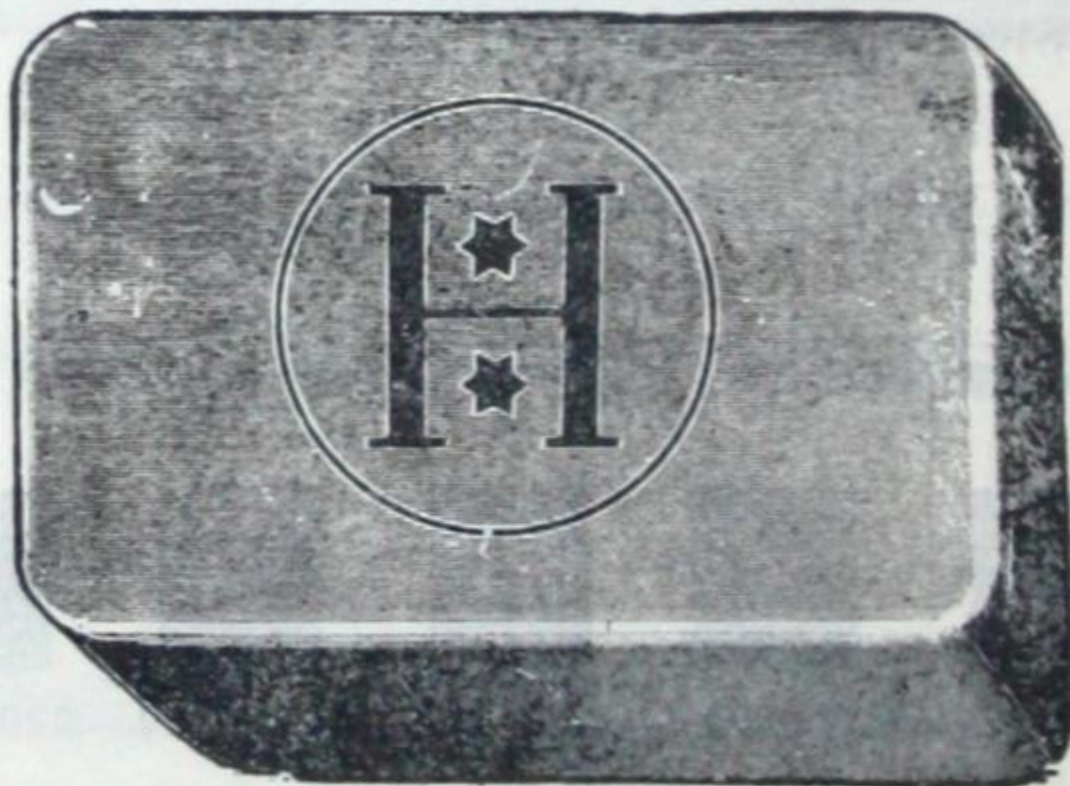
HARDTMUTH'S GRAY "PLIABLE" RUBBER



No. 4. Gray, size 2 × 3 each, .65	No. 20. Gray, size 1¼ × 1¾ each, .14
8. " " 1¾ × 2½ " .35	24. " " 1⅛ × 1⅝ " .12
10. " " 1½ × 2⅛ " .30	30. " " 1 × 1¾ " .10
12. " " 1⅜ × 2 " .25	36. " " 1 × 1⅜ " .08
16. " " 1¼ × 2 " .18	Any above . per pound, 2.50

Softer than the Pink Pliable Rubber and invaluable for cleaning Drawings, Engravings, Crayons, etc.

HARDTMUTH'S PINK "PLIABLE" RUBBER

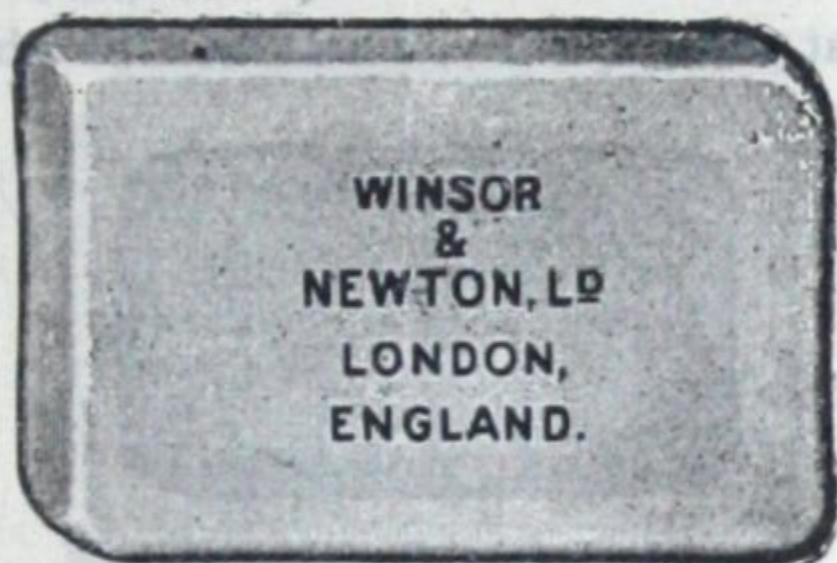


No. 4. Pink, size 2 × 3 each, .65	No. 20. Pink, size 1¼ × 1¾ each, .14
8. " " 1¾ × 2½ " .35	24. " " 1⅛ × 1⅝ " .12
10. " " 1½ × 2⅛ " .30	30. " " 1 × 1¾ " .10
12. " " 1⅜ × 2 " .25	36. " " 1 × 1⅜ " .08
16. " " 1¼ × 2 " .18	Any above . per pound, 2.50

Soft and pliable, and will erase pencil marks easily and without injury to Tracing Paper or any other delicate drawing material

NOTE. — Thickness of Rubber varies according to size

W. & N. SOFT WHITE AND GRIFFIN RUBBER

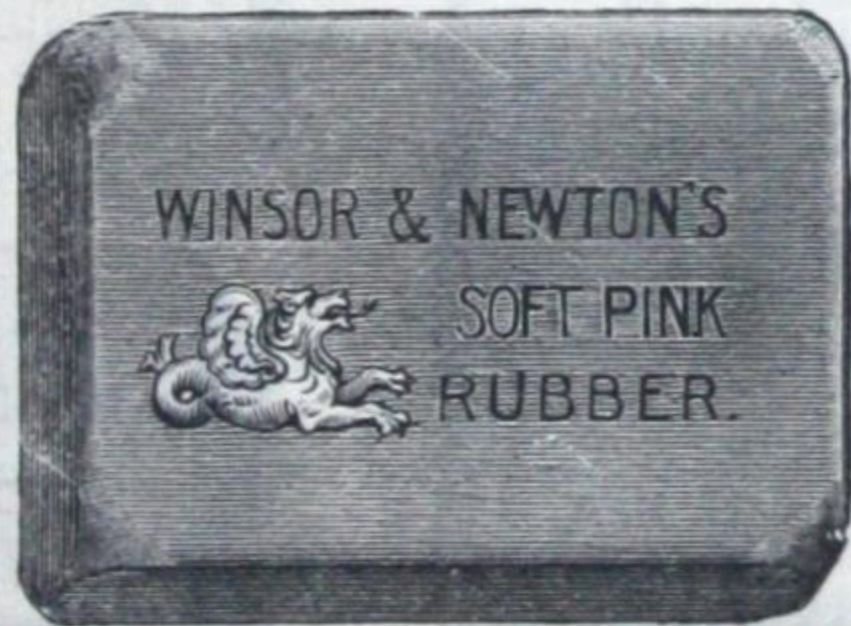


No. 6.	Size $1\frac{5}{8} \times 3\frac{3}{8}$ in.	each, .35	No. 24.	Size $1\frac{1}{4} \times 1\frac{3}{4}$ in.	each, .12
12.	" $1\frac{5}{8} \times 2\frac{3}{8}$ "	" .25	36.	" $1 \times 1\frac{3}{8}$ "	" .07
18.	" $1\frac{3}{8} \times 2$ "	" .20	48.	" $\frac{7}{8} \times 1\frac{1}{4}$ "	" .06
Any of above			per lb., \$2.50		

NOTE.—Thickness of Rubber varies according to size

This rubber is softer than our Pink Pliable Rubber, and will be found invaluable for cleaning Drawings, Engravings, Crayons, etc.

W. & N. SOFT PINK INDIAN RUBBER



No. 6.	Size $1\frac{5}{8} \times 2\frac{1}{2}$ in.	each, .25	No. 30.	Size $1 \times 1\frac{1}{2}$ in.	each, .05
12.	" $1\frac{3}{8} \times 2$ "	" .15	36.	" $1 \times 1\frac{3}{8}$ "	" .04
18.	" $1\frac{1}{8} \times 1\frac{1}{2}$ "	" .10	48.	" $\frac{7}{8} \times 1\frac{1}{4}$ "	" .03
24.	" $1\frac{1}{8} \times 1\frac{7}{8}$ "	" .07	Any of above per lb., \$1.50		

NOTE.—Thickness of Rubber varies according to size

This Rubber is soft and pliable, and will be found to erase pencil marks easily and without injury to either Tracing Paper or any other delicate drawing material used

A. W. FABER'S RED RUBBER ERASER

Flat, First Quality, Extra Soft Finish



No. 12.	Red Soft Rubber, size $1\frac{1}{2} \times 2\frac{1}{4}$	each, .10
24.	" " " $1\frac{1}{8} \times 2$	" .08
36.	" " " $1 \times 1\frac{1}{2}$	" .05
Any above		per pound, 1.50

Packed one pound in a box

NOTE. — Thickness of Rubber varies according to size

PLASTIC OR KNEADED RUBBER

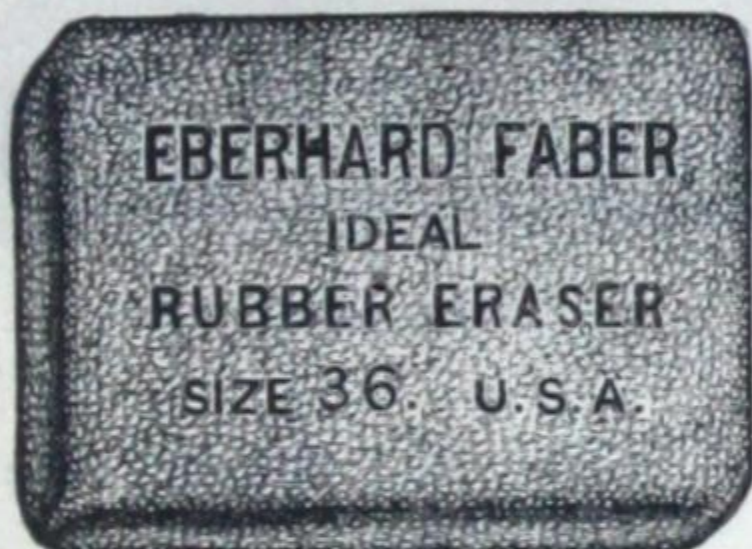


Small Kneaded Rubber, size $\frac{3}{4} \times 1\frac{1}{4}$	per dozen, .60 each, .05
Large " " " $1\frac{1}{4} \times 1\frac{5}{8}$	" 1.20 " .10

This is a Plastic Rubber, capable of being kneaded into any desirable shape, and is unexcelled for erasing pencil marks and cleaning drawings. It does the work quickly, leaving the paper very clean, and not injuring the surface. Each piece of rubber separately wrapped in paper

EBERHARD FABER'S IDEAL ERASER

Flat, Soft Finish Pencil Rubber



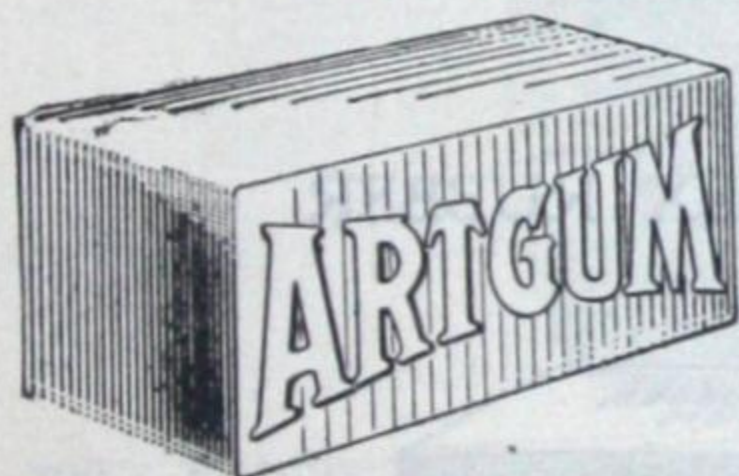
No. 12.	Size $1\frac{1}{2} \times 2\frac{1}{8}$	each, .20	No. 48.	Size $\frac{7}{8} \times 1\frac{5}{8}$	each, .05
24.	" $1\frac{1}{8} \times 1\frac{3}{4}$	" .10	60.	" $\frac{7}{8} \times 1\frac{1}{4}$	" .04
36.	" $1 \times 1\frac{7}{8}$	" .06	72.	" $1\frac{3}{8} \times 1\frac{1}{4}$	" .03

Any of the above, per lb., \$2.00

NOTE.—Thickness of Rubber varies according to size

ARTGUM—THE DRY CLEANER

For Anything Made of Wood, Leather, Cloth or Paper



No. 1.	Size $1\frac{1}{8} \times 1\frac{1}{8}$	each, .05	No. 3.	Size $1\frac{1}{8} \times 2\frac{1}{4} \times 1\frac{1}{8}$	each, .12
2.	" $1 \times 2 \times 1$	" .10	4.	" $2 \times 3 \times 1$	" .15
No. 5.		Size $3 \times 3 \times 2$	each, .30		

THE ERASER FOR THE ARTIST

Artgum removes surface dirt from everything without the use of water or any other liquid, and does not change the color of nor injure the articles rubbed with it. It does not take out grease spots or other stains which have gone below the surface

Artgum cleans gloves, belts, tan leather shoes, white canvas shoes, white kid and suede slippers, hand bags, coat collars, the lapels of coats and vests, straw hats, the band and rims of felt hats, silk and satin goods, furniture coverings, curtains, wall paper, frescoes, pictures, books, drawings, photographs, etc. No danger from fire

To the office-man Artgum is invaluable, as it enables him to remove pencil marks and memoranda from books and papers without erasing anything that is printed, or written in ink

EBERHARD FABER'S CABINET PENCIL RUBBER



NO. 1015

No. 8.	Size $\frac{3}{4} \times 3\frac{3}{4}$	each, .25	No. 40.	Size $\frac{3}{8} \times 2\frac{11}{16}$	each, .05
12.	" $\frac{9}{16} \times 3\frac{1}{4}$	" .15	60.	" $\frac{3}{8} \times 1\frac{15}{16}$	" .03
20.	" $\frac{7}{16} \times 3\frac{1}{8}$	" .10	80.	" $\frac{5}{16} \times 2\frac{1}{16}$	" .03
30.	" $\frac{7}{16} \times 2\frac{13}{16}$	" .06	120.	" $\frac{5}{16} \times 1\frac{9}{16}$	" .03

Any of the above . . . per lb., \$1.80

This Rubber is of oblong shape, one edge being beveled. It is of a soft finish, and especially adapted to Commercial and School use

NOTE.—Thickness of rubber varies according to size

TOWERS' MULTIPLEX RUBBER

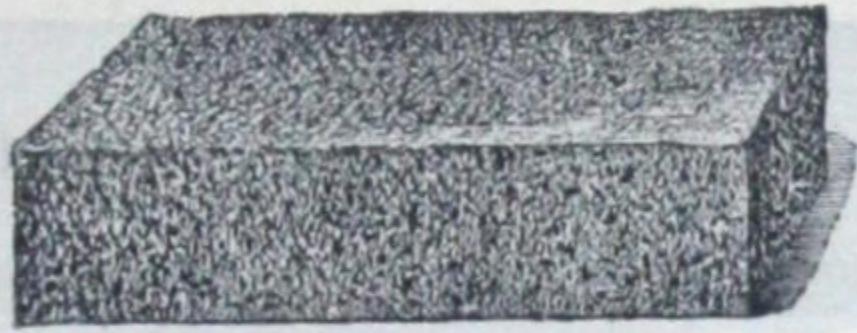


No. 4.	Size $1\frac{1}{2} \times 4\frac{7}{8}$	each, .75	No. 20.	Size $\frac{5}{8} \times 2\frac{3}{4}$	each, .12
6.	" $1\frac{5}{8} \times 3$	" .40	24.	" $\frac{5}{8} \times 2\frac{3}{8}$	" .11
10.	" 1×3	" .25	30.	" $\frac{1}{2} \times 2\frac{1}{4}$	" .10
12.	" $\frac{3}{4} \times 2\frac{7}{8}$	" .20	40.	" $\frac{1}{2} \times 2$	" .06
16.	" $\frac{3}{4} \times 2\frac{5}{8}$	" .15	60.	" $\frac{1}{2} \times 1\frac{5}{8}$	" .04

Any of above . . . per lb., \$2.50

NOTE.—Thickness of rubber varies according to size

SPONGE RUBBER FOR CLEANING DRAWINGS



Size 1×1×1 each, .10	Size 3×3×1 each, .85
" 1×2×1 " .20	" 3×4×1 " 1.00
" 2×2×1 " .40	" 4×4×1 " 1.25
" 2×3×1 " .60	" 4×5×1 " 1.40
" 2×4×1 " .75	" 4×6×1 " 1.60

SPONGE RUBBER, WITH SOLID BACK

Size 1 ×1 ×1 each, .15	Size 2×4×1 each, .90
" 1¾×2¼×⅝ " .40	" 4×6×1 " 1.90

EBERHARD FABER'S RUBBER BANDS

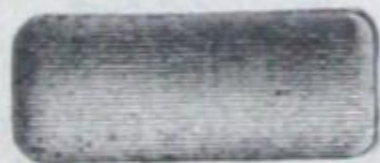


No. 200. Rubber Bands, assorted sizes in ¼ pound boxes per lb., \$4.00
 Containing Nos. 71, 72, 61, 62, 63, 82, 29, 32, 50, 51, 11

ROUND RUBBER STRIPS

For Pencil Point Protectors and Metal Tips of Pencils

HALF GROSS



IN A BOX

No. 1230. Gray, large diameter, for point protectors	per gro., \$1.25
1231. " " " bevel " "	" 1.25
1233. " medium " for pencil tips	" 1.25
1232. " small " for thin tablet pencil tips	" 1.25
1230R. Red, large diameter, for point protectors	" 1.50
1233R. " medium " for pencil tips	" 1.50

UNION INK AND PENCIL ERASER



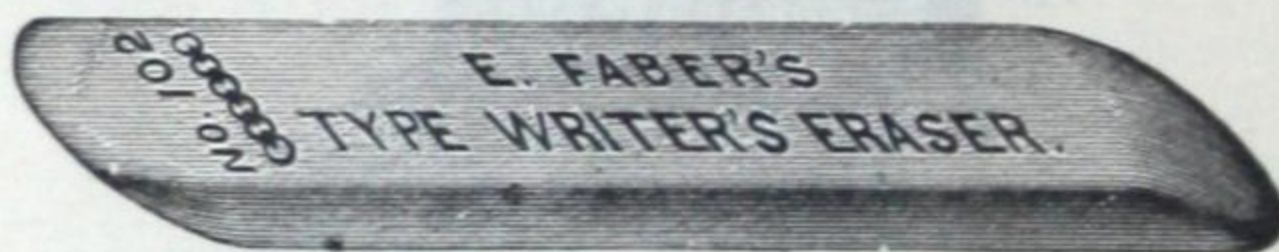
No. 110. "Union" Double Bevel, size $\frac{5}{8} \times 2\frac{5}{8}$ per dozen, .60 each, .06
Packed 1 dozen in a box

VIRGIN RUBBER

Pure Para Gum, Unvulcanized

Virgin Rubber, cut in irregular sizes each, .20 to .30
Packed 1 pound in a box per pound, \$3.00

SMALL TYPE WRITER'S ERASER



No. 102. Type Writer's Eraser, small size $\frac{1}{2} \times 2\frac{3}{4}$ per dozen, .60 each, .06

LARGE TYPE WRITER'S ERASER



No. 104. Type Writer's Eraser, large size $\frac{5}{8} \times 4\frac{1}{8}$ per dozen, \$1.20 each, .12

Type Writers have for a long time felt the want of a good eraser, suitable in shape and composition for correcting their work. It has been the aim to produce an eraser which will fully meet this requirement. The result is the Type Writer's Eraser, which is excellent for the purpose. It will be found with every thoroughly equipped machine. As all good things are imitated, so it is the case with this article, and inferior Type Writer's Erasers have been placed on the market by other manufacturers, of almost the same shape and appearance

Packed 1 dozen in a box

COLUMBIA DOUBLE BEVEL PENCIL RUBBER



No. 114. "Columbia," Mottled, size $\frac{5}{8} \times 2\frac{3}{4}$ per dozen, .60 each, .06

EMERALD AND RUBY PENCIL RUBBERS



No. 111.	"Emerald," Green,	Small size	.	per dozen,	.60	each,	.06
211.	"	Large "	.	"	1.20	"	.12
112.	"Ruby," Red	Small "	.	"	.60	"	.06
212.	"	Large "	.	"	1.20	"	.12

CIRCULAR ERASER, IN GRAY, RED OR GREEN



No. 1080. Circular Eraser, Gray, Red or Green per dozen, .60 each, .06

Mounted on Nickel Plated discs. This Eraser is of a compound that will readily erase both Ink and Pencil marks. The circular shape will be found very useful and convenient, giving a continuous narrow edge
Packed one dozen on cards

A. W. FABER'S INK ERASERS



No. 7075.	Small Ink Eraser,	25 in box,	size 1 × 1½ in.	per 100	\$3.95 each,	.06
7076.	"	"	50 " 1 × 1½ in.	"	3.95 "	.06
7077.	Large	"	25 " 1¼ × 1⅞ in.	"	7.15 "	.12
7078.	Ex. Large	"	12 " 1½ × 2⅜ in.	"	1.80 "	.20

NOTE.—Thickness of rubber varies according to size

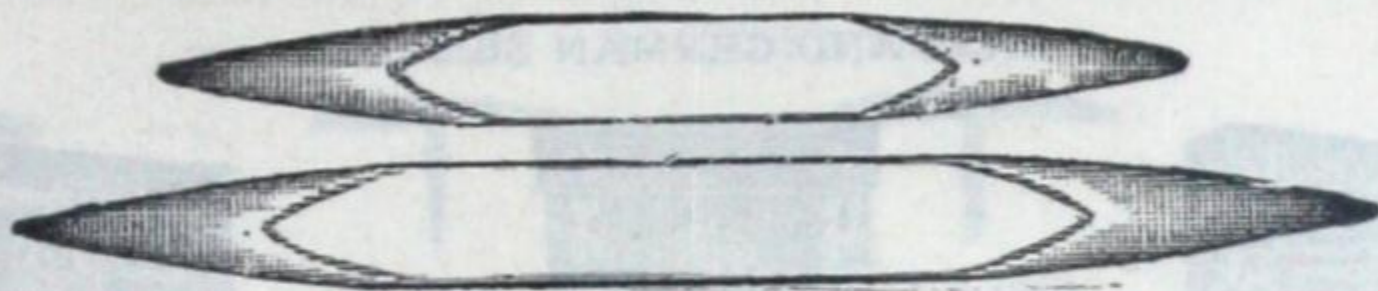
FROST & ADAMS CO.'S

BAY STATE GRAY "PLIABLE" RUBBER



No. 4.	Gray,	size 2⅛ × 3	each,	.65	No. 20.	Gray,	size 1¼ × 1¾	each,	.14
8.	"	" 1⅝ × 2¼	"	.35	24.	"	" 1⅝ × 1¾	"	.12
10.	"	" 1⅝ × 2⅛	"	.30	30.	"	" 1⅝ × 1½	"	.10
12.	"	" 1½ × 2	"	.25	36.	"	" 1 × 1⅜	"	.08
16.	"	" 1⅜ × 2⅞	"	.18	Any of above		per pound,	\$2.00	

NIGRIVORINE RUBBER



F. & A. Co. Small size, American	per dozen, .80	each, .06
“ Medium “ “	“ .80	“ .08
“ Large “ “	“ 1.00	“ .10
French Small size	“ .75	“ .07
“ Medium “	“ 1.00	“ .10
“ Large “	“ 1.15	“ .11

Double Pointed, White Soft Finish. More Durable and Superior to the Chamois Buck Stump as a Blender. The French 1 dozen on a card

CONTE'S WOOD CENTRE RUBBER STUMPS



No. 1. Conté's Crayon and Ink Eraser	each, .12
2. “ “ “	“ .18
3. “ “ “	“ .25

A. W. FABER'S INK AND PENCIL RUBBER IN CEDAR



No. 7016. Pencil Rubber, long	per doz., \$2.00	each, .20
7017. Ink “ “	“ 2.00	“ .20
7018. Ink and Pencil Rubber, long	“ 2.00	“ .20

A. W. FABER'S INK AND PENCIL ERASER
Wood Centre



Small size, each, .20. Medium size, each, .25. Large size, each, .35

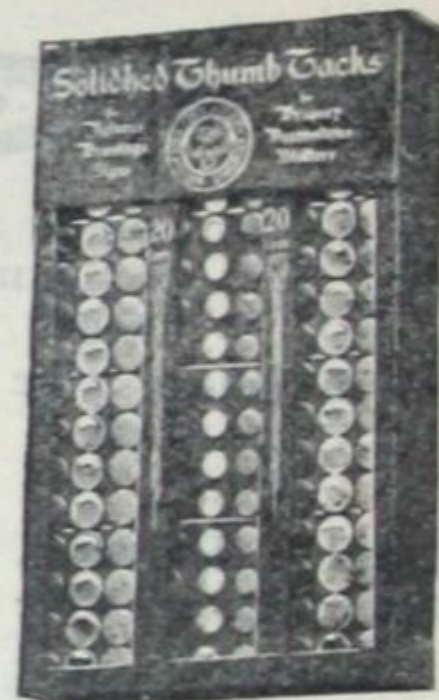
SOLIDHED THUMB TACKS IN DISPLAY CASES
BRASS AND GERMAN SILVER



NO. 1
SOLIDHED DISPLAY



NO. 6
SOLIDHED DISPLAY



NO. 2
SOLIDHED DISPLAY

- No. 1. Contains 3 gro. Brass: 1 gro. each $\frac{3}{8}$ and $\frac{1}{2}$ in. flat and 1 gro. $\frac{1}{2}$ in. bevel . . . display, \$3.00 per doz., .10
- 3. Contains $7\frac{1}{2}$ gro. Assorted: Steel, Brass and German Silver, $\frac{3}{8}$, $\frac{1}{2}$ and $\frac{5}{8}$ in. . . display, 7.50 per doz., .06 to .30
- 4. Contains 8 gro. Assorted: German Silver, Brass and Steel . . . display, 9.50 per doz., .05 to .20
- 5. Contains 3 gro. Brass: style of No. 6, contents as No. 1 . . . display, 3.00 per doz., .10



$\frac{3}{8}$ INCH



$\frac{1}{2}$ INCH



$\frac{5}{8}$ INCH

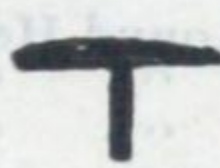
Bevelled Brass Thumb Tacks, $\frac{3}{8}$ inch . . .	per gro., \$1.00	per doz., .10
" " " $\frac{1}{2}$ " . . .	" 1.10	" .12
" " " $\frac{5}{8}$ " . . .	" 1.25	" .15
" German Silver " $\frac{3}{8}$ " . . .	" 1.50	" .15
" " " $\frac{1}{2}$ " . . .	" 1.65	" .18
" " " $\frac{5}{8}$ " . . .	" 1.85	" .20

COLORED CELLULOID THUMB TACKS

- No. 2. Contains 3 gro. Colors: 4 each, Red, White and Blue on a block $\frac{3}{8}$ and $\frac{5}{8}$ in. . . display, 6.00 per doz., .20
- 6. Contains 3 gro. Colors: Red, White and Blue, $\frac{3}{8}$ and $\frac{5}{8}$ in. . . display, 6.00 per doz., .20
- Celluloid Thumb Tacks, $\frac{3}{8}$ inch, Red, White, Blue, Green, Yellow, Black . . . per gro., \$2.25 per doz., .20
- Celluloid Thumb Tacks, $\frac{5}{8}$ inch, Red, White, Blue, Green, Yellow, Black . . . per gro., 2.25 per doz., .20

"GOVERNMENT" THUMB TACKS

BRASS — ROUNDED HEADS



Section

1-2 inch

5-8 inch

3-8 inch

No. 851.	$\frac{3}{8}$ in. per gro.,	\$1.00 doz.,	.10	No. 853.	$\frac{5}{8}$ in. per gro.,	\$1.25 doz.,	.20
852.	$\frac{1}{2}$ " " "	1.10 " "	.15	One dozen on cork			

GERMAN SILVER — ROUNDED HEADS

No. 861.	$\frac{3}{8}$ in. per gro.,	\$1.50 doz.,	.15	No. 863.	$\frac{5}{8}$ in. per gro.,	\$1.85 doz.,	.25
862.	$\frac{1}{2}$ " " "	1.65 " "	.20	One dozen on Cork			

These Tacks are made by a new method, which insures indestructibility; the points will not push through the heads nor pull out

GERMAN SILVER THUMB TACKS

STEEL POINTS, ROUND OR BEVELED HEADS

$\frac{5}{16}$ in.	per doz.,	.25	$\frac{7}{16}$ in.	per doz.,	.30	$\frac{9}{16}$ in.	per doz.,	.45
$\frac{3}{8}$ "	" "	.28	$\frac{1}{2}$ "	" "	.35	$\frac{5}{8}$ "	" "	.55

FROST & ADAMS CO.'S STAMPED STEEL TACKS



No. 1160.	$\frac{5}{16}$ in. per gro.,	.80 doz.,	.10	No. 1164.	$\frac{1}{2}$ in. per gro.,	\$1.20 doz.,	.15
1161.	$\frac{3}{8}$ " " "	1.00 " "	.12				

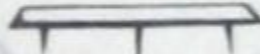
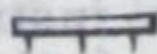
FROST & ADAMS CO.'S THUMB TACKS

BRASS

NICKEL

No. 1351.	$\frac{3}{8}$ in. per gro.,	.80 doz.,	.10	No. 1350.	$\frac{3}{8}$ in. per gro.,	.80 doz.,	.10
1353.	$\frac{1}{2}$ " " "	1.00 " "	.12	1354.	$\frac{1}{2}$ " " "	1.00 " "	.12
1363.	$\frac{5}{8}$ " " "	1.20 " "	.15	1364.	$\frac{5}{8}$ " " "	1.20 " "	.15

CENTRES OF HORN AND METAL



Brass Centre, for use with Dividers,	$\frac{3}{16}$ in. diameter	per doz.	.25
Horn Centre		each,	.10
Horn Centre with German Silver Rim		"	.50
German Silver Centre with Handle.		"	.35

FINE GERMAN SILVER THUMB TACKS

Round Head.	$\frac{5}{16}$ in.	per doz.,	.50	Bev'd Head.	$\frac{5}{16}$ in.	per doz.,	.50
"	$\frac{3}{8}$ "	"	.60	"	$\frac{3}{8}$ "	"	.60
"	$\frac{7}{16}$ "	"	.65	"	$\frac{7}{16}$ "	"	.65
"	$\frac{1}{2}$ "	"	.70	"	$\frac{1}{2}$ "	"	.70
"	$\frac{9}{16}$ "	"	.80	"	$\frac{9}{16}$ "	"	.80
"	$\frac{5}{8}$ "	"	.90	"	$\frac{5}{8}$ "	"	.90

Steel Points screwed in and riveted. One dozen on a cork

FROST & ADAMS CO'S

ROUND POINT STEEL THUMB TACKS

No. 1.	Round Head, $\frac{3}{8}$ in.	per gro.,	.80	per doz.,	.10
2.	" " $\frac{1}{2}$ "	"	1.00	"	.12
3.	" " $\frac{5}{8}$ "	"	1.20	"	.15

BRONZE RUG TACKS

For Fastening Rugs on Hard-wood Floors

Bronze, $\frac{11}{16}$ in.	per gro.,	\$3.00	per doz.,	.30
" $\frac{7}{8}$ in.	"	3.50	"	.35

1 dozen on card, in a box



DRUGGET BRASS PINS

Brass Pins, $\frac{5}{8}$ in.	per gro.,	\$3.00	per doz.,	.30
" $\frac{3}{4}$ "	"	3.75	"	.35

1 gross loose in a box

THUMB TACK-LIFTER

Tack Lifter and Paper Knife, Brass, Nickle Plated, $5\frac{3}{4}$ in. each, .20



A handy and simple instrument to extract thumb tacks. The end of the Lifter is placed under the head of the tack, and takes it out without bending the point or wrenching off the head, as is done by using a knife

The handle of this instrument is a Paper Knife, useful for removing drawings which have been glued to the board

FROST & ADAMS CO.'S
SCHOOL STEEL THUMB TACKS



No. 1



No. 2



No. 3

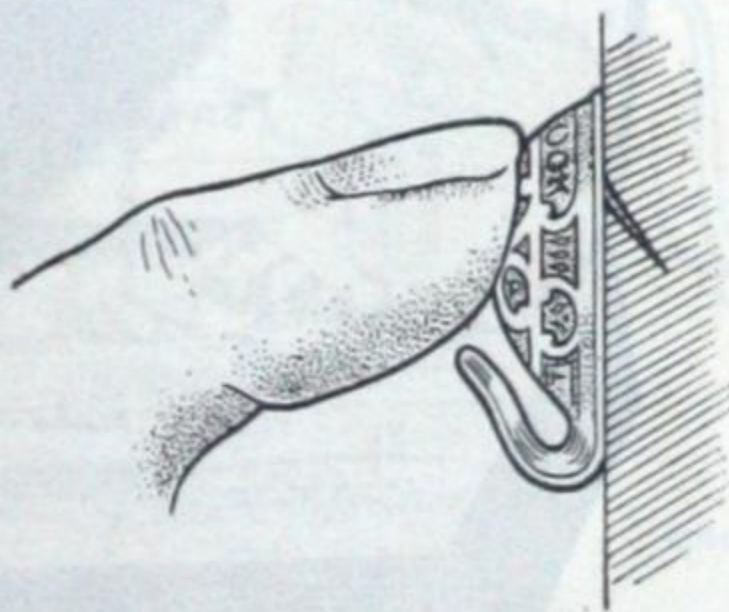
No. 1.	$\frac{3}{8}$ in.	per gross, .30	No. 3.	$\frac{1}{2}$ in.	per gross, .50
2.	$\frac{3}{8}$ "	" .40			

STANDARD STEEL THUMB TACKS.

No. 751	$\frac{3}{8}$ in.	per gross	\$.80,	per doz.	.08
No. 761	$\frac{1}{2}$ in.	"	1.00,	"	.10

BRASS HANDIHOOK

Reg. U. S. Pat. Off.



Brass Handihooks	per gross, \$3.00	per doz., .30
------------------	-------------------	---------------

The Handihook is the most wonderful little hook ever devised. You don't need a hammer or screwdriver for a Handihook. Just push it in with your thumb — that's all. Handy? Well! It's up before you can count three. And it goes in anywhere — wall or woodwork — without leaving marks. And strong? It'll hold 10 pounds without a tremor. You'll find the Handihook just the thing for hanging pictures, signs, calendars, whisks, towels, coats, waists, skirts, utensils, etc.

MOORE PUSH-PINS—IN PACKETS AND CARTONS

Two Sizes—Uses Unlimited

With Glass Heads and Steel Points



NO. 1

Here's a Pin!

Push it in!



NO. 2

No. 1. Small Moore Push-Pins,
 $\frac{1}{2}$ doz. in a packet, 24 packets
 in a carton
 per gro., \$2.40 packet, .10

No. 2. Large Moore Push-Pins,
 $\frac{1}{2}$ doz. in a packet, 24 packets
 in a carton
 per gro., \$2.40 packet, .10



Box contains 72 Packets of Pins, assorted No. 1 and No. 2, and a
 Plush Pad 3 gross pins, \$7.20 packet, .10

This is the latest in Moore Push-Pins—one-half gross of packets, assorted, No. 1 and No. 2, put up in blue-colored box, size $11\frac{3}{4} \times 9\frac{5}{8} \times 2\frac{1}{2}$ inches, with easel-lid and containing a Purple Plush Pad

The Pad contains a resisting material which enables one to test the merits of the Pin by inserting it in Pad

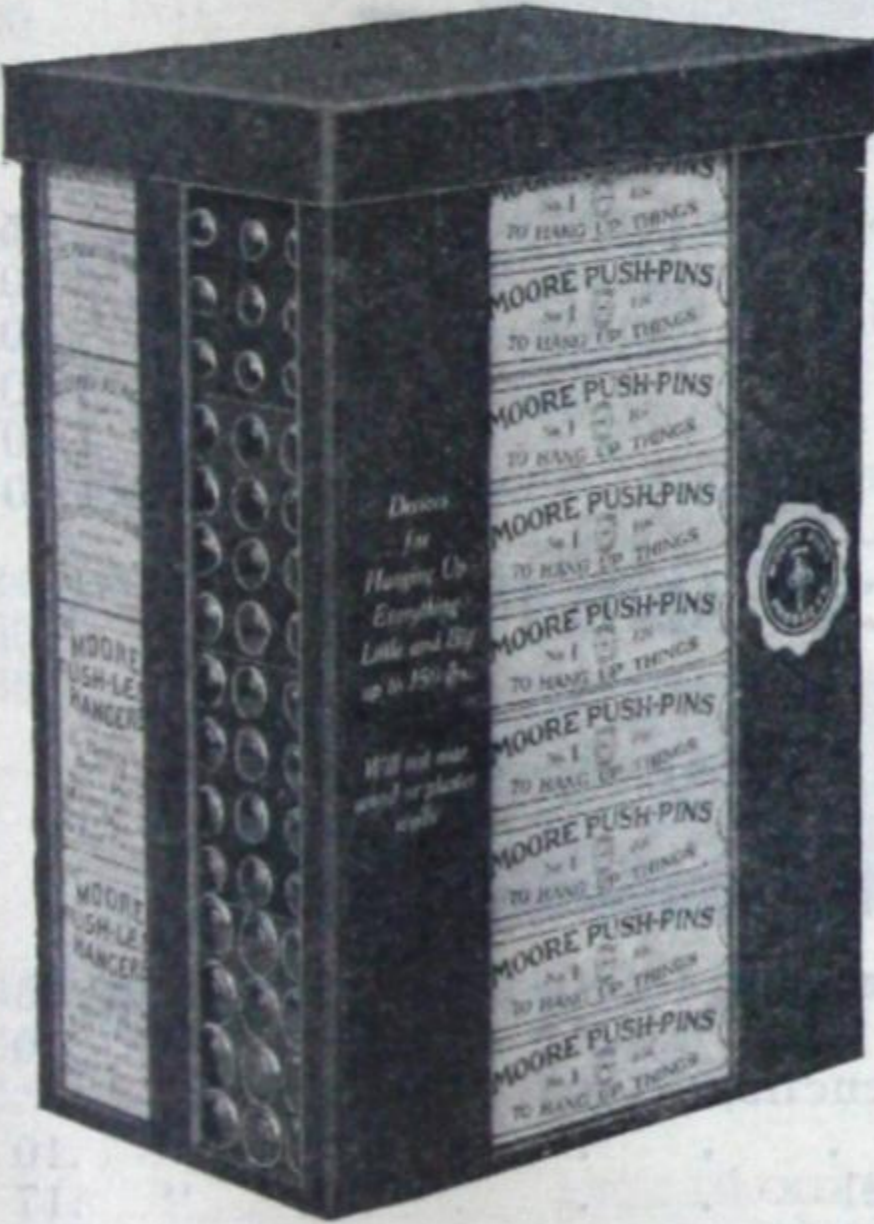
This outfit placed on a show-case by the retailer attracts the attention of patrons to these neat and useful Pins and causes quick sales

Moore Push-Pins are thoroughly practical and supply a long-felt want

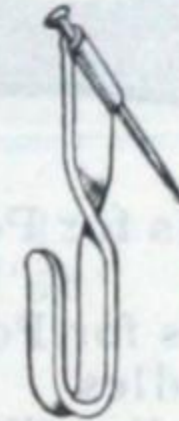
MOORE PUSH-PINS AND PUSHLESS HANGERS

HANG YOUR PICTURES ON INVISIBLE SUPPORTS AND IMPROVE THE APPEARANCE OF YOUR HOME

WILL NOT MAR WOOD OR PLASTER WALLS



NO. 10



NO. 25



NO. 28

GREEN DISPLAY, STYLE D
Dimensions 10½ x 6¾ 4½

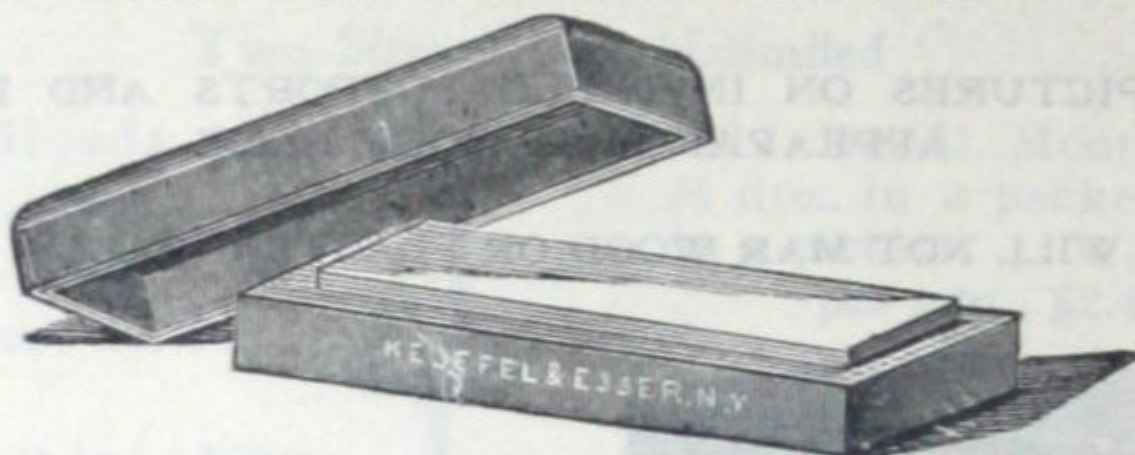
Display, Style D each, \$7.80

Contains an assortment of Moore Push Products as follows :

- 18 10 cent Packets of ½ dozen No. 1 } Moore Push-Pins
- 16 10 cent Packets of ½ dozen No. 2 } Moore Push-Pins
- 16 10 cent Packets of ½ dozen No. 25 } Moore Pushless Hangers
- 4 10 cent Packets of ¼ dozen No. 28 } Moore Pushless Hangers
- 8 10 cent Blocks of 1 dozen No. 31, ⅜ in., } Moore Push Thumbtacks
- 8 10 cent Blocks of 1 dozen No. 32, ½ in., } Moore Push Thumbtacks
- 8 10 cent Blocks of 1 dozen No. 33, ⅝ in., } Moore Push Thumbtacks

- No. 25. Moore Pushless Brass Hangers per ½ doz., .10
- 28. Moore Pushless Brass Hangers per ¼ doz., .10
- 10. Moore Pushpoints, 18 colors, in separate boxes per 2 doz., .10

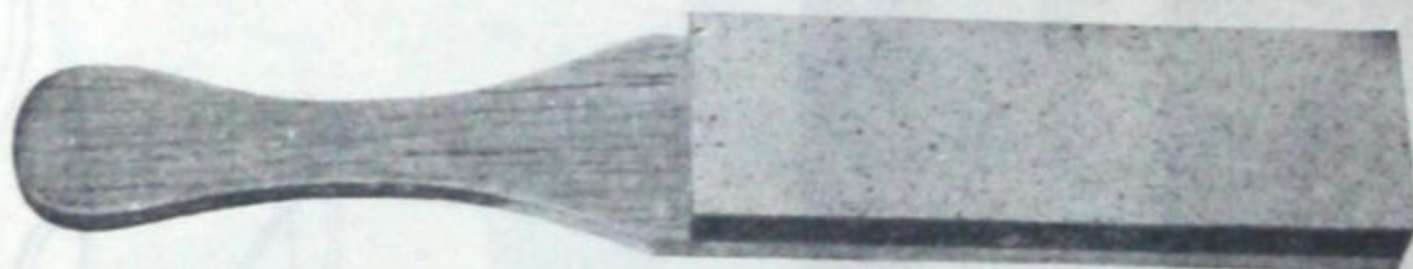
ARKANSAS OIL STONES



NO. 2720

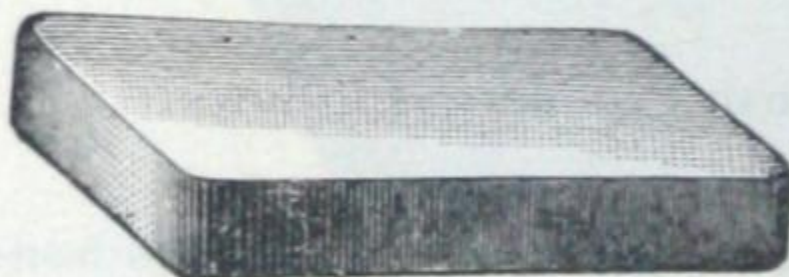
No. 2720.	Arkansas Oil Stone, in case with cover, 3 in.	each, .75
2721.	" " " " 5 "	" 2.00
2725.	" " on wood with handle, 3 in.	" .60
2726.	" " " " 4 "	" 1.00
2727.	" " " " 5 "	" 1.50
2730.	" " Slips	each from .25 to 1.50

SAND PAPER BLOCKS AND FILES



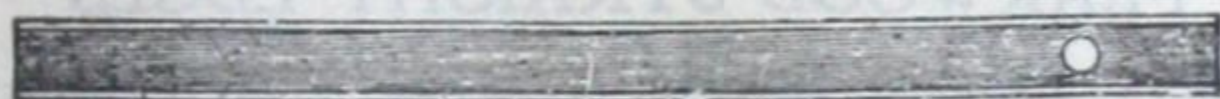
Sand Paper Blocks for Pointing Lead Pencils, 1 1/2 x 4 in.	each, .05
" " " " 2 3/4 x 5 "	" .10
Sand Paper Blocks for Pointing Lead Pencils, 1 1/2 x 4 "	
on Wood Handles	" .10
Files for Pointing Pencils, 5 in., all Steel	" .17
" " " 3 " on Wood Handles	" .25

PAPER WEIGHTS



Lead Paper Weight, covered with leather, 4 x 2 1/4 x 1 3/8 in., about 2 3/4 lbs.	each, \$1.00
Lead Paper Weight, covered with leather, 4 1/4 x 2 1/2 x 1 in., about 3 3/4 lbs.	" 1.35
Iron Paper Weight, with Knob, 2 1/4 in. diam., Nickel Plated	" 1.00
Lead Paper Weight, covered with billiard cloth, round, 2 1/2 x 5/8 in., 1 lb.	" .50
Lead Paper Weight, covered with billiard cloth, round, 2 1/2 x 1 1/8 in., 2 lb.	" 1.00

FROST & ADAMS CO'S STRAIGHT EDGES



HARDWOOD LINED, SQUARE EDGES, THIN

24 inches long	each, .40	42 inches long	each, .85	60 inches long	each, \$2.00
30 "	" .50	48 "	" 1.15	72 "	" 3.00
36 "	" .70	54 "	" 1.50		

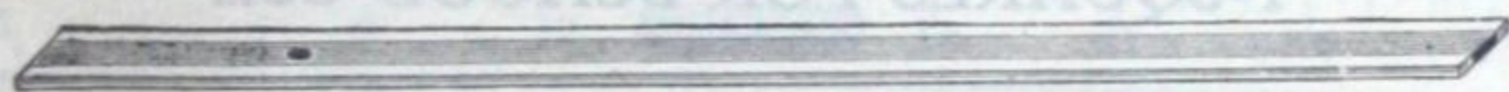
HARDWOOD, BEVELED EDGE, THICK

12 inches long	each, .15	30 inches long	each, .30	48 inches long	each, .60
15 "	" .15	36 "	" .40	60 "	" .80
18 "	" .20	42 "	" .50	72 "	" 1.00
24 "	" .25				

MAHOGANY, EBONY LINED, THIN, SQUARE EDGES

24 inches long	each, .50	42 inches long	each, \$1.00	60 inches long	each, \$2.00
30 "	" .60	48 "	" 1.35	72 "	" 2.75
36 "	" .80	54 "	" 1.60		

MAPLE CELLULOID LINED STRAIGHT EDGES, SQUARE EDGES



12 inches long	each, .45	24 inches long	each, \$1.00	42 inches long	each, \$1.80
15 "	" .55	30 "	" 1.25	48 "	" 2.20
18 "	" .70	36 "	" 1.50		

CELLULOID STRAIGHT EDGES

9 inches long	each, .40	18 inches long	each, .75	30 inches long	each, \$1.25
12 "	" .50	21 "	" .85	36 "	" 1.50
15 "	" .60	24 "	" 1.00	42 "	" 2.00

STEEL, NICKEL PLATED, WITH SQUARE EDGES

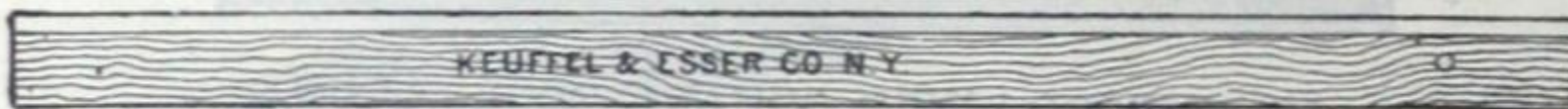
15 in. long, 1 1/8 wide, 1/16 thick	each, \$1.25	42 in. long, 2 1/4 wide, 1/16 thick	each, \$5.00
18 " 1 1/4 " 1/16 "	" 1.50	48 " 2 1/2 " 1/14 "	" 6.00
24 " 1 1/2 " 1/8 "	" 2.00	60 " 2 3/4 " 1/2 "	" 8.50
30 " 1 3/4 " 1/8 "	" 3.00	72 " 3 " 1/10 "	" 12.00
36 " 2 " 1/8 "	" 4.00		

STEEL, NICKEL PLATED, ONE EDGE BEVELED

15 in. long, 1 1/8 wide, 1/14 thick	each, \$1.75	42 in. long, 2 1/4 wide, 1/10 thick	each, \$ 6.50
18 " 1 1/4 " 1/14 "	" 2.00	48 " 2 1/2 " 1/10 "	" 8.00
24 " 1 1/2 " 1/13 "	" 3.00	60 " 2 3/4 " 1/8 "	" 11.00
30 " 1 3/4 " 1/12 "	" 4.00	72 " 3 " 5/32 "	" 15.00
36 " 2 " 1/2 "	" 5.00		

Dividing Steel Straight Edges, to sixteenths of inches . per foot, \$1.00

FROST & ADAMS CO.'S
PEARWOOD STRAIGHT EDGES



NO. 2250

No. 2250. Pearwood, one edge bevelled

12 in.	each, .12	24 in.	each, .25	36 in.	each, .40
15 "	" .15	30 "	" .30	42 "	" .50
18 "	" .20				

HARD RUBBER STRAIGHT EDGES

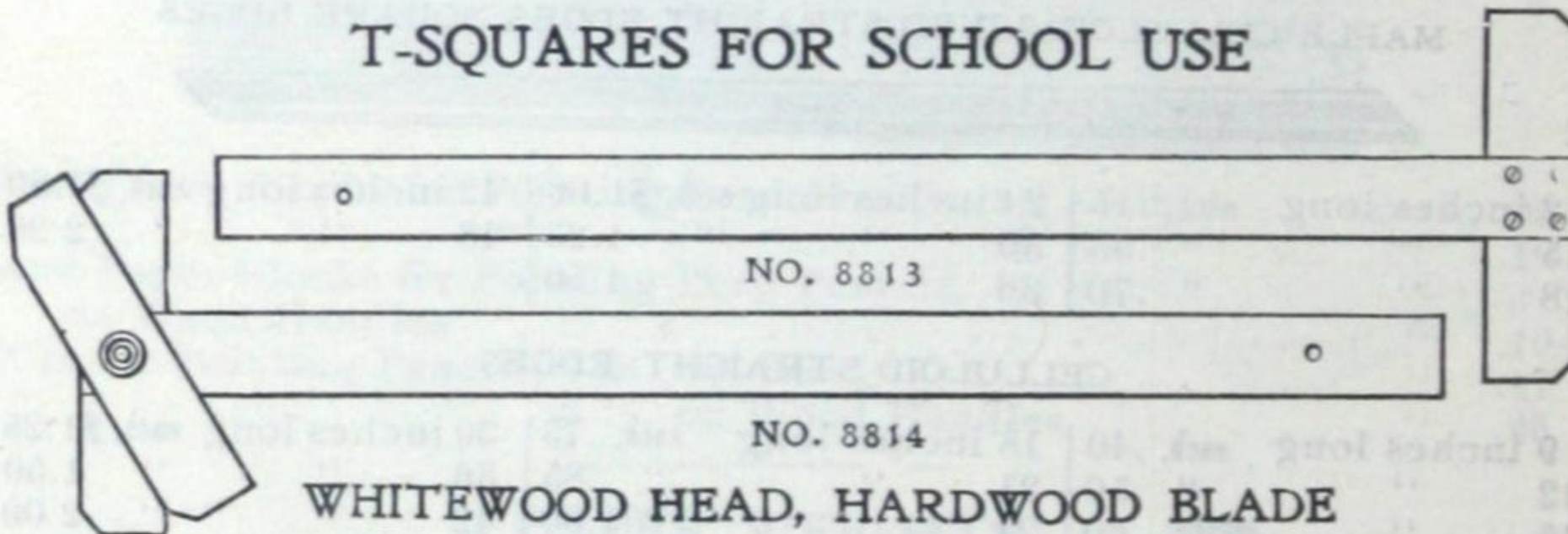


NO. 1930

No. 1930. Hard Rubber Straight Edges with Square Edges

12 in.	each, .35	24 in.	each, .75	36 in.	each, \$1.35
15 "	" .40	30 "	" 1.00	42 "	" 1.75
18 "	" .50				

T-SQUARES FOR SCHOOL USE



NO. 8813

NO. 8814

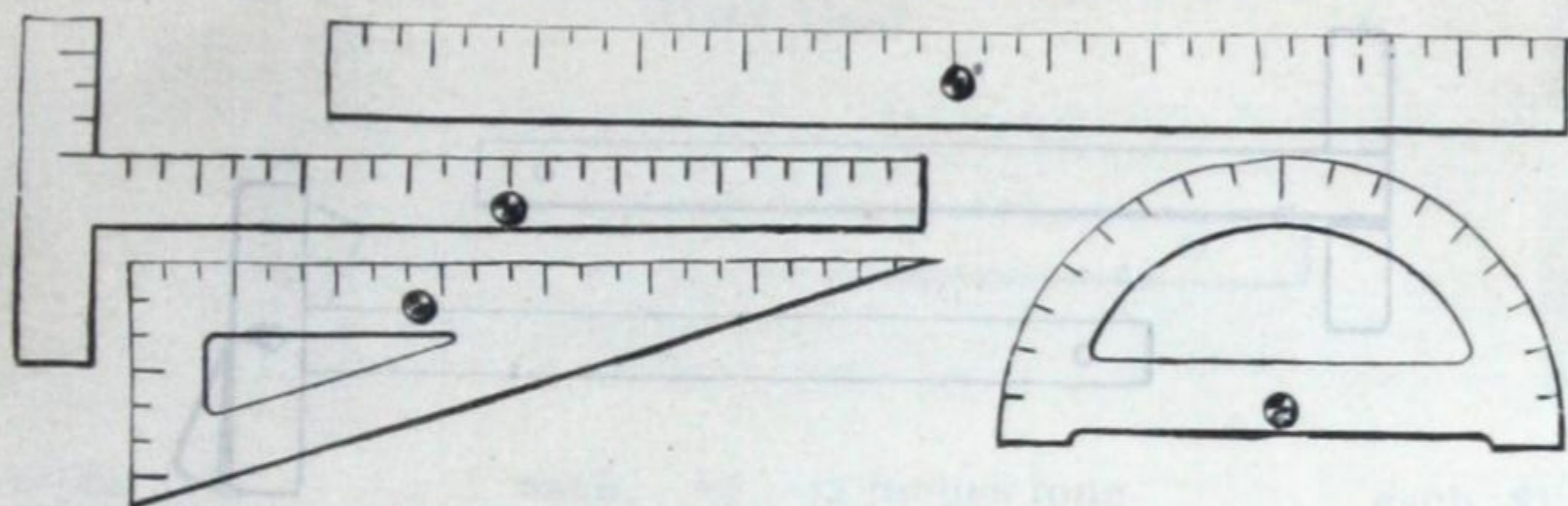
WHITEWOOD HEAD, HARDWOOD BLADE

No. 8813. Fixed Head		No. 8814. Shifting Head	
15 in.	per doz., \$1.95 each, .20	15 in.	per doz., \$3.75 each, .30
18 "	" 2.25 " .25	18 "	" 4.75 " .40
21 "	" 2.70 " .30	21 "	" 5.65 " .45
24 "	" 3.10 " .35	24 "	" 6.55 " .55
30 "	" 3.60 " .40	30 "	" 7.70 " .65
36 "	" 4.20 " .45	36 "	" 9.00 " .75

HARDWOOD HEAD, HARDWOOD BLADE

No. 8815. Fixed Head		No. 8816. Shifting Head	
15 in.	per doz., \$2.50 each, .25	15 in.	per doz., \$6.25 each, .55
18 "	" 2.85 " .30	18 "	" 7.60 " .65
21 "	" 3.30 " .35	21 "	" 8.25 " .70
24 "	" 3.85 " .40	24 "	" 9.00 " .75
30 "	" 4.50 " .45	30 "	" 10.25 " .90
36 "	" 5.25 " .50	36 "	" 11.20 " 1.00

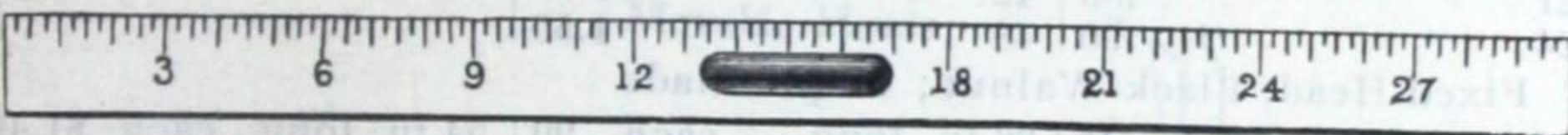
BLACKBOARD SET



8840

8840. Blackboard Set of Hardwood, contains Straight Edge, 36 inch, T Square, 24 inch, Triangle, 24 inch, all divided to inches and eighths, Protractor, 15½ inch, divided to degrees per set, \$6.00

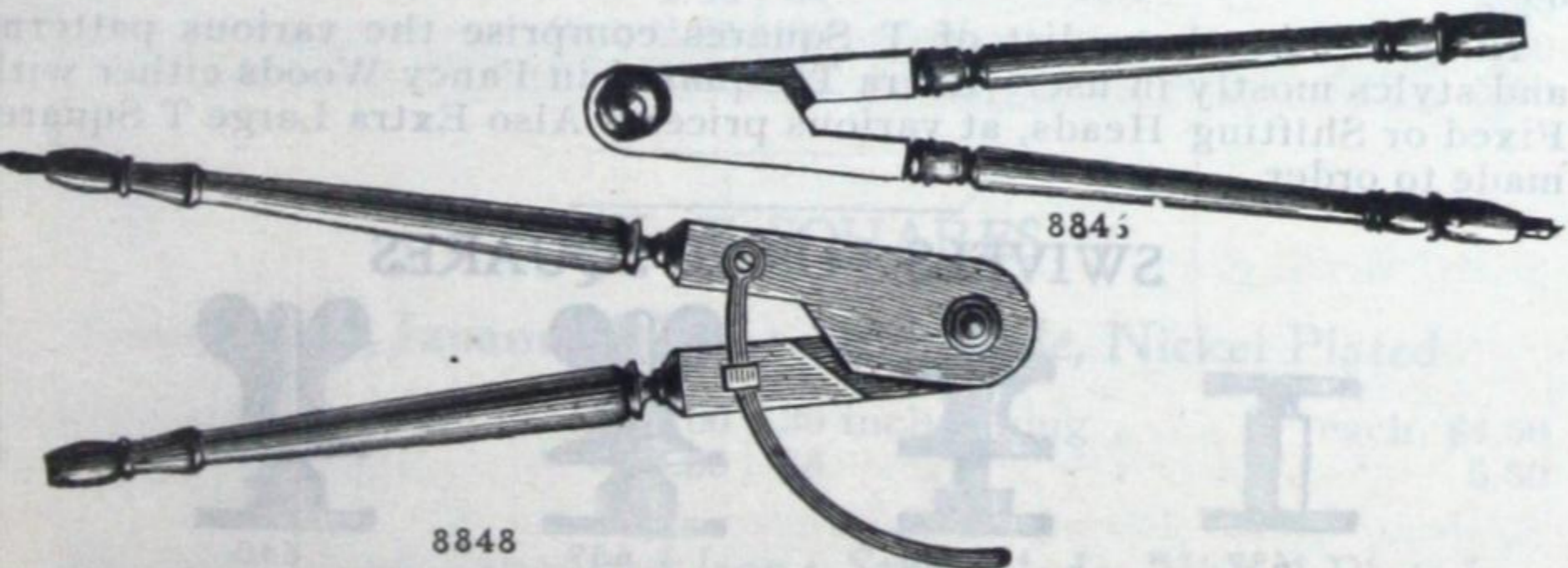
BLACKBOARD RULERS



8842

8842. "Standard" Blackboard Rulers, well seasoned Hardwood, well finished, with a substantial and convenient handle, Ruler 30 inch, divided to inches and eighths each, .60

BLACKBOARD DIVIDERS

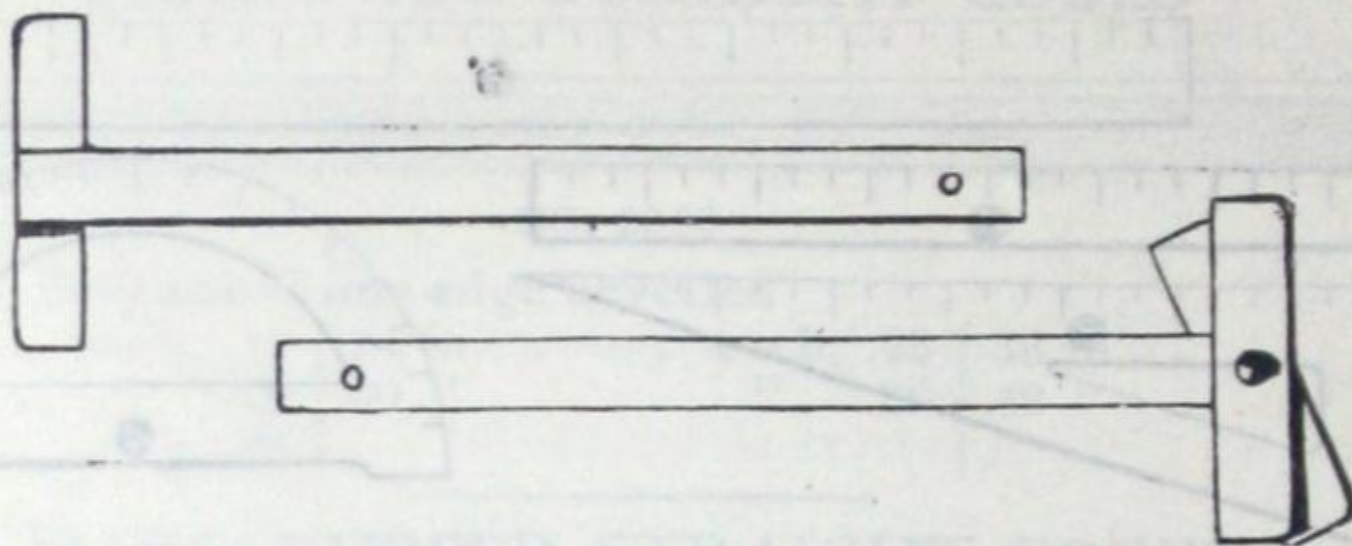


8845

8848

846. Wooden Blackboard Dividers, joint with japanned Thumbscrew, 16 in., each, \$1.50 20 in., each, \$1.75
 848. Wooden Blackboard Dividers, with japanned arc, and Clampscrew, 20 in., each, \$2.50 24 in., each, \$2.75

FROST & ADAMS CO'S T SQUARES



Fixed Head, Pearwood, well seasoned

15 in. long	each, .35	30 in. long	each, .60	54 in. long	each, \$1.35
18 " "	" .40	36 " "	" .70	60 " "	" 1.50
21 " "	" .45	42 " "	" .80	72 " "	" 2.00
24 " "	" .50	48 " "	" 1.25		

Shifting Head, Pearwood, well seasoned, Swivel

15 in. long	each, .70	30 in. long	each, \$1.00	54 in. long	each, \$2.00
18 " "	" .75	36 " "	" 1.15	60 " "	" 2.25
21 " "	" .80	42 " "	" 1.25	72 " "	" 2.50
24 " "	" .90	48 " "	" 1.50		

Fixed Head, Black Walnut; Maple Blade

18 in. long	each, .45	36 in. long	each, .90	54 in. long	each, \$1.40
21 " "	" .50	42 " "	" 1.05	60 " "	" 1.75
24 " "	" .60	48 " "	" 1.20	72 " "	" 2.00
30 " "	" .75				

Shifting Head, Black Walnut; Maple Blade, Swivel

18 in. long	each, \$1.00	36 in. long	each, \$1.50	54 in. long	each, \$2.10
21 " "	" 1.10	42 " "	" 1.65	60 " "	" 2.50
24 " "	" 1.20	48 " "	" 1.85	72 " "	" 3.00
30 " "	" 1.35				

NOTE.—The above list of T Squares comprise the various patterns and styles mostly in use. Extra T Squares in Fancy Woods either with Fixed or Shifting Heads, at various prices. Also Extra Large T Squares made to order

SWIVELS FOR T SQUARES



637



638



639

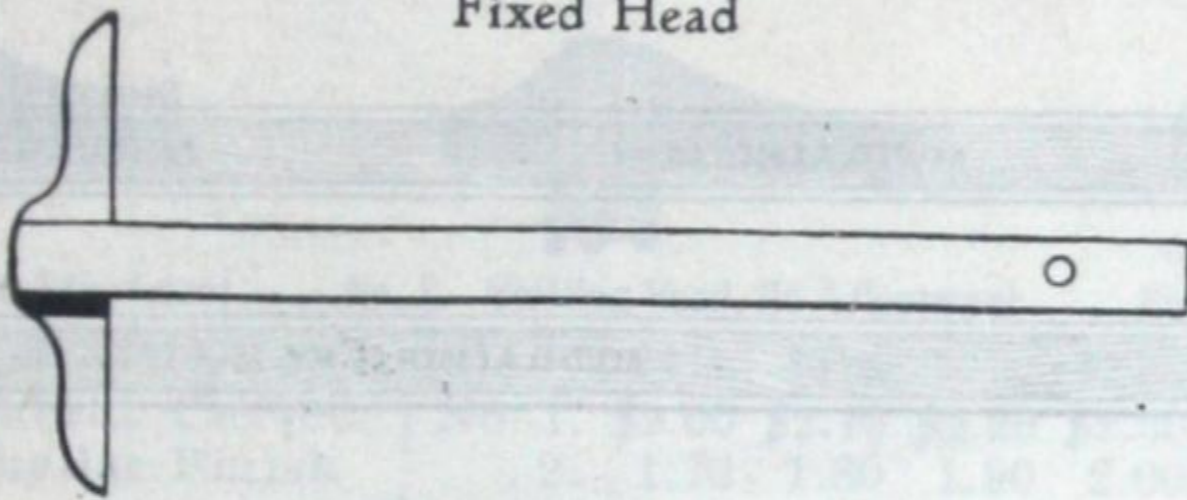


640

No. 637.	Common Swivel, Brass	each, .25
638.	Fine Swivel, Milled Head, Brass	" .40
639.	Fine Swivel, with Nut and Washer, Brass	" .80
640.	Fine Swivel, with Nut and Washer, German Silver	" 1.00

MAHOGANY EBONY-LINED T SQUARES

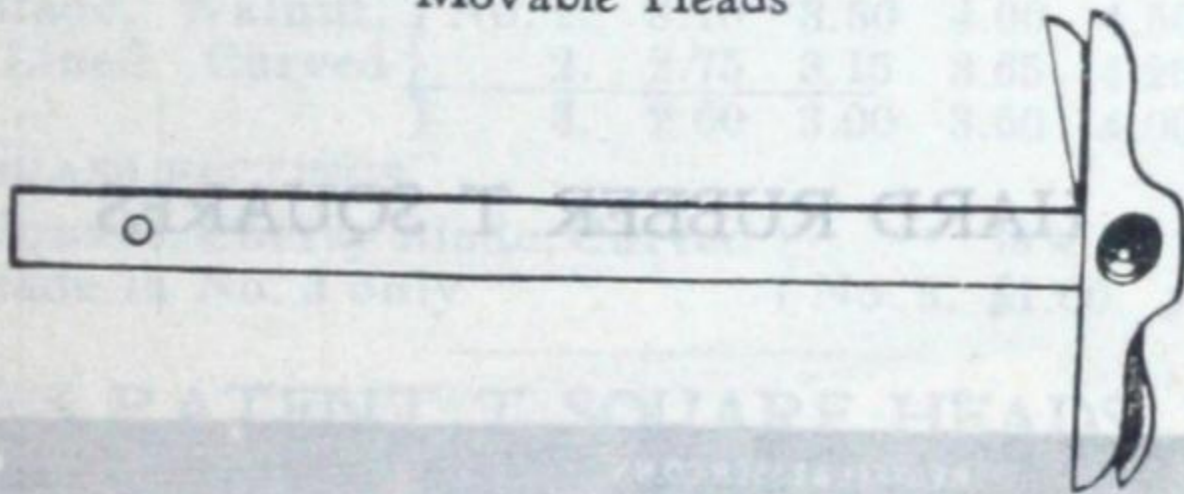
Fixed Head



18 inches long	each, .85	42 inches long	each, \$1.60
21 " "	" .90	48 " "	" 1.85
24 " "	" 1.00	54 " "	" 2.25
30 " "	" 1.20	60 " "	" 3.50
36 " "	" 1.40	72 " "	" 4.50

MAHOGANY EBONY-LINED T SQUARES

Movable Heads



4 inches long	each, \$1.75	48 inches long	each, \$2.80
6 " "	" 2.00	54 " "	" 3.25
8 " "	" 2.25	60 " "	" 4.50
12 " "	" 2.50	72 " "	" 5.50

STEEL T SQUARES

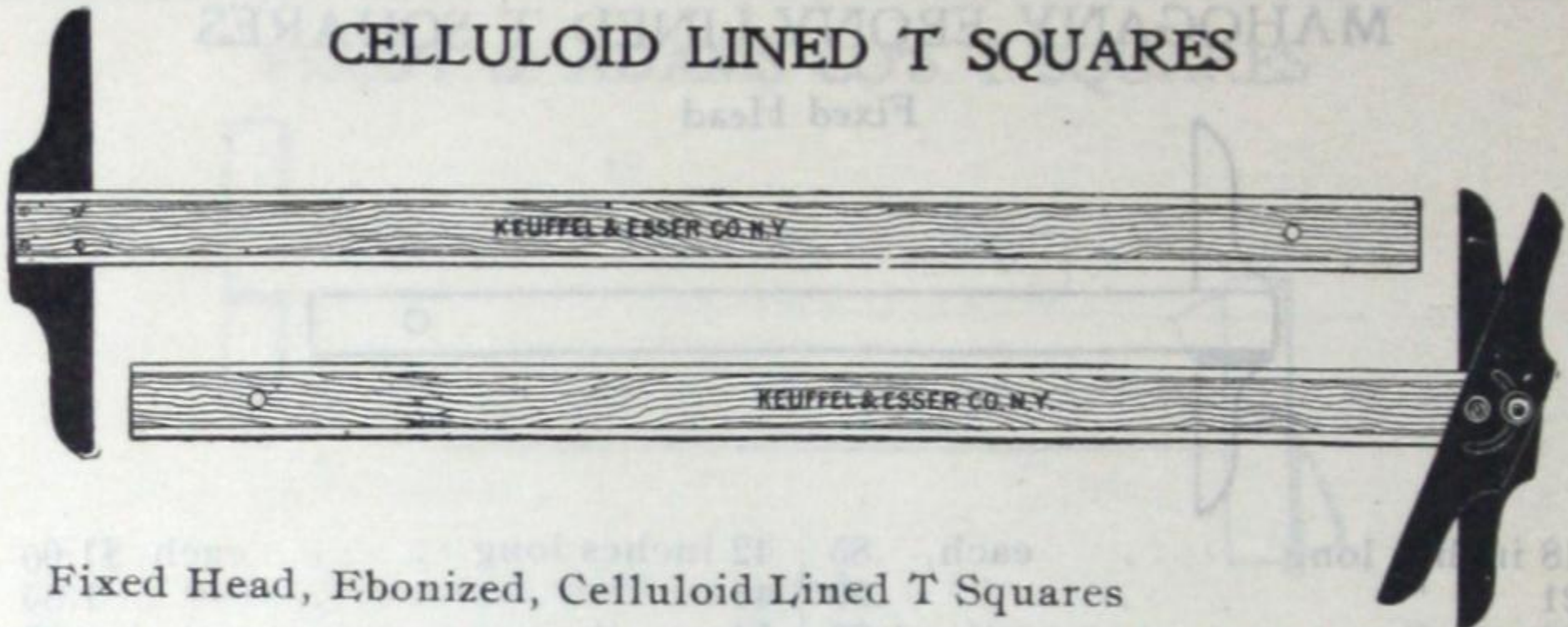
Fixed Head, Japanned Iron; Steel Blade, Nickel Plated

18 inches long	each, \$3.00	30 inches long	each, \$4.50
24 " "	" 3.50	36 " "	" 5.50

Movable Head, Japanned Iron; Steel Blade, Nickel Plated

18 inches long	each, \$4.25	30 inches long	each, \$5.75
24 " "	" 5.00	35 " "	" 6.75

CELLULOID LINED T SQUARES



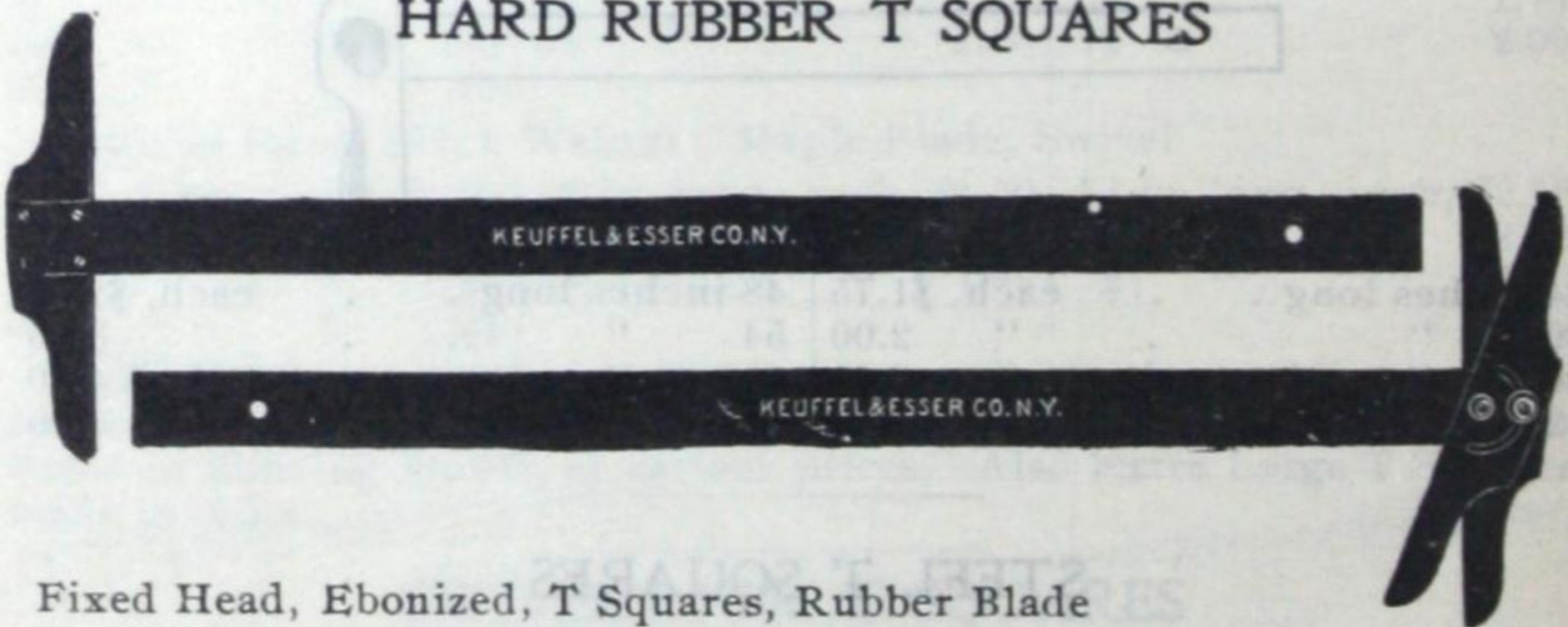
Fixed Head, Ebonized, Celluloid Lined T Squares

18 inches	each, \$1.10	30 inches	each, \$1.85	42 inches	each, \$2.50
24 "	" 1.50	36 "	" 2.15	48 "	" 3.00

Shifting Head, Ebonized, Celluloid Lined T Squares, with 2 fine Brass Swivels. The 18 inch Squares have one Swivel

18 inches	each, \$1.90	30 inches	each, \$2.80	42 inches	each, \$3.60
24 "	" 2.45	36 "	" 3.20	48 "	" 4.20

HARD RUBBER T SQUARES



Fixed Head, Ebonized, T Squares, Rubber Blade

6 inches	each, .40	15 inches	each, .75	30 inches	each, \$1.60
9 "	" .50	18 "	" .90	36 "	" 2.00
12 "	" .60	24 "	" 1.25		

Shifting Head, Ebonized, T Squares, Rubber Blade, with two fine Brass Swivels. Sizes 18 inches and smaller have one Swivel

12 inches	each, \$1.10	18 inches	each, \$1.60	30 inches	each, \$2.50
15 "	" 1.25	24 "	" 2.00	36 "	" 3.00

DEANE'S T SQUARES OF ALL KINDS



No. 1. Unlimited Adjustment No. 2. Shifting Head, No Adjustment No. 3. Limited Adjustment

NICKEL FITTINGS		24 in.	30 in.	36 in.	42 in.	48 in.	54 in.	60 in.
Maple, Walnut Curved, Head, Shellac Finish	No. 1.	\$2.00	\$2.10	\$2.20	\$2.30	\$2.50	\$2.75	\$3.00
	2.	1.70	1.80	1.90	2.00	2.25	2.50	2.75
	3.	1.50	1.60	1.70	1.80	2.00	2.25	2.50
Ashwood, Maple Lined, Walnut Curved Head, Shellac Finish	No. 1.	2.15	2.25	2.35	2.50	2.75	3.00	3.50
	2.	1.80	1.90	2.00	2.15	2.40	2.75	3.25
	3.	1.65	1.75	1.85	2.00	2.25	2.50	3.00
Mahogany, Ebony Lined, Ebonized Curved Head, Shellac Finish	No. 1.	2.30	2.50	2.65	2.85	3.00	3.30	3.75
	2.	2.00	2.15	2.30	2.50	2.75	3.00	3.50
	3.	1.80	2.00	2.15	2.35	2.50	2.75	3.25
Mahogany, Amber Lined Ebonized Curved Head, Shellac Finish	No. 1.	3.50	4.00	4.50	5.20	6.00	7.00	8.00
	2.	3.15	3.65	4.25	4.75	5.50	6.50	7.70
	3.	3.00	3.50	4.00	4.60	5.40	6.40	7.50
Rubber Blade, Walnut, Maple Lined Curved Head	No. 1.	3.10	3.50	4.00	4.50			
	2.	2.75	3.15	3.65	4.25			
	3.	2.60	3.00	3.50	4.00			

BRASS FITTINGS

School T Square, Cherry Blade, Curved Head, made in No. 3 only	18 in.	24 in.	30 in.	36 in.
	No. 3. \$1.00	\$1.15	\$1.20	\$1.24

DEANE'S PATENT T SQUARE HEADS, NO BLADES

NICKEL FITTINGS		24 in.	30 in.	36 in.	42 in.	48 in.	54 in.	60 in.
Walnut, Maple Lined, or Ebonized	No. 1.	\$1.75	\$1.80	\$1.85	\$1.90	\$2.00	\$2.15	\$2.25
	2.	1.45	1.50	1.55	1.50	1.70	1.85	1.95
	3.	1.25	1.30	1.35	1.40	1.50	1.65	1.75
Mahogany, Ebony Lined	No. 1.	2.00	2.05	2.10	2.15	2.25	2.40	2.60
	2.	1.70	1.75	1.80	1.85	1.95	2.10	2.30
	3.	1.50	1.55	1.60	1.65	1.75	1.90	2.10

Cherry, Brass Fittings, No. 3, 18 in., .75; 24 in., .85; 30 in., .95; 36 in., \$1.00

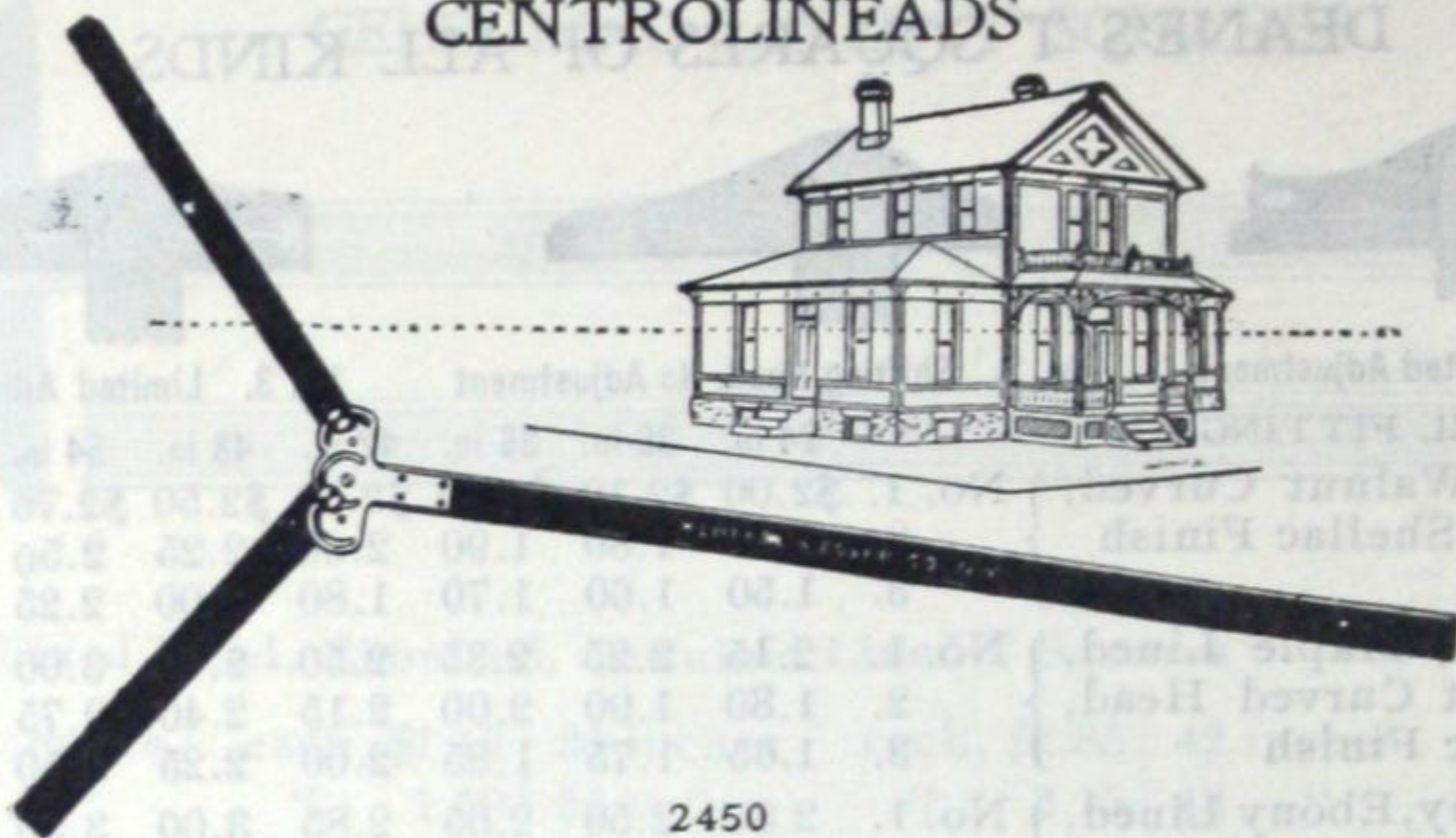
PROTRACTOR, OR "CLIMAX," T SQUARES

NICKEL FITTINGS

Mahogany, Ebony Lined Blades and Heads, Polished	30 in.	36 in.	42 in.
	\$5.50	\$8.00	\$7.00
Mahogany, Amber Lined Blades, Ebonized Heads, Polished	30 in.	36 in.	42 in.
	6.50	7.25	8.50

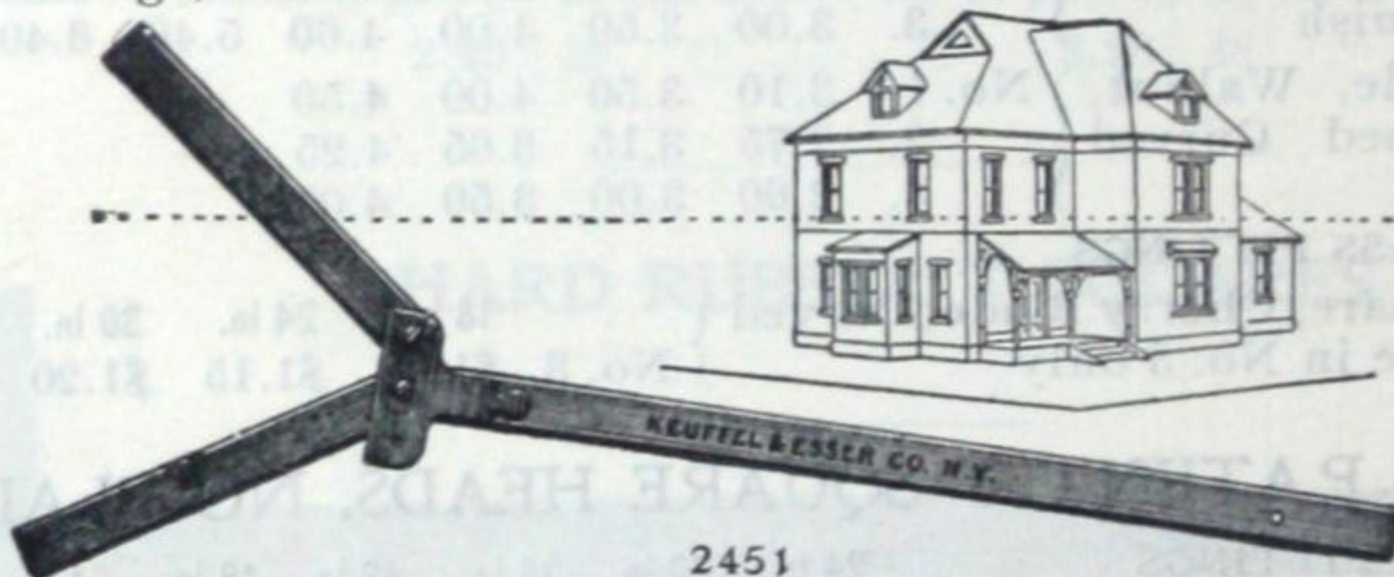


CENTROLINEADS



2450

2450. Centrolinead, Ebony, German Silver Mountings, Blade 42 in., Arms 15 in., 2 Studs each, \$11.00
- 2450-2. The same as 2450, Hardwood Ebonized, Brass Mountings, Blade 42 in., Arms 15 in., 2 Studs " 7.00

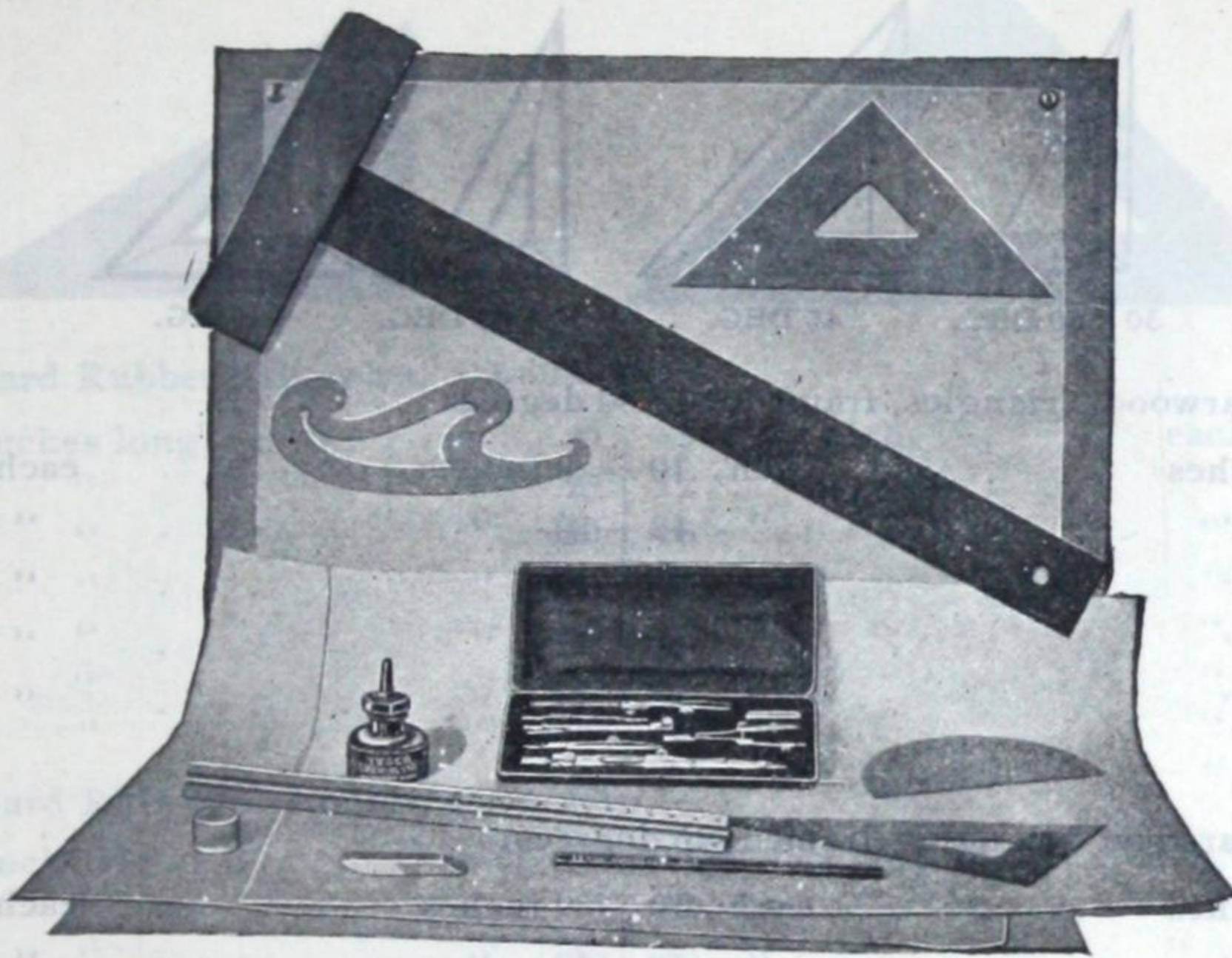


2451

2451. English Centrolinead, Pearwood, Brass Swivels, 2 Studs, Blade 24 in., Arms 10 in. each, \$3.00
2452. The same as 2451, Blade 30 in., Arms 11 in. " 3.50
2453. The same as 2451, Blade 36 in., Arms 12 in. " 4.00

Used when vanishing point of a perspective drawing is beyond the drawing board, as follows: Draw a horizontal line (line of sight) and a vertical line crossing it near end toward vanishing point. Place the two studs in this vertical line, equidistant from the horizontal, and about 8 to 16 inches from it, according to size of angle. The angle at which two arms are to be set, is determined as follows: Multiply distance of either of the studs (from horizontal line) by itself, divide product by distance of vanishing point from vertical line, and quotient will be distance from vertical line toward drawing, at which centre of head (the point at which lines of inner edges of arms intersect horizontal line) should be placed. For instance, if either stud be 8 inches from horizontal line and vanishing point 24 inches beyond it, then $8 \times 8 = 64$ divided by $24 = 2\frac{2}{3}$ i. e. the point of intersection should be placed $2\frac{2}{3}$ inches from vertical line toward drawing

"THE ACADEMIC" DRAWING OUTFIT



Complete Outfit \$9.00

Outfit contains velvet-lined leather case with all German Silver Instruments. One Compass, $5\frac{1}{2}$ in., with Pen Point, Loose Needle Point Pencil Point, Lengthening Bar; One Bow Pen, $3\frac{1}{2}$ in., with Metal Handle; One Ruling Pen, $5\frac{1}{2}$ in., with Steel Points and Ebony Handle; One Adjusting Key; One Box of Extra Leads for Compass

One Drawing Board, $16\frac{1}{2} \times 22\frac{1}{2}$ in.

One Pear-Wood T Square, $22\frac{1}{2}$ in.

One 6 in. Protractor

One 7 in. 45 degrees Transparent Celluloid Triangle

One 8 in. 60 degrees Transparent Celluloid Triangle

One 12 in. Boxwood Triangular Scale, divided $\frac{3}{16}$, $\frac{3}{32}$, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $2\frac{1}{4}$ and 3 in. to foot and one edge 16 to inch

One Transparent Celluloid, Irregular Curve

Thumb Tacks

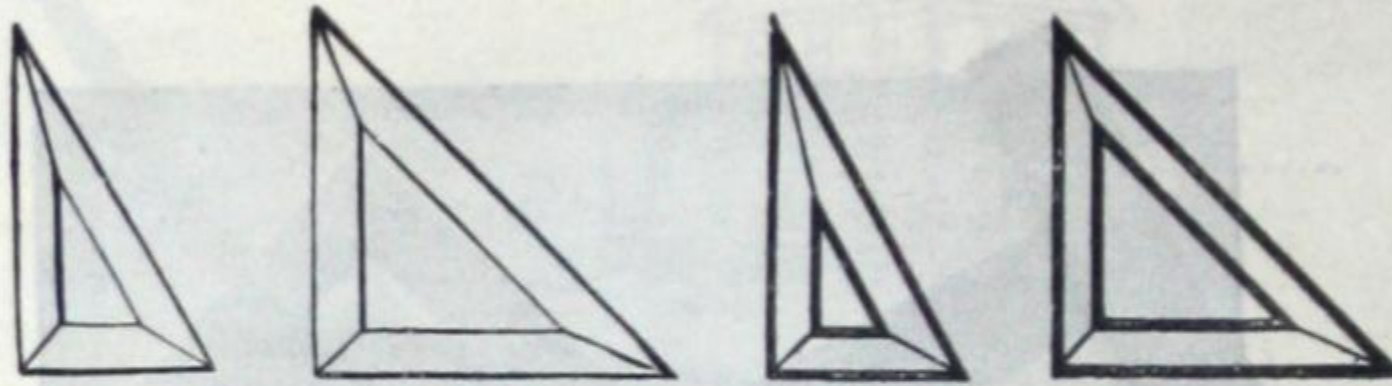
One Drawing Pencil

One $\frac{3}{4}$ -oz. bottle Waterproof Drawing Ink

One Ink and Pencil Eraser

One-quarter dozen Sheets Drawing Paper, 15×20 in.

FROST & ADAMS CO'S PEARWOOD TRIANGLES



30 x 60 DEG. 45 DEG. 30 x 60 DEG. 45 DEG.

Pearwood Triangles, framed, 30x60 degrees

4 inches	. . .	each, .10	9 inches	. . .	each, .27
5 "	. . .	" .12	10 "	. . .	" .30
6 "	. . .	" .15	11 "	. . .	" .35
7 "	. . .	" .20	12 "	. . .	" .38
8 "	. . .	" .25	14 "	. . .	" .40

Pearwood Triangles, framed, 45 degrees

4 inches	. . .	each, .10	9 inches	. . .	each, .30
5 "	. . .	" .12	10 "	. . .	" .30
6 "	. . .	" .15	11 "	. . .	" .35
7 "	. . .	" .20	12 "	. . .	" .40
8 "	. . .	" .25	14 "	. . .	" .45

BAR FOR BEAM COMPASSES



Hardwood Bars for Beam Compasses

24 inches	. . .	each, .25	42 inches	. . .	each, .40
30 "	. . .	" .30	48 "	. . .	" .50
36 "	. . .	" .35	60 "	. . .	" .65

FROST & ADAMS CO'S HARD RUBBER TRIANGLES



Hard Rubber Triangles, 30x60 degrees

4 inches long	each, .20	11 inches long	each, .75
5 " "	" .25	12 " "	" .90
6 " "	" .30	13 " "	" 1.00
7 " "	" .35	14 " "	" 1.25
8 " "	" .45	15 " "	" 1.40
9 " "	" .55	16 " "	" 1.50
10 " "	" .65	17 " "	" 1.75
		18 " "	" 1.90

Hard Rubber Triangles, 45 degrees

4 inches long	each, .25	11 inches long	each, \$1.10
5 " "	" .35	12 " "	" 1.30
6 " "	" .45	13 " "	" 1.60
7 " "	" .50	14 " "	" 1.85
8 " "	" .65	15 " "	" 2.15
9 " "	" .75	16 " "	" 2.50
10 " "	" .95	17 " "	" 2.70
		18 " "	" 3.00

RUBBER PROTRACTORS

Circular Rubber Protractor, 6 inches Diameter, 1/2 Degrees	each, \$3.75
" " " 8 " " 1/2 " "	" 5.00
" " " 10 " " 1/2 " "	" 16.00

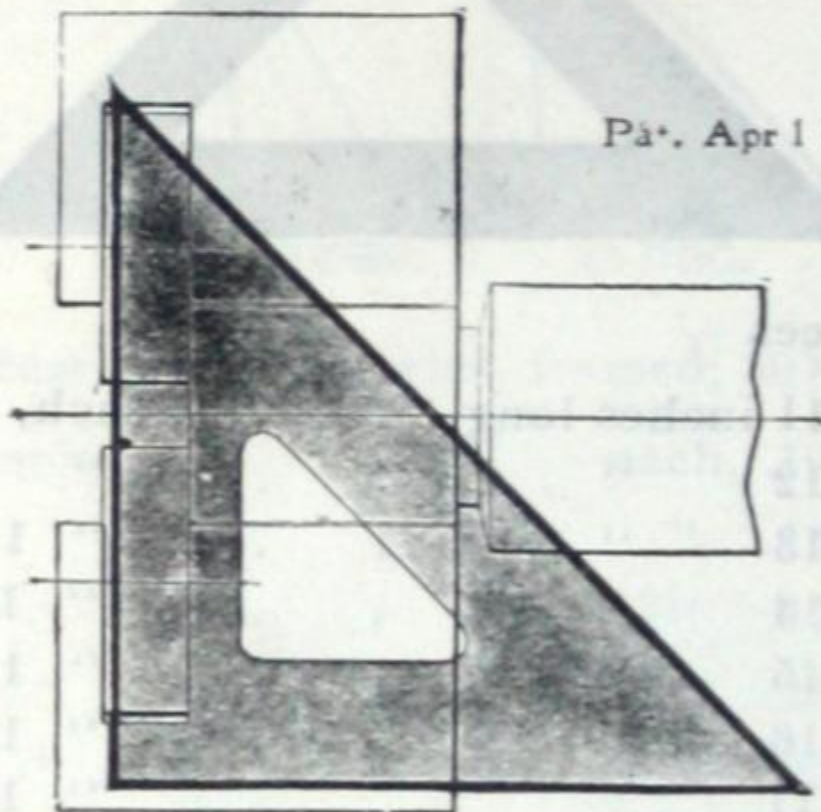
COPENHAGEN SHIP CURVES OF HARD RUBBER

120 Curves, in Walnut Case	per set, \$65.00
Separate Curves,	each .30 to 1.50

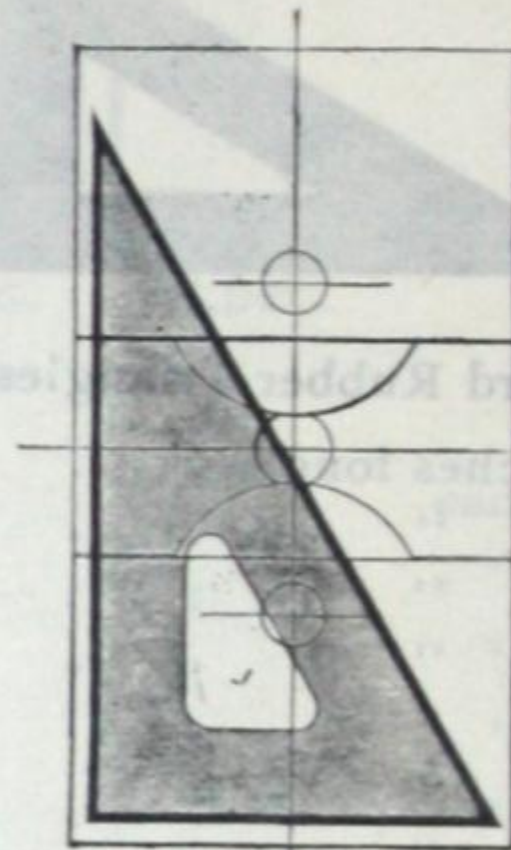
The above made of Celluloid, if desired

FROST & ADAMS CO.'S
OPAQUE EDGE, TRANSPARENT TRIANGLES

Cellu'oid



45 DEGREES



30 x 60 DEGREES

Opaque Edge Transparent Triangles, 45 degrees

4 inches	each, .50	11 inches	each, \$1.20
5 "	" .65	12 "	" 1.40
6 "	" .75	13 "	" 1.70
7 "	" .85	14 "	" 2.00
8 "	" 1.00	15 "	" 2.40
9 "	" 1.20	16 "	" 2.75
10 "	" 1.40		

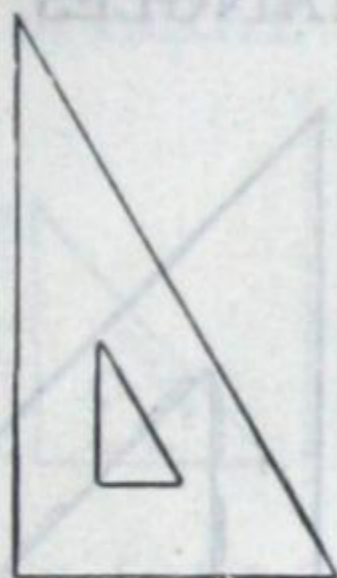
Opaque Edge Transparent Triangles, 30 x 60 degrees

4 inches	each, .40	11 inches	each, \$1.70
5 "	" .45	12 "	" 2.00
6 "	" .50	13 "	" 2.40
7 "	" .65	14 "	" 2.75
8 "	" .75	15 "	" 3.10
9 "	" .85	16 "	" 3.60
10 "	" 1.00		

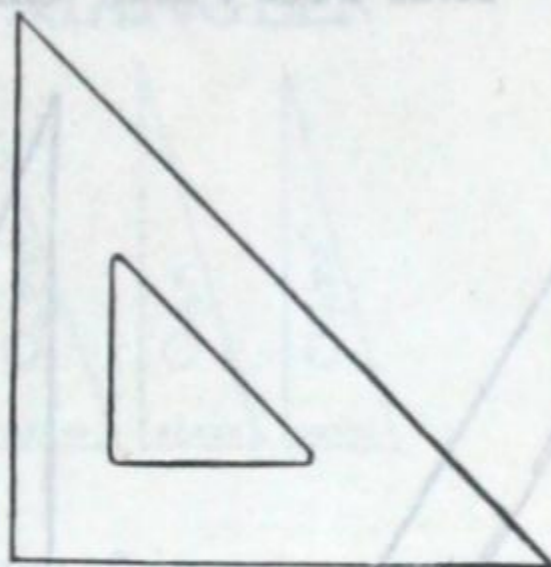
Made from Extra Heavy Seasoned Celluloid. Accuracy Guaranteed

These triangles differ from ordinary transparent triangles in that the transparent material at the edges is, by a novel method, rendered opaque, resulting in a sharply defined border a scant $\frac{1}{8}$ inch in width, which, contrasting strongly with the drawing surface, facilitates the adjusting of the working edges to existing lines

FROST & ADAMS CO.'S CELLULOID TRIANGLES



30 x 60 DEGREES



45 DEGREES

Celluloid Triangles, 30x60 degrees

3 in. long	each, .20	8 in. long	each, .55	13 in. long	each, \$1.25
4 " "	" .25	9 " "	" .65	14 " "	" 1.65
5 " "	" .35	10 " "	" .75	15 " "	" 2.00
6 " "	" .40	11 " "	" .85	16 " "	" 2.50
7 " "	" .45	12 " "	" 1.00	17 " "	" 3.00
				18 " "	" 3.50

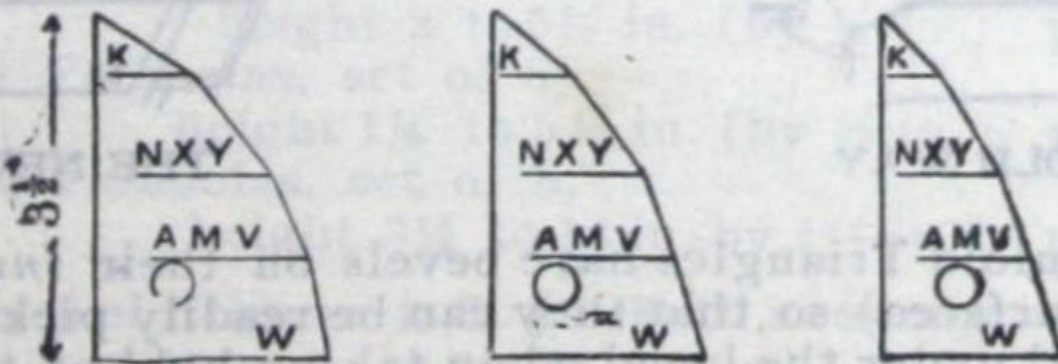
Celluloid Triangles, 45 degrees

3 in. long	each, .30	8 in. long	each, .75	13 in. long	each, \$1.90
4 " "	" .35	9 " "	" .95	14 " "	" 2.20
5 " "	" .45	10 " "	" 1.10	15 " "	" 2.65
6 " "	" .55	11 " "	" 1.35	16 " "	" 3.15
7 " "	" .65	12 " "	" 1.65	17 " "	" 3.65
				18 " "	" 4.15

CELLULOID LETTERING TEMPLATES AND TRIANGLES

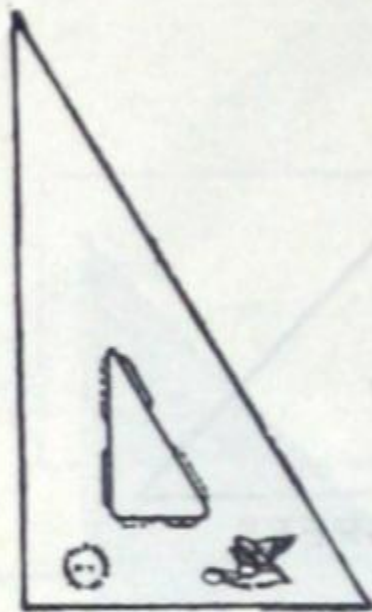


Celluloid Lettering Templates, 3 in set per set, \$2.00

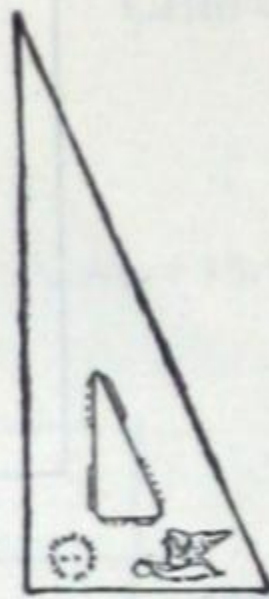


Celluloid Lettering Triangles, 3 in set per set, \$1.50

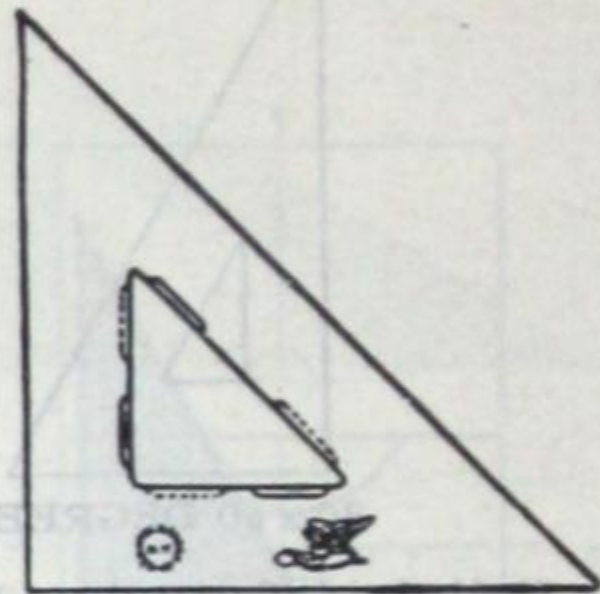
FROST & ADAMS CO.'S
IMPROVED CELLULOID TRIANGLES



NO. 1855
30x60 DEGREES



NO. 1855-1
22 1/2 x 67 1/2 DEGREES



NO. 1856
45 DEGREES

No. 1855. Improved Celluloid Triangles, 30x60 degrees

4 in.	each, .25	8 in.	each, .55	12 in.	each, \$1.00
5 "	" .35	9 "	" .65	13 "	" 1.25
6 "	" .40	10 "	" .75	14 "	" 1.65
7 "	" .45	11 "	" .85	16 "	" 2.50

No. 1855-1. Improved Triangles, 22 1/2 x 67 1/2 degrees

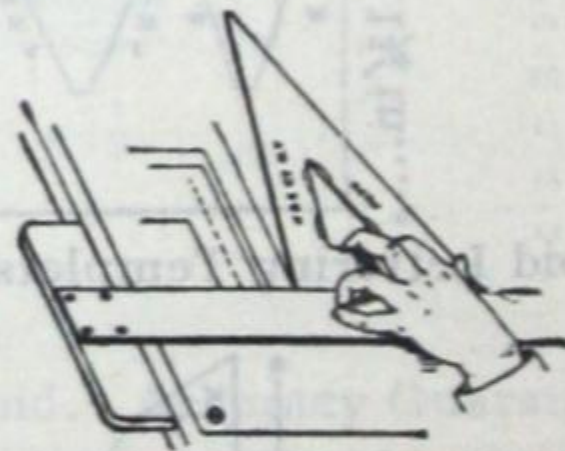
4 in.	each, .25	10 in.	each, .75	14 in.	each, \$1.65
6 "	" .40	12 "	" 1.00	16 "	" 2.50
8 "	" .55				

No. 1856. Improved Triangles, 45 degrees

4 in.	each, .35	8 in.	each, .75	12 in.	each, \$1.65
5 "	" .45	9 "	" .95	13 "	" 1.90
6 "	" .55	10 "	" 1.10	14 "	" 2.20
7 "	" .65	11 "	" 1.35	16 "	" 3.15



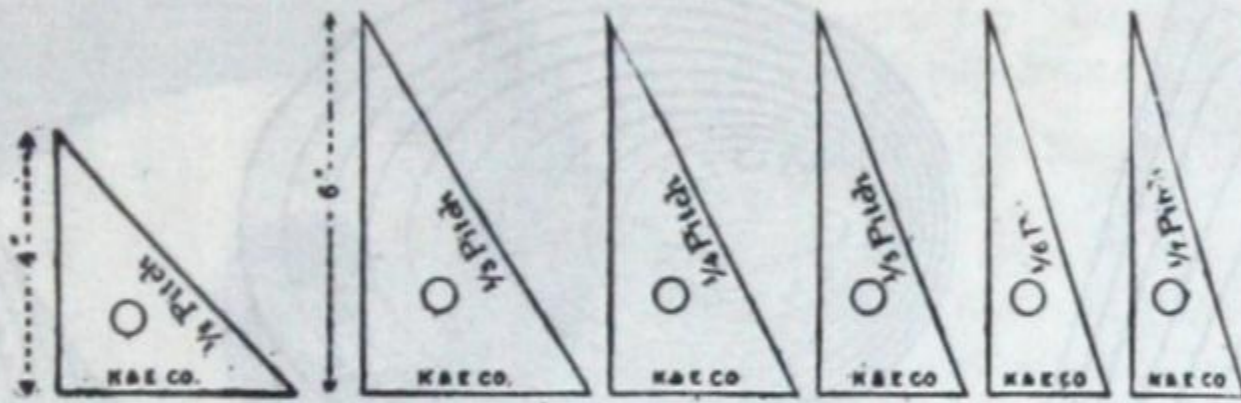
THE OLD WAY



THE NEW WAY

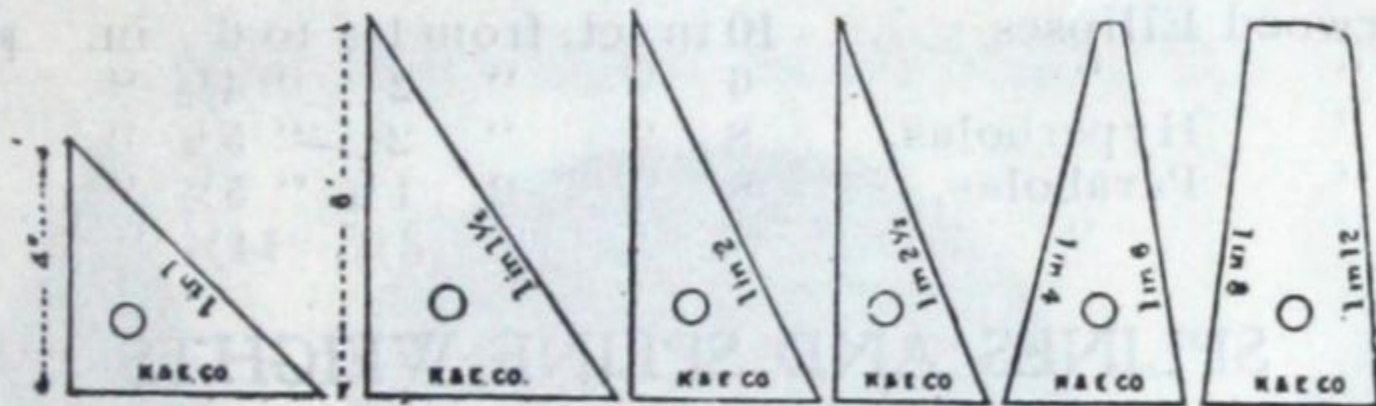
Improved Celluloid Triangles have bevels on their *inner* edges from opposite faces (surfaces) so that they can be readily picked up by catching the finger nail under the bevel when taking hold of them

FROST & ADAMS CO.'S
SPECIAL CELLULOID TRIANGLES



NO. 1857A

No. 1857A. Celluloid Triangles for roof pitches, 6 in set per set, \$3.00



NO. 1857B

No. 1857B. Celluloid Triangles for embankments,
8 slopes on 6 templets per set, \$4.50

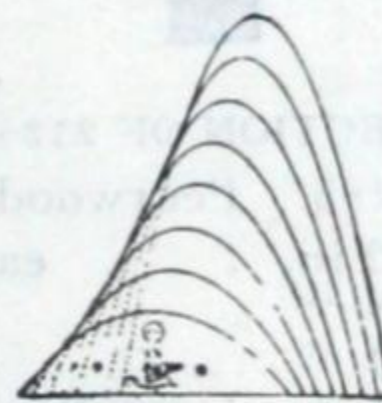
CELLULOID ELLIPSES, HYPERBOLAS, PARABOLAS



NO. 1862B



NO. 1862

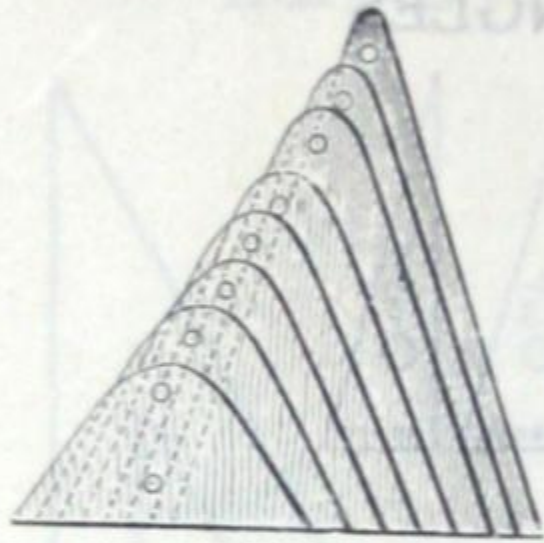


NO. 1862C

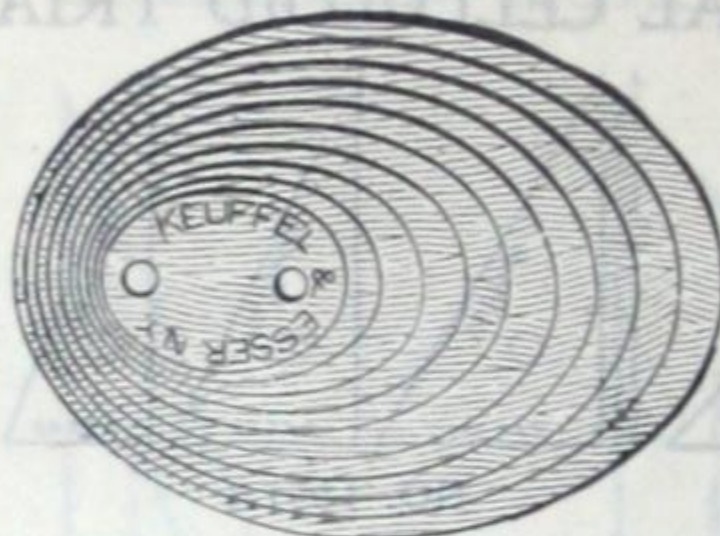
- No. 1862. Celluloid Ellipses, set of 10 major axis,
1 1/2 to 6 in. (by 1/2 in.) per set, \$3.50
- 1862A. Celluloid Ellipses, set of 6, major axis,
2 to 4 1/2 in. (by 1/2 in.) per set, 2.25
- 1862B. Celluloid Hyperbolas, set of 8,
height 2 to 5 1/2 in. (by 1/2 in.) per set, \$2.75
- 1862C. Celluloid Parabolas, set of 8,
height 1 1/4 to 5 5/8 in. (by 5/8 in.) per set, 2.75
- 1862D. Celluloid Parabolas, set of 8,
height 3 1/2 to 14 in. by 1 1/2 in.) per set, 6.00

The ratio of the axes of Ellipses is 3 : 4. Both axes engraved correctly
The Hyperbolas and Parabolas have 4 in. base

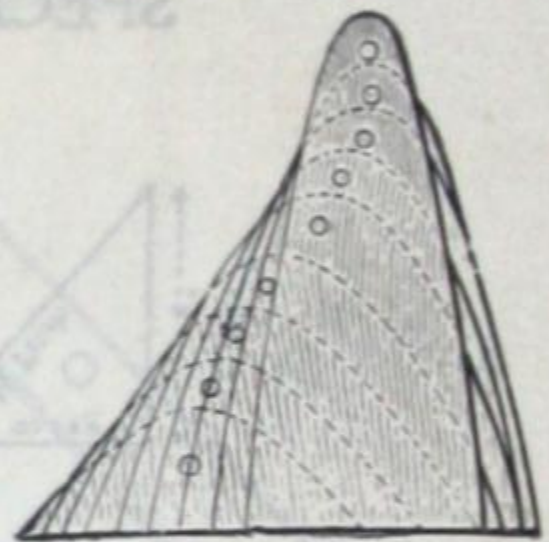
PEARWOOD ELLIPSES



2182



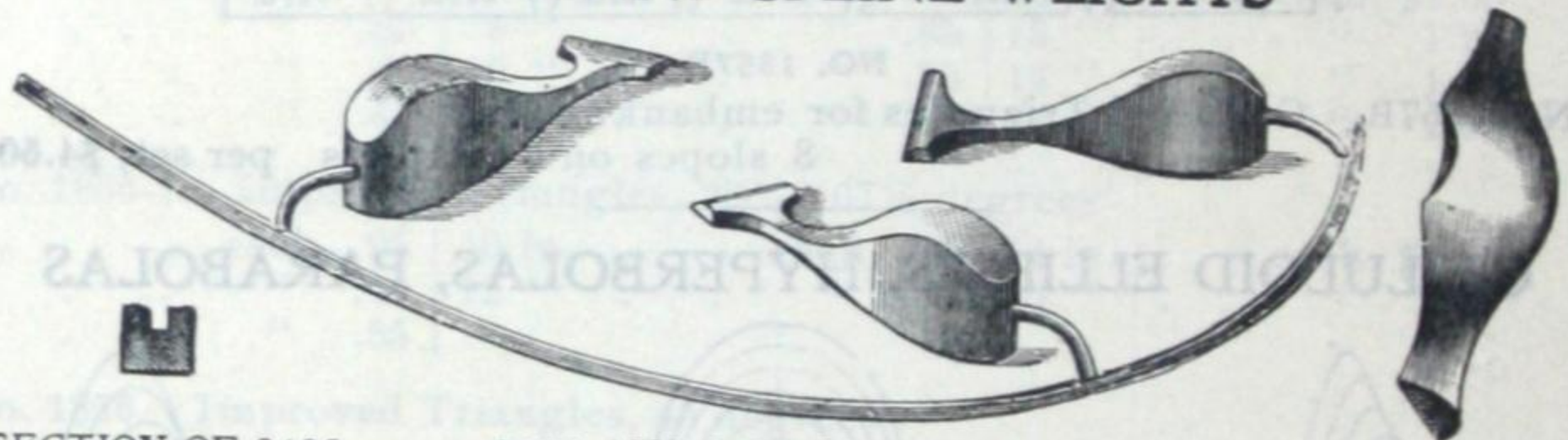
2180



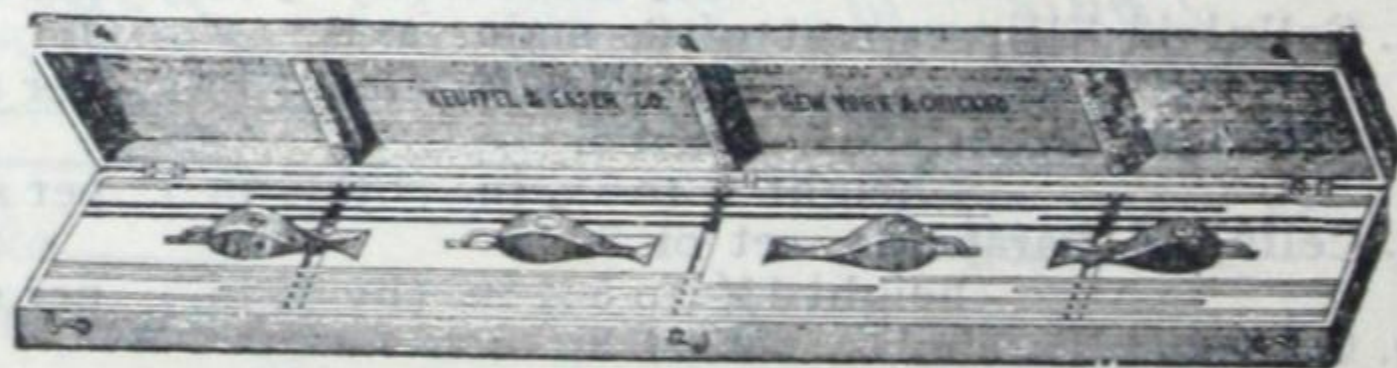
2183

2180.	Pearwood Ellipses	10 in set, from 1½ to 6 in.	per set, \$2.00
2181.	"	6 " " 2 " 4½ "	" 1.25
2182.	" Hyperbolas,	8 " " 2 " 5¼ "	" 1.50
2183.	" Parabolas,	8 " " 1¼ " 5½ "	" 1.50
2184.	"	8 " " 3¼ " 14½ "	" 3.00

SPLINES AND SPLINE WEIGHTS

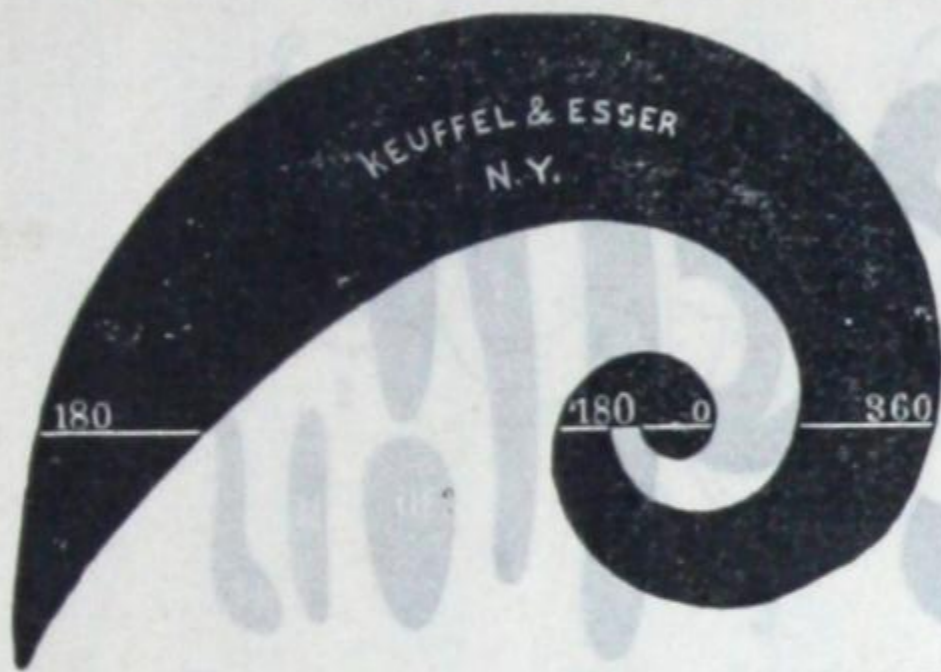


SECTION OF 2185	2185 AND 2186 OR 2186½	2187
2185. Pearwood Splines, grooved		
12 in. each, .15	30 in. each, .39	54 in. each, .70
18 " " .20	36 " " .40	60 " " .80
24 " " .25	48 " " .50	
2186. Lead Weights for Splines, with finger, about 3¾ pounds each,		.85
2186½. " " " " about 8 pounds		1.25
2187. Iron " " " no " about 3¼ pounds		.50



2190. Set of 4 Spline Weights, No. 2186, Hard Rubber Splines, 1 each No. 1835, 12, 18, 24, 30, 36, 42, inch, Pearwood Splines, 1 each No. 2185, 12, 18, 24, 30, 36, 48 inch, in strong Wooden Box per set, \$10.00

LOGARITHMIC SPIRAL CURVE

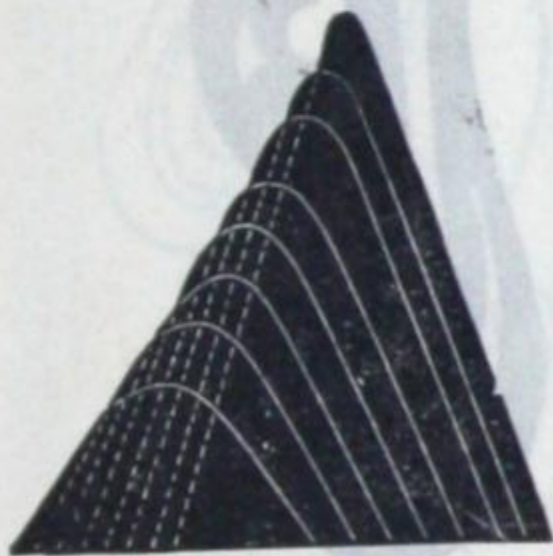


1822. Logarithmic Spiral Curve with Directions each, \$1.50

Directions for Logarithmic Spiral Curve each, .20

The Curve is mathematically constructed and contains every curve within the limit of its size. If properly used according to the directions accompanying each, the most difficult calculations can be made with it

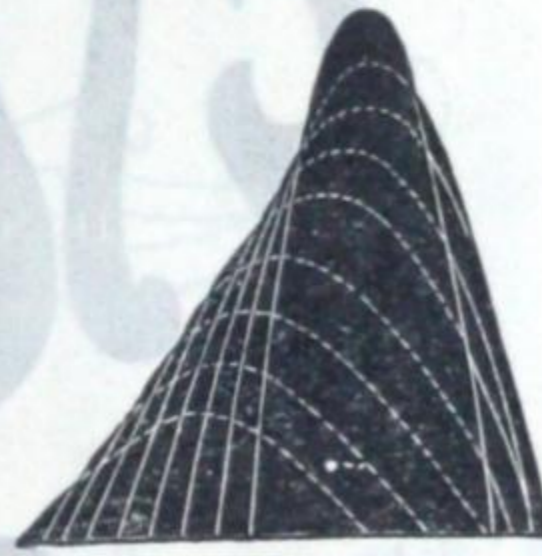
HARD RUBBER ELLIPSES, ETC.



1827



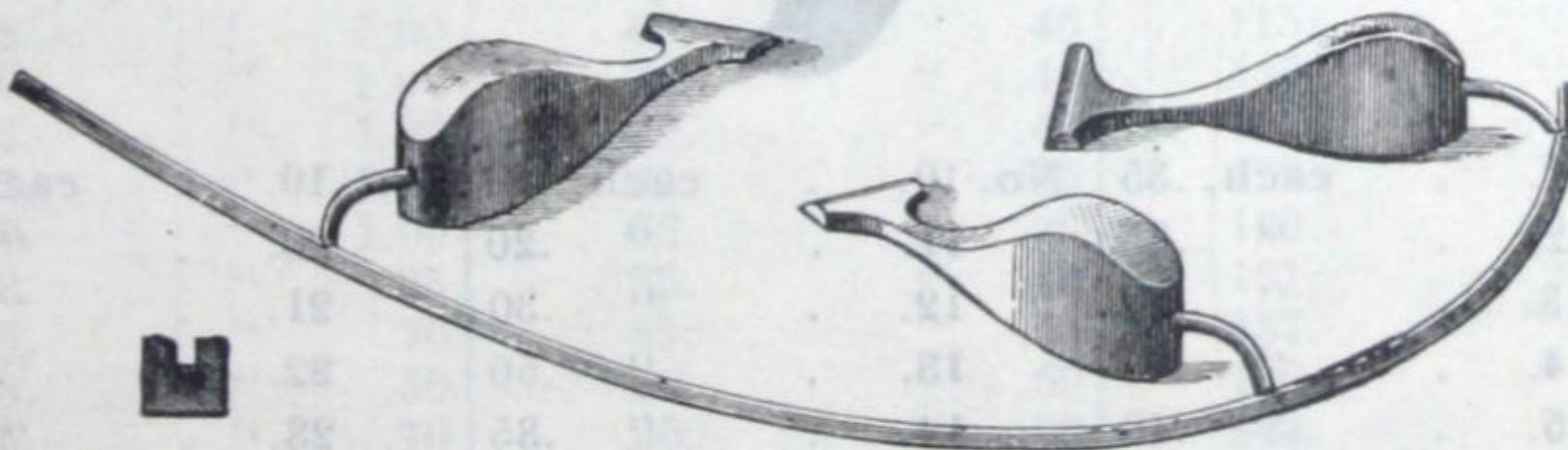
1825



1828

1825.	Hard Rubber Ellipses,	10 in set, from 1 1/2 to 6	in.	per set, \$2.50
1826.	" "	6 " " 2 " 4 1/2	" "	1.50
1827.	" Hyperbolas,	8 " " 2 " 5 1/2	" "	2.25
1828.	" Parabolas,	8 " " 1 1/4 " 5 1/2	" "	2.25
1829.	" "	8 " " 3 1/4 " 14 1/4	" "	5.00

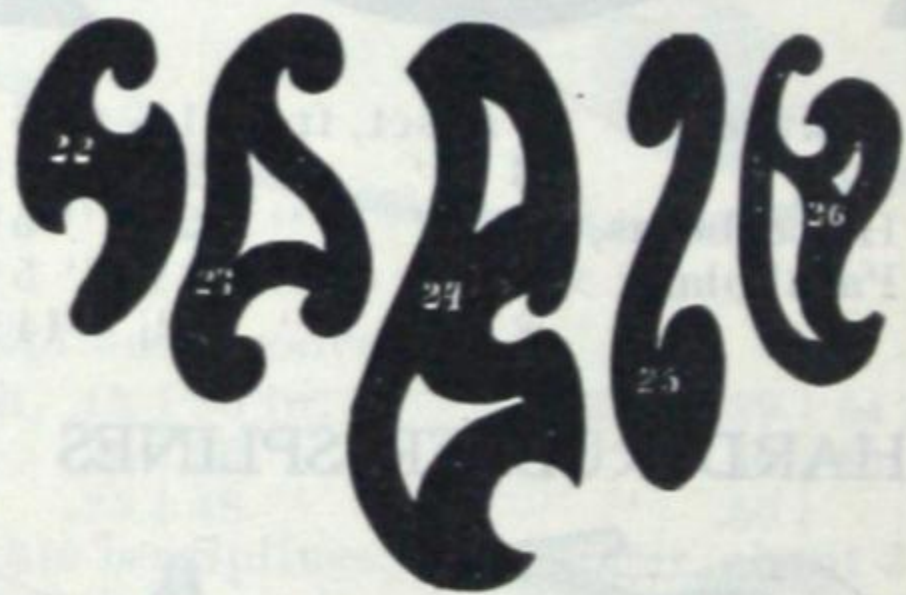
HARD RUBBER SPLINES



12 inch each, .30	24 inch each, .45	36 inch each, .55	43 inch each, .75
10 " " .35	30 " " .50	42 " " .60	54 " " .90
60 inch	each, \$1.00	72 inch	each, \$1.10

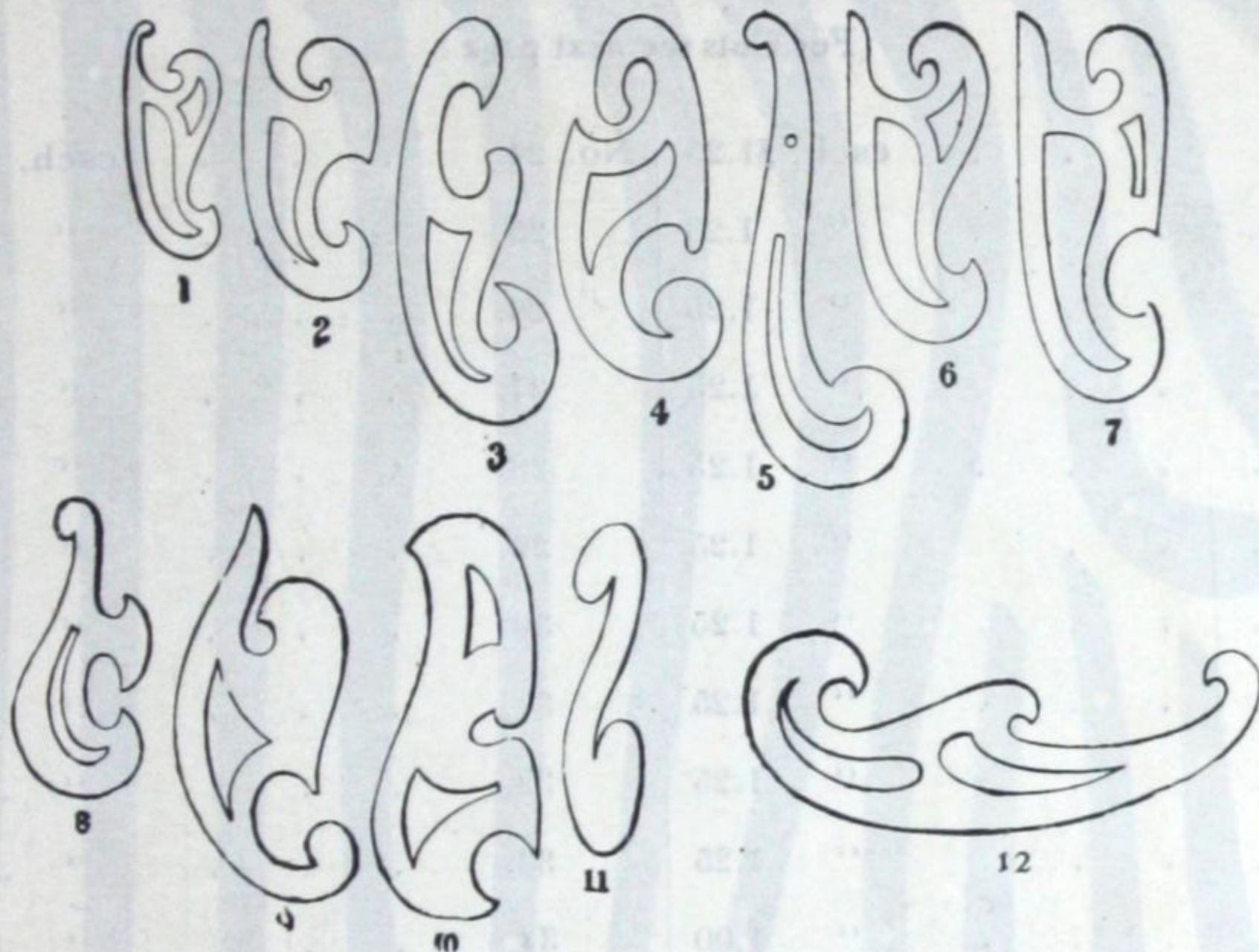
These Splines have a small groove, as shown in the section, to admit the finger of the weights which hold them in position

FROST & ADAMS CO'S HARD RUBBER CURVES



No. 1.	each, .35	No. 10.	each, .20	No. 19.	each, .50
2.	" .35	11.	" .20	20.	" .50
3.	" .50	12.	" .30	21.	" .45
4.	" .50	13.	" .50	22.	" .35
5.	" .40	14.	" .35	23.	" .40
6.	" .35	15.	" .45	24.	" .60
7.	" .30	16.	" .35	25.	" .40
8.	" .25	17.	" .35	26.	" .35
9.	" .25	18.	" .40	26. Special	" .40

PEARWOOD CURVES



Pearwood Curves, fine finish

No. 1.	each, .20	No. 5.	each, .30	No. 9.	each, .30
2.	" .25	6.	" .25	10.	" .35
3.	" .30	7.	" .30	11.	" .20
4.	" .30	8.	" .25	12.	" .35

PEARWOOD SHIP CURVES

No. 32.	each, \$1.00	No. 63.	each, .65	No. 107.	each, .45
34.	" 1.00	65.	" .65	113.	" .35
36.	" 1.00	66.	" .45	114.	" .45
38.	" 1.00	69.	" .45	115.	" .35
40.	" 1.00	74.	" .45	119.	" .45
43.	" 1.00	78.	" .45	121.	" .30
45.	" 1.00	81.	" .45	129.	" .35
47.	" 1.00	82.	" .45	130.	" .45
48.	" .85	83.	" .45	131.	" .35
50.	" .70	87.	" .50	137.	" .25
53.	" .50	89.	" .60	140.	" .35
55.	" .70	90.	" .50	144.	" .35
59.	" .70	94.	" .45	148.	" .35
60.	" .70	98.	" .45	149.	" .35
62.	" .65	102.	" .35	151.	" .45

Set of 45 Pearwood Copenhagen Ship Curves, containing 1 curve each as listed, in hardwood case . . . per set, \$25.70

COPENHAGEN SHIP CURVES, CELLULOID

(For Cuts see next page)

No. 1.	.	.	.	each, \$1.25	No. 24.	.	.	.	each, .75
2.	.	.	.	" 1.25	25.	.	.	.	" .75
3.	.	.	.	" 1.25	26.	.	.	.	" .75
4.	.	.	.	" 1.25	27.	.	.	.	" .75
5.	.	.	.	" 1.25	28.	.	.	.	" .50
6.	.	.	.	" 1.25	29.	.	.	.	" .50
7.	.	.	.	" 1.25	30.	.	.	.	" .50
8.	.	.	.	" 1.25	31.	.	.	.	" .50
9.	.	.	.	" 1.25	32.	.	.	.	" .50
15.	.	.	.	" 1.25	33.	.	.	.	" .50
10.	.	.	.	" 1.00	34.	.	.	.	" .50
11.	.	.	.	" 1.00	35.	.	.	.	" .50
12.	.	.	.	" 1.00	36.	.	.	.	" .50
13.	.	.	.	" 1.00	37.	.	.	.	" .50
14.	.	.	.	" 1.00	38.	.	.	.	" .50
16.	.	.	.	" 1.00	39.	.	.	.	" .50
17.	.	.	.	" .75	40.	.	.	.	" .50
18.	.	.	.	" .75	41.	.	.	.	" .50
19.	.	.	.	" .75	42.	.	.	.	" .50
20.	.	.	.	" .75	43.	.	.	.	" .50
21.	.	.	.	" .75	44.	.	.	.	" .50
22.	.	.	.	" .75	45.	.	.	.	" .50
23.	.	.	.	" .75					



For prices see page 302

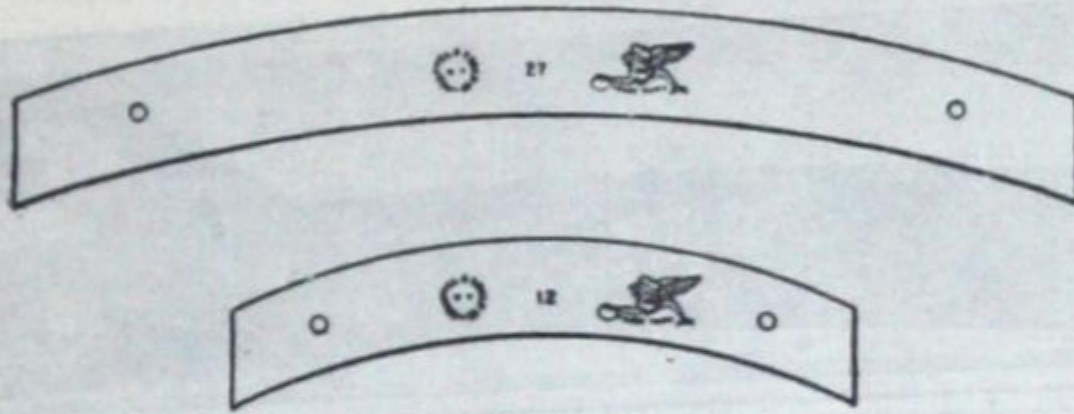
FROST & ADAMS CO'S CELLULOID CURVES



No. 1.	.	.	.	each, .50
2.	.	.	.	" .50
3.	.	.	.	" .65
4.	.	.	.	" .65
5.	.	.	.	" .55
6.	.	.	.	" .50
7.	.	.	.	" .40
8.	.	.	.	" .40
9.	.	.	.	" .35
10.	.	.	.	" .30
11.	.	.	.	" .30
12.	.	.	.	" .35
13.	.	.	.	" .65
14.	.	.	.	" .40
15.	.	.	.	" .50

No. 16.	.	.	.	each, .35
17.	.	.	.	" .50
18.	.	.	.	" .50
19.	.	.	.	" .60
20.	.	.	.	" .75
21.	.	.	.	" .60
22.	.	.	.	" .50
23.	.	.	.	" .50
24.	.	.	.	" .75
25.	.	.	.	" .35
26.	.	.	.	" .50
27.	.	.	.	" .90
28.	.	.	.	" .90
26. Special	.	.	.	" 1.80

FROST & ADAMS CO.'S
PEARWOOD RAILROAD CURVES



No. 2200. Pearwood Railroad Curves, 10 in set, viz.: 12, 24, 36, 48, 60, 72, 84, 96, 108, 120 inch radius . . . set, \$3.50

2202. Pearwood Railroad Curves, 17 in set, viz.: 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60 inch radius set, 6.00

2204. Pearwood Railroad Curves, 44 in set, viz.: 3, 3½, 4, 4½, 5, 5½, 6, 6½, 7, 7½, 8, 8½, 9, 9½, 10, 12, 14, 16, 18, 20, 22, 24, 27, 30, 33, 36, 39, 42, 48, 54, 60, 66, 72, 78, 84, 90, 100, 110, 120, 130, 140, 160, 180, 200 inch radius . . . set, 12 00

Put up in a Wood Case

No. 2208. Pearwood Railroad Curves to any scale, to order each, .45
2209. " " " " " with Tangent " .60

These Curves are made of genuine Pearwood, by special machinery, and are warranted to be correct. They are the same on both edges, so that either edge can be used

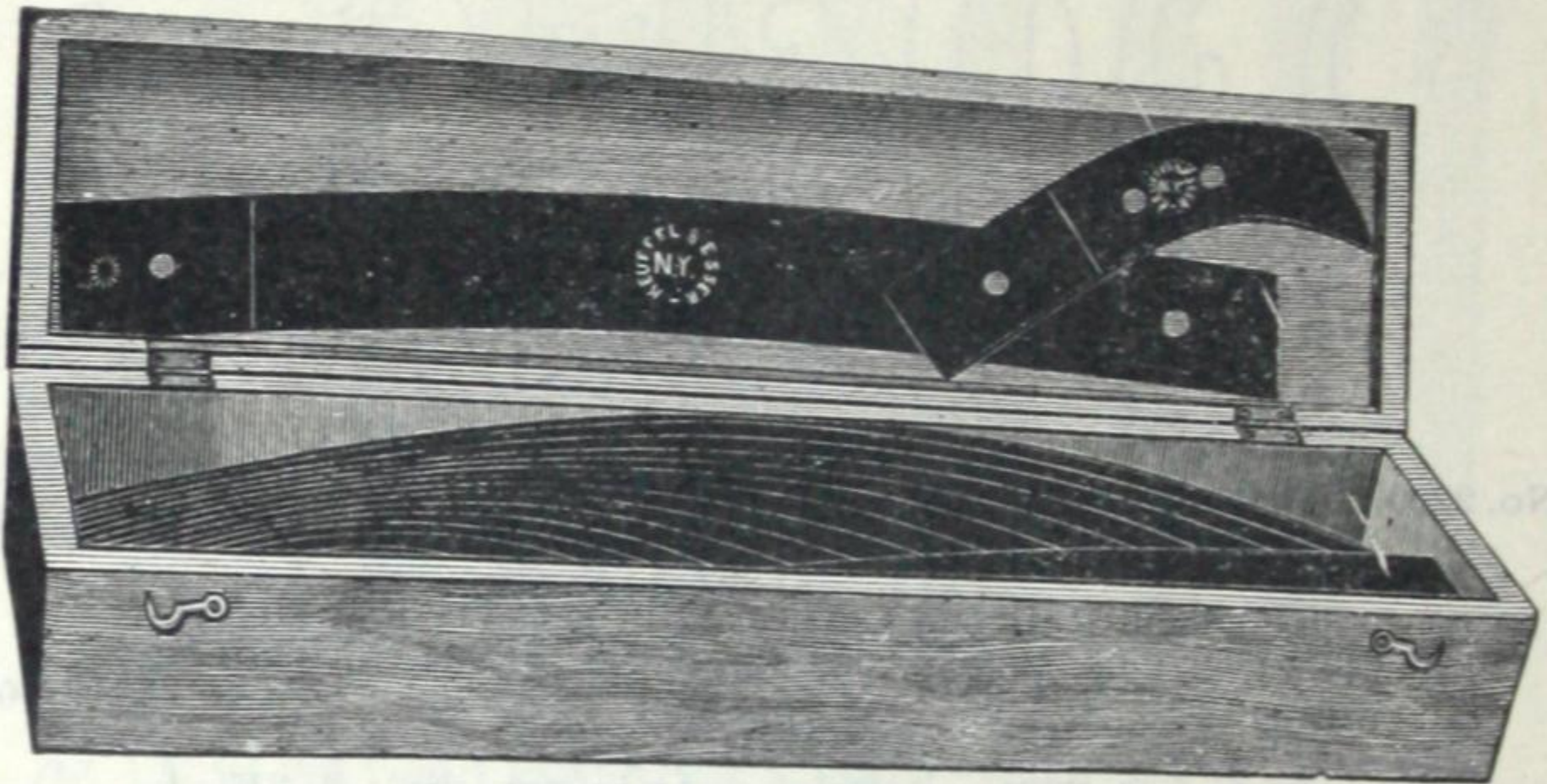
CARD BOARD RAILROAD CURVES

No. 2210. Card Board Railroad Curves, 30 in set, viz.: 1½, 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 35, 40, 45, 50, 60 inch radius . . . set, \$5.25

2211. Card Board Railroad Curves, 50 in set, viz.: 1½, 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 6½, 7, 7½, 8, 8½, 9, 9½, 10, 10½, 11, 11½, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 110, 120 inch radius set, 8.50

Put up in a Wood Case

HARD RUBBER RAILROAD CURVES



- No. 1840. Hard Rubber Railroad Curves, 10 in set: 12, 24, 36, 48, 60, 72, 84, 96, 108, 120 inch radius, in wooden box per set, \$7.75
1841. Hard Rubber Railroad Curves, 17 in set: 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60 inch radius, in wooden box " 13.25
1842. Hard Rubber Railroad Curves, 40 in set: 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 66, 72, 78, 84, 90, 96, 102, 108, 114, 120 inch radius, 1 curve 1 deg. to 100 foot scale, 57.30 inch, 1 curve 2 deg. to 100 foot scale, 28.65 inch, in wooden box " 28.00
1845. Hard Rubber Railroad Curves with Tangent, 55 in set: 3, 3½, 4, 4½, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 32, 34, 35, 36, 38, 40, 45, 50, 55, 60, 65, 70, 75, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200 inch radius, in wooden box " 40.00

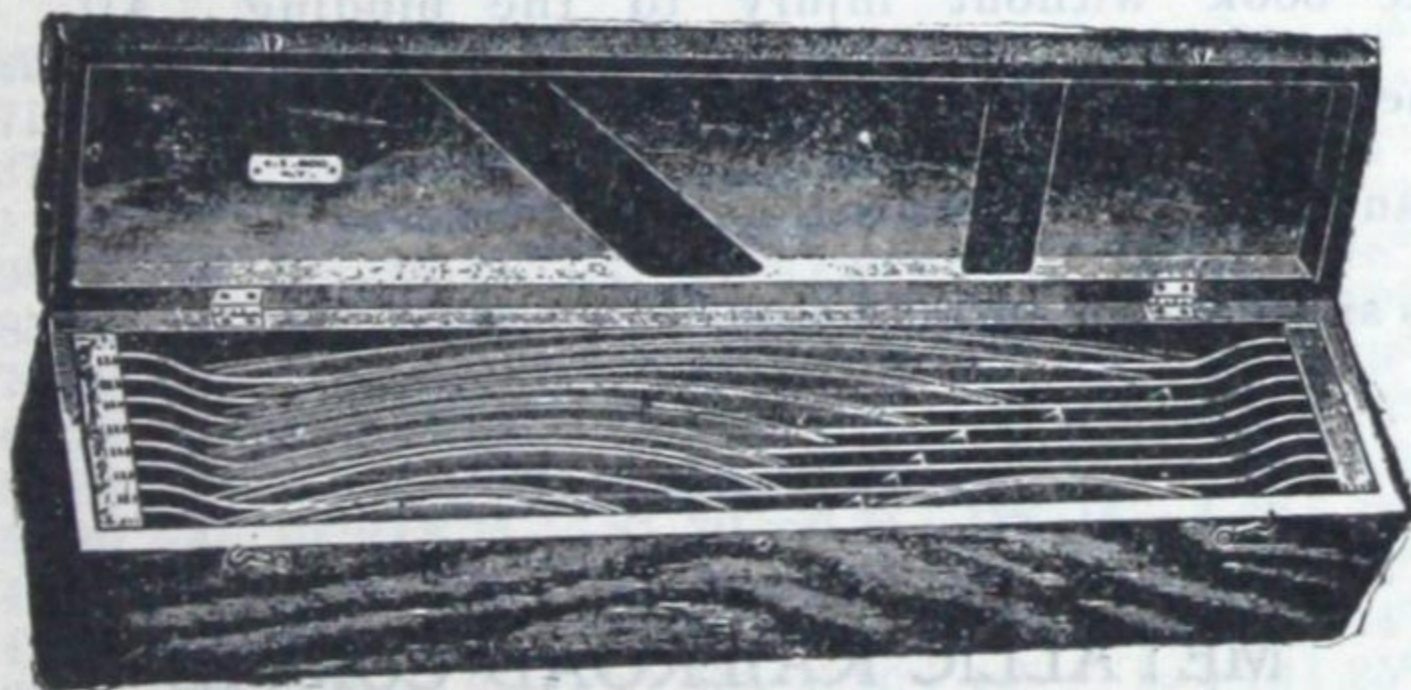
FROST & ADAMS CO.'S

CELLULOID RAILROAD CURVES

No. 1891. Celluloid Railroad Curves, 17 in set, viz.: 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60 inch radius set, \$15.00

1891A. Celluloid Railroad Curves, 30 in set, viz.: 1½, 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 35, 40, 45, 50, 60 inch radius . set, 27.50

1891B. Celluloid Railroad Curves, 50 in set, viz.: 1½, 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 6½, 7, 7½, 8, 8½, 9, 9½, 10, 10½, 11, 11½, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 110, 120 inch radius set, 42.00

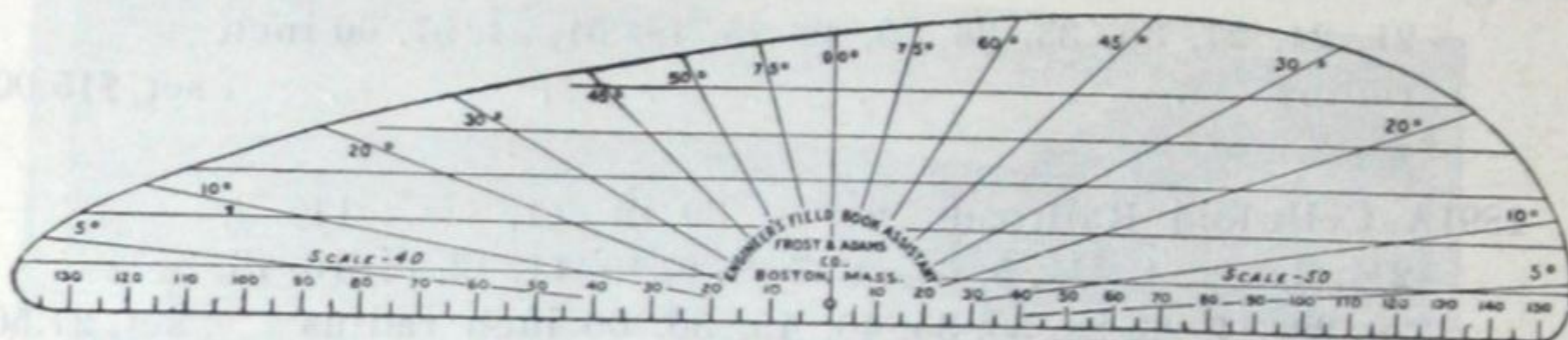


NO. 1891C

No. 1891C. Celluloid Railroad Curves, with Tangent, 55 in set, viz.: 3, 3½, 4, 4½, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 32, 34, 35, 36, 38, 40, 45, 50, 55, 60, 65, 70, 75, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200 inch radius set, \$55.00

Put up in Improved Partitioned Cases (except set 1891 has no partitions)

FROST & ADAMS CO'S
ENGINEERS' FIELD BOOK ASSISTANT



The Engineers' Field Book Assistant combines in itself a straight edge, irregular curve, parallel ruler, protractor and scale. It is made of transparent celluloid, thin enough to enable its being carried between the leaves of a note book without injury to the binding. All Engineers who appreciate the advantage of clear, complete and neat field notes will readily perceive the value of this simple little instrument each, .50

METALLIC RAILROAD CURVES



PATENT NOV. 21, 1893

See next page for sizes and prices

Metallic Railroad Curves—Continued

STANDARD SET NO. 1

100 curves stamped with radius in inches as follows:

2	4 1/2	7	9 1/2	12	16 1/2	21 1/2	28	38	70
2 1/4	4 3/4	7 1/4	9 3/4	12 1/4	17	22	29	40	80
2 1/2	5	7 1/2	10	12 1/2	17 1/2	22 1/2	30	42	90
2 3/4	5 1/4	7 3/4	10 1/4	13	18	23	31	44	100
3	5 1/2	8	10 1/2	13 1/2	18 1/2	23 1/2	32	46	120
3 1/4	5 3/4	8 1/4	10 3/4	14	19	24	33	48	140
3 1/2	6	8 1/2	11	14 1/2	19 1/2	24 1/2	34	50	160
3 3/4	6 1/4	8 3/4	11 1/4	15	20	25	35	55	200
4	6 1/2	9	11 1/2	15 1/2	20 1/2	26	36	60	240
4 1/4	6 3/4	9 1/4	11 3/4	16	21	27	37	65	300

100 Curves (Full Standard Set No. 1)	per set, \$23.00
75 Curves, selected "ad lib" from Standard Set No. 1	" " 18.75
50 Curves, selected "ad lib" from Standard Set No. 1	" " 14.00
25 Curves, selected "ad lib" from Standard Set No. 1	" " 8.00

STANDARD SET NO. 2

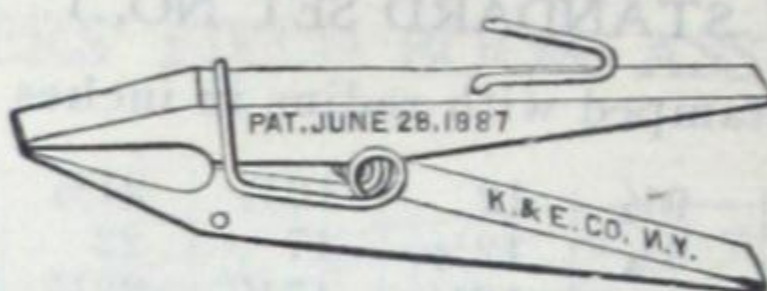
102 Curves stamped in degrees and inches to 100 foot scale, as follows:

0° 15' = 229.18	2° 40' = 21.49	6° 15' = 9.17	11° = 5.22	16° 30' = 3.48
0° 20' = 171.89	2° 50' = 20.22	6° 30' = 8.82	11° 15' = 5.10	17° = 3.38
0° 25' = 137.51	3° = 19.10	6° 45' = 8.49	11° 30' = 4.99	17° 30' = 3.29
0° 30' = 111.59	3° 10' = 18.10	7° = 8.19	11° 45' = 4.88	18° = 3.20
0° 35' = 98.22	3° 20' = 17.19	7° 15' = 7.91	12° = 4.78	18° 30' = 3.11
0° 40' = 85.94	3° 30' = 16.37	7° 30' = 7.64	12° 15' = 4.69	19° = 3.03
0° 45' = 76.39	3° 40' = 15.63	7° 45' = 7.40	12° 30' = 4.59	19° 30' = 2.95
0° 50' = 68.76	3° 50' = 14.95	8° = 7.17	12° 45' = 4.50	20° = 2.88
0° 55' = 62.60	4° = 14.38	8° 15' = 6.95	13° = 4.42	21° = 2.74
1° = 57.30	4° 10' = 13.75	8° 30' = 6.75	13° 15' = 4.33	22° = 2.62
1° 10' = 49.11	4° 20' = 13.23	8° 45' = 6.55	13° 30' = 4.25	23° = 2.51
1° 20' = 42.97	4° 30' = 12.74	9° = 6.37	13° 45' = 4.18	24° = 2.40
1° 30' = 38.20	4° 40' = 12.28	9° 15' = 6.20	14° = 4.10	25° = 2.31
1° 40' = 34.38	4° 50' = 11.86	9° 30' = 6.04	14° 15' = 4.03	26° = 2.22
1° 50' = 31.25	5° = 11.46	9° 45' = 5.88	14° 30' = 3.96	27° = 2.14
2° = 28.65	5° 15' = 10.92	10° = 5.74	14° 45' = 3.90	28° = 2.07
2° 10' = 26.45	5° 30' = 10.42	10° 15' = 5.60	15° = 3.83	29° = 2.00
2° 20' = 24.56	5° 45' = 9.97	10° 30' = 5.45	15° 30' = 3.71	30° = 1.93
2° 30' = 22.92	6° = 9.55	10° 45' = 5.34	16° = 3.59	

102 Curves (Full Standard Set No. 2)	per set, \$25.00
75 Curves, selected "ad lib" from Standard Set No. 2	" " 20.25
50 Curves, selected "ad lib" from Standard Set No. 2	" " 15.00
25 Curves, selected "ad lib" from Standard Set No. 2	" " 8.75

Special templets of any other sizes than above enumerated can only be furnished subject to delay and at greatly increased cost

SPRING CLIPS

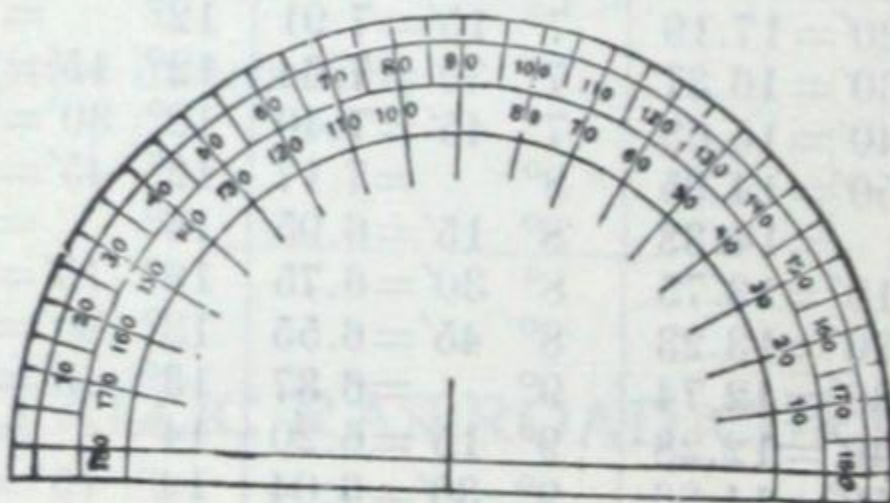


- 249-3. Spring Clips for Clamping Prints when Drying per dozen, .25

PAPER PROTRACTORS

- | | |
|--|-----------|
| Circular, on Vegetable Tracing Paper, 14 in. diam., $\frac{1}{4}$ deg. | each, .30 |
| " Drawing Paper, 14 in. diam., $\frac{1}{4}$ degree | " .30 |
| " Bristol Board, 14 " $\frac{1}{4}$ " | " .40 |
| " " " 8 " $\frac{1}{2}$ " | " .20 |
| Semicircular, on Bristol Board, 5 " $\frac{1}{2}$ " | " .10 |
| Semicircular, on Bristol Board, 5 " $\frac{1}{2}$ " with Diagonal Scales of inches to $\frac{1}{100}$ th, and millimeter | " .15 |

HORN PROTRACTORS

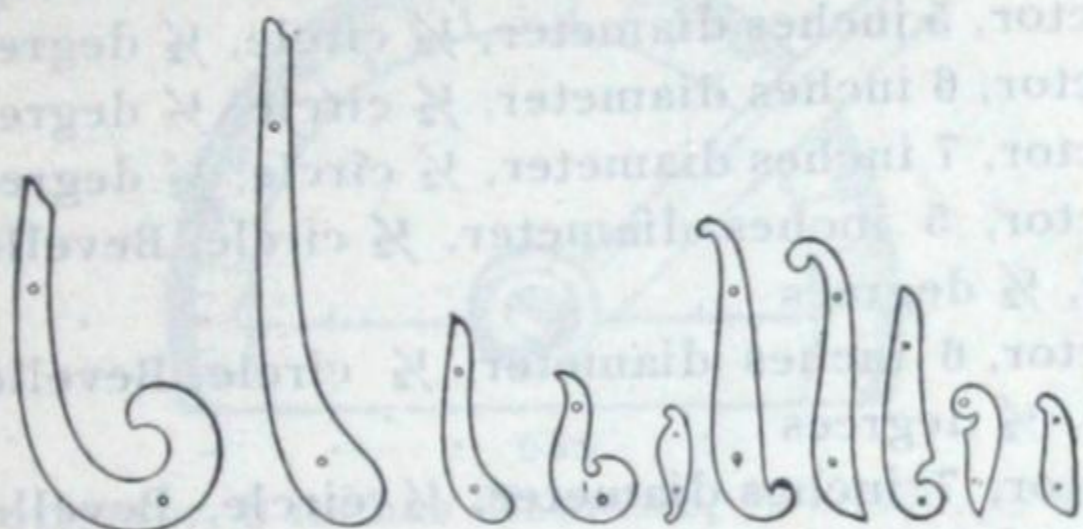


- | | |
|---|--------------|
| No. 559. Railroad Curve Protractor, 8 inches diameter, having laid off on it twenty-three curves, from $\frac{1}{2}$ degree to 8 degrees, with a radius of 400 feet to the inch | each, \$1.60 |
| 560. Protractor, 4 inches diameter, $\frac{1}{2}$ circle, whole deg. | " .15 |
| 561. Protractor, 5 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees | " .25 |
| 562. Protractor, 6 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees | " .30 |
| 563. Protractor, 7 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees | " .50 |
| 564. Protractor, 8 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees | " .80 |

FROST & ADAMS CO.'S
CELLULOID SPLINES, GROOVED

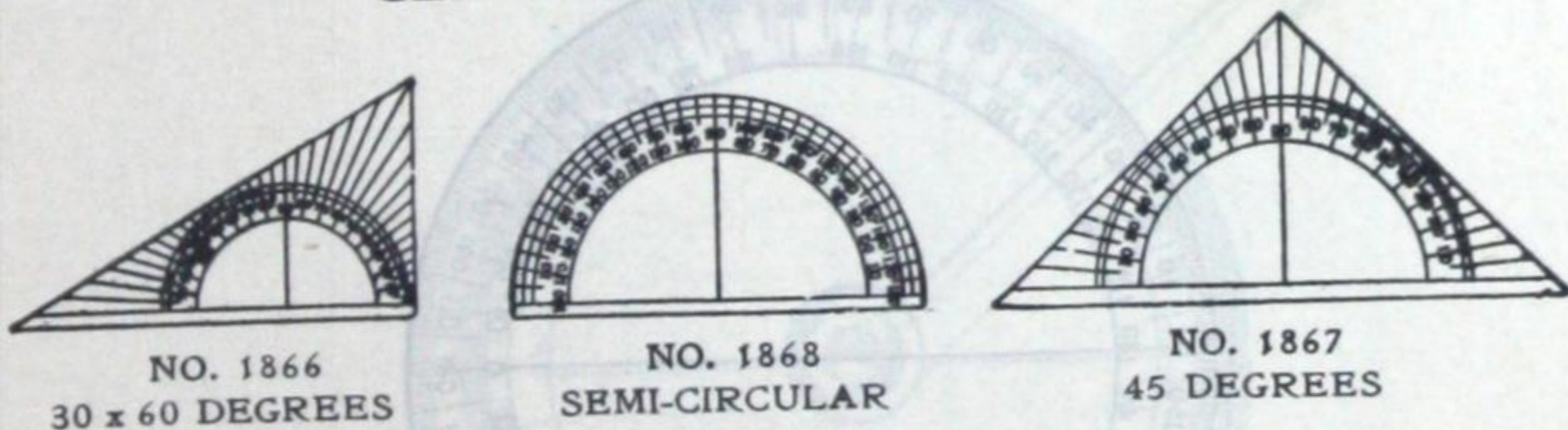
2 in.	each, .35	36 in.	each, .60	54 in.	each, \$1.00
3 "	" .40	42 "	" .70	60 "	" 1.10
4 "	" .50	48 "	" .85	72 "	" 1.15
0 "	" .55				

CELLULOID ENGINEERS' CURVES, IN SETS



No. 1863. Celluloid Curves for Mechanical Engineers . . . per set, \$4.80
Set of 10, put up in a Wood Case

CELLULOID PROTRACTORS



NO. 1866
30 x 60 DEGREES

NO. 1868
SEMI-CIRCULAR

NO. 1867
45 DEGREES

CELLULOID PROTRACTOR TRIANGLE

No. 1866. 5 in., divided to 1°	each, .45	No. 1867. 5 in., divided to 1°	each, .50
6 " " " 1 " .50		6 " " " 1 " .70	
7 " " " 1 " .70		7 " " " 1 " .90	

CELLULOID SEMI-CIRCULAR PROTRACTOR

No. 1868. 4 in., divided to 1/2°	each, .35	No. 1868. 7 in., divided to 1/2°	each, .75
4 1/4 " " 1/2 " .40		8 " " 1/2 " 1.20	
5 " " 1/2 " .45		10 " " 1/2 " 2.00	
6 " " 1/2 " .60			

BRASS PROTRACTORS

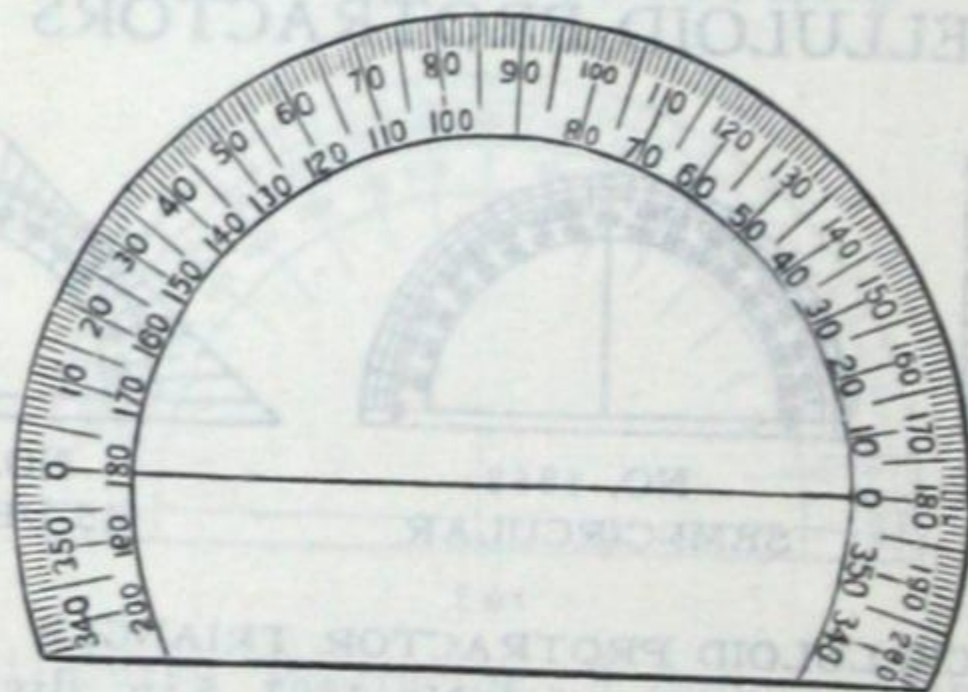
No. 565.	Protractor, 4 inches diameter, $\frac{1}{2}$ circle, whole degrees each,	.10
566.	Protractor, 4 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees	“ .35
567.	Protractor, 5 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees	“ .55
568.	Protractor, 6 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees	“ .65

GERMAN SILVER PROTRACTORS

No. 569.	Protractor, 4 inches diameter, $\frac{1}{2}$ circle, whole degrees each,	.50
570.	Protractor, 5 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees	“ .85
571.	Protractor, 6 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees	“ 1.00
572.	Protractor, 7 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees	“ 1.15
573.	Protractor, 5 inches diameter, $\frac{1}{2}$ circle, Bevelled Edge, $\frac{1}{2}$ degrees	“ 1.25
574.	Protractor, 6 inches diameter, $\frac{1}{2}$ circle, Bevelled Edge, $\frac{1}{2}$ degrees	“ 2.00
575.	Protractor, 7 inches diameter, $\frac{1}{2}$ circle, Bevelled Edge, $\frac{1}{2}$ degrees	“ 2.65

GERMAN SILVER SWISS PROTRACTORS

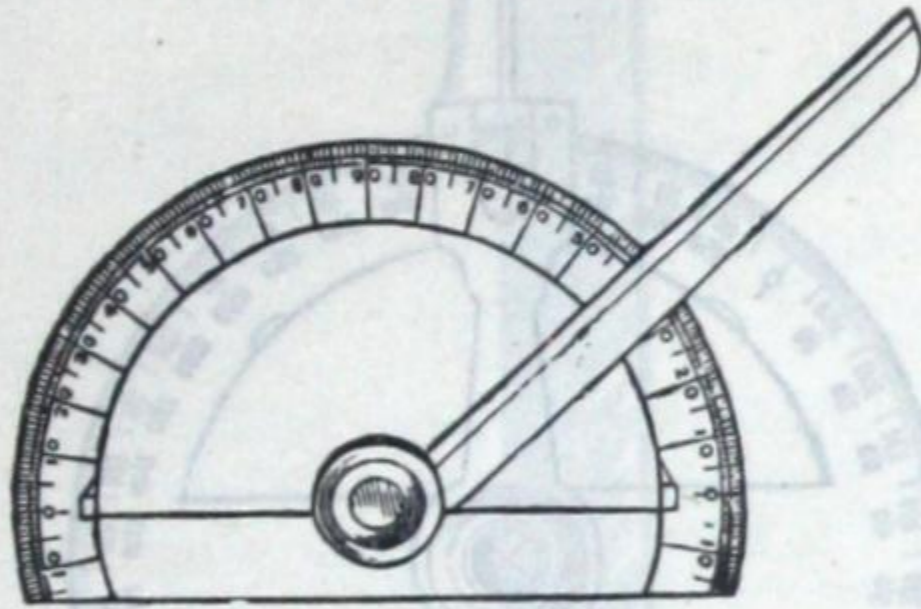
Of Superior Quality



No. 576.	Protractor, 4 inches diameter, $\frac{1}{2}$ circle, whole degrees each,	\$1.90
577.	Protractor, 5 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees	“ 2.50
578.	Protractor, 6 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees	“ 3.20
579.	Protractor, 6 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{4}$ degrees	“ 3.90
580.	Protractor, 5 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees	“ 3.00
581.	Protractor, 6 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees	“ 3.50
582.	Protractor, 6 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{4}$ degrees	“ 4.50

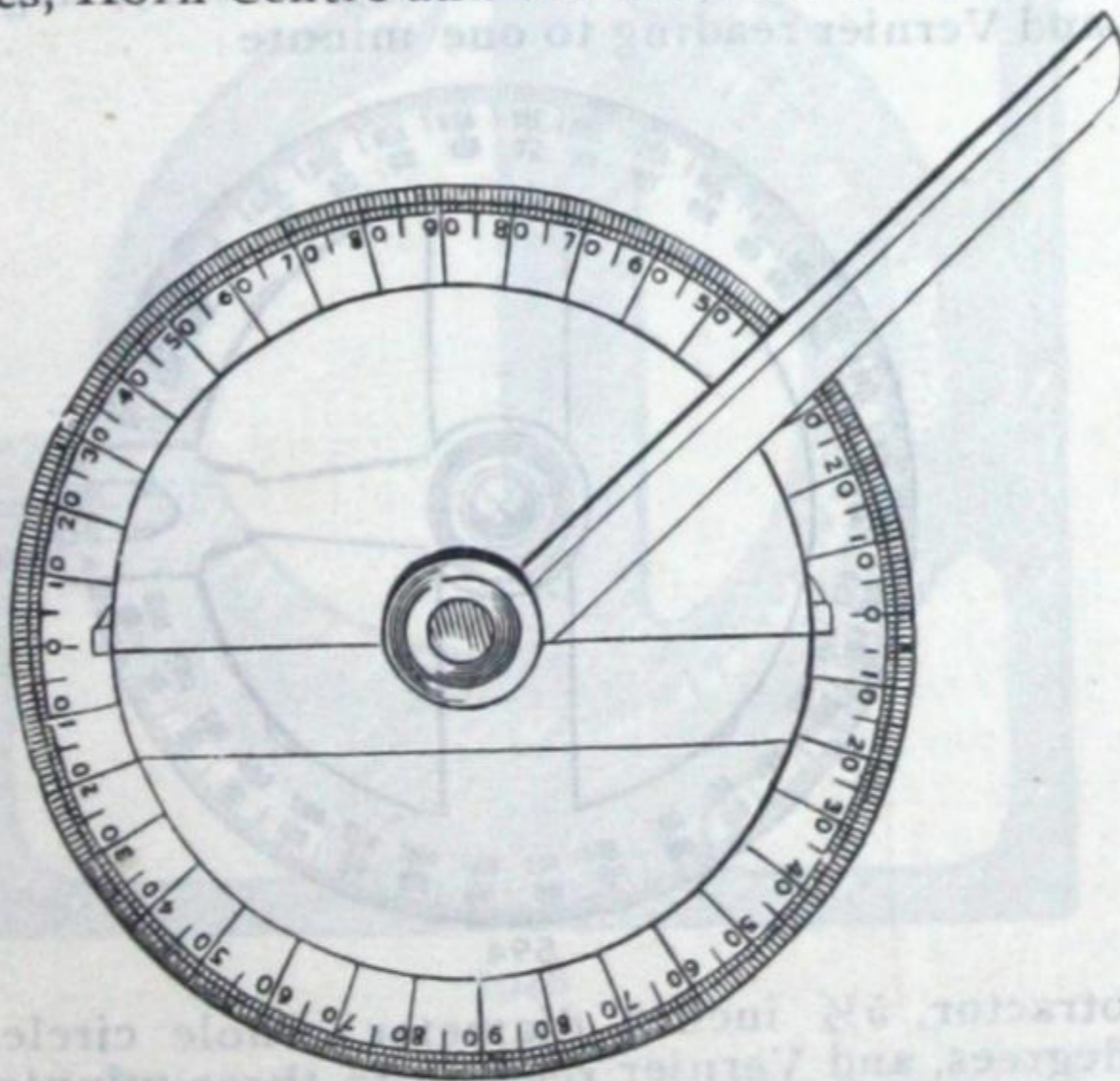
German Silver Swiss Protractors — continued

- No. 583. Protractor, 5 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees, Horn Centre and Movable Arm . . . each, \$6.50
- 584. Protractor, 6 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees, Horn Centre and Movable Arm . . . " 7.50
- 585. Protractor, 7 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees, Horn Centre and Movable Arm . . . " 9.00



583

- No. 586. Protractor, 8 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees, Horn Centre and Movable Arm . . . each, \$12.00
- 587. Protractor, 5 inches diameter, whole circle, $\frac{1}{2}$ degrees, Horn Centre and Movable Arm . . . " 10.00

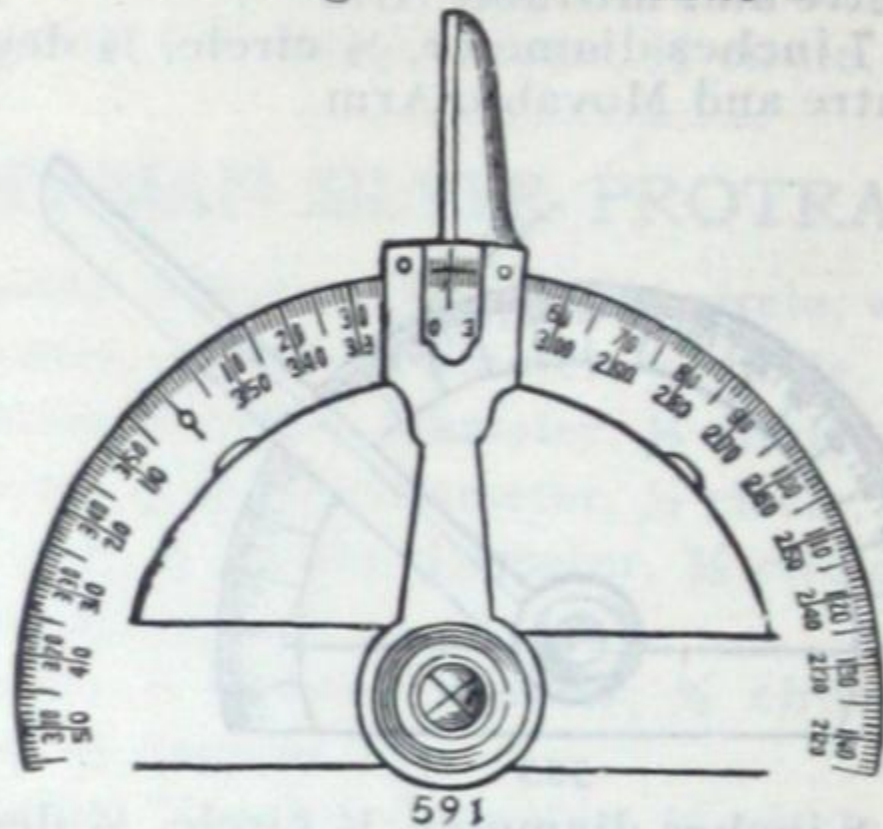


587

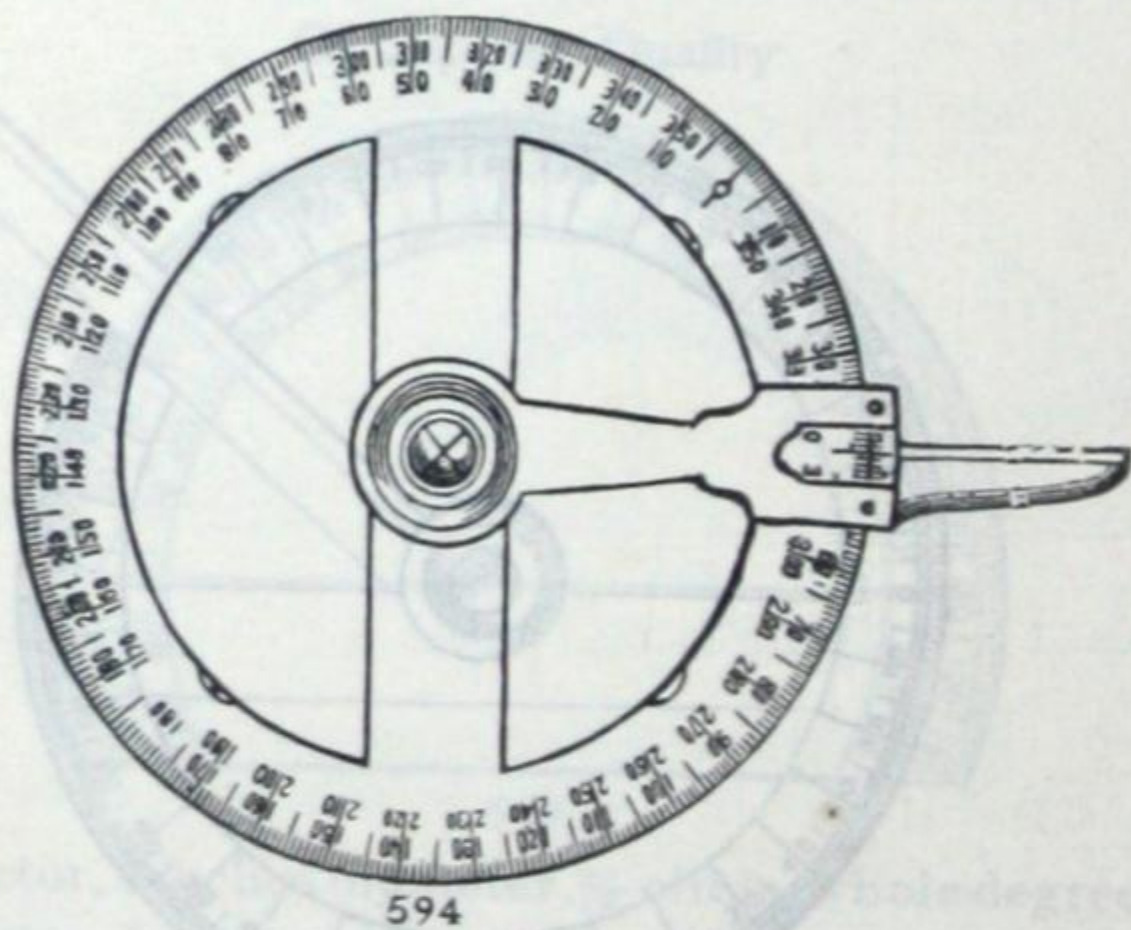
- No. 588. Protractor, 5 inches diameter, whole circle, $\frac{1}{2}$ degrees, Horn Centre and Movable Arm . . . each, \$12.00
- 589. Protractor, 7 inches diameter, whole circle, $\frac{1}{2}$ degrees, Horn Centre and Movable Arm . . . " 14.00

German Silver Swiss Protractors — continued

- No. 590. Protractor, 8 inches diameter, whole circle, $\frac{1}{2}$ degrees, Horn Centre and Movable Arm . . . each, \$16.00
 591. Protractor, $5\frac{1}{2}$ inches diameter, $\frac{1}{2}$ circle, $\frac{1}{2}$ degrees, and Vernier reading to three minutes . . . " 11.00

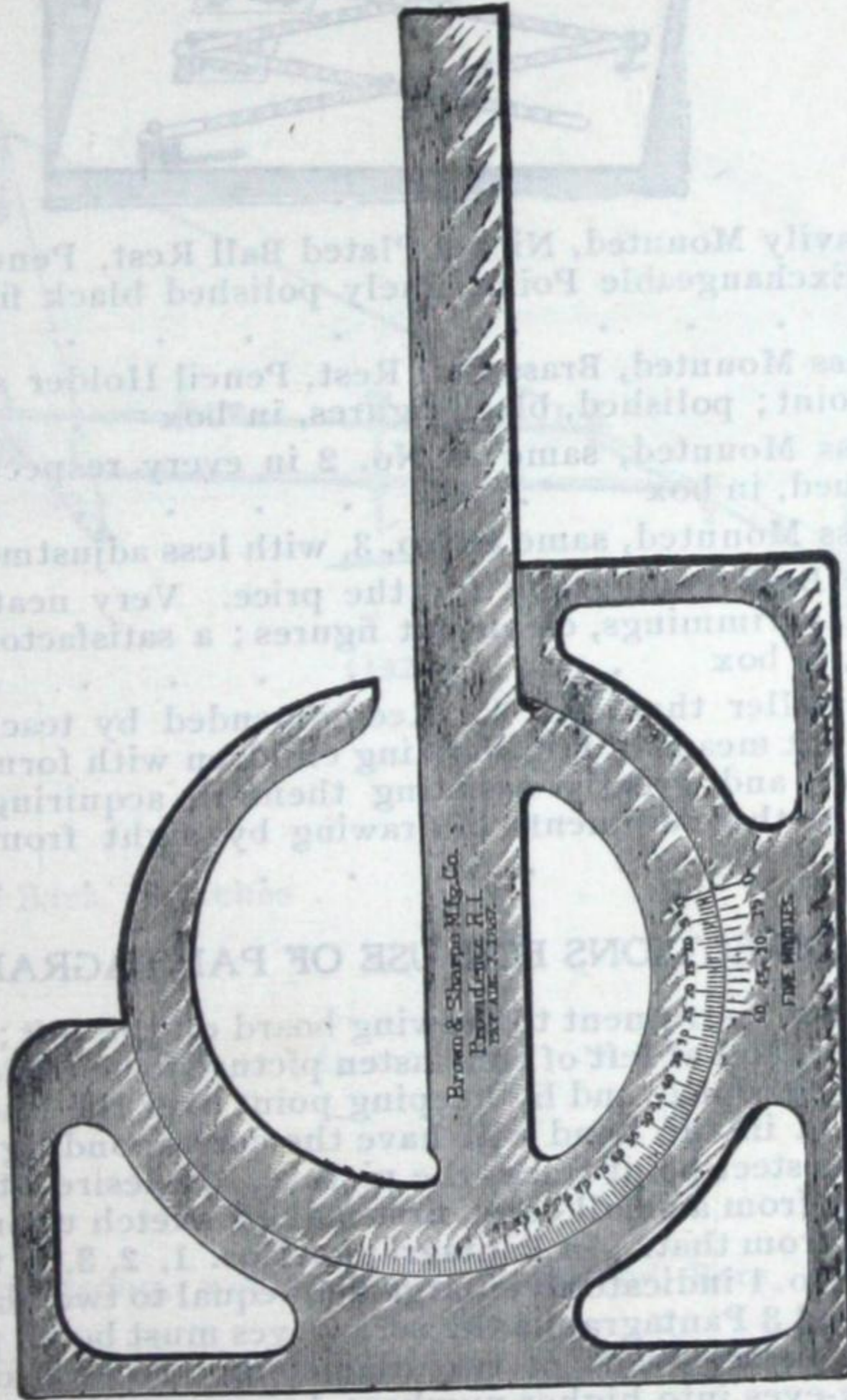


- No. 592. Protractor, 8 inches diameter, $\frac{1}{2}$ circle, $\frac{1}{4}$ degrees, and Vernier reading to one minute . . . each, \$14.50
 593. Protractor, 10 inches diameter, $\frac{1}{2}$ circle $\frac{1}{4}$ degrees, and Vernier reading to one minute . . . " 18.00



- No. 594. Protractor, $5\frac{1}{2}$ inches diameter, whole circle, $\frac{1}{2}$ degrees, and Vernier reading to three minutes . . . each, \$14.00
 595. Protractor, 8 inches diameter, whole circle, $\frac{1}{4}$ degrees, and Vernier reading to one minute . . . " 16.25
 596. Protractor, 10 inches diameter, whole circle, $\frac{1}{4}$ degrees, and Vernier reading to one minute . . . " 20.00

DRAUGHTSMEN'S STEEL PROTRACTOR.

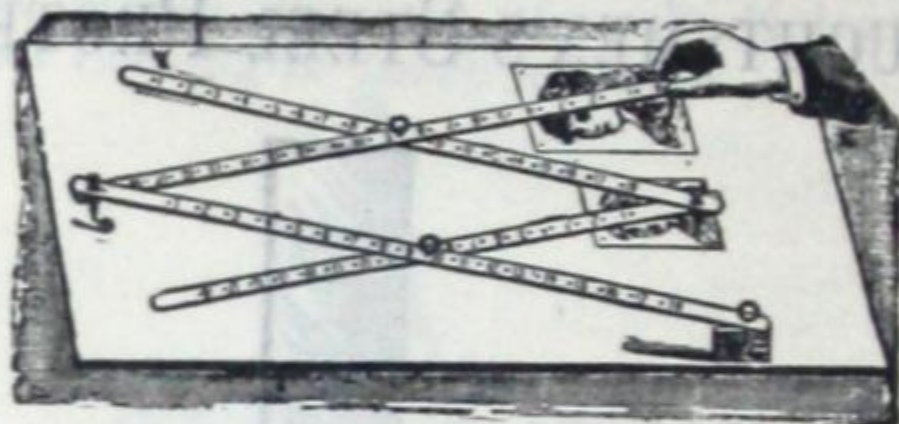


2948

- 2948. Steel Protractor, graduated to degrees, with vernier reading to 5 minutes \$6.50
- 2949. Steel Protractor, No. 2948 in morocco case 7.75

FROST & ADAMS CO.'S PANTAGRAPHS

For Enlarging and Reducing Drawings of All Kinds



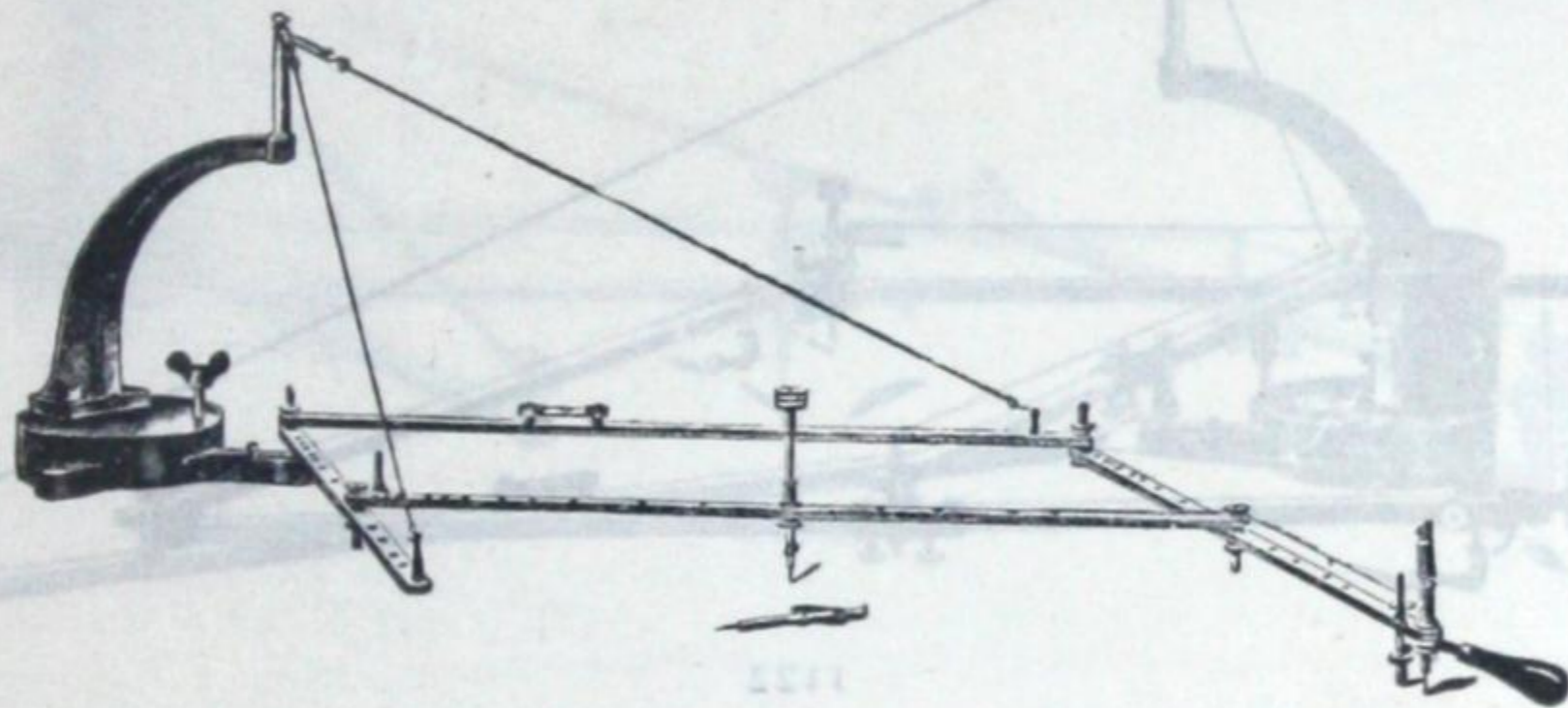
- | | |
|--|--------------|
| No. 1. Heavily Mounted, Nickel Plated Ball Rest, Pencil Holder and Exchangeable Point; finely polished black figures. In box | each, \$2.50 |
| 2. Brass Mounted, Brass Ball Rest, Pencil Holder and Movable Point; polished, black figures, in box | each, 2.00 |
| 3. Brass Mounted, same as No. 2 in every respect, but not polished, in box | each, 1.50 |
| 4. Brass Mounted, same as No. 3, with less adjustments " | 1.00 |
| 5. The Best Pantagraph for the price. Very neat and substantial trimmings, clean cut figures; a satisfactory instrument, in box | each, .50 |
| 6. Is smaller than No. 5. Recommended by teachers as an excellent means of familiarizing children with form and proportion, and greatly assisting them in acquiring a knowledge of the rudiments of drawing by sight from original objects | each, .25 |

DIRECTIONS FOR USE OF PANTAGRAPH

Fasten foot of instrument to drawing board on the left; at right fasten drawing paper, and at left of this fasten picture to be copied. Rest point on picture to be copied, and by keeping point over the lines and shadings the pencil held in the hand will have the corresponding movement and copy as fast as steel point traces the picture. If desired to make a very large drawing from a small copy, first make a sketch upon a small sheet and enlarge from that. In Pantagraphs Nos. 1, 2, 3, 4, the figures that are opposite No. 1 indicate an enlargement equal to two diameters. Thus in Nos. 1, 2 and 3 Pantagraphs the screw-eyes must be all placed at figure 26 to get an enlargement of two diameters. To increase enlargement change screw-eyes into higher numbers, being sure to have screw eyes in holes opposite same number on all the sticks. In No. 4 Pantagraph the screw-eye should be in hole No. 15 to enlarge two diameters, and to increase enlargement, moved to the large numbers. In Nos. 5 and 6 the holes are indicated by numbers, and to increase the size of enlargement move the screw-eyes into holes marked with higher numbers. Nos. 1, 2, 3 and 4 can be used for reducing as well as enlarging by reversing position of the pencil and pointer

SUSPENDED PANTOGRAPH

For Reducing and Enlarging in the following ratios: 5:4, 4:3, 3:2, 5:3, 2:1, 5:2, 3:1, 4:1, 5:1, 6:1, 8:1, 10:1, 12:1, 20:1, or vice versa



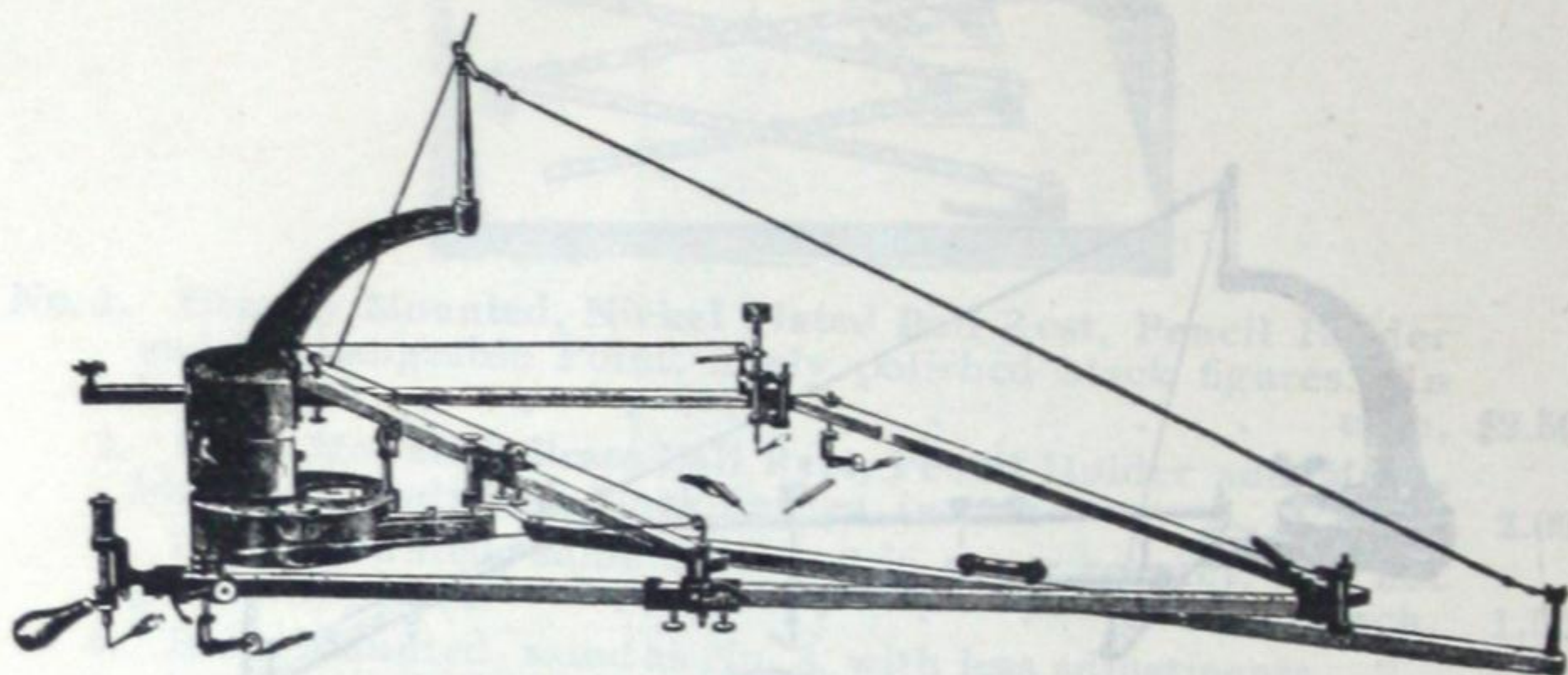
1132

1132.	Length of Bars, 28 inches	each, \$35.00
1133.	" " 33 "	" 36.00
1134.	" " 38 "	" 37.50

Pantograph of strong, well-seasoned Pearwood Bars, connected by Cone Joints and provided with holes accurately bored for the above ratios. Tracing and Pencil Points are interchangeable. Plain Solid Iron Standard. Instrument with Adjustable Tracing Point, Pencil Point, with 3 Brass Weights, 1 Steel Point, 1 Spirit Level, 1 Box of Paragon Leads and Directions. In Hardwood Case with Lock and Key

PRECISION PANTOGRAPH

For Reducing from 20:1 to 1:1 or Enlarging from 1:1 to 1:20 in all ratios



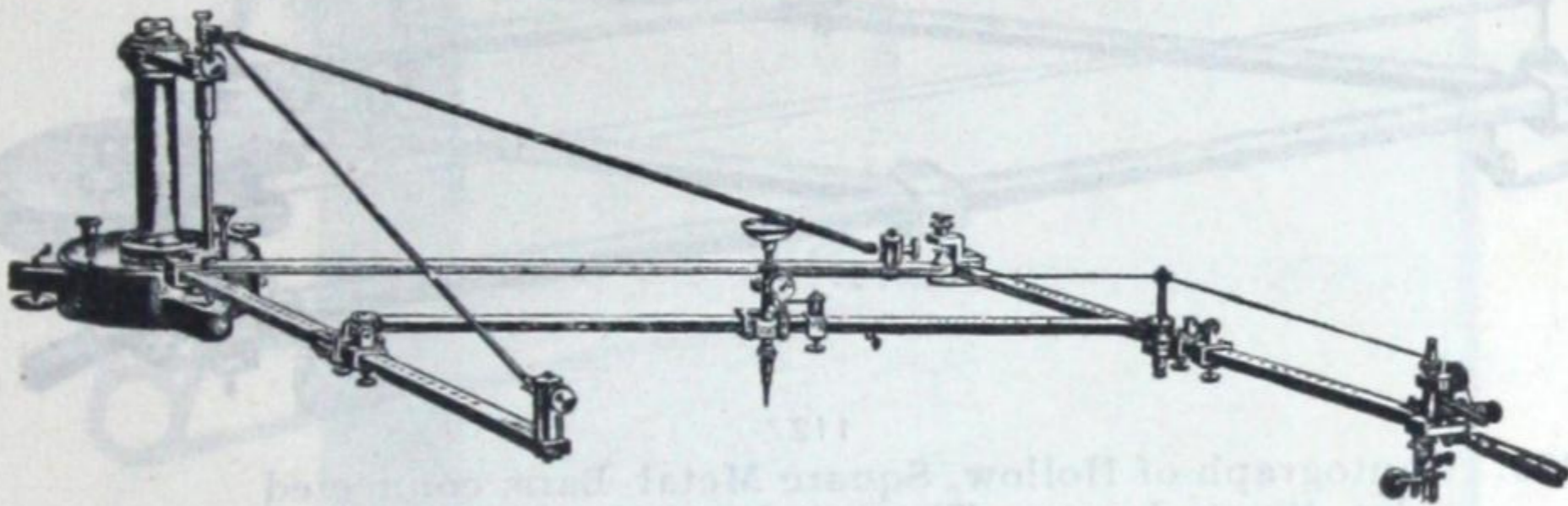
1122

1122.	Length of Bars, 33 inches	.	.	.	.	.	each, \$160.00
1123.	" " " 38 "	.	.	.	.	.	" 170.00

Pantograph of Hollow, Square Metal Bars, connected by pivot-joints; the bars are fully graduated and the sliding sockets are provided with verniers and micrometer adjustments. Extra Supporting Bar and appliances for setting up the instrument with the pole within the parallelogram. Pole and Pencil Point interchangeable. Convenient contrivance for operating the Pencil from the Tracing Point. Solid Iron Standard, with 2 Spirit Levels, 2 Leveling Screws and 2 extra Weights. Instrument with Adjustable Tracing Point, Pencil Point with 3 Brass Weights, 2 Steel Points, 1 Spirit Level, 1 Box of Paragon Leads, Directions and Formula for computing the setting for any ratio. In Polished Hardwood Case with Lock and Key

PRECISION PANTOGRAPH

For Reducing from 20:1 to 5:4 or Enlarging from 1:20 to 4:5 in all ratios



1125

1125. Length of Bars, 24 inches each, \$155.00

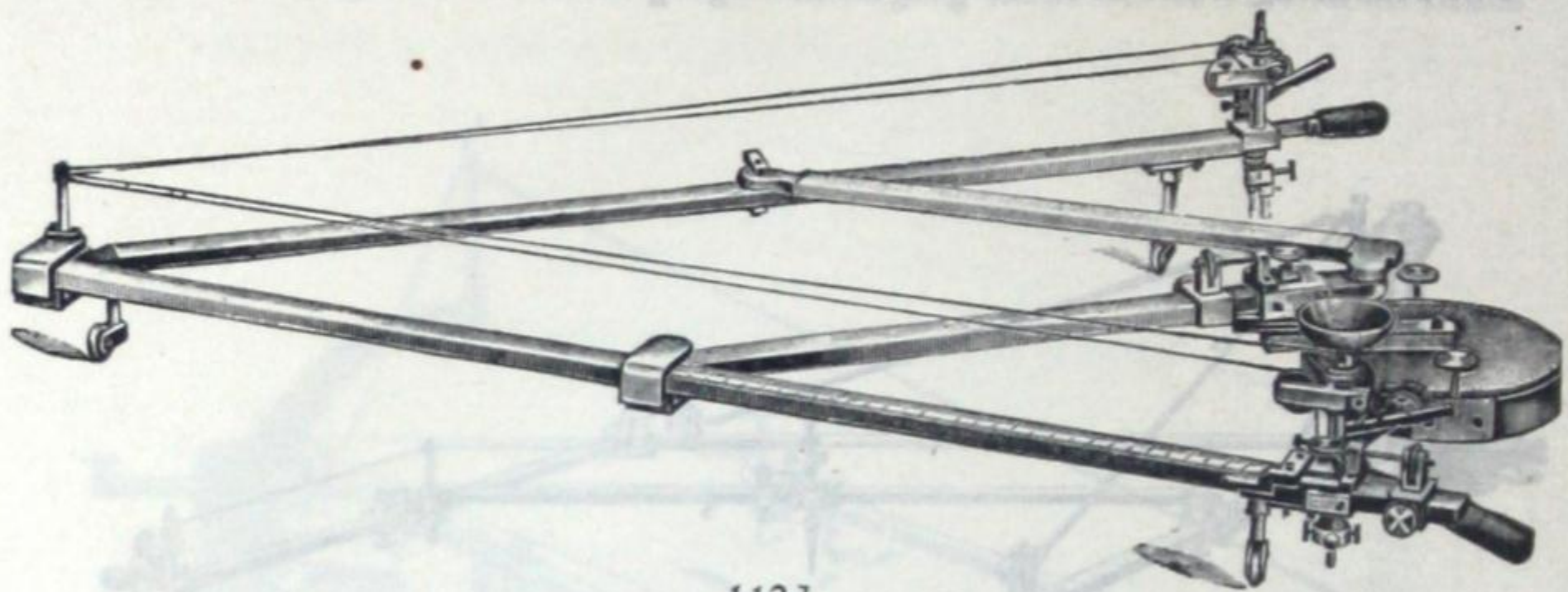
1125½. " " 33 " " " 165.00

This instrument is practically the same as No. 1122, but is without the appliance for erecting the instrument with the pole within the parallelogram and can be used only with the ratios given above

Nos. 1126 to 1128 are of the same quality and workmanship as Nos. 1125 to 1125½. They move on castors and are not suspended from a standard. This causes a little more friction, but makes the instrument better adapted for use in a limited space. Is replaced in case more readily than the Suspended Pantographs, as it does not require setting up

PANTOGRAPH

For Reducing from 6:1 to 1:1 or Enlarging from 1:1 to 1:6 in all ratios

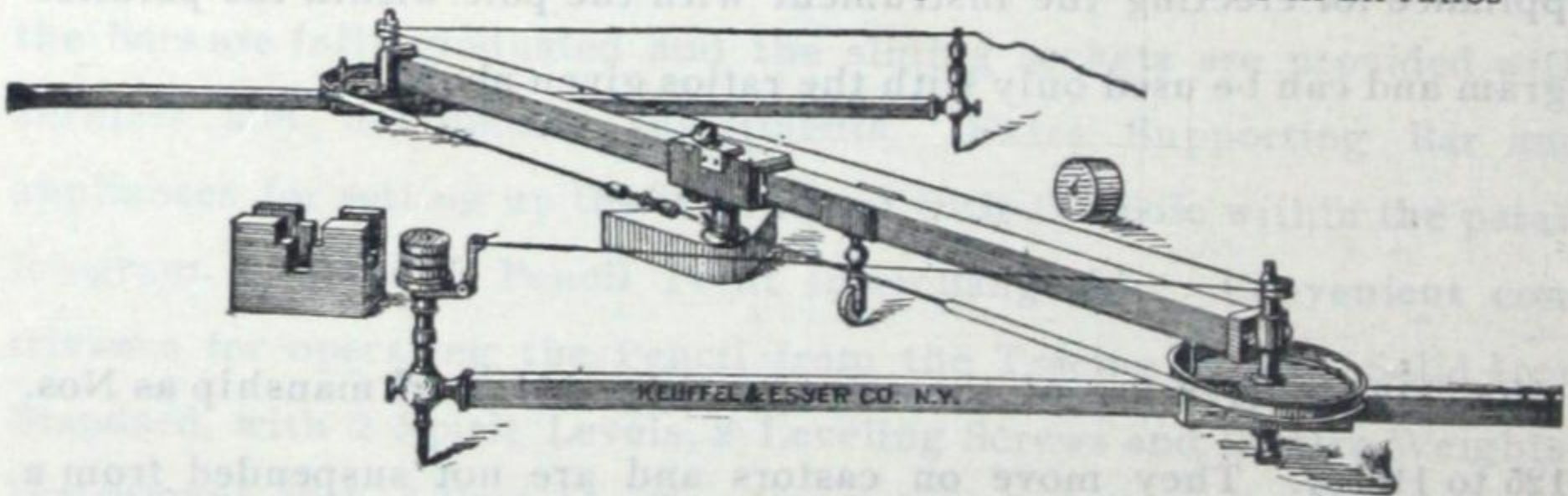


1127

1126. Pantograph of Hollow, Square Metal Bars, connected by Pivot Joints. The left hand bar is graduated and has a Vernier and Micrometer adjustment. Convenient for operating the Pencil from the Tracing Point. Solid Iron Fulcrum with 2 Adjustable Needle Points to fix its position on the drawing board. With Pencil Point, 2 Steel Points, 1 Box of Paragon Leads, in Hardwood Case with Lock and Key each, \$71.50
1127. The same as 1126 but Arms 28 inches " 87.50
1128. The same as 1126 but Arms 33 inches " 100.00

EIDOGRAPH

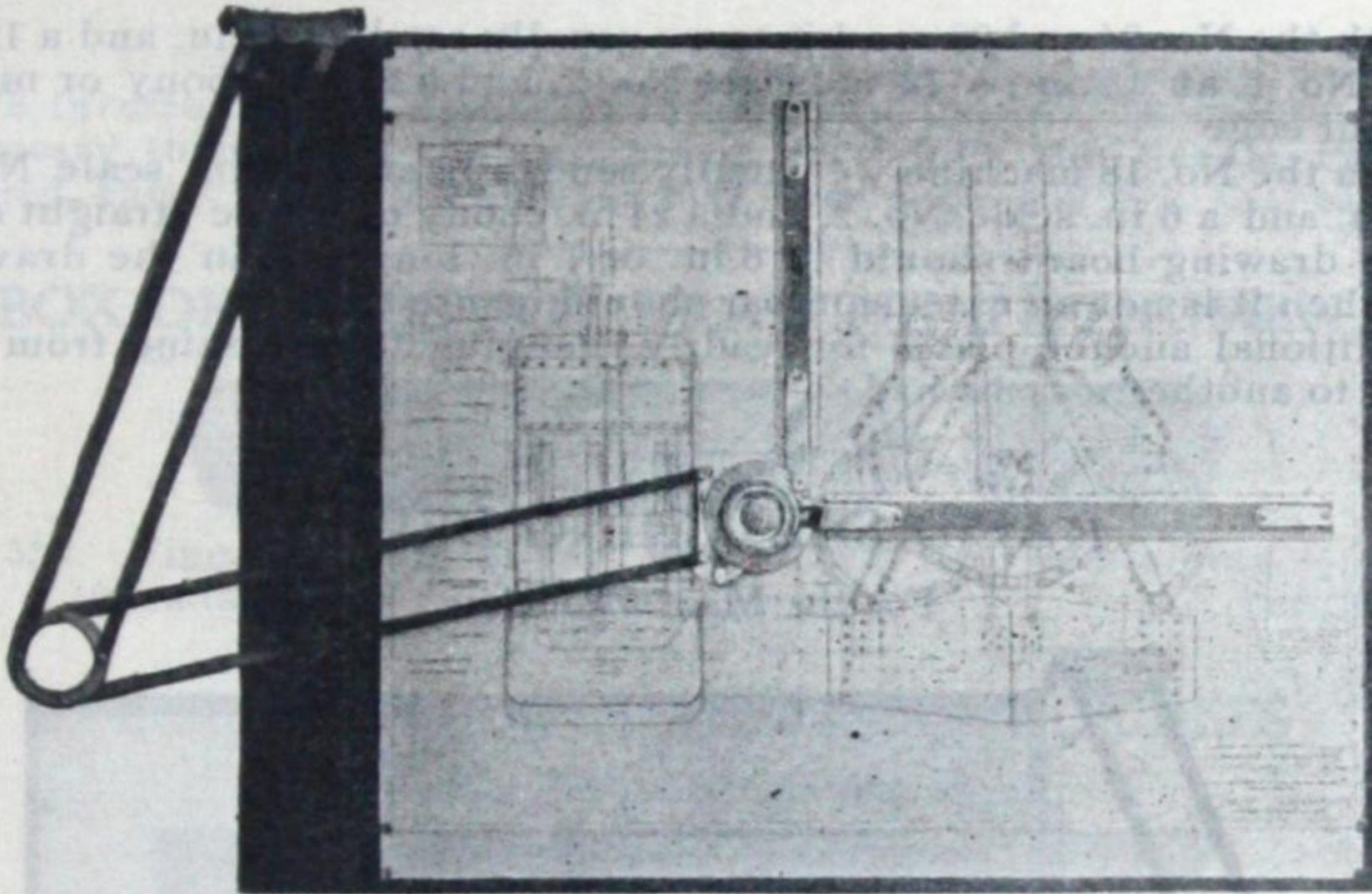
For Reducing from 8:1 to 1:1 or Enlarging from 1:1 to 1:8 in all ratios



1120

1120. Eidograph, Brass, of improved construction, with 2 Balance Weights and Moveable Support, Arms 30 inches, complete in Hardwood Case, with table of settings each, \$110.00
1121. The same as 1120, but Arms 36 inches " 125.00

UNIVERSAL DRAFTING MACHINES



No. 18.	Machine only, for drawings up to 18 × 24 inches	each, \$25.00
24.	Machine only, for drawings up to 30 × 36 inches	“ 25.00
28.	Machine only, for drawings up to 32 × 42 inches	“ 25.00
Extension Bar	“ “ “ “ “ “ “ “	“ .50
Anchor Plates	“ “ “ “ “ “ “ “	“ .25

SCALES WITH WHITE CELLULOID EDGES

6 inches long	each, .75	18 inches long	each, \$2.25
12 “ “	“ 1.25	24 “ “	“ 3.00

STANDARD GRADUATIONS OF SCALES

No. 1.	3, 1½, ¾, ⅜ in. to the foot	No. 5.	20-40
2.	1, ½, ¼, ⅛ “ “ “	6.	30-60
3.	Full and half size	7.	¼ and ⅛ size graduated full length
4.	10-50		

Two scales of the same graduation are used, forming a square: Set of 12 in. and 6 in. for the No. 18 machine and Set of 18 in. and 12 in. for the Nos. 24 and 28 machines are usually preferred

Other combinations are 12 and 12 inch, 24 and 12 inch, 24 and 18 inch

STRAIGHT EDGES FOR INKING

12 in. long, ebony or maple edges	each, .50	12 in. long, transparent celluloid edges	each, \$1.00
18 “ “ “ “ “ “	“ .75	18 “ “ “ “ “ “	“ 1.25
24 “ “ “ “ “ “	“ 1.00	24 “ “ “ “ “ “	“ 1.50
36 “ “ “ “ “ “	“ 1.50	36 “ “ “ “ “ “	“ 2.25

☞ All goods on this page are Net

Universal Drafting Machines—continued

With the No. 24 and 28 machines we usually send an 18 in. and a 12 in. scale No. 1, an 18 in., a 12 in. scale No. 2, and a 24 in. ebony or maple straight edge

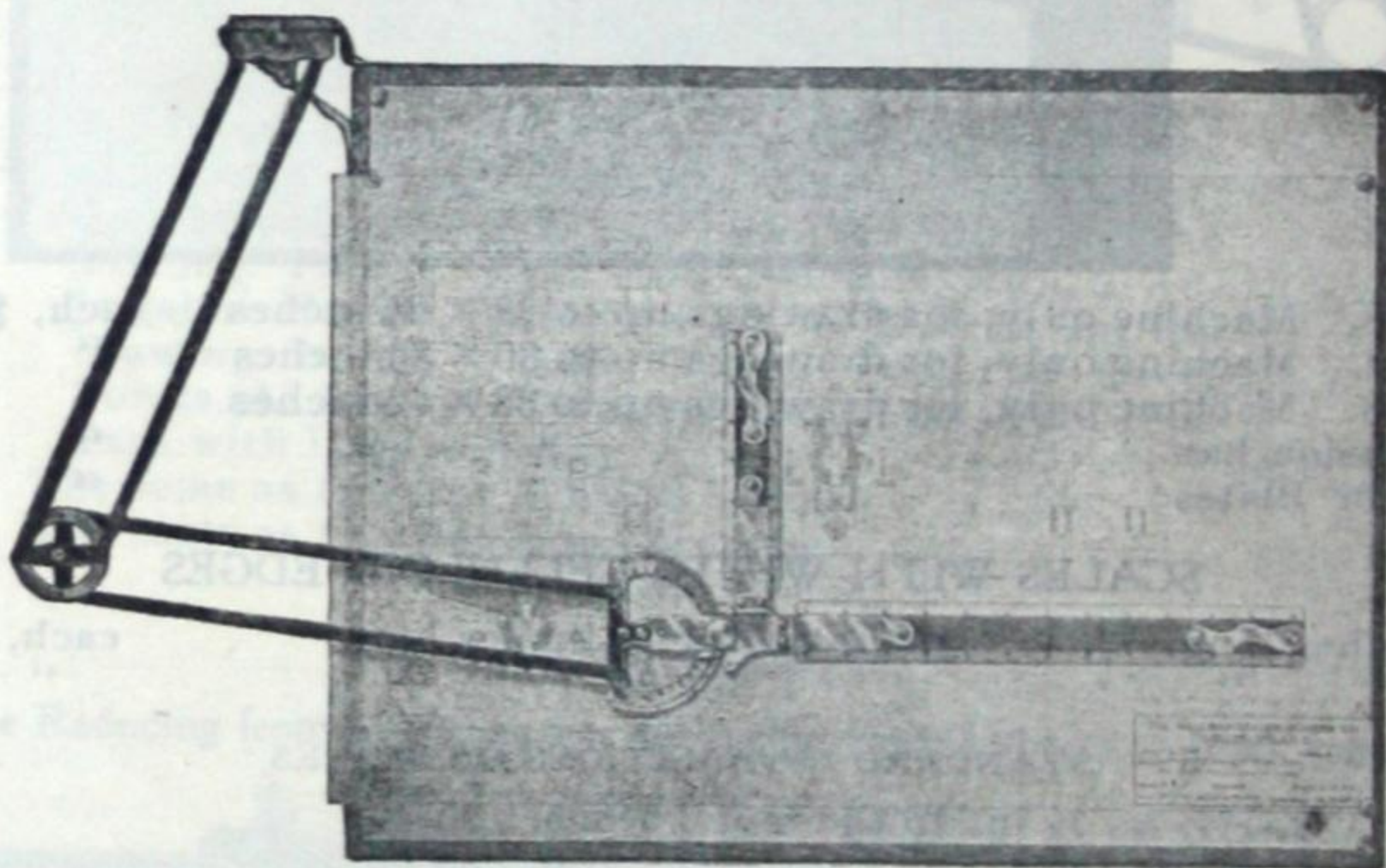
With the No. 18 machine we usually send a 12 and a 6 in. scale No. 1, a 12 in. and a 6 in. scale No. 2, and a 24 in. ebony or maple straight edge

The drawing board should be 6 in. or 7 in. longer than the drawing and when it is not an extension bar should be used

Additional anchor plates for readily changing the machine from one board to another may be had

RAPID SKETCHING DEVICE

For the Man with Ideas

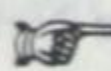


The Rapid Sketching Device, for drawings up to 18 x 24 inches, without board or scales each, \$14.00

The Scales, Straight Edges, etc., listed on page 276a are used with this machine

The convenience and completeness of the Rapid Sketching Device induce you to put your ideas on paper at once, instead of continually delaying the matter, burdening your mind, or even losing the ideas entirely

With your idea put on paper, to scale, instead of being loosely held in the mind, or merely represented by a free hand sketch, it may be improved and put into practical shape without delay, or if found to be impracticable, discarded for something better

 All goods on this page are Net

NEEDLE POINTS

For Mathematical Instruments

We furnish Needle Points to fit any Instrument. In ordering it is necessary to mention the Instrument for which the Needle Point is desired, thus: "Needle Point for 1532," see page 401 . . . each, .15

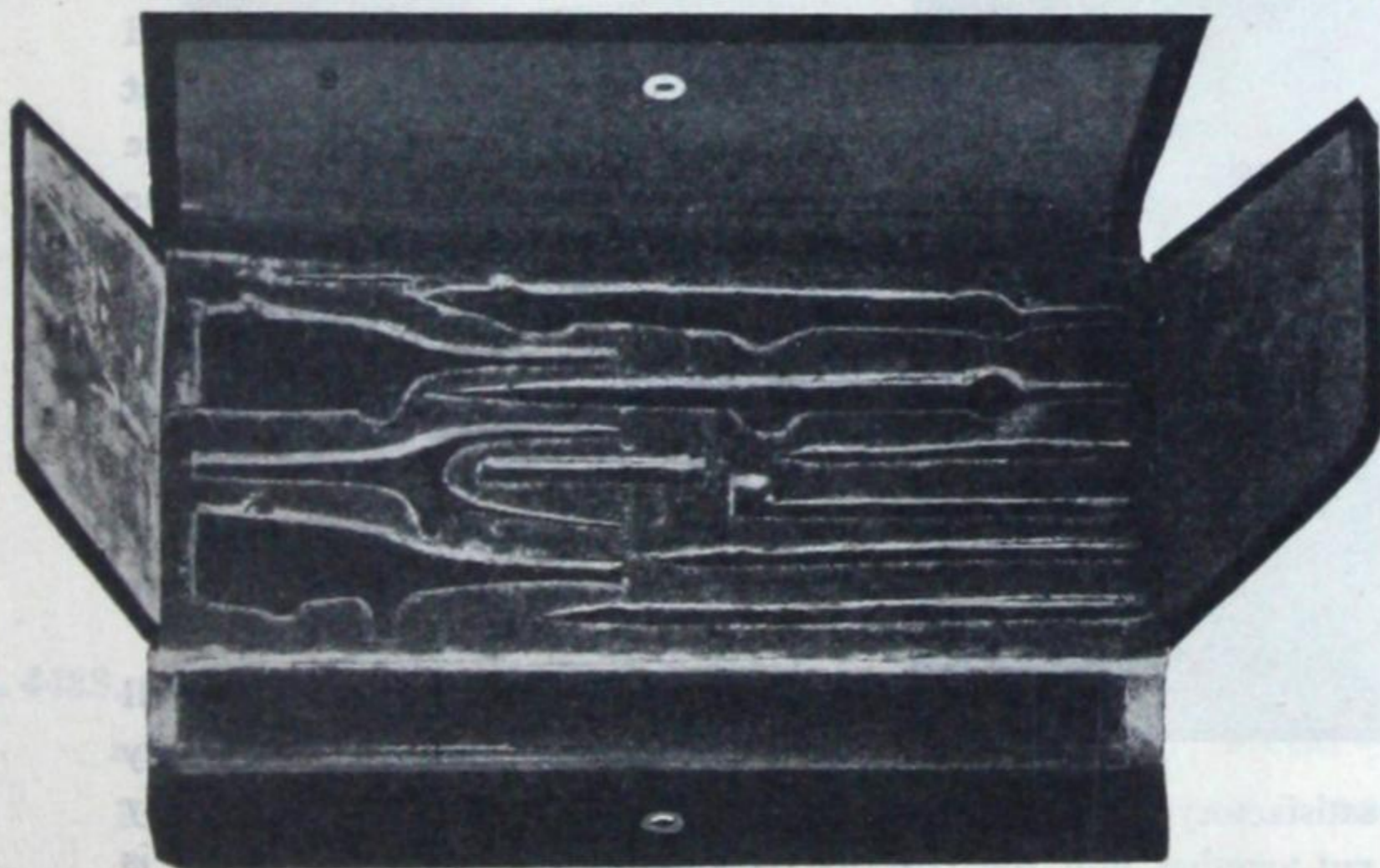
BOX OF LEADS FOR DRAWING INSTRUMENTS



No. 559. Fine German Silver Box, screw cap, containing 6 leads per box, .25

EMPTY FOLDING AND POCKET CASES

Fitted for Mathematical Instruments



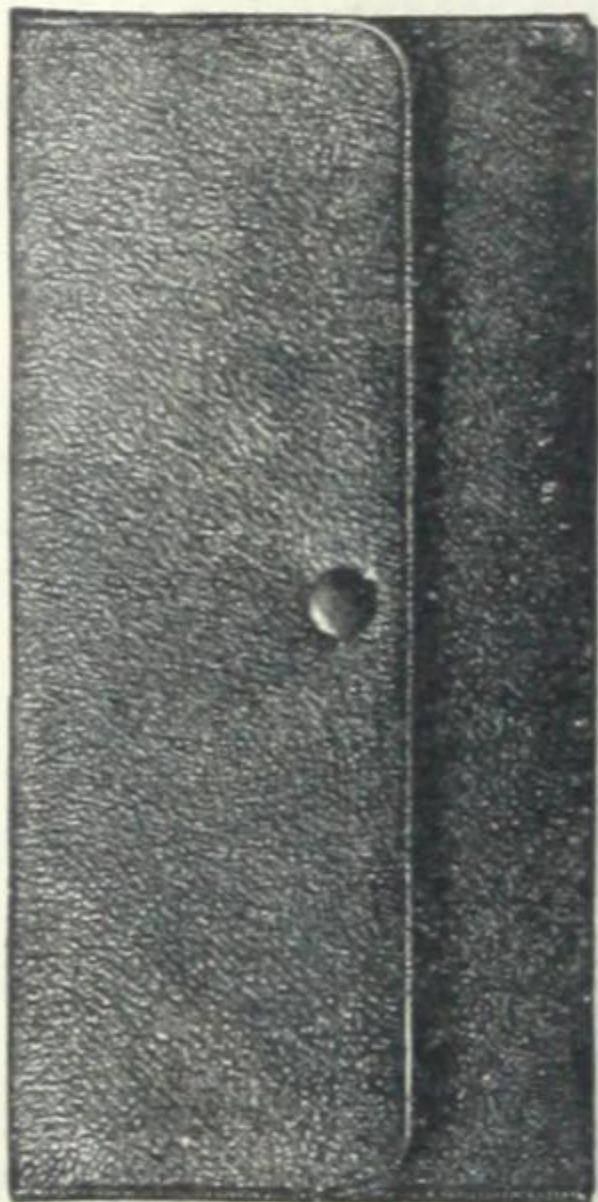
Lined with Silk Velvet.	Size of Case closed	2 × 6 in.	each, \$1.50
"	"	3 × 7½ "	" 2.00
"	"	3½ × 9 "	" 2.50
"	"	5 × 9 "	" 3.00
"	"	5 × 12½ "	" 4.50
"	"	6 × 10 "	" 4.00
"	"	7 × 11 "	" 4.50
"	"	7 × 13 "	" 5.00

These Folding Cases are covered with Morocco, with Sliding Bar Lock Pocket Case, Folding Flaps, Chamois Lined, as cut, add 20% to above

MATHEMATICAL INSTRUMENTS IN CASES

IN selecting a set of instruments the purchaser is not limited to the combinations as listed on the following pages, as we make to order, at short notice, special cases to suit any selection of instruments which the draughtsman may consider adapted to his line of work. It is advisable to have an instrument case, both for convenience and as a protection for the instruments; it tends to

keep the instruments in better condition and, as each tool has its separate space, saves time in handling.



The Alteneder pocket case is the best and most compact form of instrument case ever offered. When closed it has the appearance of a wallet and may be carried in the pocket without any greater inconvenience. With the exception of the block into which the instruments are fitted, it is all leather; the lining is colored chamois and the outside genuine morocco leather. This case is well adapted to withstand such wear as instrument cases are subjected to, and where a draughtsman has occasion to carry his instruments no more desirable case is to be had.

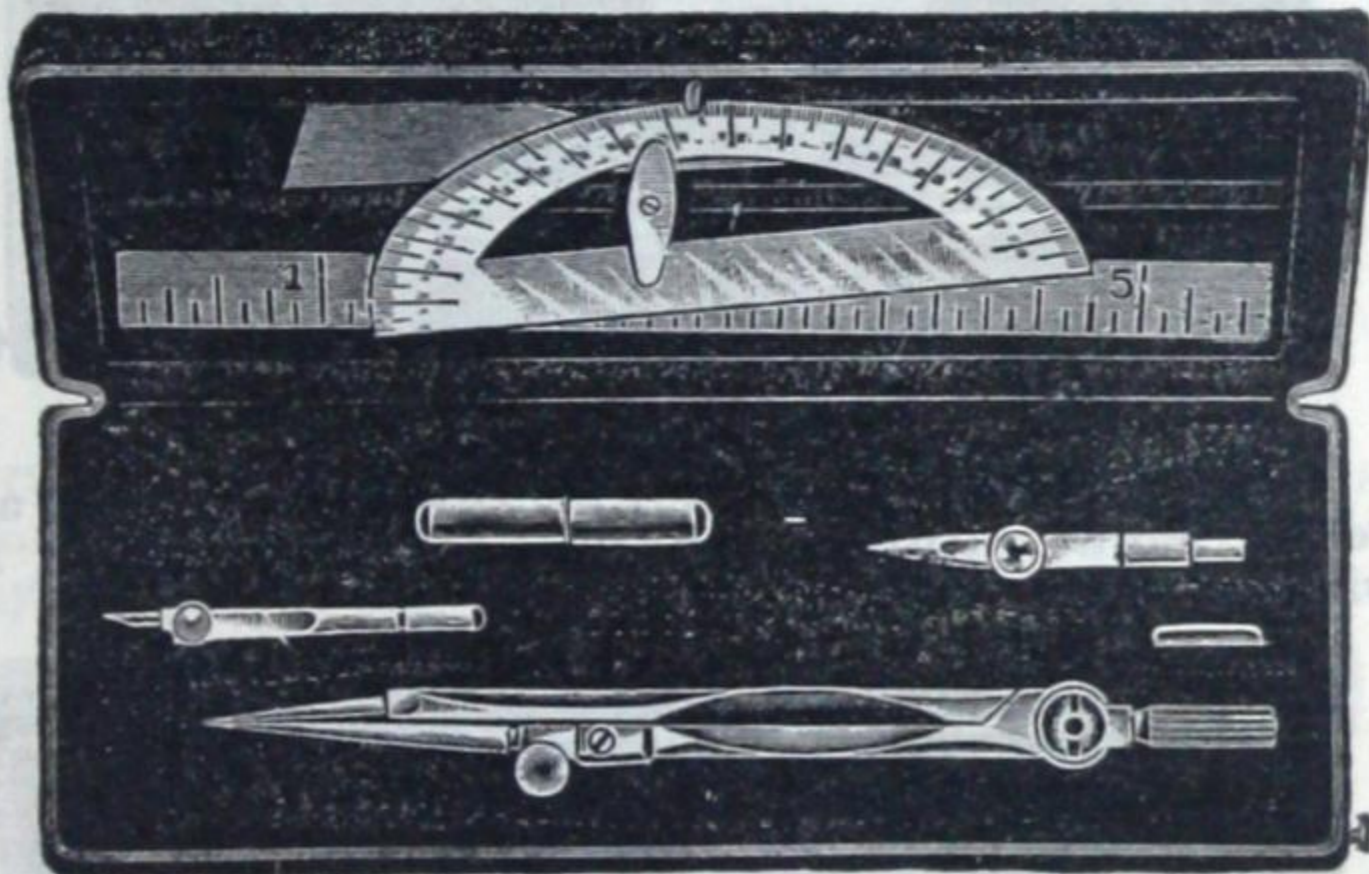
The morocco-covered cases are well made in every detail, and are a very satisfactory form of instrument case. The wood frames are firmly put together and the covering is genuine morocco; the lining is green velvet, although the colored chamois, as used in the Alteneder pocket-cases, may be substituted with good results both as regards appearance and wear. The hinges and catches are flush.

The mahogany cases are made of selected well-seasoned wood, finely polished, and are provided with good locks. They have loose cushion in lid and removable tray. The lining is green velvet, but chamois may be used instead as noted for the morocco-covered cases. A metal name plate is fitted in the lid if specified.

FROST & ADAMS CO.'S

NICKEL PLATED INSTRUMENTS

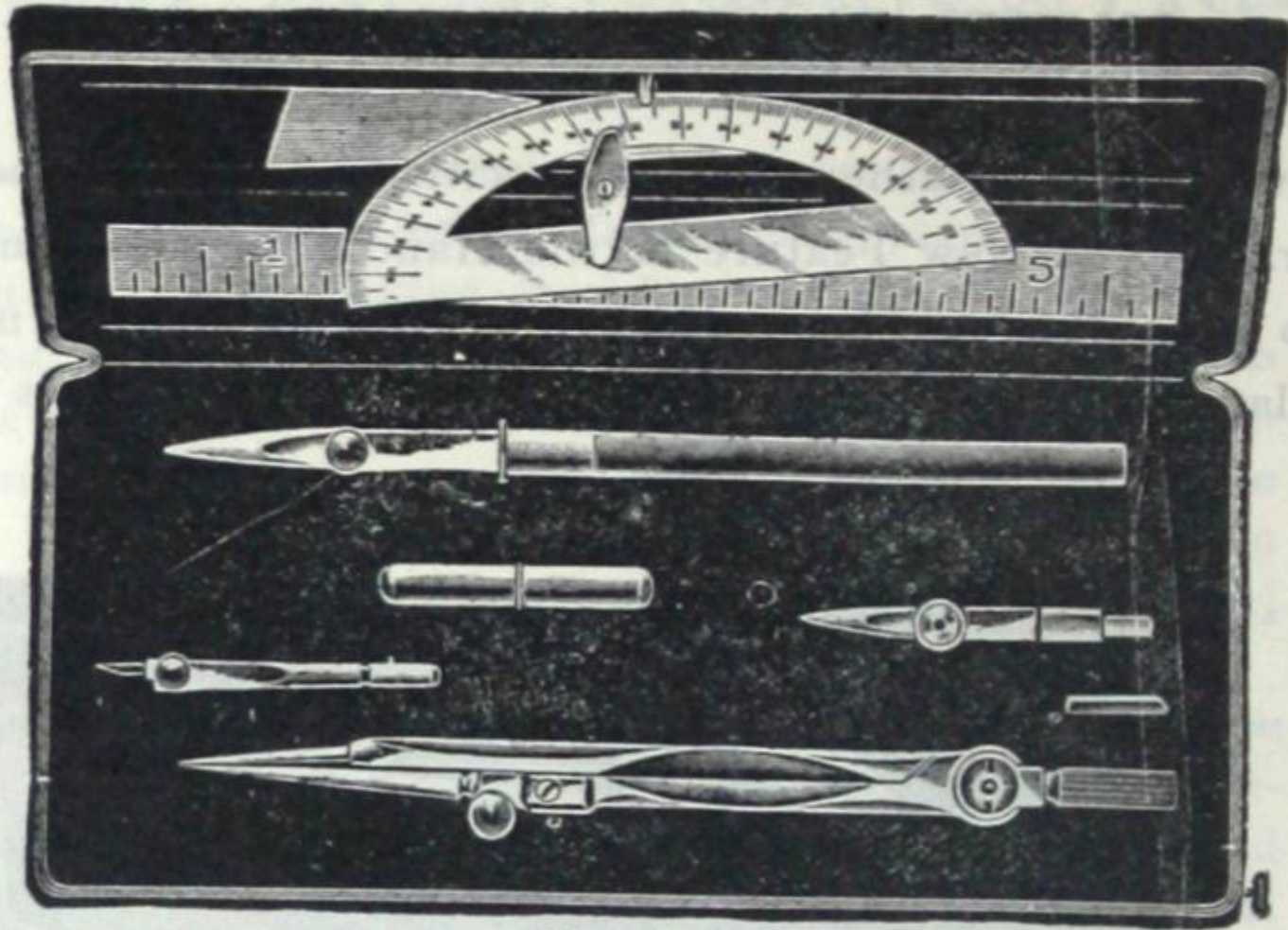
In Velvet Lined Leatherette Cases, with Sliding Bar Lock, including Protractor. A New Feature is the Handle on these Instruments, which up to now has only been attached to German Silver Instruments. Nickel Plated Instruments have the Improved Round Points



NO. 4440

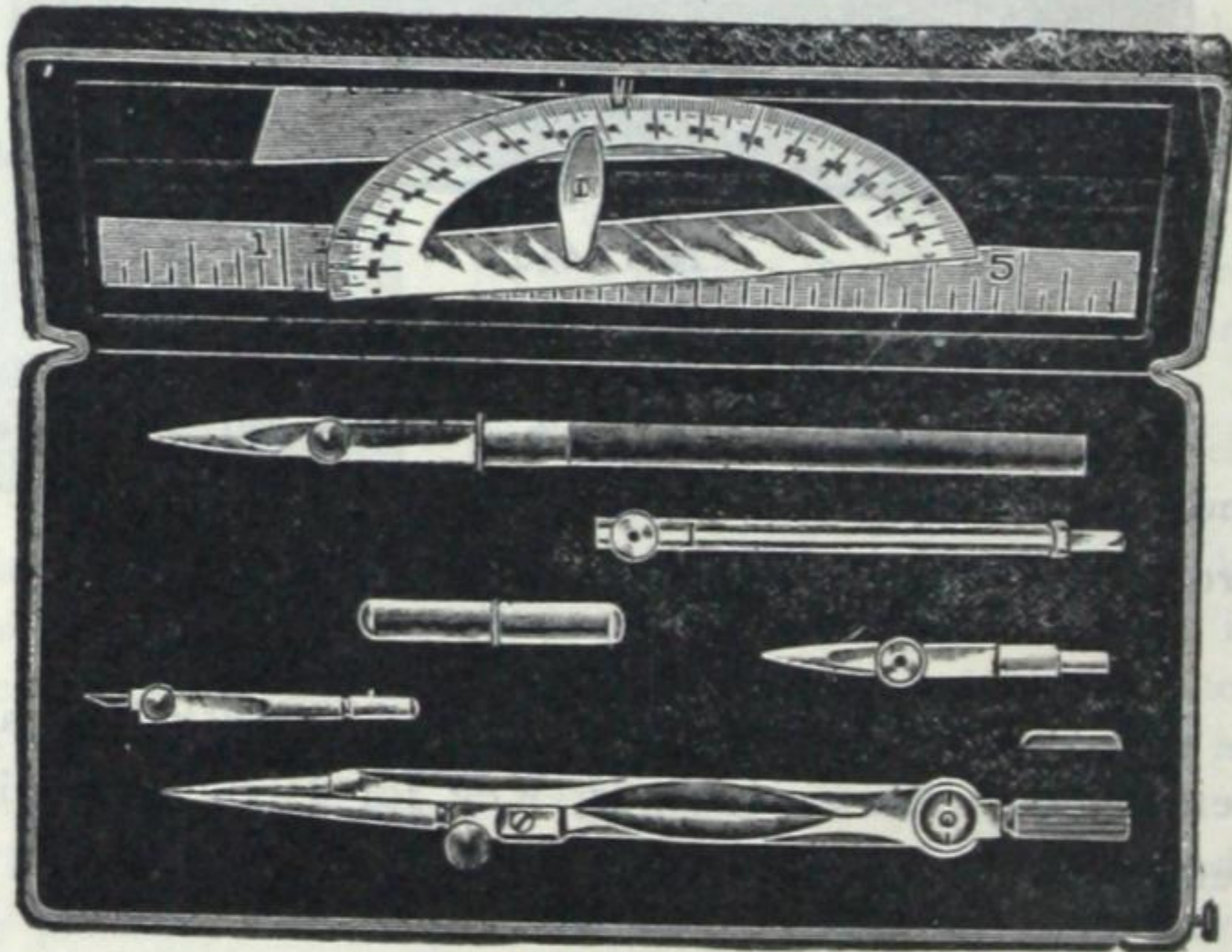
- No. 4438. Case contains 7 pieces: 3½ in. Divider with Pen, and Pencil Point, Box of Leads, Key for Divider, Metal Protractor, Wood Ruler each, .65
4439. Case contains 8 pieces: 3½ in. Divider with Pen, and Pencil Point, Box of Leads, Key for Divider, Ruling Pen, Metal Protractor, Wood Ruler each, .70
4440. Case contains 7 pieces: 4½ in. Divider with Pen, and Pencil Point, Box of Leads, Key for Divider, Metal Protractor, Wood Ruler each, .80

Nickel Plated Instruments—continued



NO. 4441

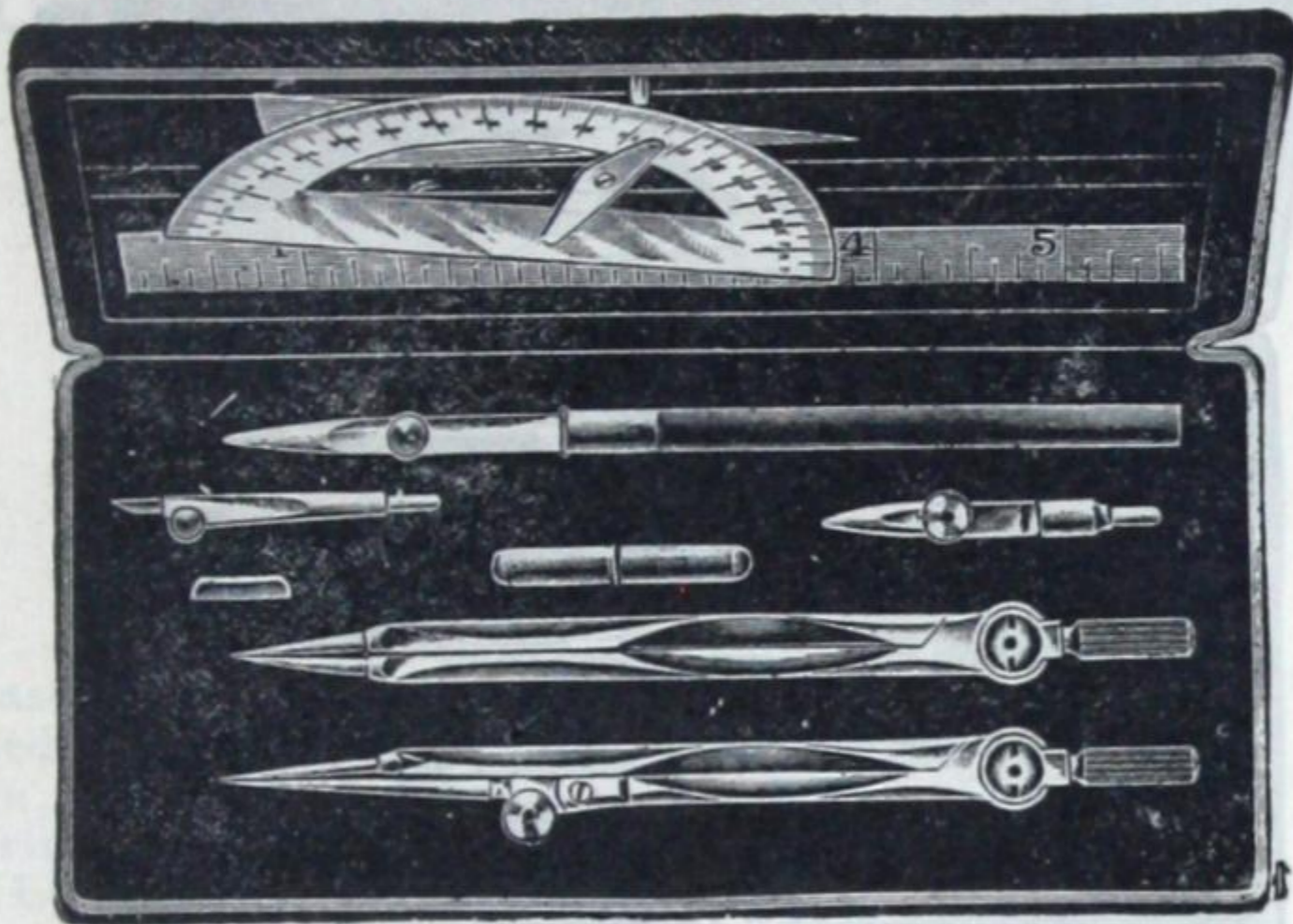
No. 4441. Case contains 7 pieces: 4½ in. Divider with Pen, and Pencil Point, Ruling Pen, Box of Leads, Key for Divider, Metal Protractor each, .90



NO. 4442

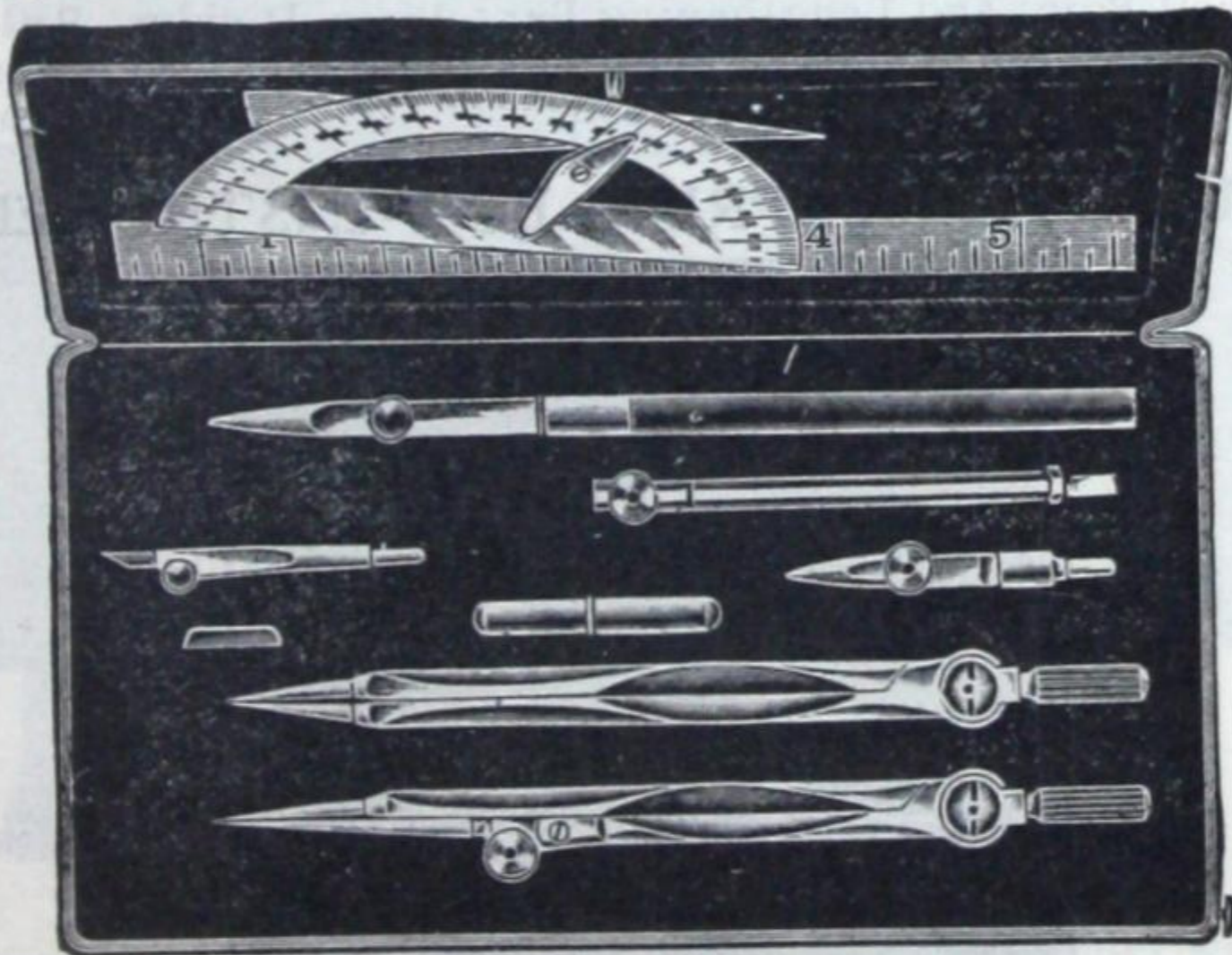
No. 4442. Case contains 8 pieces: 4½ in. Divider with Pen, Pencil Point and Lengthening Bar; Ruling Pen, Box of Leads, Key for Divider, Metal Protractor each, \$1.00

Nickel Plated Instruments—continued



NO. 4443

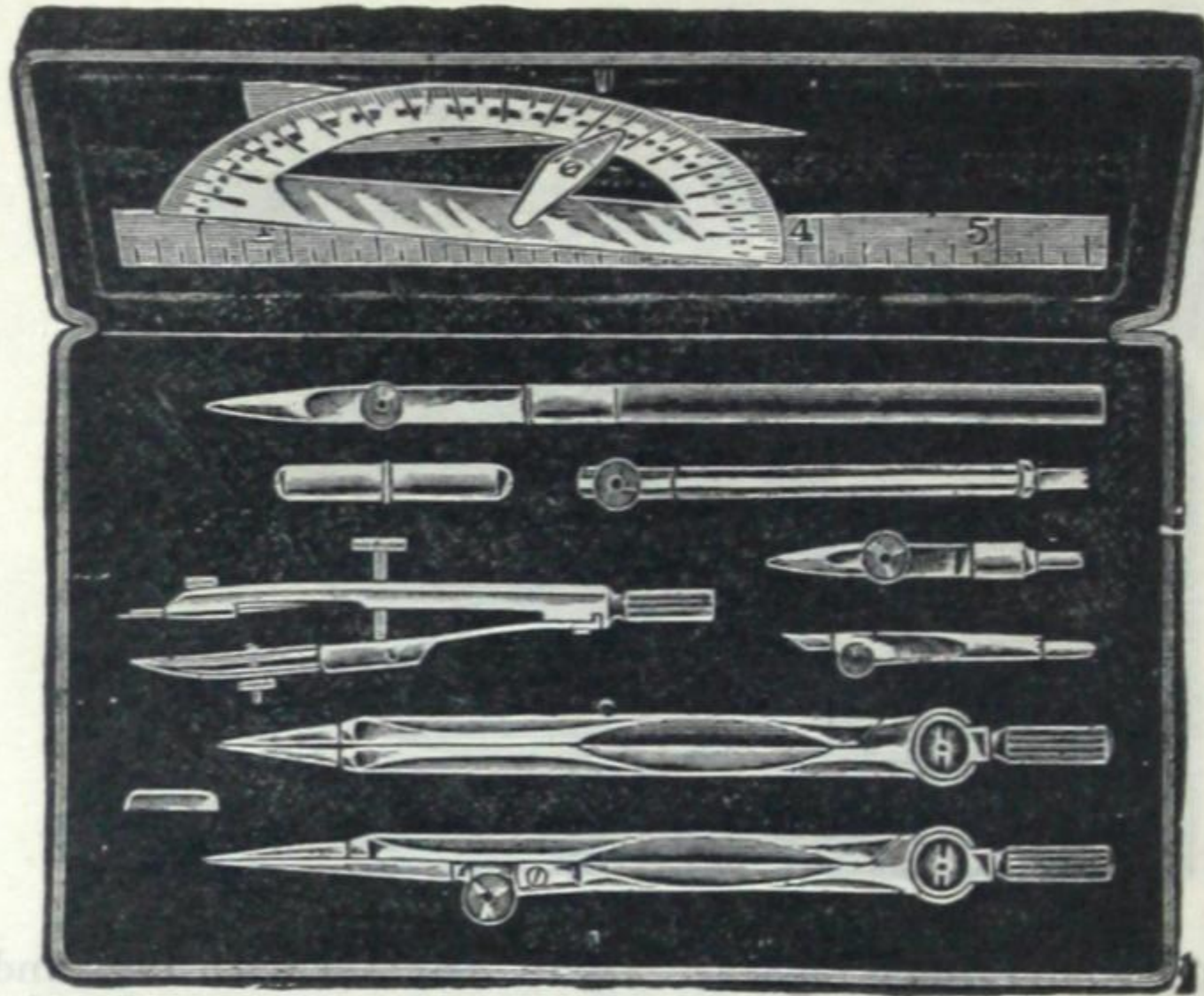
No. 4443. Case contains 9 pieces: 4½ in. Divider with Pen, and Pencil Point; Plain Divider, Ruling Pen, Box of Leads, Key for Dividers, Metal Protractor, Ruler . . . each, \$1.15



NO. 4444

No. 4444. Case contains 9 pieces: 4½ in. Divider with Pen, Pencil Point and Lengthening Bar; Plain Divider, Ruling Pen, Box of Leads, Key for Dividers, Metal Protractor . . . each, \$1.25

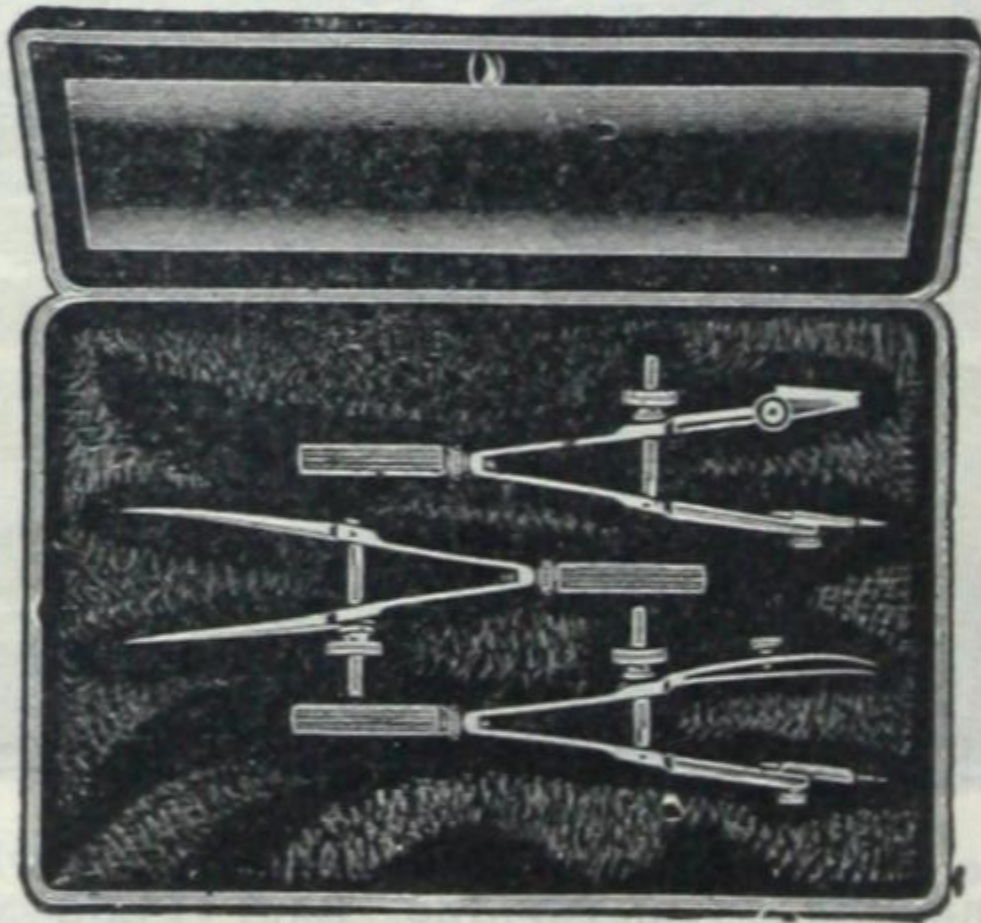
Nickle Plated Instruments—continued



NO. 4445

No. 4445. Case contains 10 pieces: 4½ in. Divider with Pen, Pencil Point and Lengthening Bar; Plain Divider, Ruling Pen, Spring Bow Pen, Box of Leads, Key for Dividers, Metal Protractor each, \$1.75

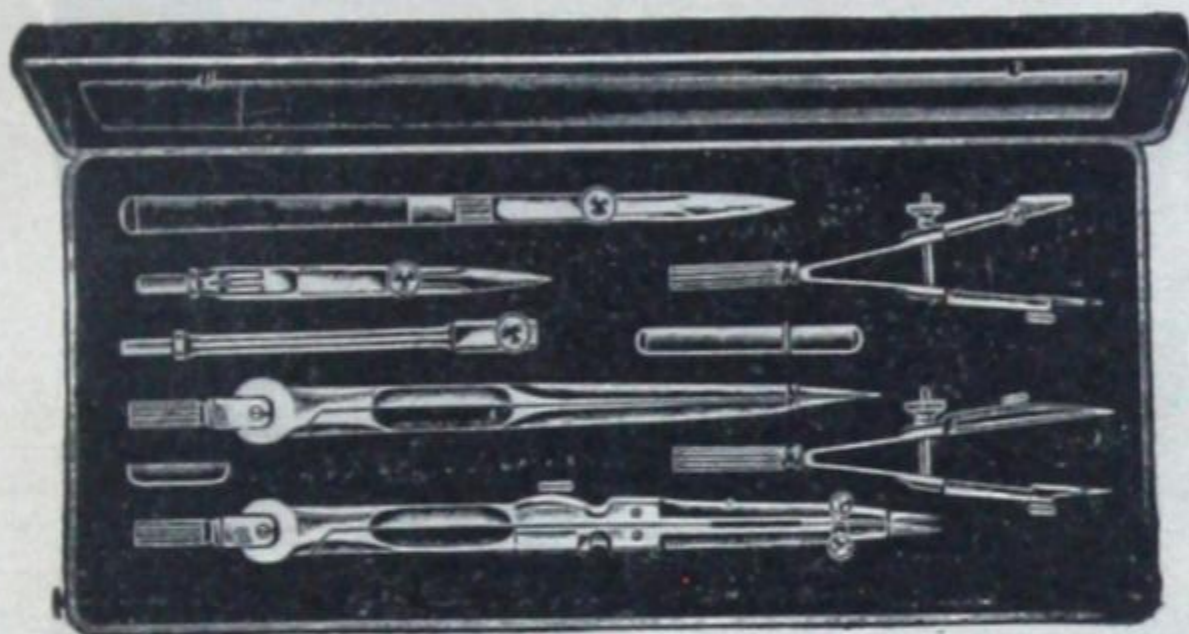
GERMAN SILVER SPRING BOW INSTRUMENTS



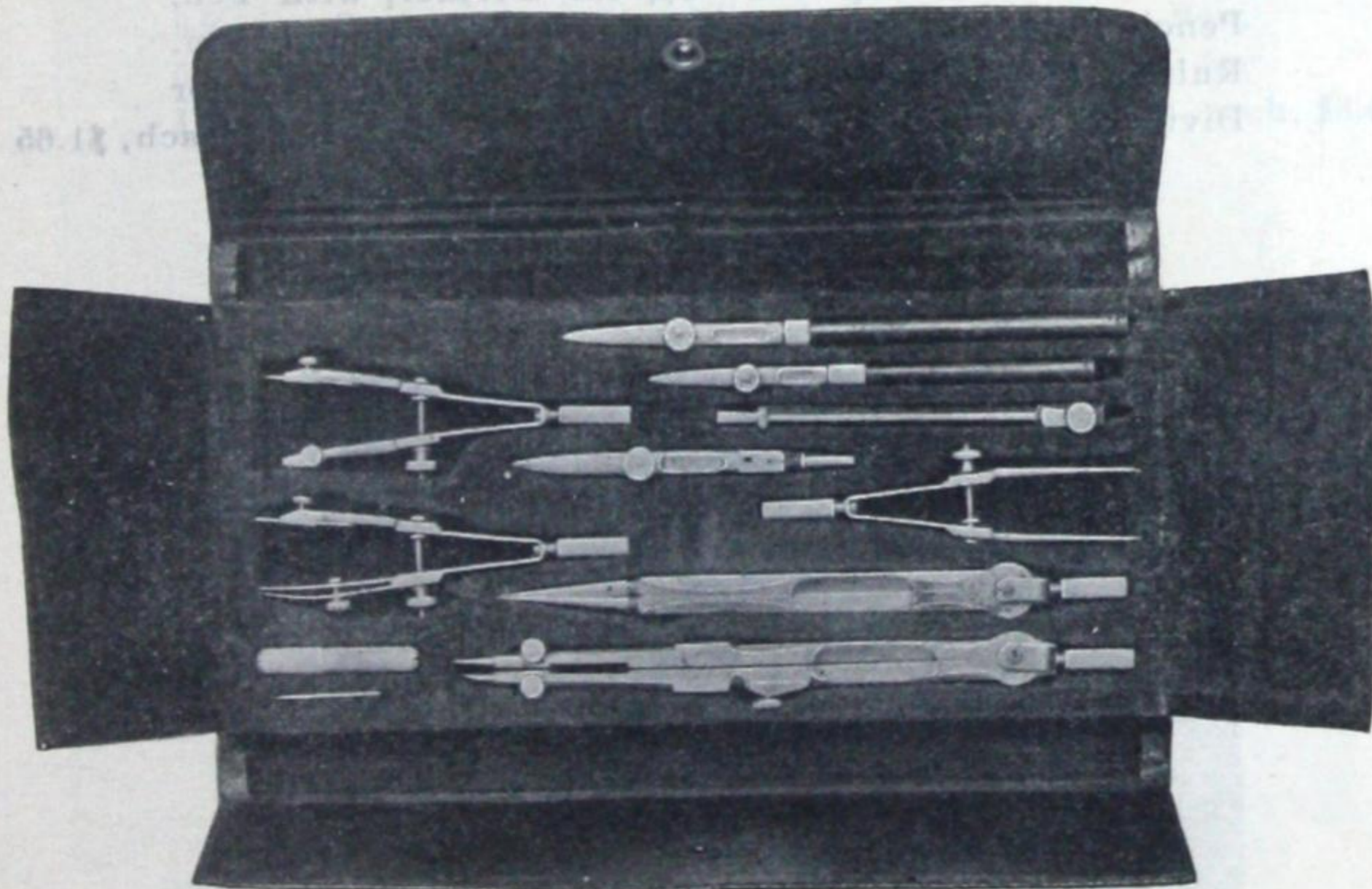
NO. 2254

No. 2254. Morocco Case contains 3 pieces: 3½ in. Spring Bow Pen, 3½ in. Spring Bow Pencil, 3½ in. Spring Bow Divider each, \$3.50

FROST & ADAMS CO.'S
SCHOOL SETS GERMAN SILVER INSTRUMENTS



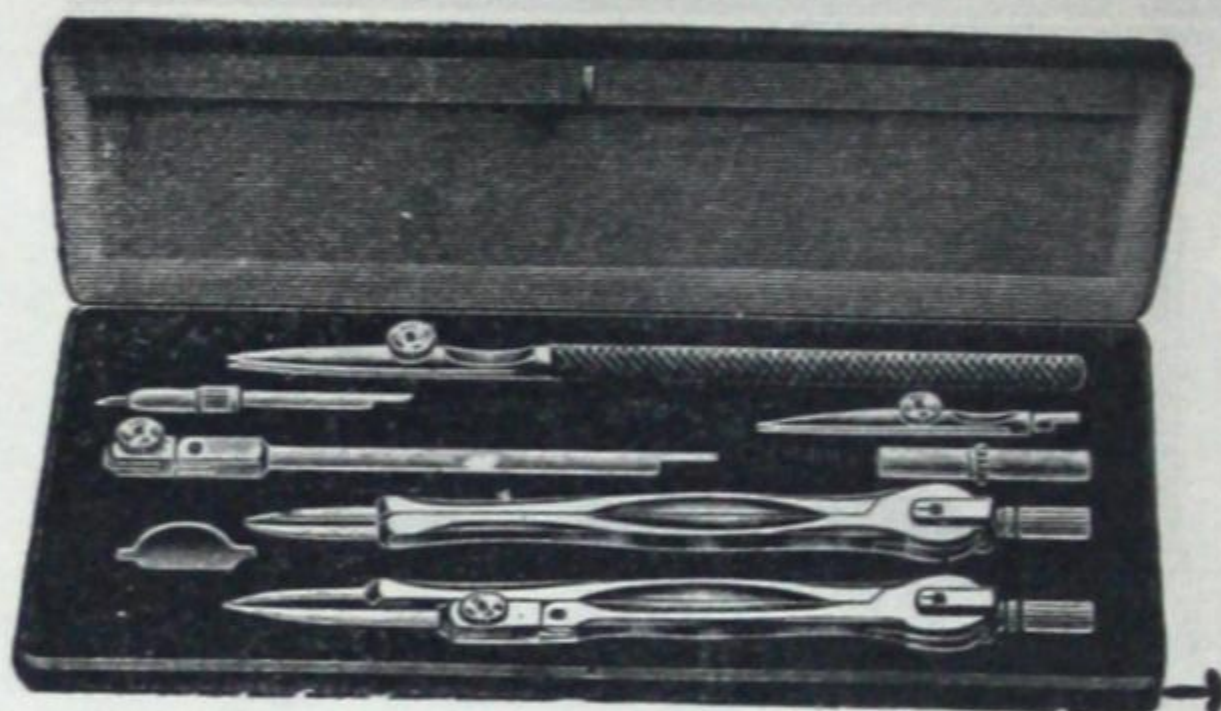
No. 65. Case contains 9 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Plain Dividers, 3½ in. Spring Bow Pen, 3½ in. Spring Bow Pencil, 5 in. Spring Back Ruling Pen, Box of Leads and Key each, \$5.00



No. 1. F. & A. CO. POCKET BOOK SCHOOL SET

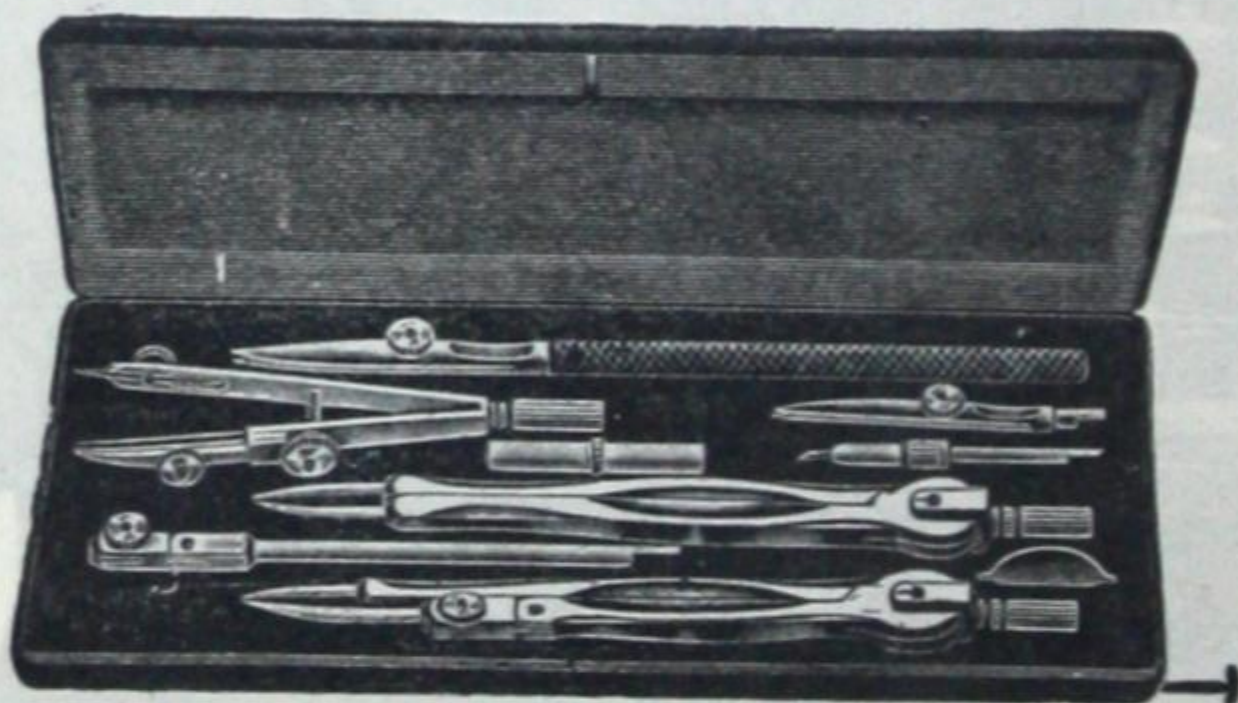
No. 1. Pocket Book Case contains 11 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Plain Dividers, 3 in. Bow Pen, 3 in. Bow Pencil, 3 in. Bow Dividers, 4 in. Ruling Pen, 5 in. Ruling Pen, Box of Leads and Key each, \$5.00

Frost & Adams Co.'s German Silver School Sets — continued
For Elementary School Grades



NO. 408

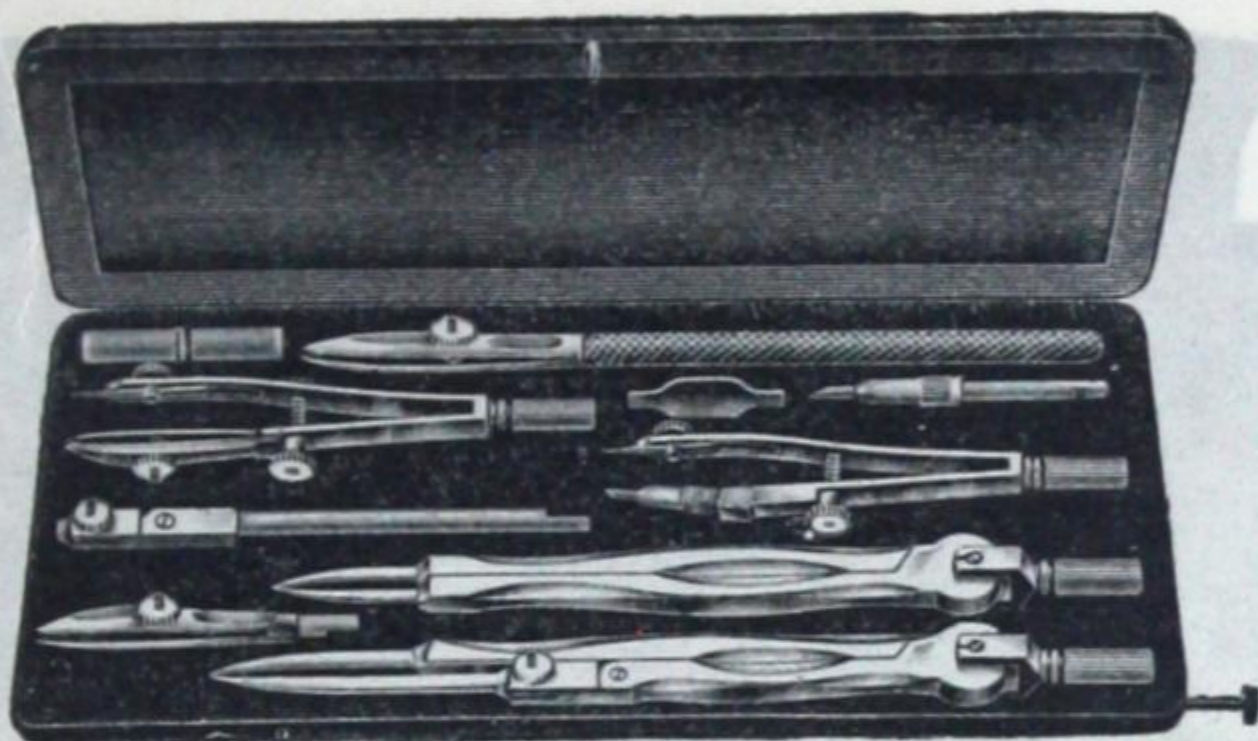
- No. 408. Case contains 8 pieces: 5 $\frac{1}{4}$ in. Divider, with Pen, Pencil Point and Lengthening Bar, 5 $\frac{1}{4}$ in. Divider, 5 in. Ruling Pen, Black Handle, Box of Leads, Key for Dividers each, \$1.65



NO. 409

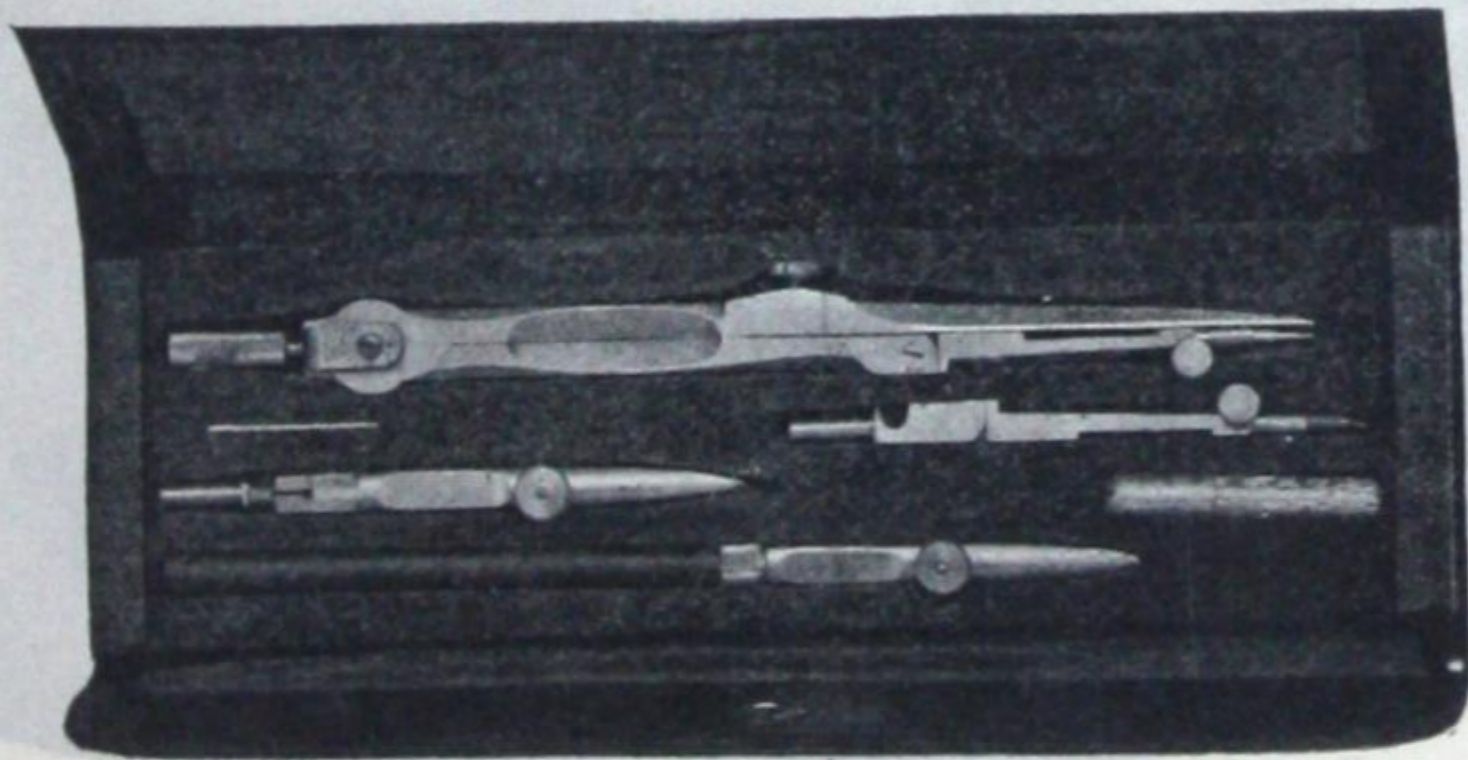
- No. 409. Case contains 9 pieces: 5 $\frac{1}{4}$ in. Divider, with Pen, Pencil Point and Lengthening Bar, 5 $\frac{1}{4}$ in. Divider, 3 $\frac{1}{4}$ in. Spring Bow Pen, 5 in. Ruling Pen, Black Handle, Box of Leads, Key for Dividers each, \$2.50

Frost & Adams Co.'s German Silver School Sets — continued



NO. 410

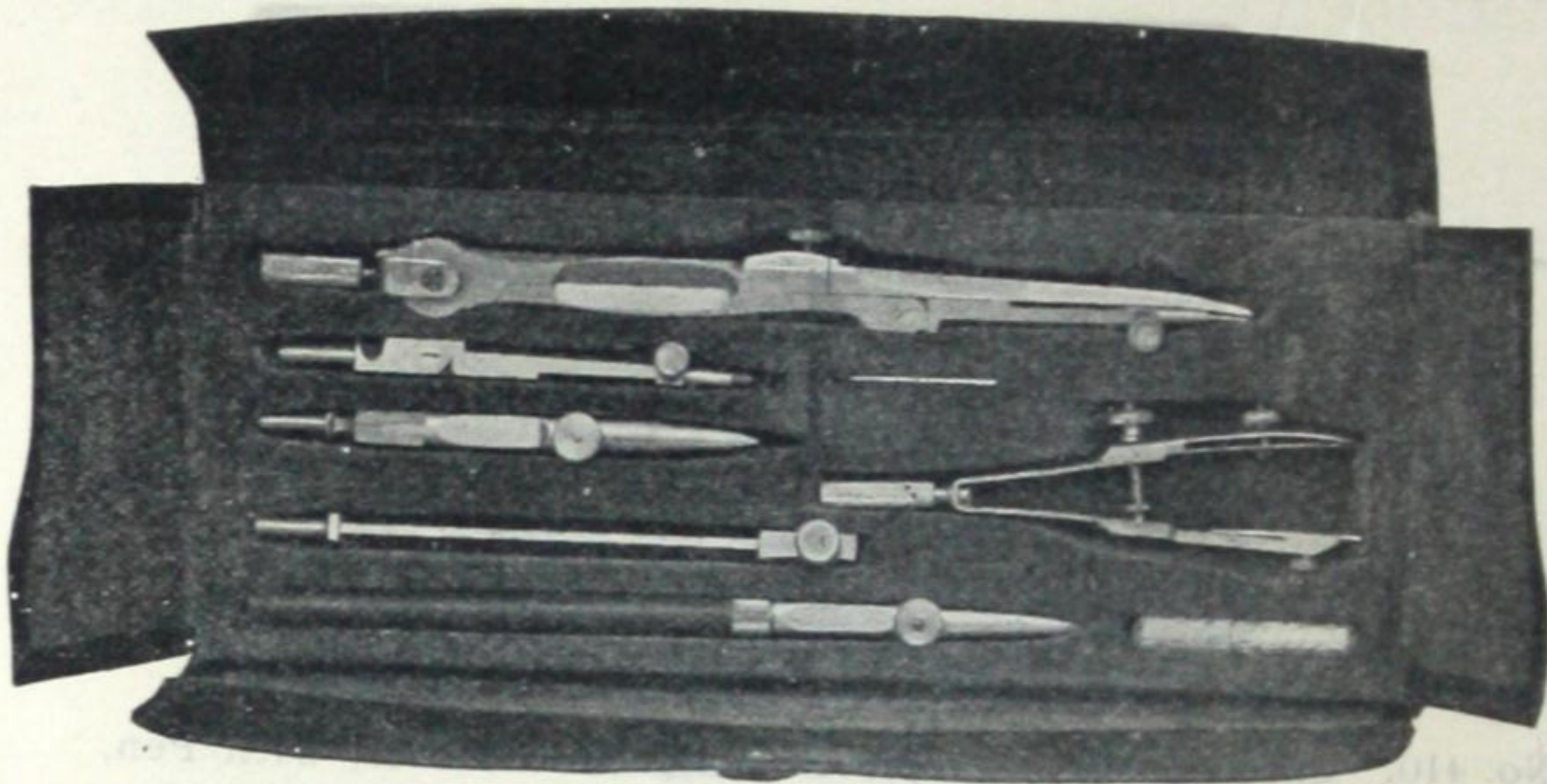
No. 410. Case contains 10 pieces: 5¼ in. Divider, with Pen, Pencil Point and Lengthening Bar, 5¼ in. Divider, 3¼ in. Spring Bow Pencil, 3¼ in. Spring Bow Pen, 5 in. Ruling Pen, Black Handle, Box of Leads, Key for Dividers each, \$3.45



NO. 50 P. B.

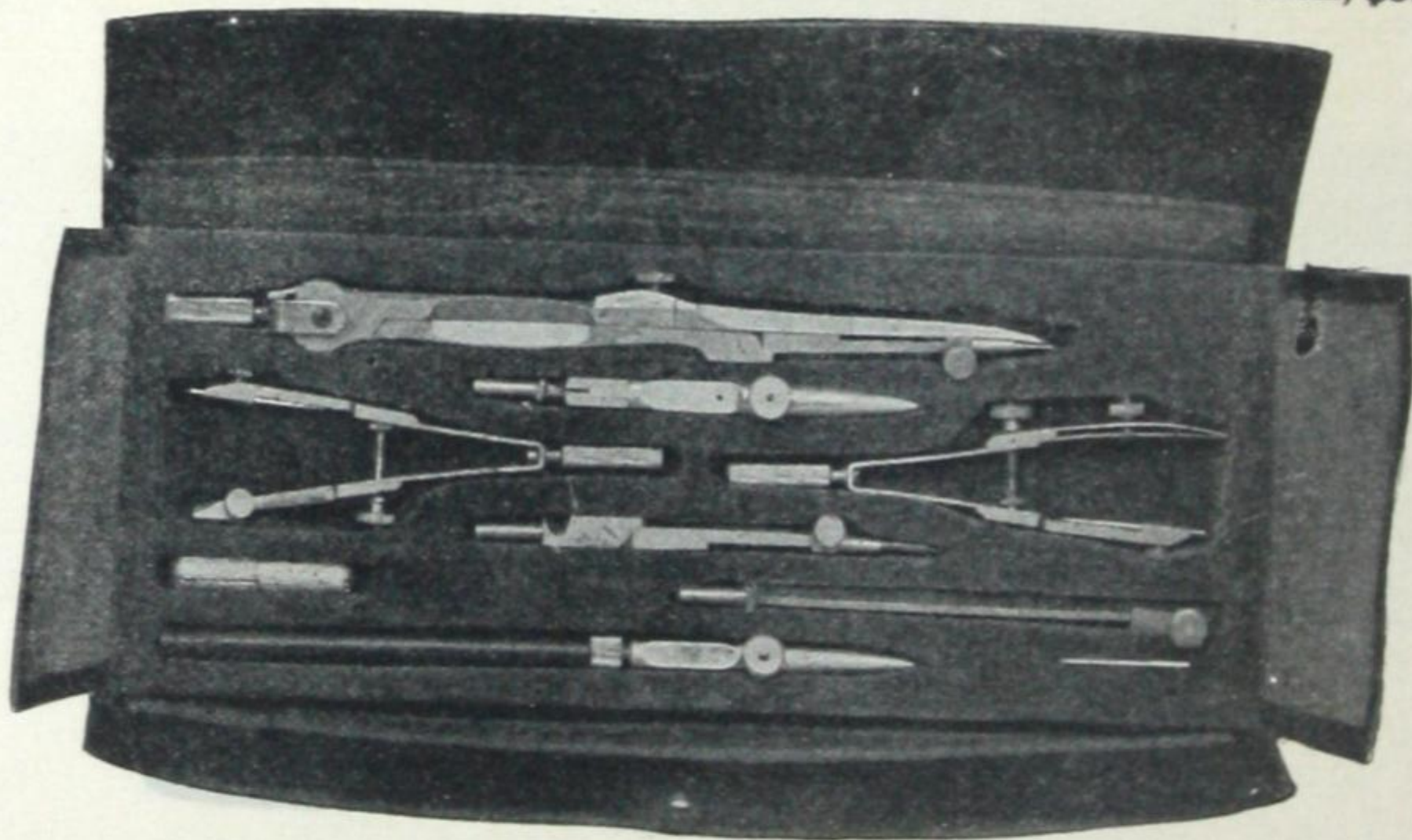
No. 50 P. B. Case contains 6 pieces: 6 in. Divider with fixed Needle Point, Pen and Pencil Point, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Divider each, \$2.75

Frost & Adams Co.'s German Silver School Sets—continued



NO. 51-1 P. B.

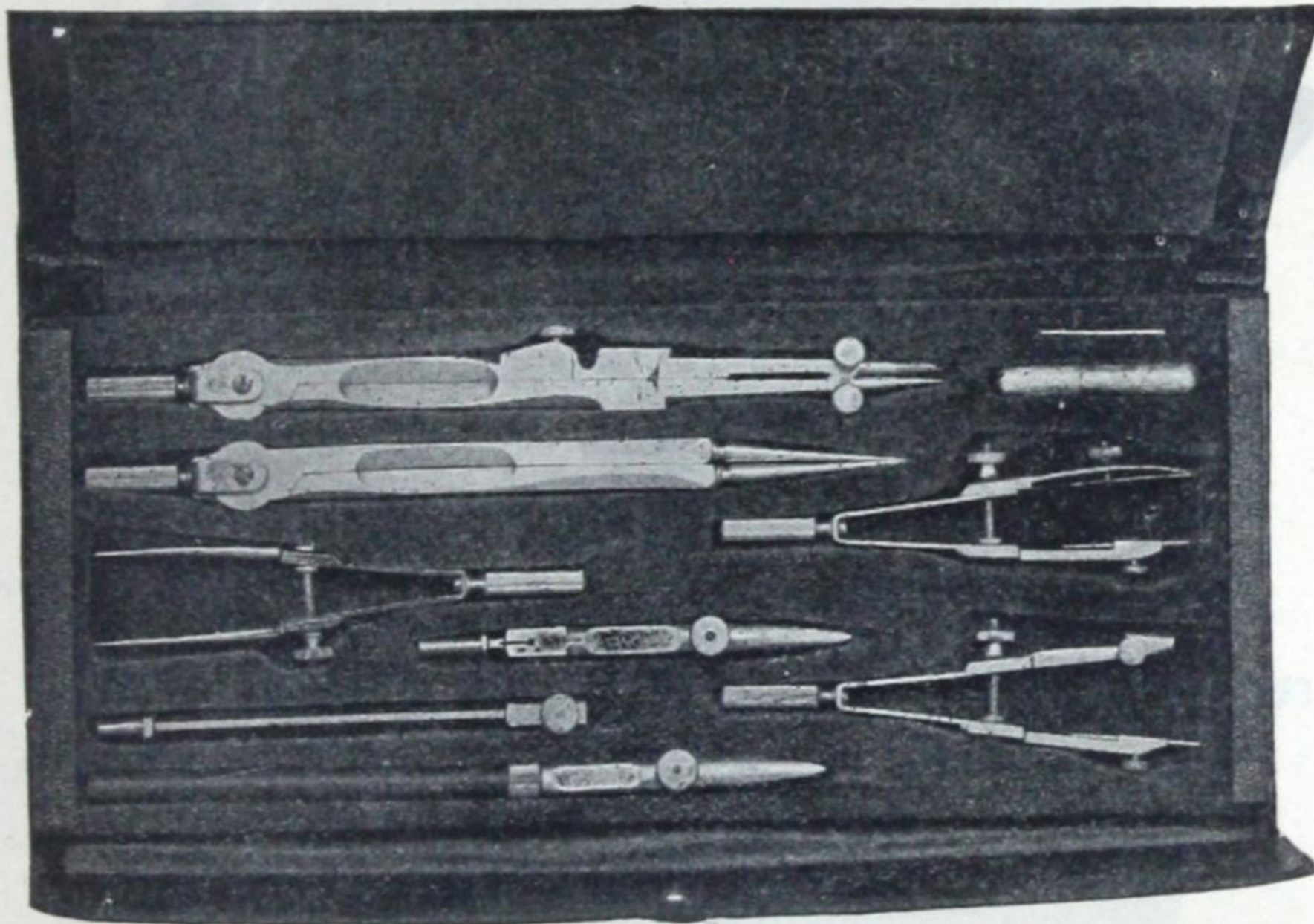
No. 51-1 P. B. Case contains 8 pieces: 6 in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar, $3\frac{1}{4}$ in. Spring Bow Pen, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Divider each, \$3.50



NO. 52-2 P. B.

No. 52-2 P. B. Case contains 9 pieces: 6 in. Divider with fixed Needle Point, Pen and Pencil Point, $3\frac{1}{4}$ in. Spring Bow Pen, $3\frac{1}{4}$ in. Bow Pencil, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Divider each, \$4.50

Frost & Adams Co.'s German Silver School Sets — continued

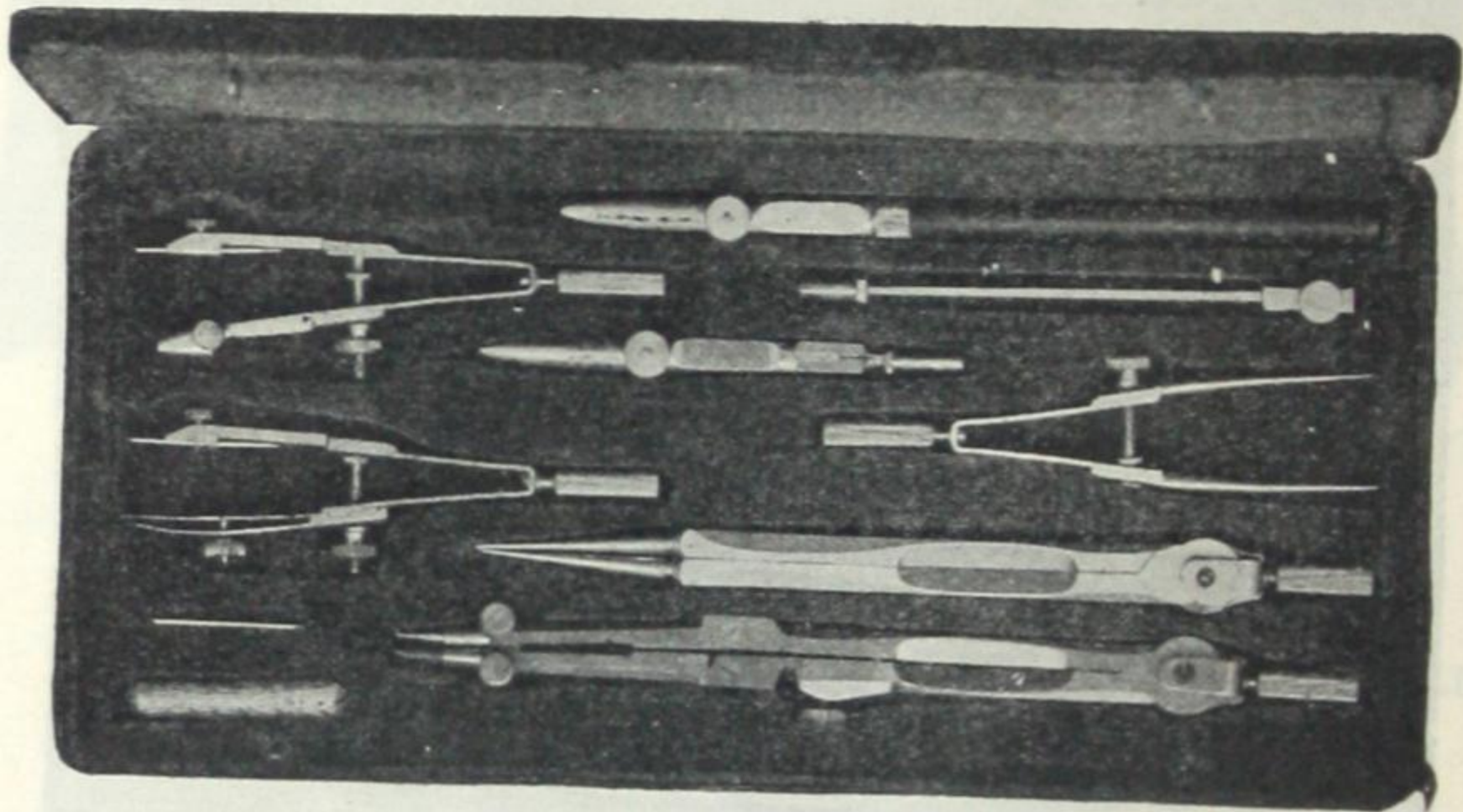


NO. 53-3 P. B.

Case contains 11 pieces: 6 in. Divider, with fixed Needle Point,
 Pen, Pencil Point and Lengthening Bar, $3\frac{1}{4}$ in. Spring
 Bow Pen. $3\frac{1}{4}$ in. Spring Bow Pencil, $3\frac{1}{4}$ in. Spring Bow
 Divider, 5 in. Spring Back Ruling Pen, Box of Leads,

Key for Divider each, \$5.25

Frost & Adams Co.'s German Silver School Sets — continued

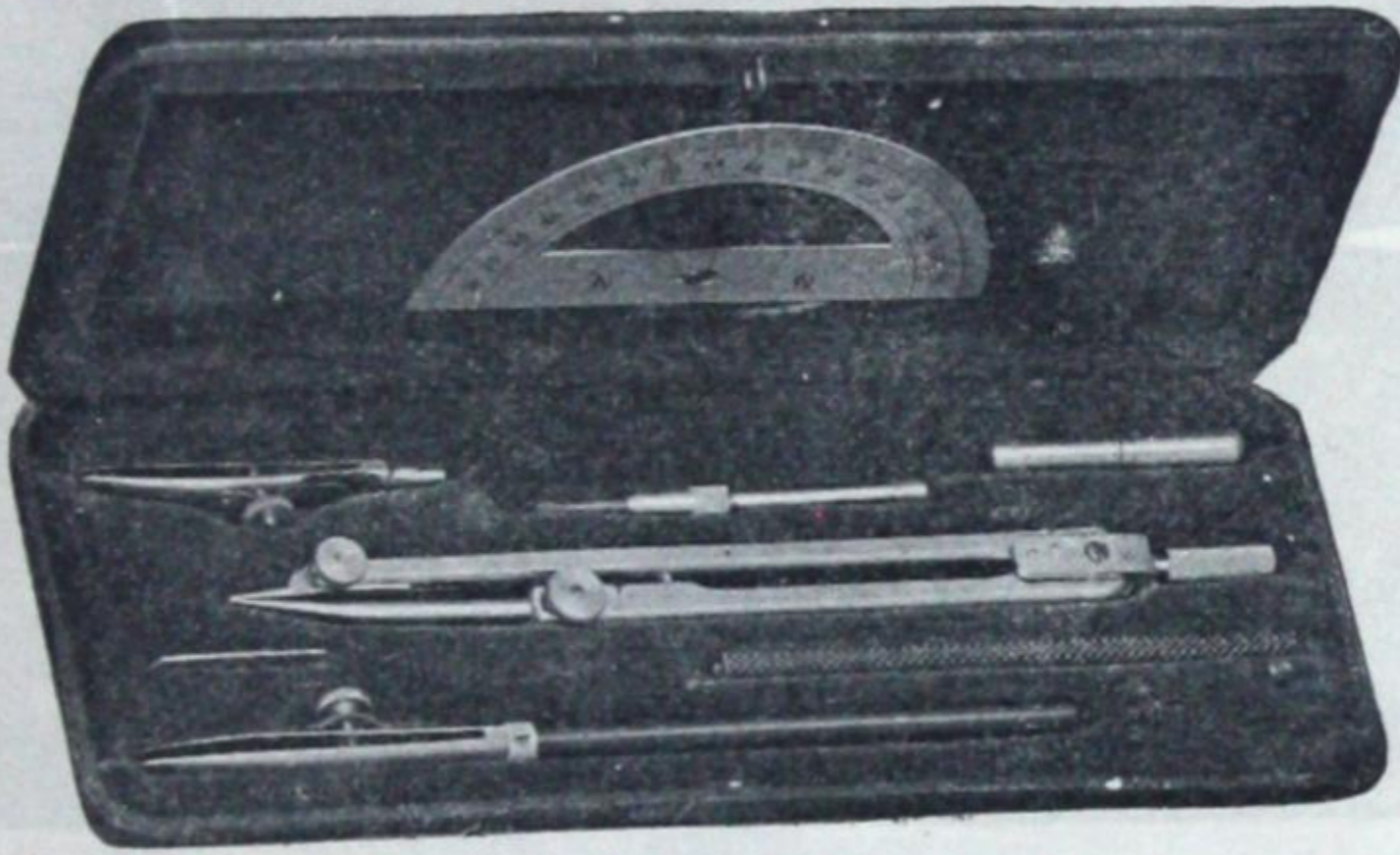


NO. 73

- No. 73. Case contains 10 pieces : 6 in. Divider with fixed Needle Point, Pen and Pencil Point, $5\frac{1}{2}$ in. Plain Divider, $3\frac{1}{4}$ in. Spring Bow Pen, $3\frac{1}{4}$ in. Spring Bow Pencil, $3\frac{1}{4}$ in. Spring Bow Divider, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Divider each, \$4.75

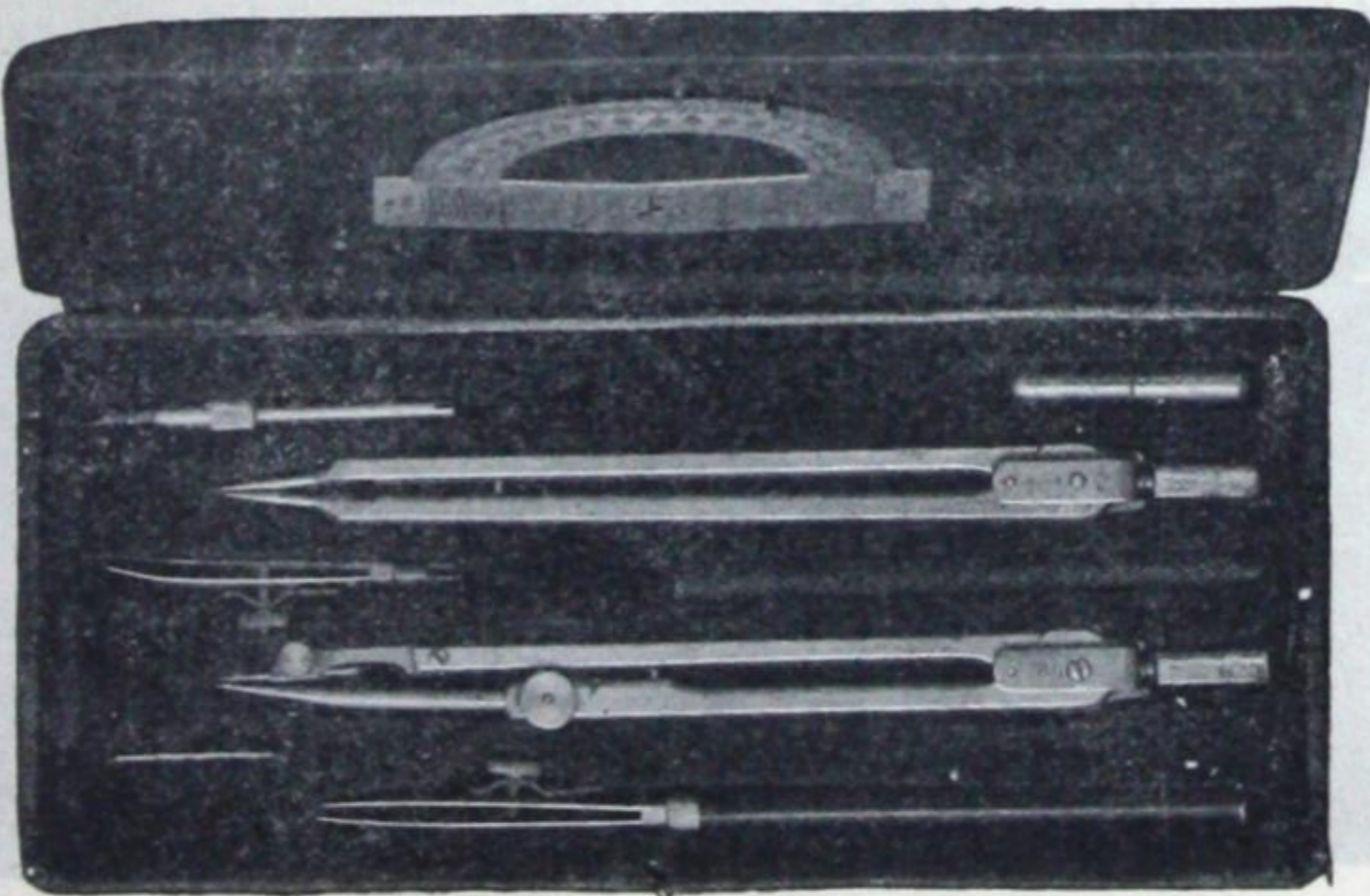
FROST & ADAM'S CO.'S

FLAT GERMAN SILVER INSTRUMENTS



NO. 400

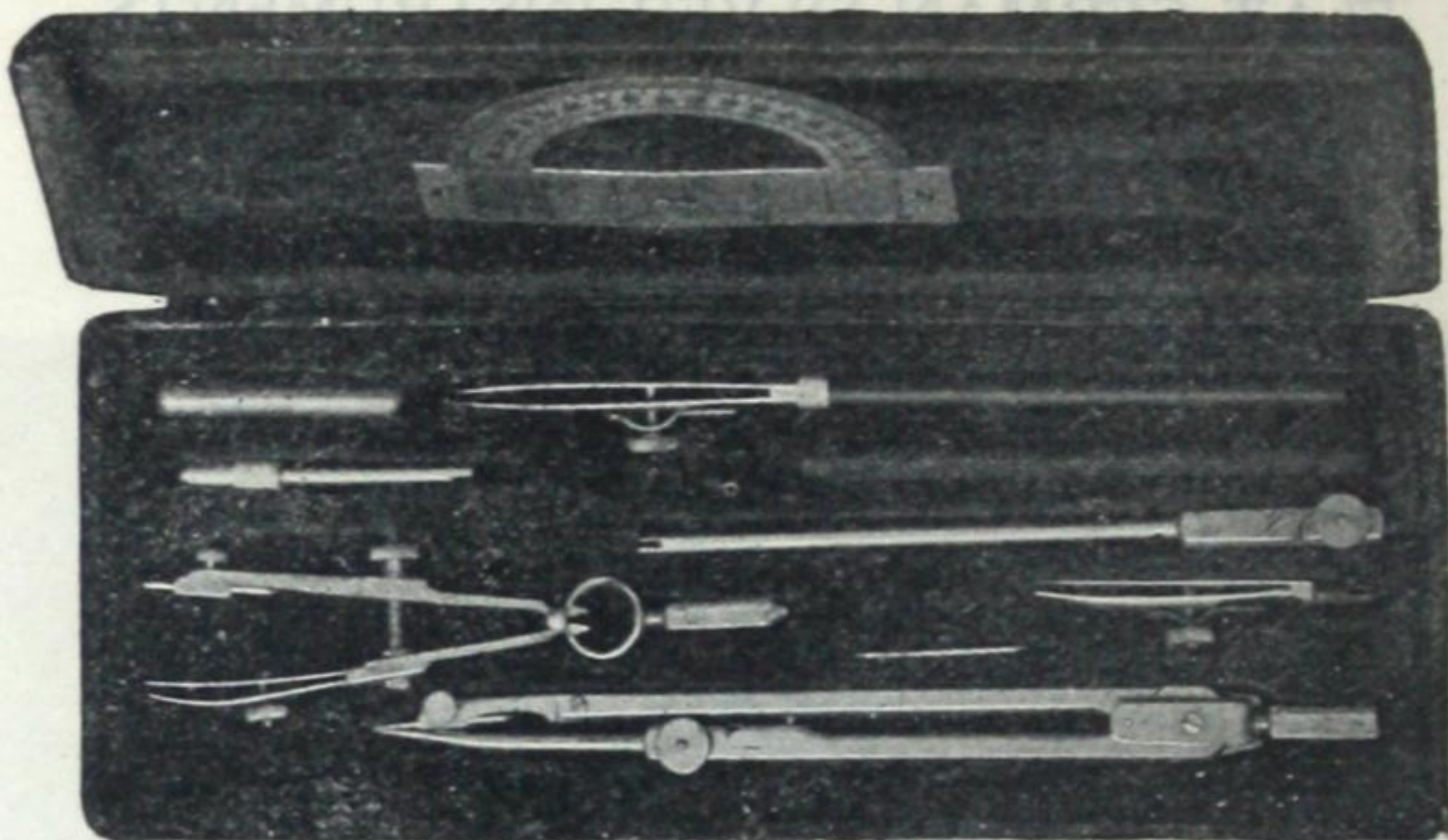
No. 400. Case contains 8 pieces: 5 1/2 in. Divider with fixed Needle Point, Pen and Pencil Point, 5 in. Spring Back Ruling Pen with release, Extra Metal Handle for Pen, Metal Protractor, Box of Leads, Key for Dividers . . . each, \$3.00



NO. 401

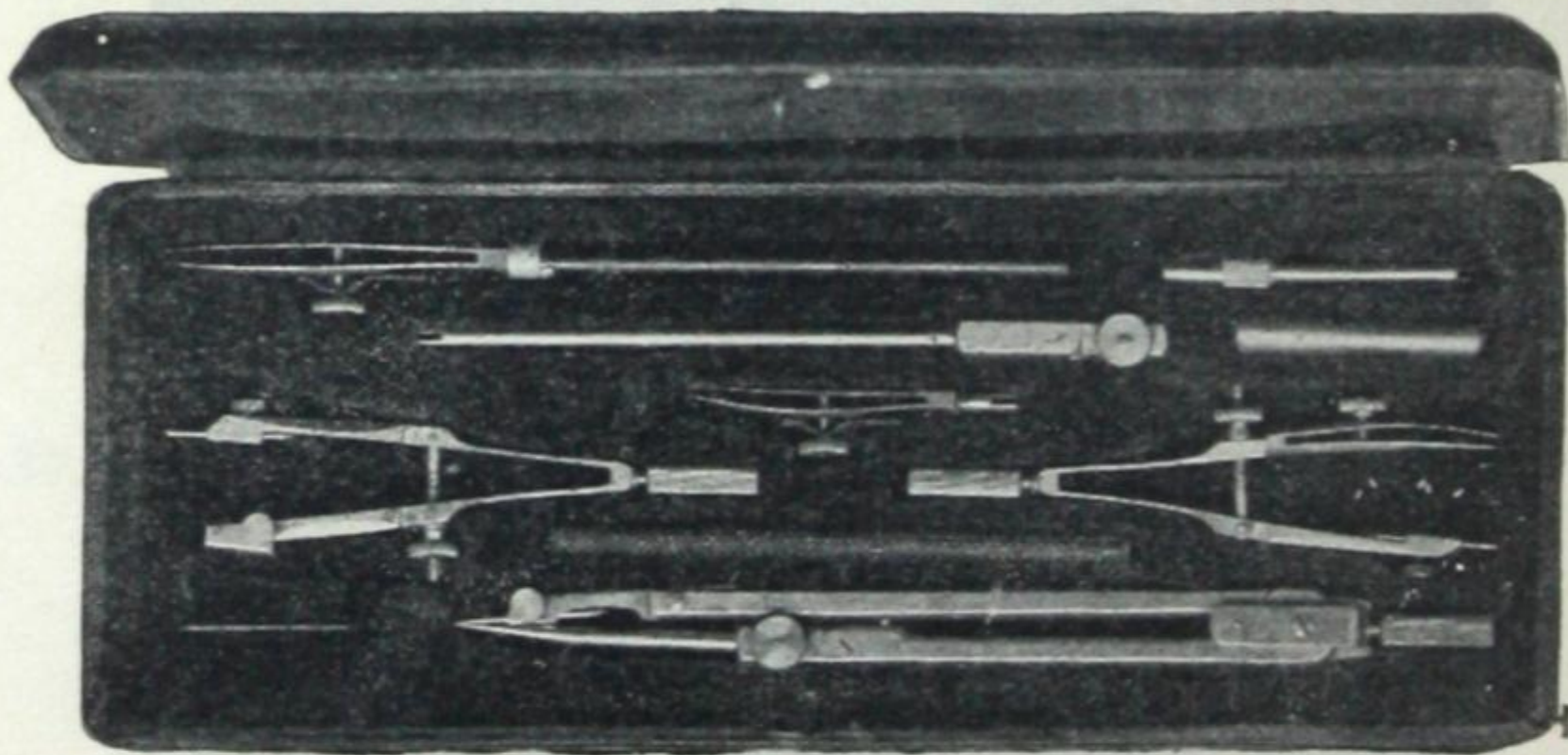
No. 401. Case contains 10 pieces: 5 1/2 in. Divider with fixed Needle Point, Pen and Pencil Point, 5 1/2 in. plain Divider, 5 in. Ruling Pen with release, Extra Metal Handle for Ruling Pen, Metal Protractor, Box of Leads, Key for Dividers . . . each, \$3.75

Frost & Adams Co.'s Flat German Silver Instruments — cont.



NO. 402

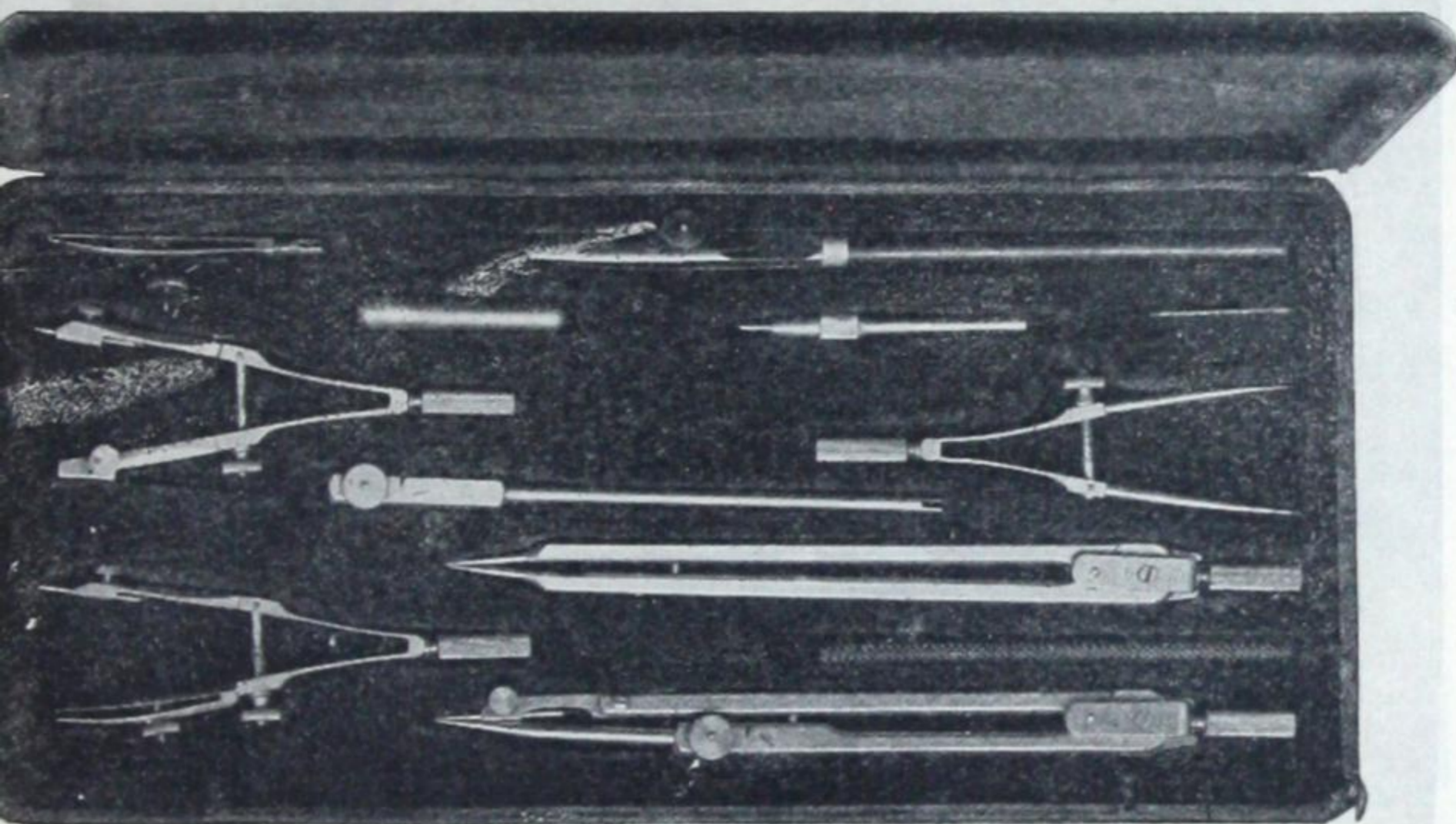
No. 402. Case contains 10 pieces: $5\frac{3}{4}$ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar, Spring Back Ruling Pen with release, $3\frac{1}{2}$ in. Spring Bow Pen, Extra Handle for Pen, Metal Protractor, Box of Leads, Key for Dividers each, \$4.00



NO. 403

No. 403. Case contains 10 pieces: $5\frac{1}{2}$ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar, $3\frac{1}{2}$ in. Spring Bow Pen, $3\frac{1}{4}$ in. Spring Bow Pencil, 5 in. Spring Back Ruling Pen with release, Extra Handle for Pen, Box of Leads, Key for Dividers each, \$4.50

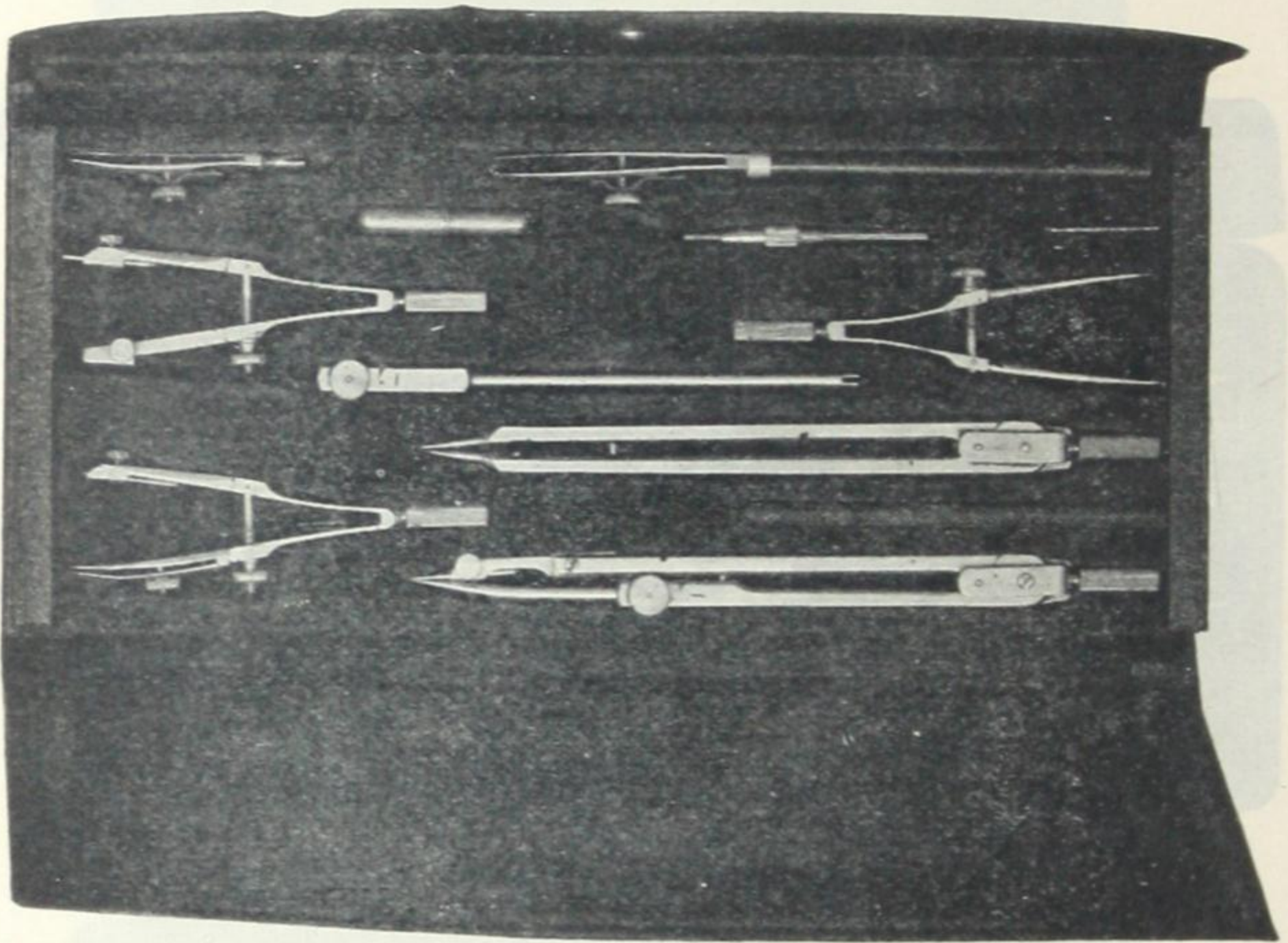
Frost & Adams Co.'s Flat German Silver Instruments—cont.



NO 404

No. 404. Case contains 12 pieces: $5\frac{3}{4}$ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar, $5\frac{3}{4}$ in. Plain Divider, $3\frac{1}{4}$ in. Spring Bow Divider, $3\frac{1}{4}$ in. Spring Bow Pen, $3\frac{1}{4}$ in. Spring Bow Pencil, 5 in. Spring Back Ruling Pen with release, Extra Handle for Ruling Pen, Box of Leads, Key for Dividers . . . each, \$6.00

Frost & Adams Co.'s Flat German Silver Instruments — cont.

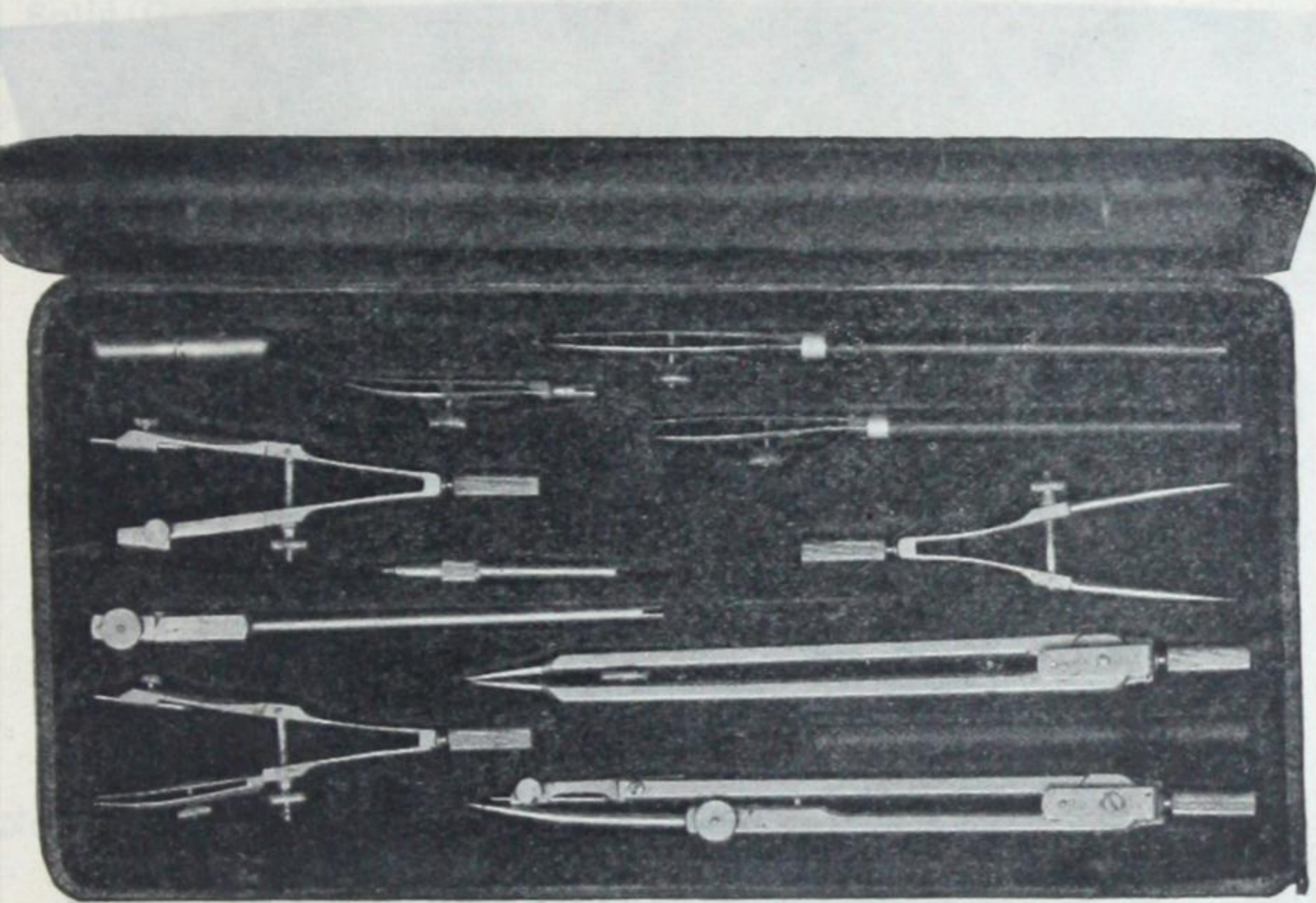


NO. 405 P. B.

No. 405 P.B. Case contains 12 pieces: 5½ in. Divider with fixed Needle Point, Pen and Pencil Point, 3¼ in. Bow Pen, 3¼ in. Bow Pencil, 3¼ in. Divider, 5 in. Spring Back Ruling Pen with release, Extra Handle for Ruling Pen, Box of Leads, Key for Dividers each, \$8.00

Frost & Adams Co.'s Flat German Silver Instruments—cont.

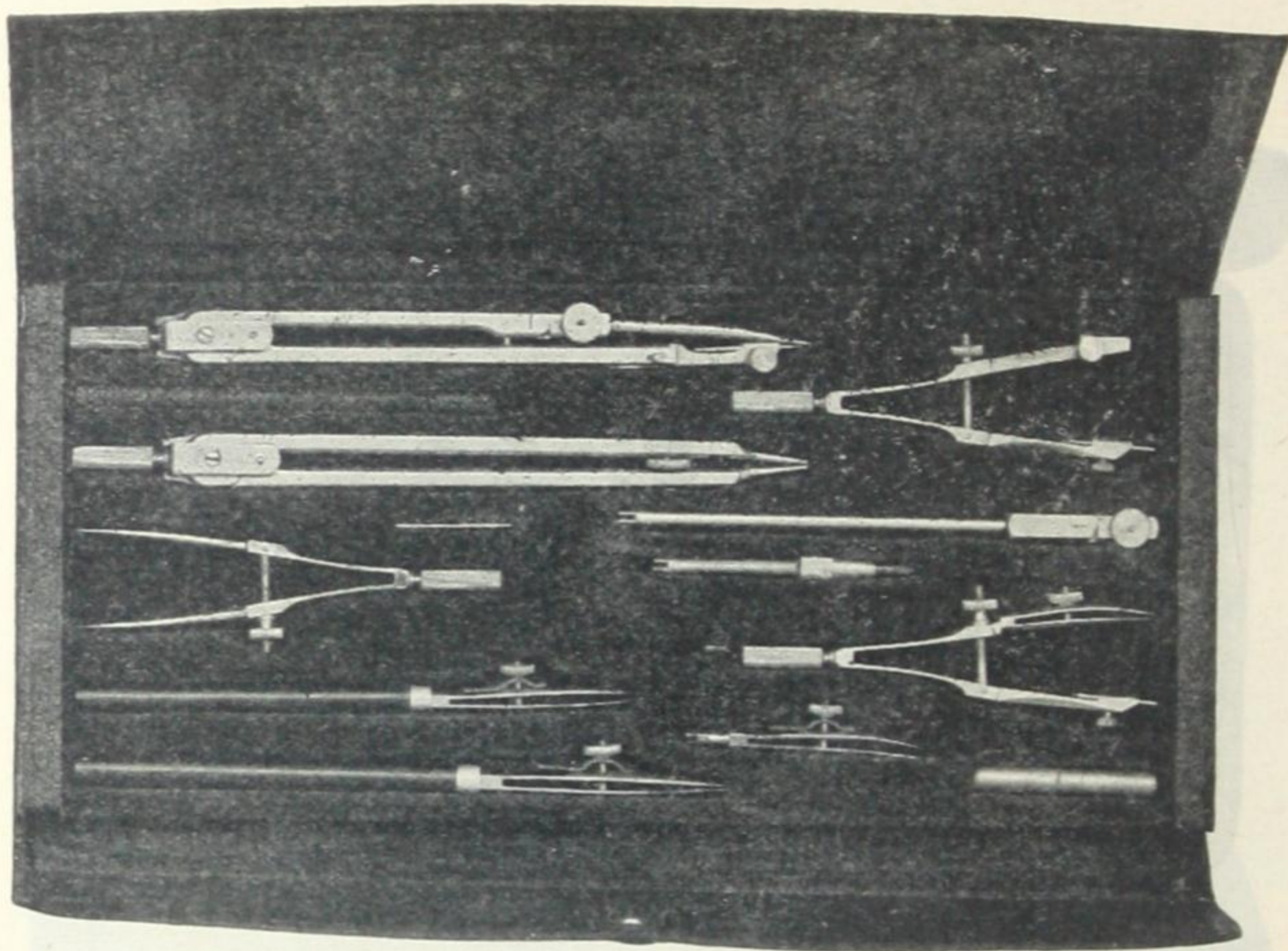
GERMAN SILVER INSTRUMENTS



NO. 406

No. 406. Case contains 13 pieces: $5\frac{3}{4}$ in. Divider with fixed Needle Point, Pen and Pencil Point, $5\frac{3}{4}$ in. Divider with Hair Line Spacing Attachment, $3\frac{1}{4}$ in. Spring Bow Pen, $3\frac{1}{4}$ in. Spring Bow Pencil, $3\frac{1}{4}$ in. Spring Bow Divider, 5 in. Ruling Pen with release, $4\frac{1}{4}$ in. Ruling Pen with release, Box of Leads, Key for Dividers , , each, \$7.25

Frost & Adams Co.'s Flat German Silver Instruments — cont.



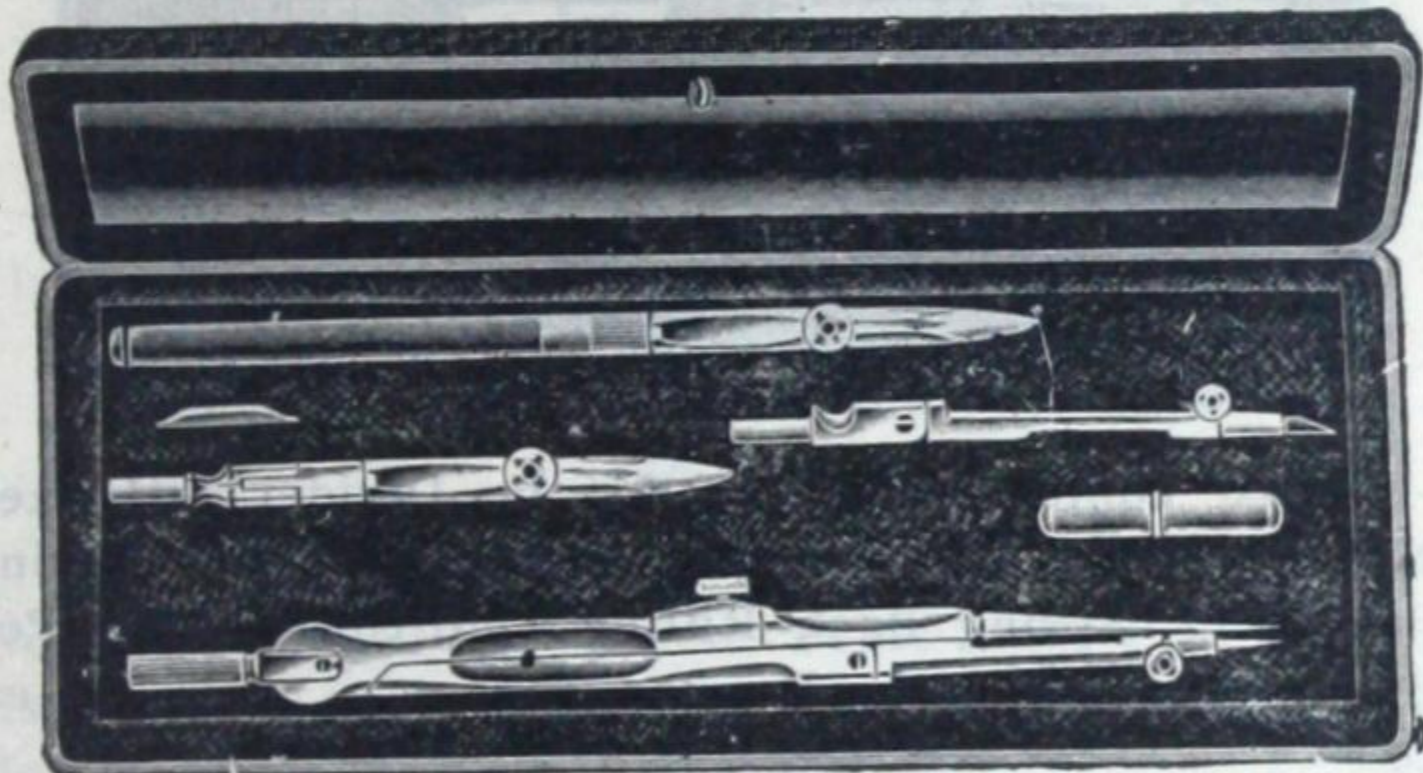
NO. 407 P. B.

No. 407 P.B. Case contains 13 pieces: $5\frac{1}{2}$ in. Divider with fixed Needle Point, Pen and Pencil Point, $5\frac{1}{2}$ in. Divider with Hair Spring, Line Spacing Attachment, 3 in. Spring Bow Pen, $3\frac{1}{4}$ in. Spring Bow Pencil 3 in. Spring Bow Divider, 5 in. Spring Back Ruling Pen with release, $4\frac{1}{2}$ in. Spring Back Ruling Pen with release, Extra Handle for Ruling Pen, Box of Leads, Key for Dividers each, \$9.00

FROST & ADAMS CO.'S

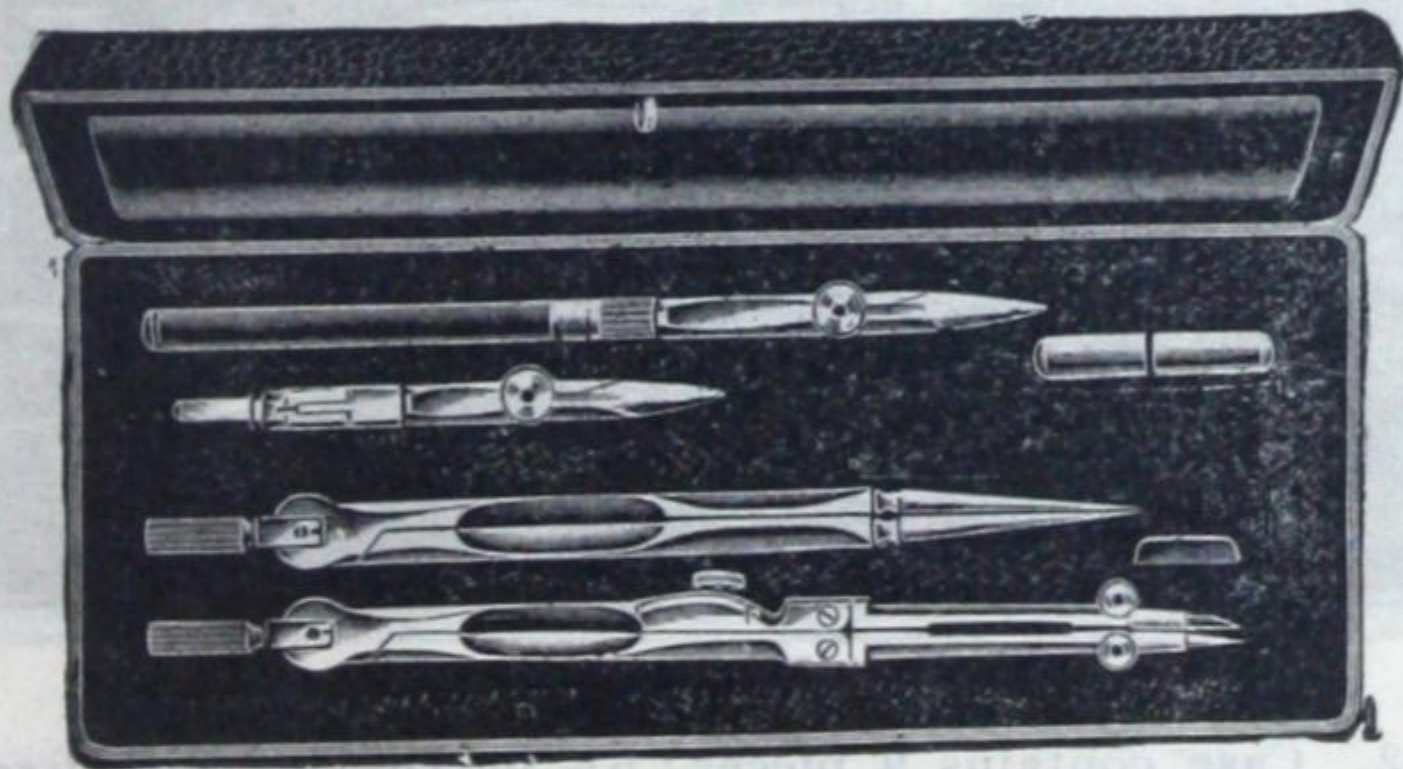
GERMAN SILVER INSTRUMENTS

Solid German Silver with Steel Points, Pivot Joints, with German Silver Handles, in Morocco Cases lined with Silk Velvet. Improved pattern, with interchangeable parts



NO. 5000

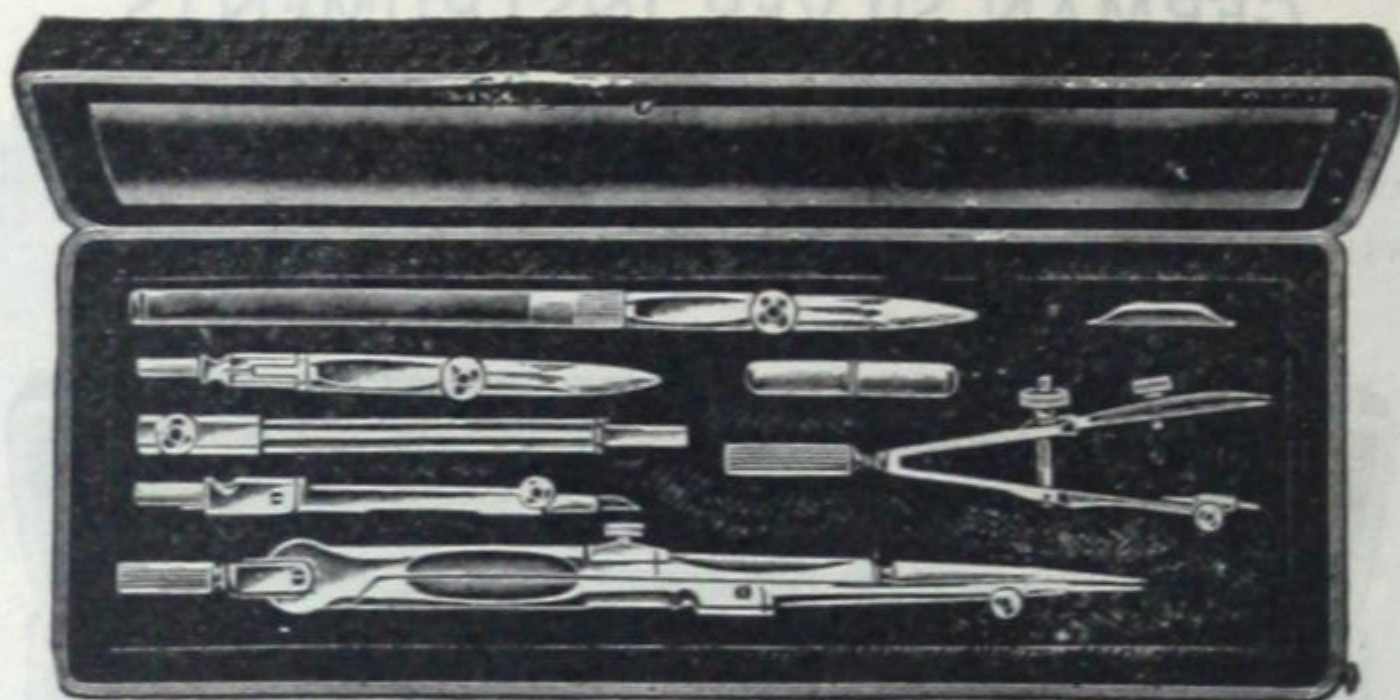
No. 5000. Case contains 6 pieces: 5 1/2 in. Divider with fixed Needle Point, Pen, and Pencil Point; 5 in. Spring Back Ruling Pen, Box of Leads, Key for Divider each, \$2.15



NO. 5001

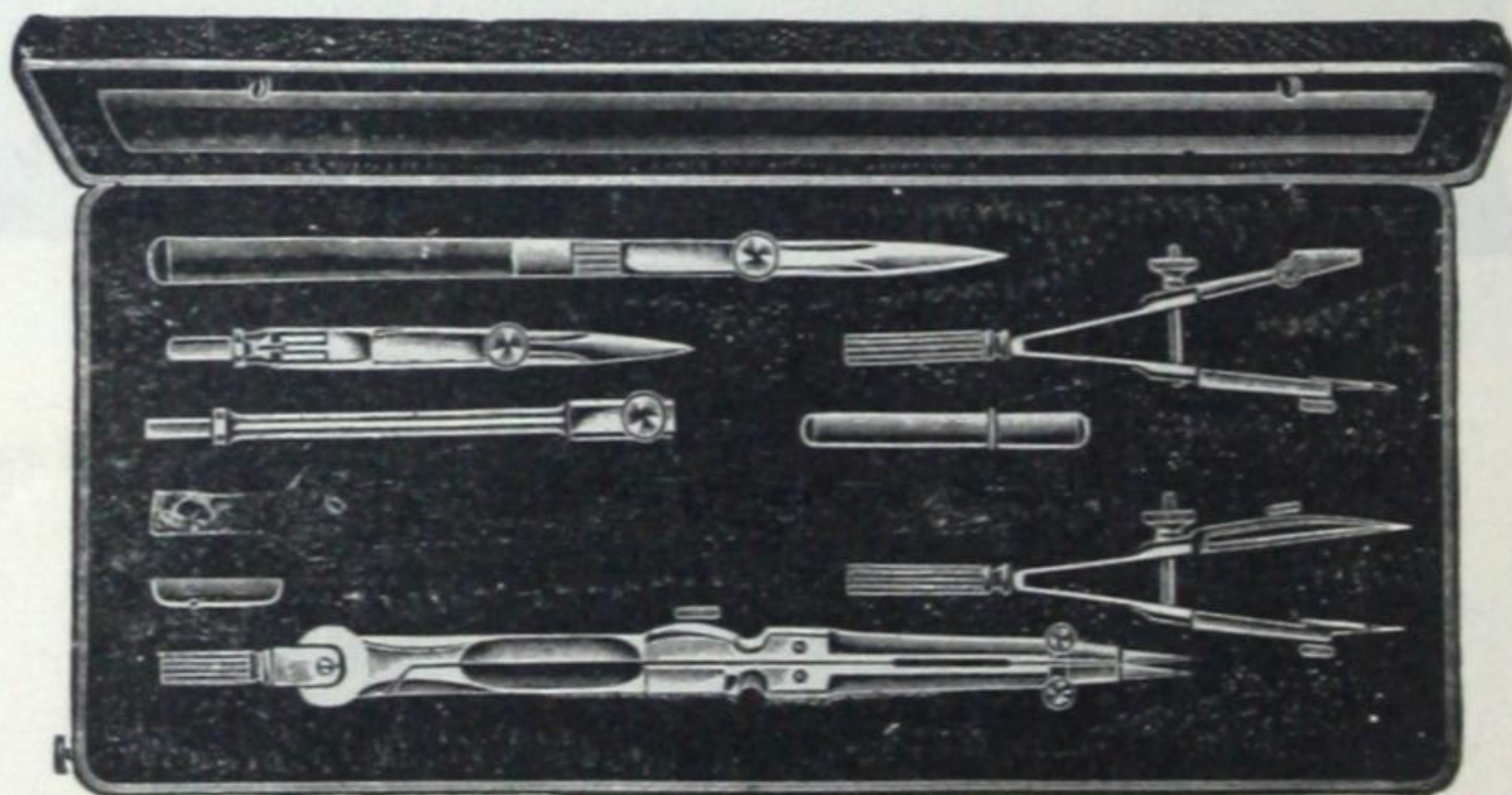
No. 5001. Case contains 7 pieces: 5 1/2 in. Divider with fixed Needle Point, Pen, and Pencil Point; 5 in. Plain Divider, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers each, \$2.50

German Silver Instruments—continued



NO. 2054-1

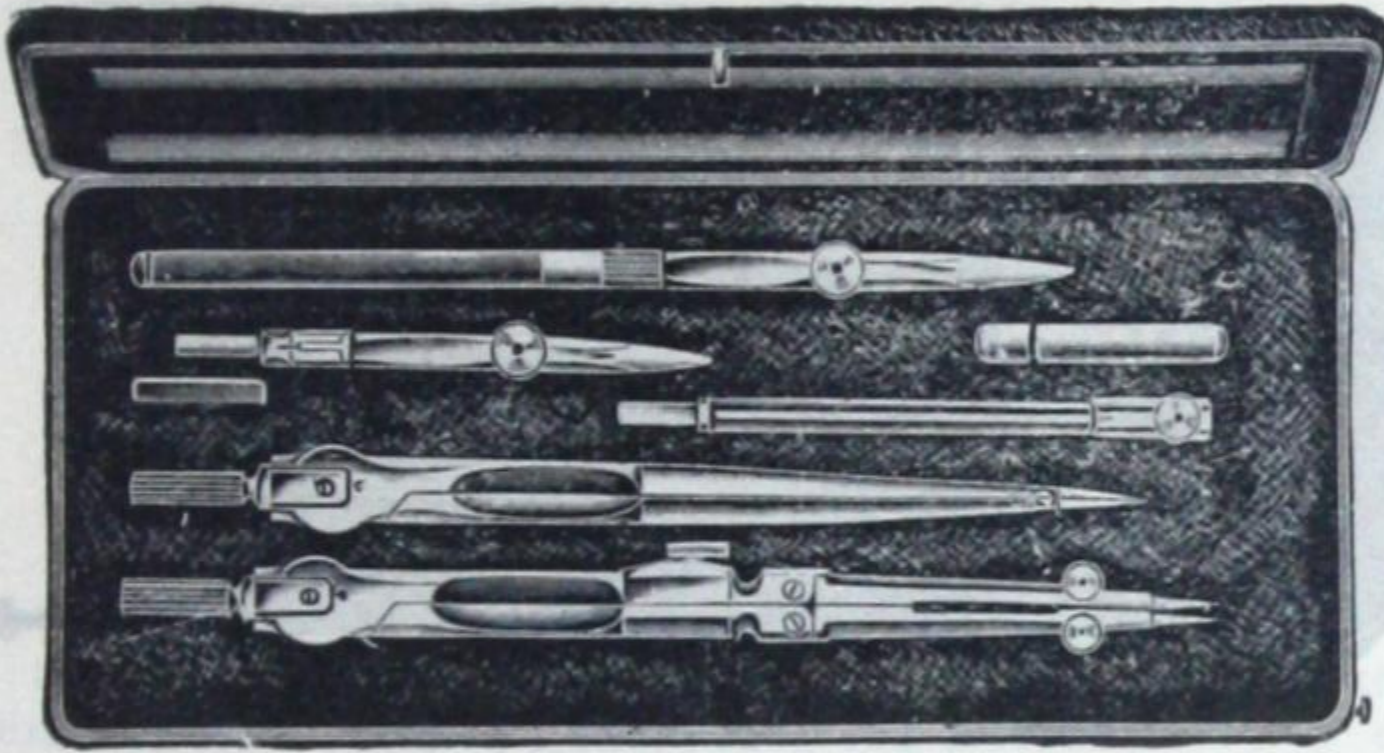
No. 2054-1. Case contains 8 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Spring Back Ruling Pen, Spring Bow Pen Box of Leads, Key for Divider each, \$3.00



NO. 2054-2

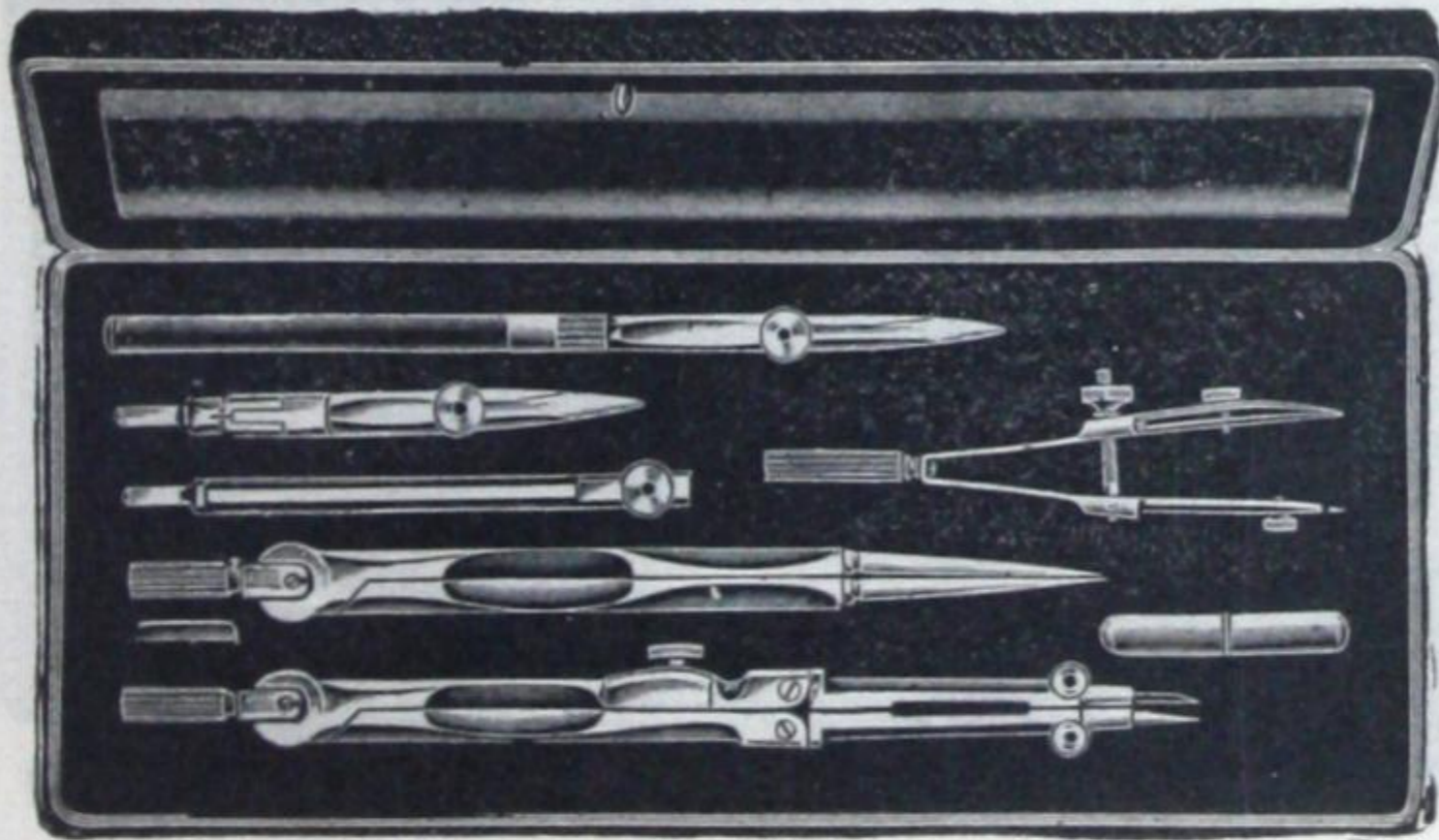
No. 2054-2. Case contains 9 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Plain Divider, 5 in. Spring Back Ruling Pen, Spring Bow Pen, Spring Bow Pencil, Box of Leads, Key for Dividers each, \$3.50

German Silver Instruments—continued



NO. 5041

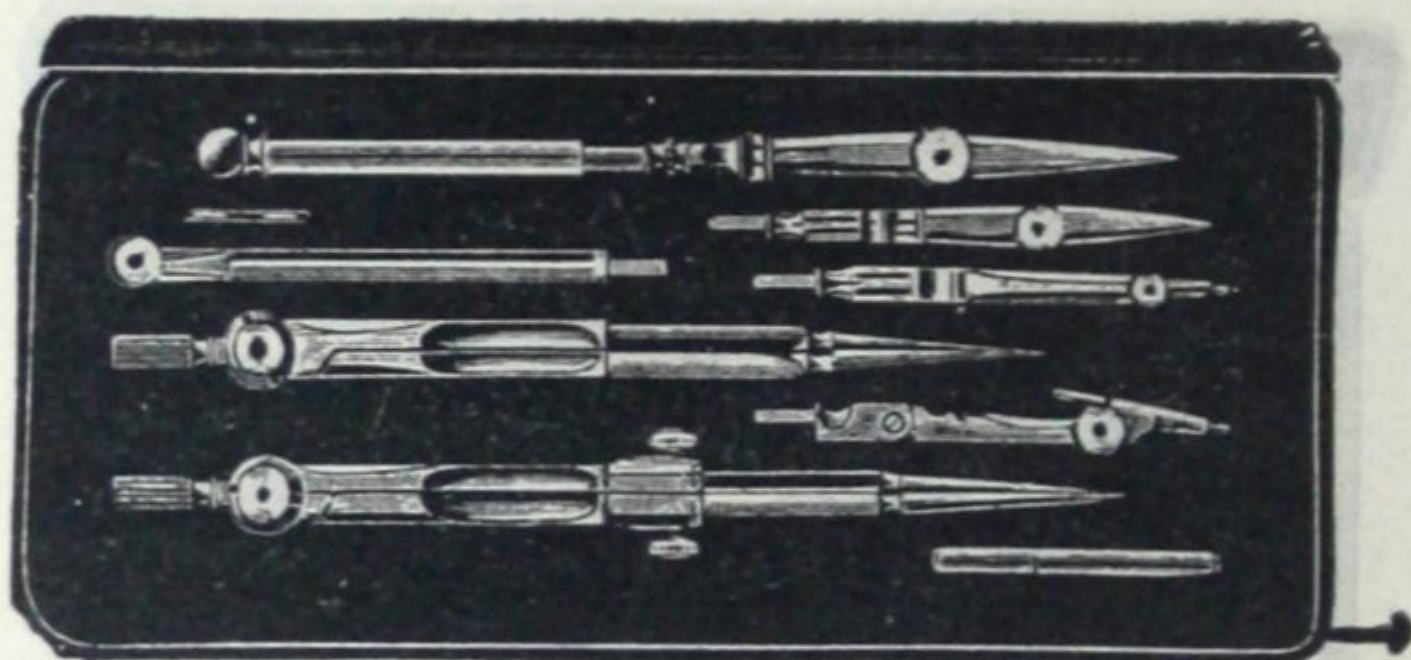
No. 5041. Case contains 7 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Plain Divider, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers each, \$3.50



NO. 5042

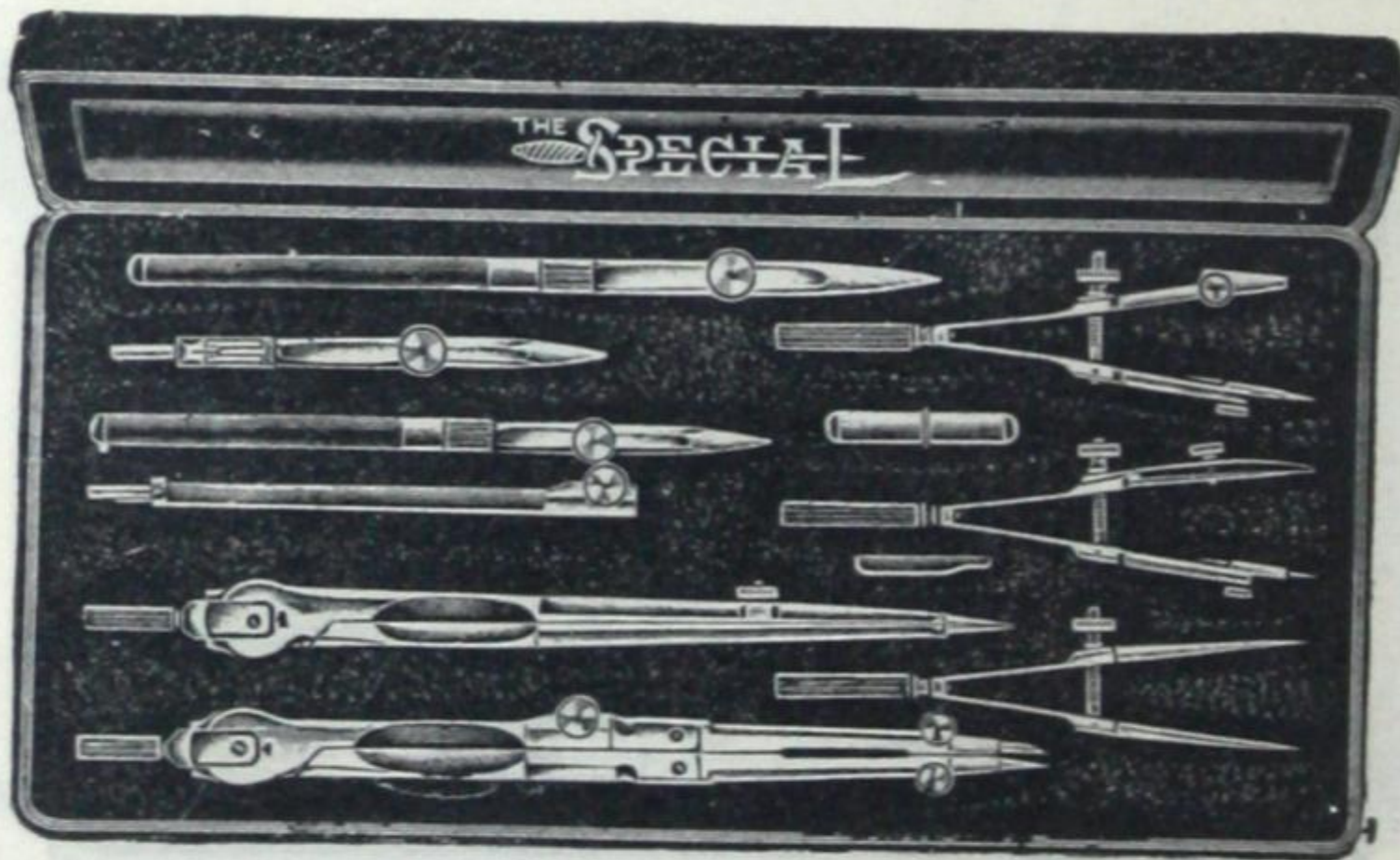
No. 5042. Case contains 8 pieces; 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Plain Divider, Spring Bow Pen, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers each, \$4.00

German Silver Instruments—continued



NO. 5043

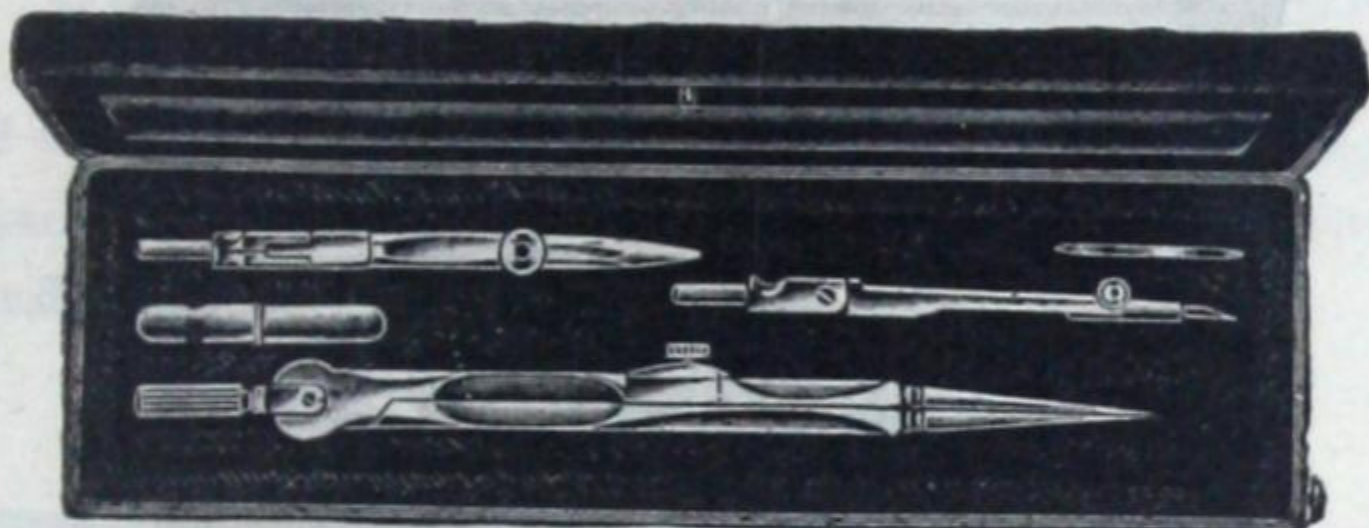
No. 5043. Case contains 9 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar, both legs changeable; 5 in. Plain Divider, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers each, \$4.00



NO. 5044

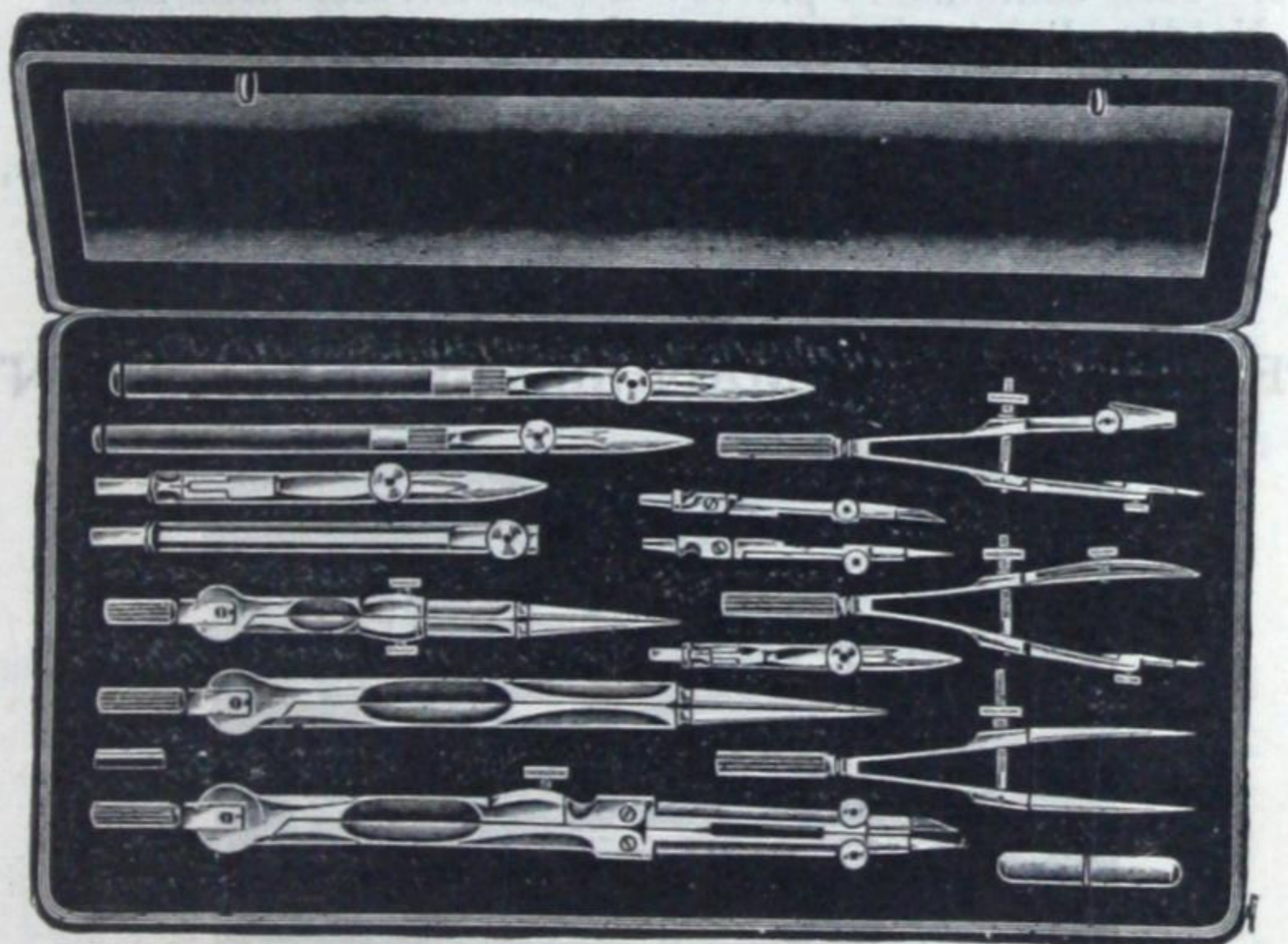
No. 5044. Case contains 11 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Divider with Hair Line Spacing Attachment, Spring Bow Pen, Spring Bow Pencil, Spring Bow Divider, 4½ in. Spring Back Ruling Pen, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers each, \$7.50

German Silver Instruments—continued



NO. 2070

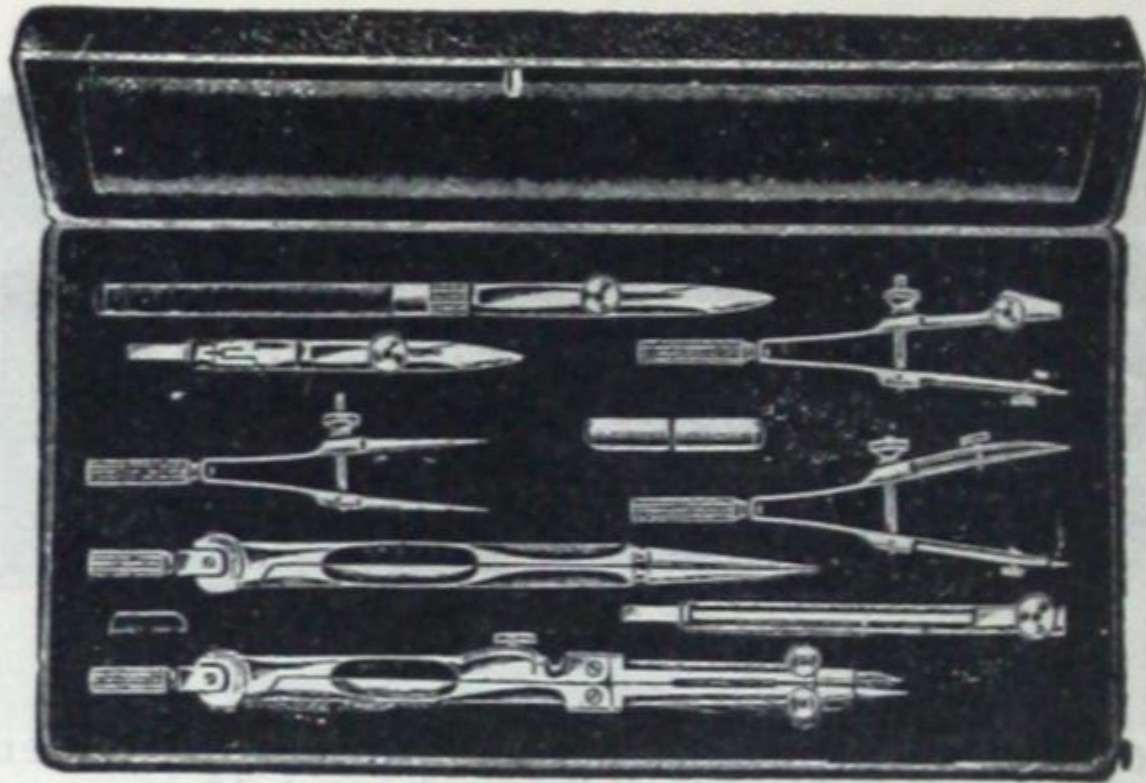
No. 2070. Case contains 5 pieces: 5½ in. Divider with Pen, and Pencil Point, Box of Leads, Key for Divider . . . each, \$2.00



NO. 5045

No. 5045. Case contains 15 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Plain Divider, Spring Bow Pen, Spring Bow Pencil, Spring Bow Divider, 3½ in. Divider with Needle Point, Pen, and Pencil Point; 4½ in. Spring Back Ruling Pen, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers each, \$10.00

German Silver Instruments—continued

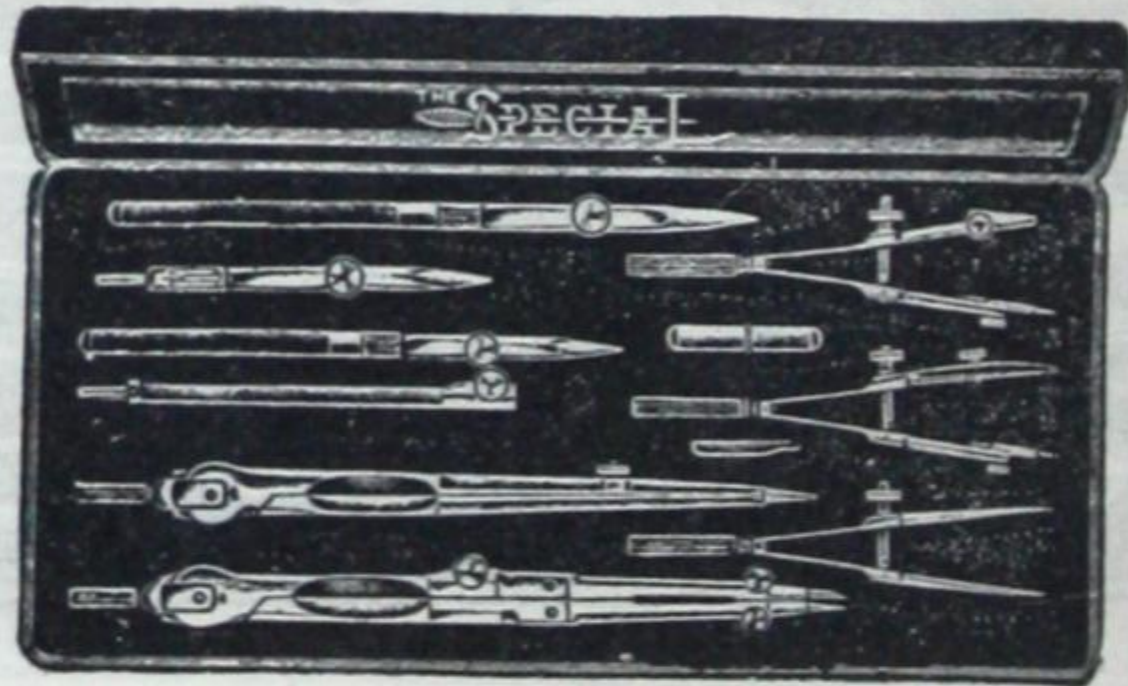


NO. 3276

No. 3276. Case contains 10 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Plain Divider, Spring Bow Pen, Spring Bow Pencil, Spring Bow Divider, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers . . . each, \$5.50

FROST & ADAMS CO.'S

SPECIAL FINE GERMAN SILVER INSTRUMENTS



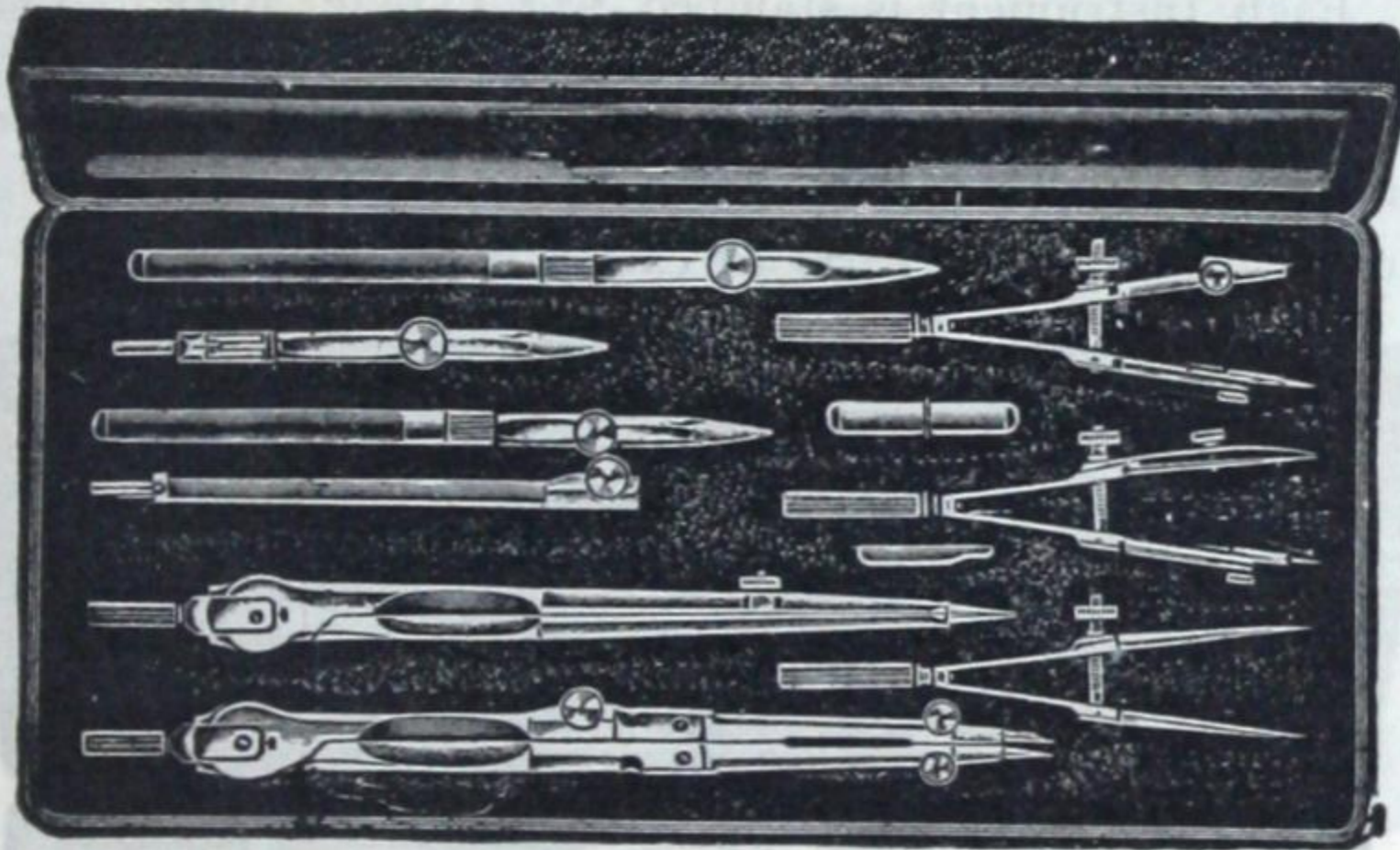
NO. 2113

No. 2113. Case contains 11 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Divider with Hair Line Spacing Attachment, Spring Bow Pen, Spring Bow Pencil, Spring Bow Divider, 4½ in. Spring Back Ruling Pen, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers . . . each, \$9.00

FROST & ADAMS CO.'S

FIRST QUALITY GERMAN SILVER INSTRUMENTS

Made of the Best Grade of German Silver with Highly Tempered Steel Points, Excellent Finish, with Pivot Joints and Set Screws, German Silver Handle with Straightening Device



NO. 700

No. 700 Case contains 11 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Divider with Hair Line Spacing Attachment; Spring Bow Pen, Spring Bow Pencil, Spring Bow Divider; 4½ in. Spring Back Ruling Pen; 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers — each, \$10.00

No. 2112. Case contains 8 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Plain Divider: Spring Bow Pen; 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers — each, \$6.00

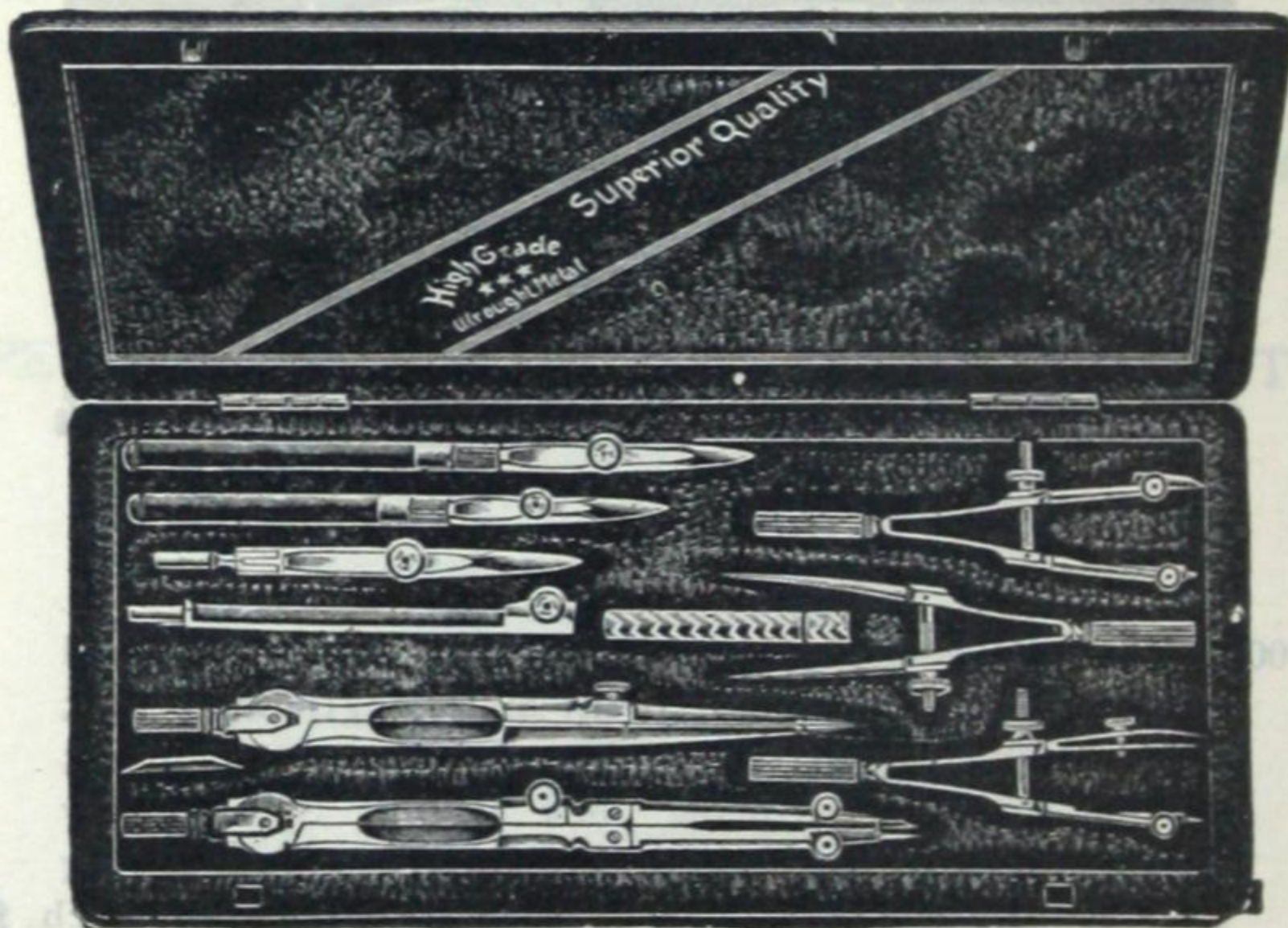
FROST & ADAMS CO.'S

GERMAN SILVER INSTRUMENTS

High Grade, Wrought Metal, Superior Quality

The Superior Quality, High Grade Instruments are made of Wrought German Silver with best English Steel Points. In finish as well as material they are of the very highest type which modern machinery and skilled workmanship can produce. The Compasses and Dividers have the excellent Straightening Device with Pivot Joints with Set Screws. Each Instrument is stamped *** (Trade Mark). Cases are made of hard wood covered with best Morocco leather; they are lined with green silk velvet, or if in the "Pocket Book" shape, lined with chamois leather

All Ruling Pens and Pen Parts are carefully ground and set

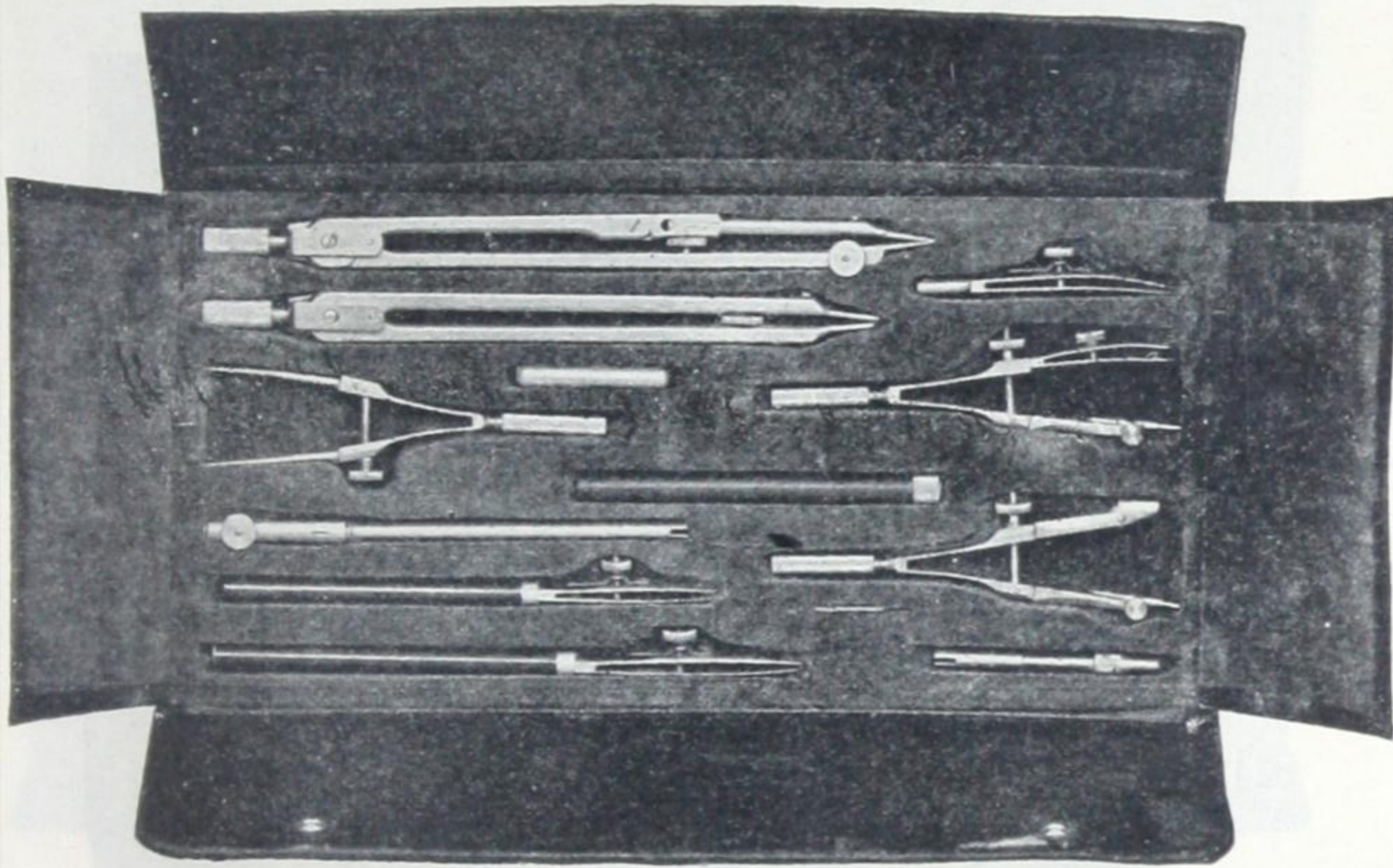


NO. 600

No. 600 Case contains 11 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Divider with Hair Line Spacing Attachment, Spring Bow Pen, Spring Bow Pencil, Spring Bow Divider, 4¼ in. Spring Back Ruling Pen, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers . . . each, \$15.00

FROST & ADAMS CO.'S
 FLAT GERMAN SILVER INSTRUMENTS

High Grade

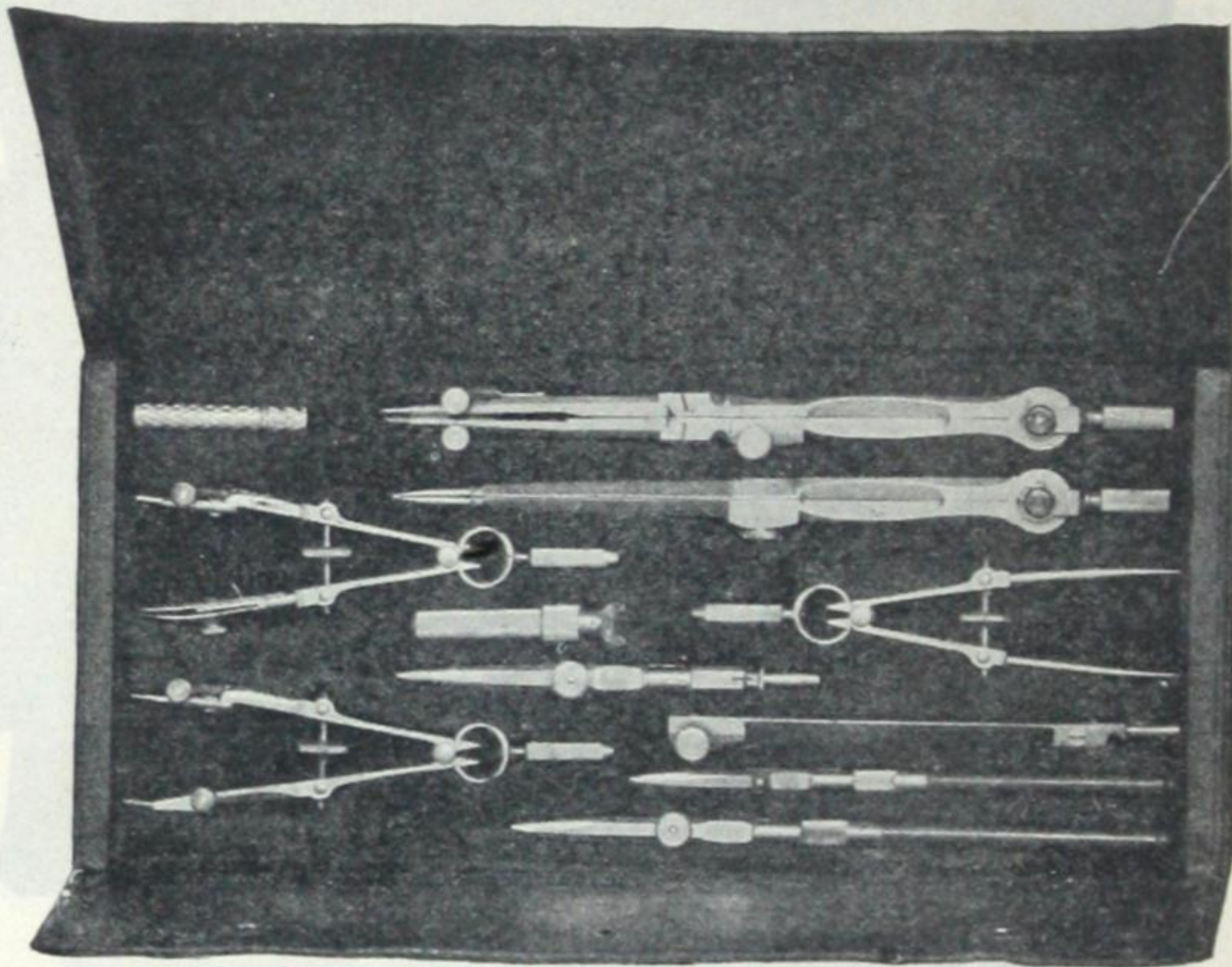


NO. 100 P. B.

No. 100 P. B. Case contains 13 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar, 5½ in. Divider with Hair Line Spacing Attachment, 3¾ in. Spring Bow Pen, 3¾ in. Spring Bow Pencil, 3¾ in. Spring Bow Divider, 4¼ in. Spring Back Ruling Pen with release attachment, 5 in. Spring Back Ruling Pen with release attachment, Extra Handle for Ruling Pen, Box of Leads, Key for Divider each, \$22.50

This case is made of Soft Morocco Leather with flaps, Plush Lined

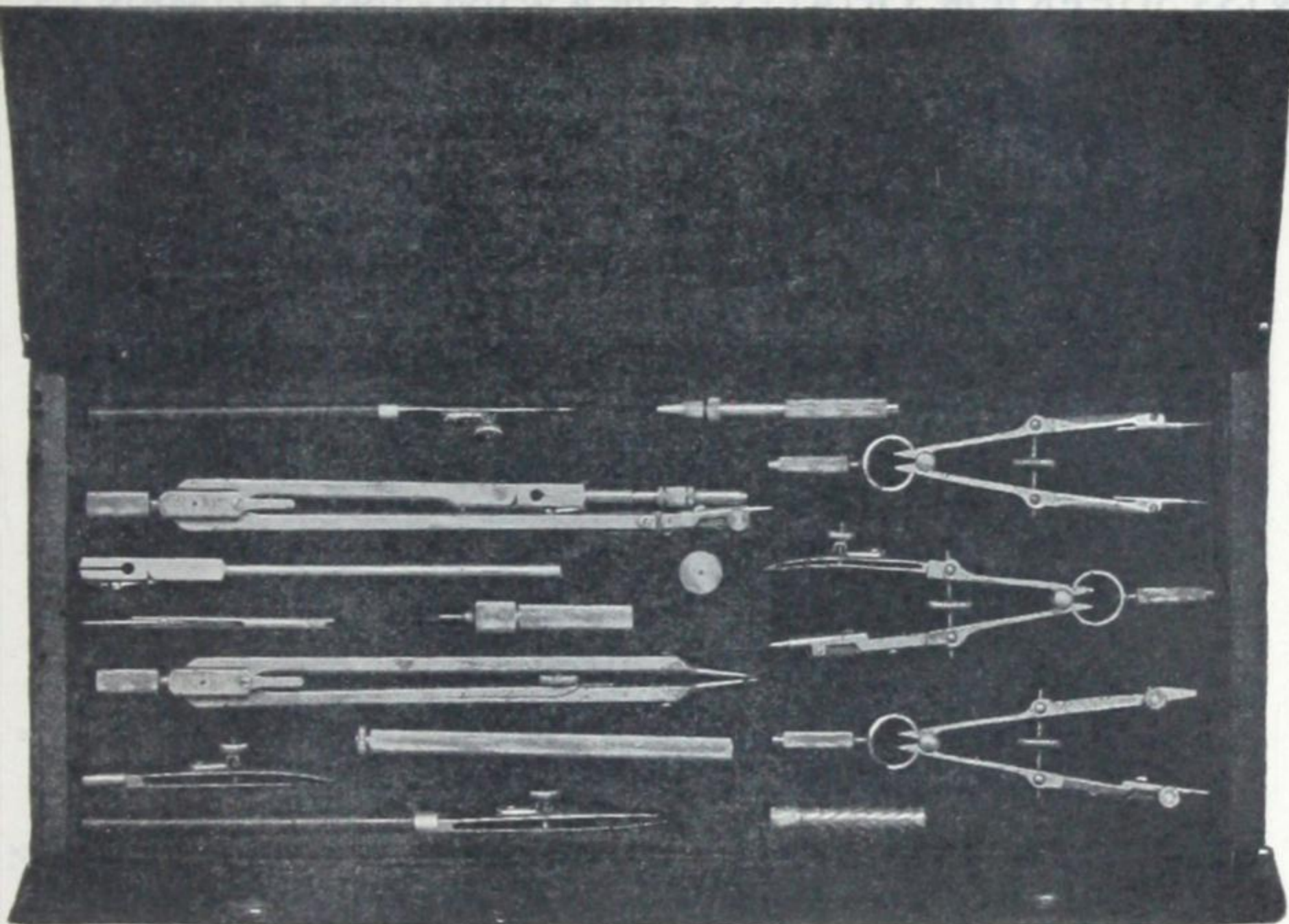
Frost & Adams Co.'s Flat German Silver Instruments—continued



NO. 200 P. B.

No. 200 P. B. Case contains 13 pieces : $6\frac{1}{4}$ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar, 6 in. Divider with Hair Line Spacing Attachment, $3\frac{1}{2}$ in. Spring Bow Pen, $3\frac{1}{2}$ in. Spring Bow Pencil, $3\frac{1}{2}$ in. Spring Bow Divider, $4\frac{1}{2}$ in. Spring Back Ruling Pen with release, $5\frac{1}{4}$ in. Spring Back Ruling Pen with release, Extra Handle, Box of Leads, Key for Divider . . . each, \$25.00

Frost & Adams Co.'s Flat German Silver Instruments—continued



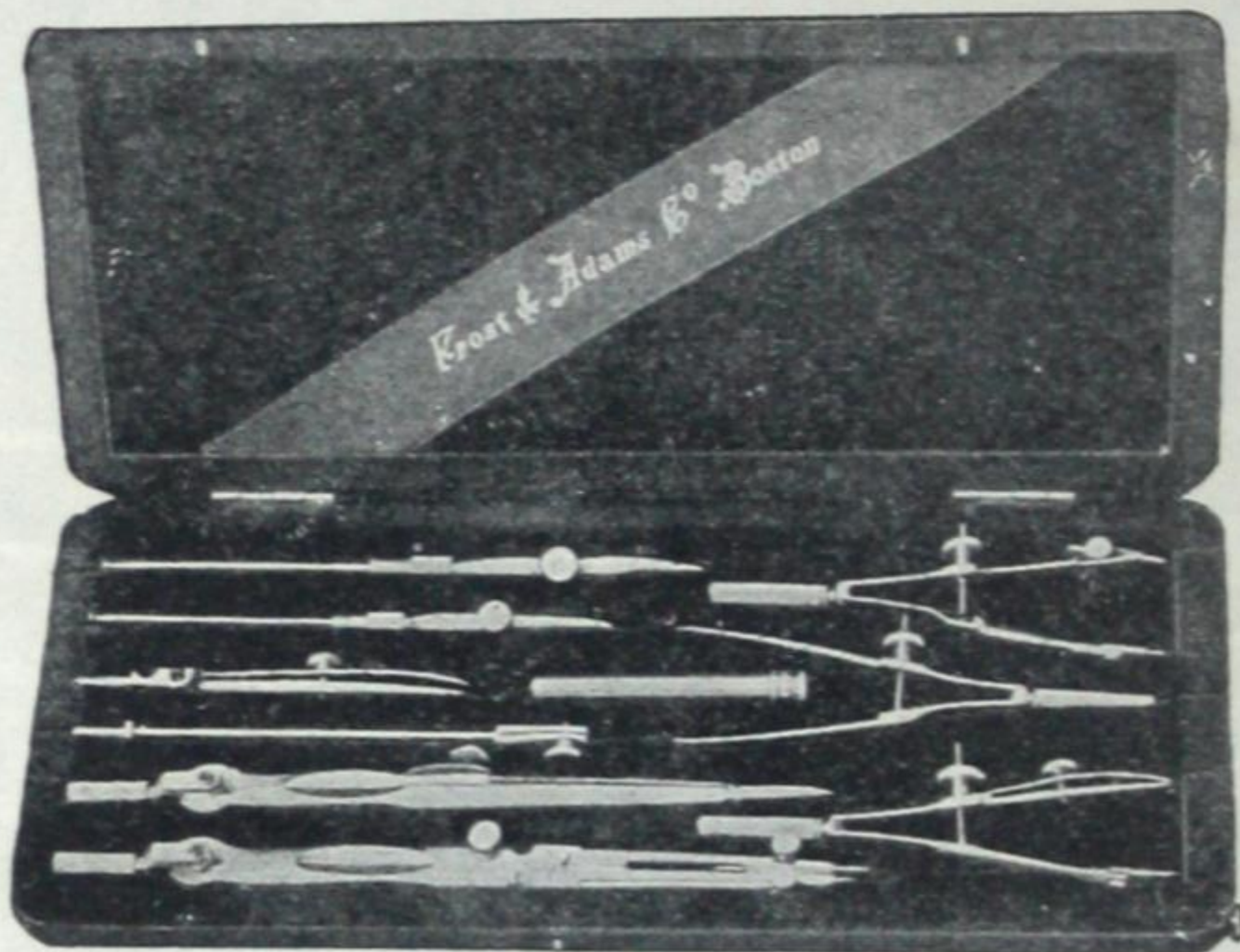
NO. 300 P. B.

No. 300 P. B. Case contains 15 pieces: $6\frac{1}{4}$ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar with Micrometer Attachment, 6 in. Divider with Hair Line Spacing Attachment, centre adjustments, 4 in. Spring Bow Pen with centre screw, 4 in. Spring Bow Pen with Micrometer Adjustment, 4 in. Spring Bow Pencil with Micrometer Adjustment, 4 in. Spring Bow Divider with Centre Screw, $4\frac{1}{4}$ in. Spring Back Ruling Pen with release, $5\frac{1}{4}$ in. Spring Back Ruling Pen with release, Extra Handle for Ruling Pen, Box of Leads, Screw Driver each, \$20.00

This Case is made of Soft Morocco Leather with flaps, Chamois Lined

KERN & CO.'S

SWISS SUPERIOR QUALITY DRAWING INSTRUMENTS



NO. 660K

No. 660K. Case contains 11 pieces: $5\frac{1}{2}$ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Divider with Hair Line Spacing Attachment, Spring Bow Pen, Spring Bow Pencil, Spring Bow Divider, $4\frac{1}{2}$ in. Spring Back Ruling Pen, $5\frac{1}{2}$ in. Spring Back Ruling Pen, Box of Leads, Key for Dividers . . . each, \$23.50

FROST & ADAMS CO.'S

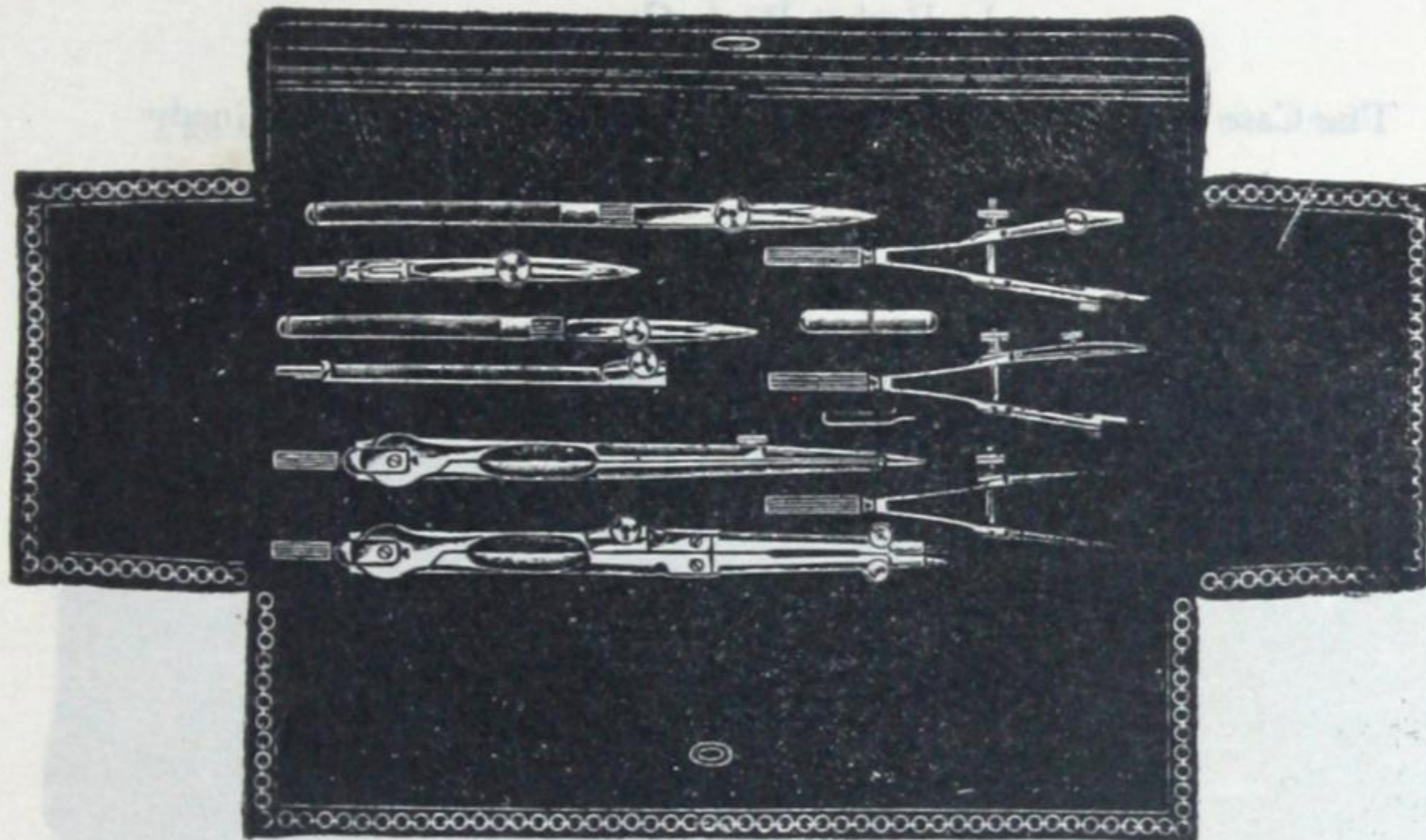
FIRST QUALITY GERMAN SILVER INSTRUMENTS

No. 2112 $\frac{1}{2}$. Case contains 9 pieces: $5\frac{1}{2}$ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Plain Divider, Spring Bow Pen, Spring Bow Pencil, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers each, \$7.00

FROST & ADAMS CO.'S POCKET BOOK CASES

First Quality German Silver Instruments

The Case is made of Soft Morocco Leather with flaps, velvet lined



NO. 1000 P.B.

No. 1000 P.B. Case contains 11 pieces: 5 1/2 in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Divider with Hair Line Spacing Attachment, Spring Bow Pen, Spring Bow Pencil, Spring Bow Divider, 4 1/2 in. Spring Back Ruling Pen, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers . . . each, \$13.00

FROST & ADAMS CO.'S

HIGH GRADE SUPERIOR QUALITY INSTRUMENTS

Pocket Book Cases, Chamois Lined

No. 800 P.B. Case contains 11 pieces: 5 1/2 in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Divider with Hair Line Spacing Attachment, Spring Bow Pen, Spring Bow Pencil, Spring Bow Divider, 4 1/2 in. Spring Back Ruling Pen, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers . . . each, \$18.00

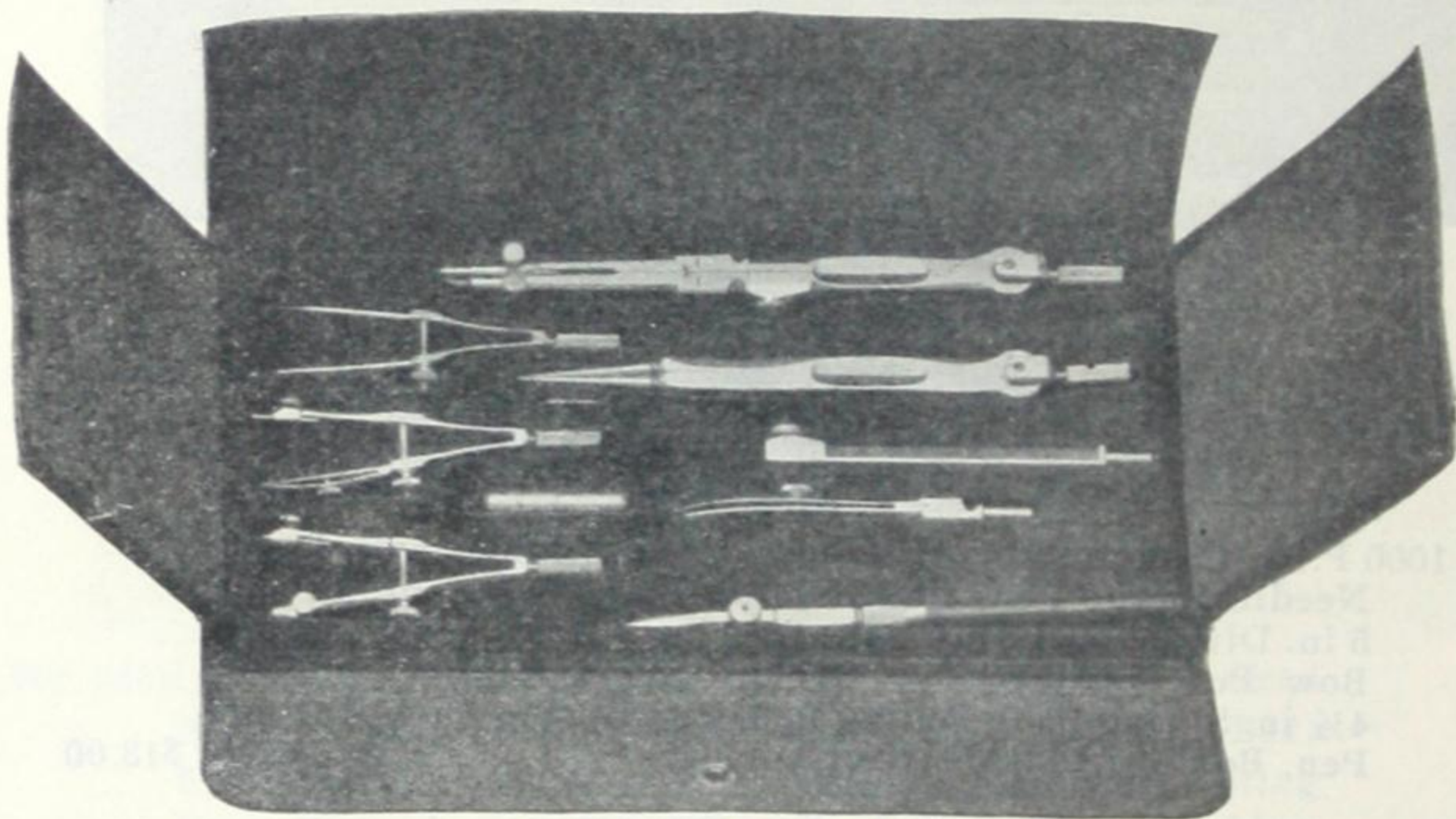
Center Screws in the Bow Instruments of No. 2184 P.B.

No. 900 P.B. Case contains 11 pieces: 5 1/2 in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Divider with Hair Line Spacing Attachment, Spring Bow Pen, Spring Bow Pencil, Spring Bow Divider, 4 1/2 in. Spring Back Ruling Pen, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers . . . each, 20 00

FROST & ADAMS CO.'S
GERMAN SILVER INSTRUMENTS

In Pocket Book Cases

The Case is made of Soft Morocco Leather with flaps, velvet lined



NO. 3276 P. B.

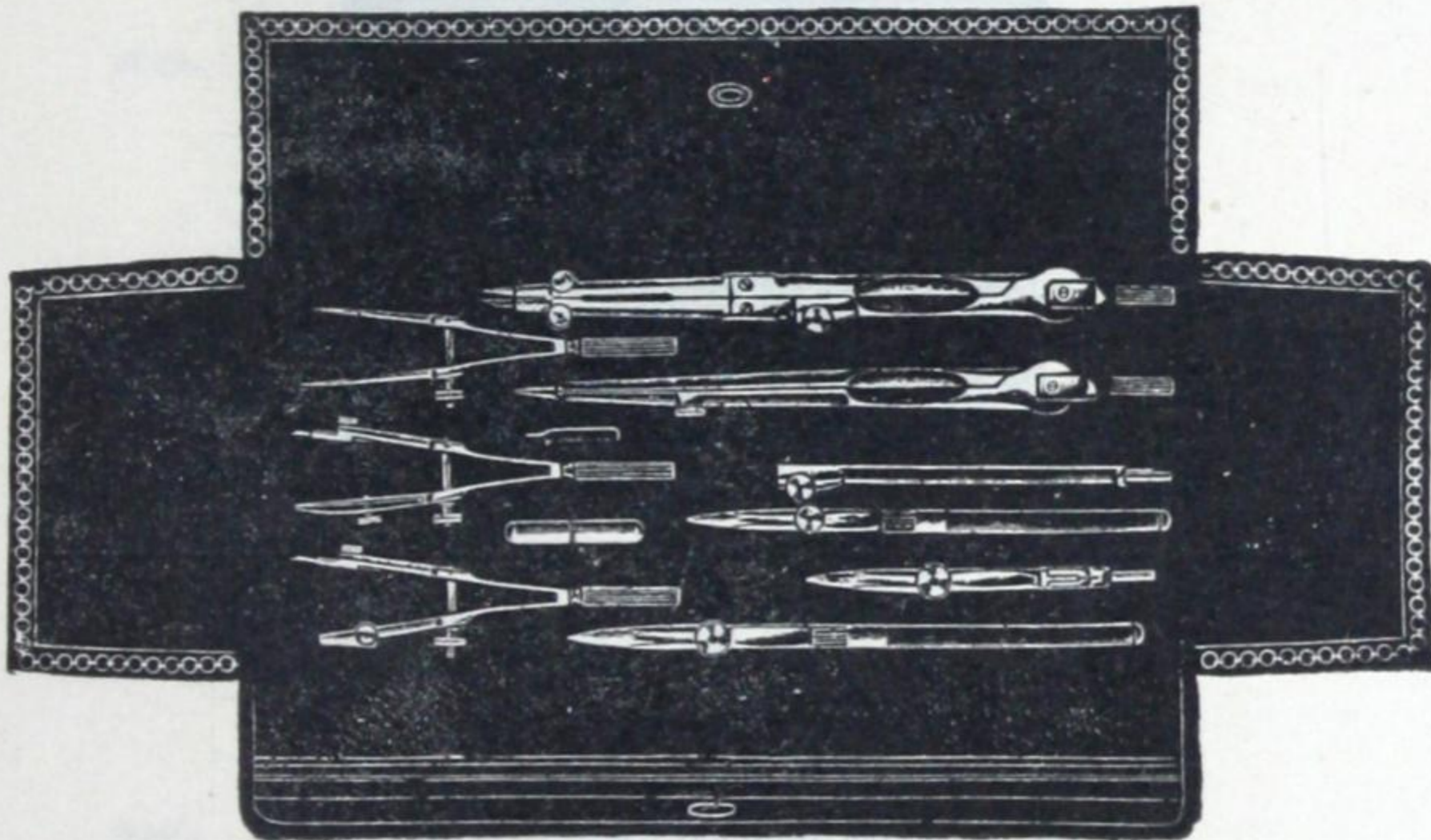
No. 3276 P. B. Case contains 10 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Plain Divider, Spring Bow Pen, Spring Bow Pencil, Spring Bow Divider, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers . . . each, \$7.00

FROST & ADAMS CO.'S

SPECIAL FINE GERMAN SILVER INSTRUMENTS

In Pocket Book Cases

The Case is made of Soft Morocco Leather with flaps, velvet lined



NO. 2079 P. B.

No. 2079 P. B. Case contains 11 pieces: 5½ in. Divider with fixed Needle Point, Pen, Pencil Point and Lengthening Bar; 5 in. Divider with Hair Line Spacing Attachment, Spring Bow Pen, Spring Bow Pencil, Spring Bow Divider, 4½ in. Spring Back Ruling Pen, 5 in. Spring Back Ruling Pen, Box of Leads, Key for Dividers each, \$8.50

ALTENER'S INSTRUMENTS IN MOROCCO-COVERED CASES.

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."

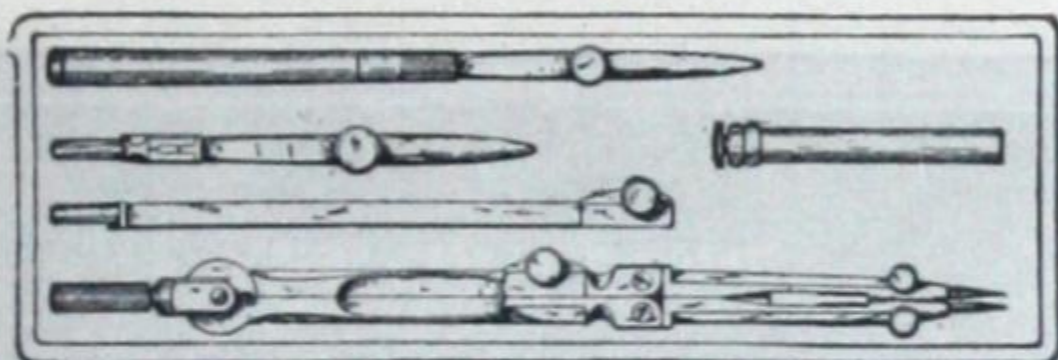


2000

2000. Morocco-covered Case containing :
- No. 1477, 3½-inch Compass, fixed pen and needle-point leg ;
 - No. 1479, 3½-inch Compass, fixed pencil and needle-point leg ;
 - No. 1613, 4¼-inch Ruling Pen \$10.75
2004. Morocco-covered Case containing :
- No. 1474, 3½-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg ;
 - No. 1613, 4¼-inch Ruling Pen ;
 - Nickel-plated lead case \$9.50

Nos. 2000 and 2004 are furnished in Alteneder's Folding Pocket Case, instead of in Morocco-covered Case, at \$1.25 additional, and when desired should be specified thus: "No. 2004 in Alteneder Folding Pocket Case, \$10.75."

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."



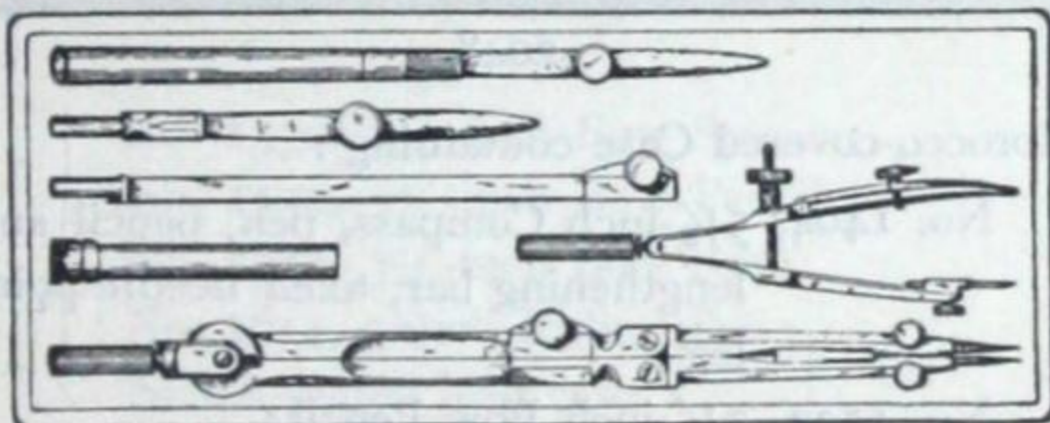
2044

2044. Morocco-covered Case containing :

No. 1404, 5 1/2-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg ;

No. 1614, 5-inch Ruling Pen ;

Nickel-plated lead case \$10.75



2046

2046. Morocco-covered Case containing :

No. 1404, 5 1/2-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg ;

No. 1533, 3 1/4-inch Bow Pen ;

No. 1614, 5-inch Ruling Pen ;

Nickel-plated lead case \$13.25

2047. Morocco-covered Case containing :

No. 1434, 5 1/2-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment ;

No. 1533, 3 1/4-inch Bow Pen ;

No. 1614, 5-inch Ruling Pen ;

Nickel-plated lead case \$14.75

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."

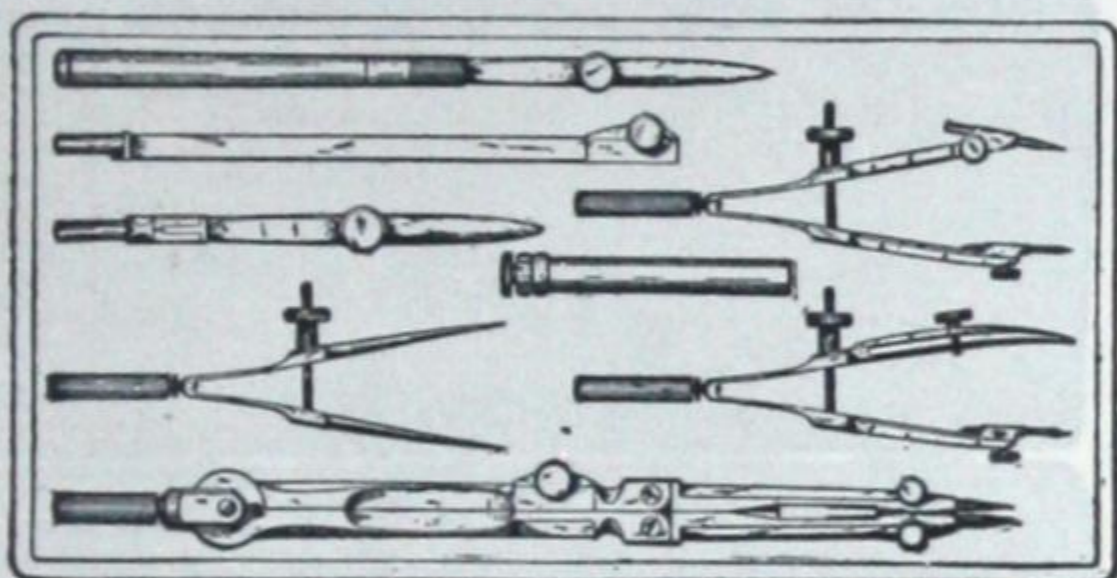


2048

2048. Morocco-covered Case containing :
- No. 1404, 5 1/2-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg ;
 - No. 1532, 3 1/4-inch Bow Pencil ;
 - No. 1533, 3 1/4-inch Bow Pen ;
 - No. 1614, 5-inch Ruling Pen ;
 - Nickel-plated lead case \$15.75
2049. Morocco-covered Case containing :
- No. 1434, 5 1/2-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment ;
 - No. 1532, 3 1/4-inch Bow Pencil ;
 - No. 1533, 3 1/4-inch Bow Pen ;
 - No. 1614, 5-inch Ruling Pen ;
 - Nickel-plated lead case \$17.25

Nos. 2044 to 2049 are furnished in Alteneder's Folding Pocket Case, instead of in Morocco-covered Case, at \$1.25 additional, and when desired should be specified thus: "No. 2046 in Alteneder's Folding Pocket Case, \$14.50."

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."



2050

2050. Morocco-covered Case containing :

No. 1404, 5½-inch Compass, pen, pencil and
lengthening bar, fixed needle-point
leg ;

No. 1530, ¾-inch Bow Spacer ;

No. 1532, ¾-inch Bow Pencil ;

No. 1533, ¾-inch Bow Pen ;

No. 1614, 5-inch Ruling Pen ;

Nickel-plated lead case \$17.75

2051. Morocco-covered Case containing :

No. 1434, 5½-inch Compass, pen, pencil and
lengthening bar, fixed needle-point
leg with hair-spring adjustment ;

No. 1530, ¾-inch Bow Spacer ;

No. 1532, ¾-inch Bow Pencil ;

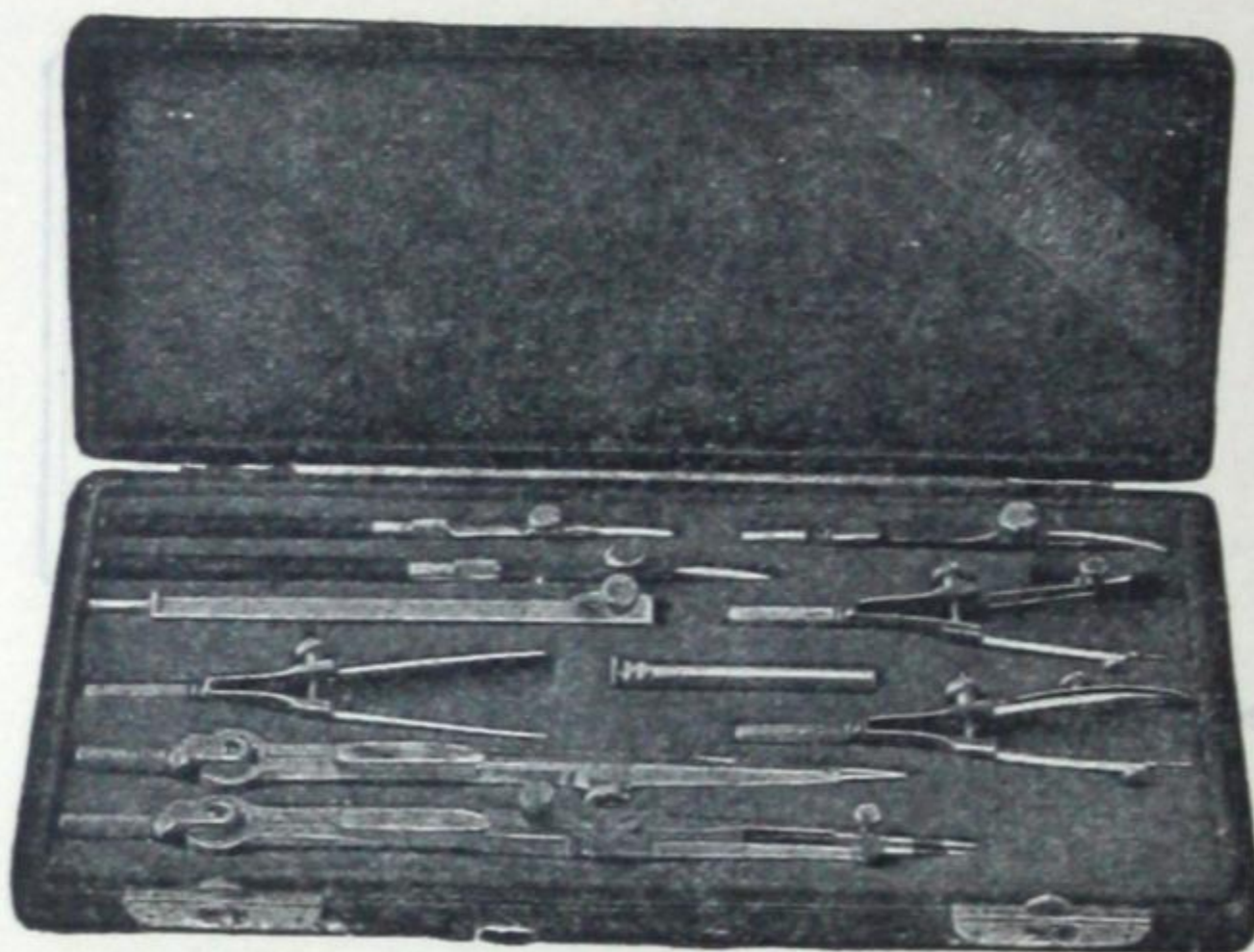
No. 1533, ¾-inch Bow Pen ;

No. 1614, 5-inch Ruling Pen ;

Nickel-plated lead case \$19.25

Nos. 2050 and 2051 are furnished in Alteneder's Folding Pocket
Case, instead of in Morocco-covered Case, at \$1.25 additional,
and when desired should be specified thus: "No. 2050 in
Alteneder's Folding Pocket Case, \$19.00."

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."



2066

2066. Morocco-covered Case containing :

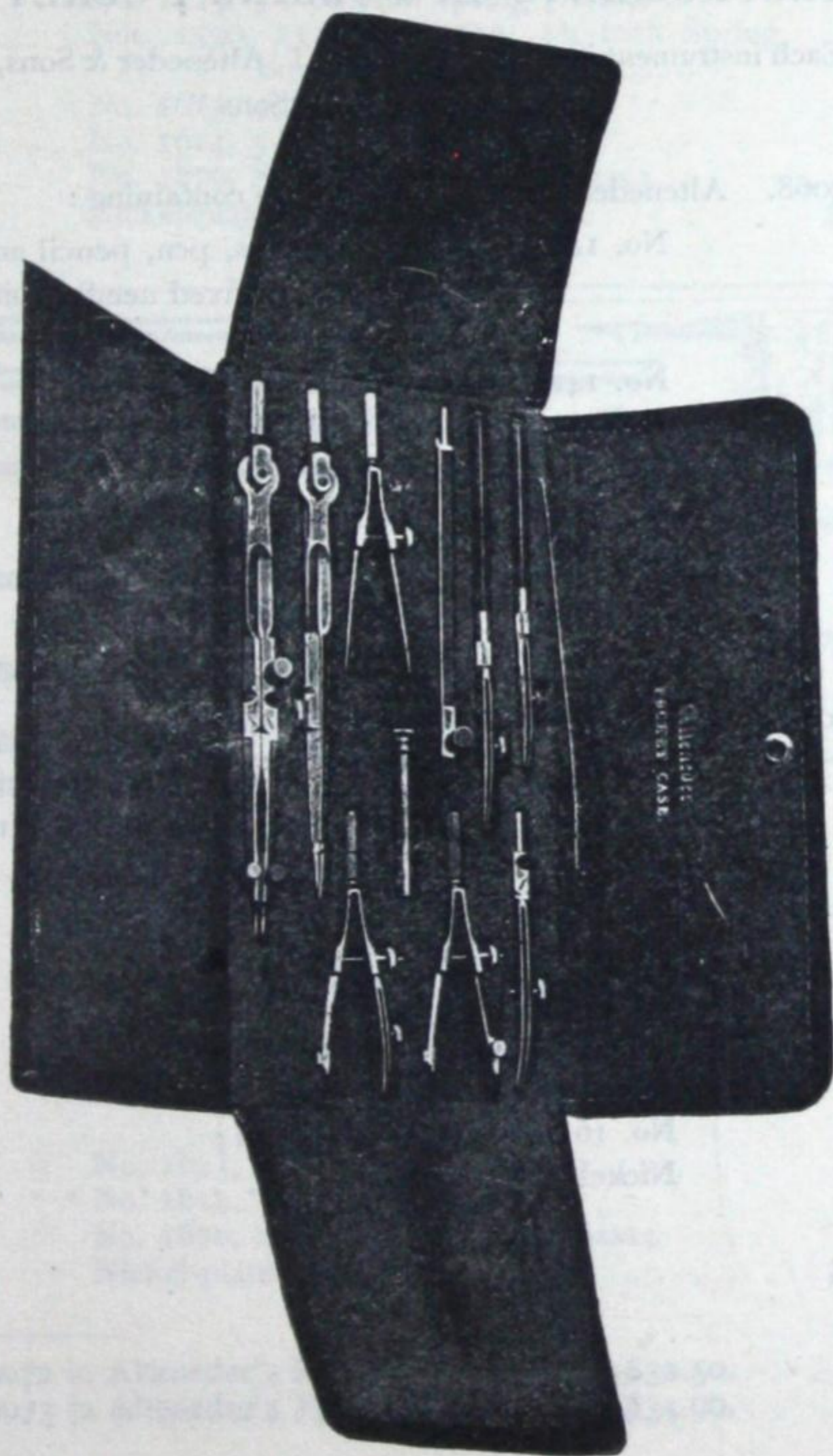
- No. 1404, 5½-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg ;
- No. 1423, 5-inch Hair-spring Divider ;
- No. 1530, 3¼-inch Bow Spacer ;
- No. 1532, 3¼-inch Bow Pencil ;
- No. 1533, 3¼-inch Bow Pen ;
- No. 1613, 4¼-inch Ruling Pen ;
- No. 1614, 5-inch Ruling Pen ;
- Nickel-plated lead case \$23.50

2067. Morocco-covered Case containing :

- No. 1434, 5½-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment ;
- No. 1423, 5-inch Hair-spring Divider ;
- No. 1530, 3¼-inch Bow Spacer ;
- No. 1532, 3¼-inch Bow Pencil ;
- No. 1533, 3¼-inch Bow Pen ;
- No. 1613, 4¼-inch Ruling Pen ;
- No. 1614, 5-inch Ruling Pen ;
- Nickel-plated lead case \$25.00

ALTENER'S FOLDING POCKET CASE.

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."



2068

ALTENER'S INSTRUMENTS IN FOLDING POCKET CASES.

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."

2068. Alteneder Folding Pocket Case containing :

No. 1404, 5½-inch Compass, pen, pencil and
lengthening bar, fixed needle-point
leg ;

No. 1423, 5-inch Hair-spring Divider ;

No. 1530, ¾-inch Bow Spacer ;

No. 1532, ¾-inch Bow Pencil ;

No. 1533, ¾-inch Bow Pen ;

No. 1613, 4¼-inch Ruling Pen ;

No. 1614, 5-inch Ruling Pen ;

Nickel-plated lead case \$24.75

2070. Alteneder Folding Pocket Case containing :

No. 1434, 5½-inch Compass, pen, pencil and
lengthening bar, fixed needle-point
leg with hair-spring adjustment ;

No. 1423, 5-inch Hair-spring Divider ;

No. 1530, ¾-inch Bow Spacer ;

No. 1532, ¾-inch Bow Pencil ;

No. 1533, ¾-inch Bow Pen ;

No. 1613, 4¼-inch Ruling Pen ;

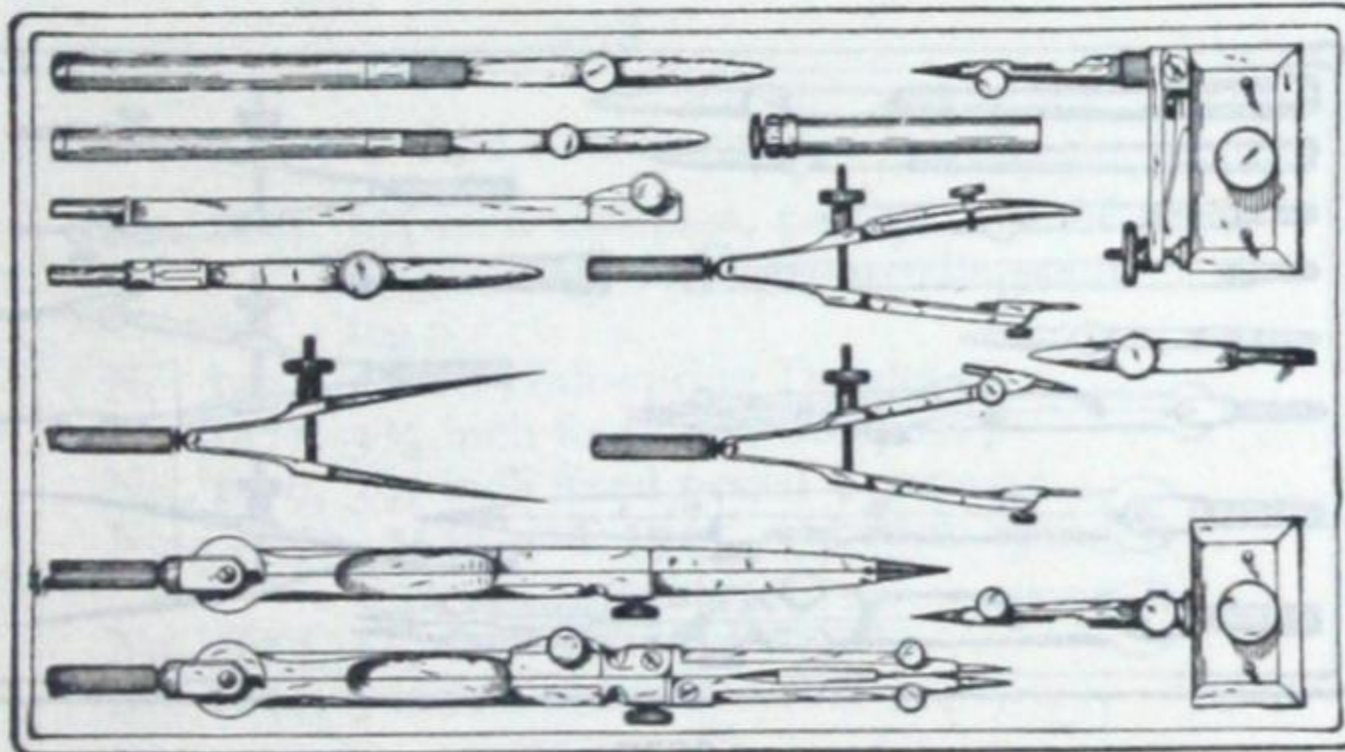
No. 1614, 5-inch Ruling Pen ;

Nickel-plated lead case \$26.25

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."

2072. Morocco-covered Case containing :

- No. 1404, 5½-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg ;
- No. 1423, 5-inch Hair-spring Divider ;
- Nos. 1530, 1532 and 1533, ¾-inch Spring Bow Instruments ;
- No. 1613, 4¼-inch Ruling Pen ;
- No. 1614, 5-inch Ruling Pen ;
- No. 1670, Small size Beam-compass ;
- Nickel-plated lead case \$31.00



2073

2073. Morocco-covered Case containing :

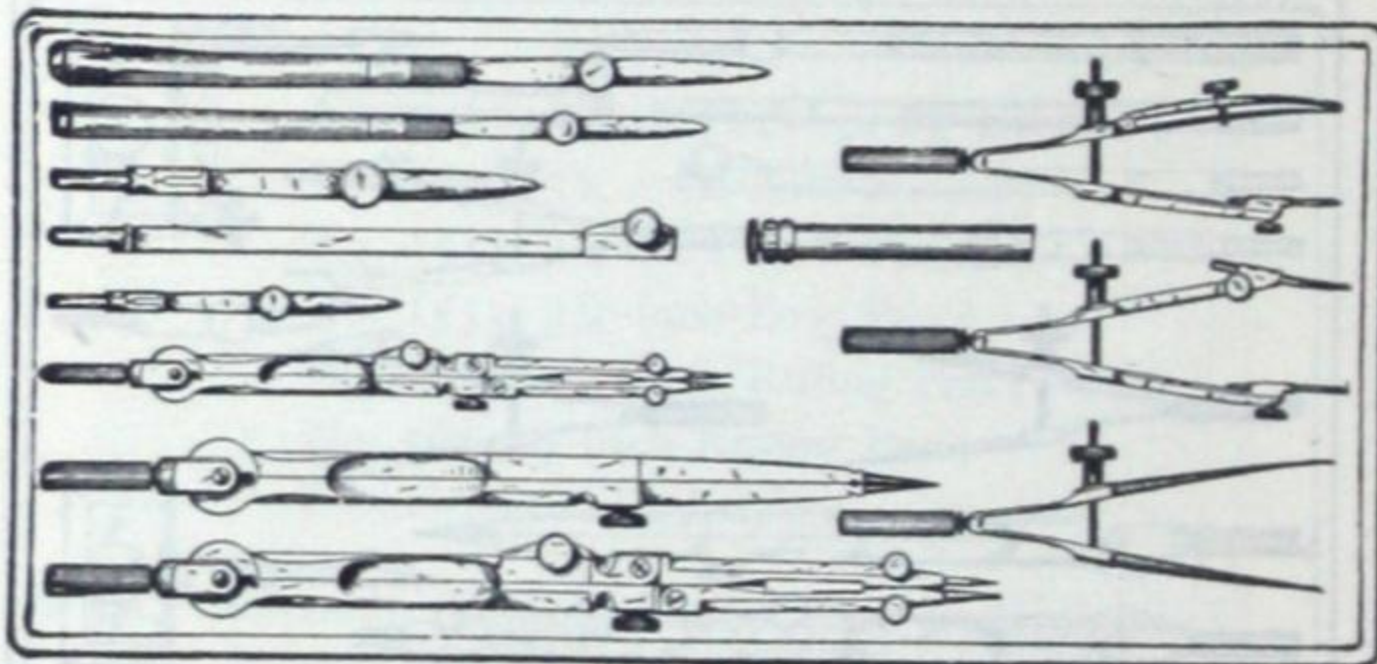
- No. 1434, 5½-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment ;
- No. 1423, 5-inch Hair-spring Divider ;
- Nos. 1530, 1532 and 1533, ¾-inch Spring Bow Instruments ;
- No. 1613, 4¼-inch Ruling Pen ;
- No. 1614, 5-inch Ruling Pen ;
- No. 1670, Small size Beam-compass ;
- Nickel-plated lead case \$32.50

No. 2072 in Alteneder's Folding Pocket Case, \$32.50.

No. 2073 in Alteneder's Folding Pocket Case, \$34.00.

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."

2076. Morocco-covered Case containing :
- No. 1404, 5 1/2-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg ;
 - No. 1470, 3 1/2-inch Compass, pen and pencil, fixed needle-point leg ;
 - No. 1423, 5-inch Hair-spring Divider ;
 - Nos. 1530, 1532 and 1533, 3 1/4-inch Spring Bow Instruments ;
 - No. 1613, 4 1/4-inch Ruling Pen ;
 - No. 1614, 5-inch Ruling Pen ;
 - Nickel-plated lead case \$30.00

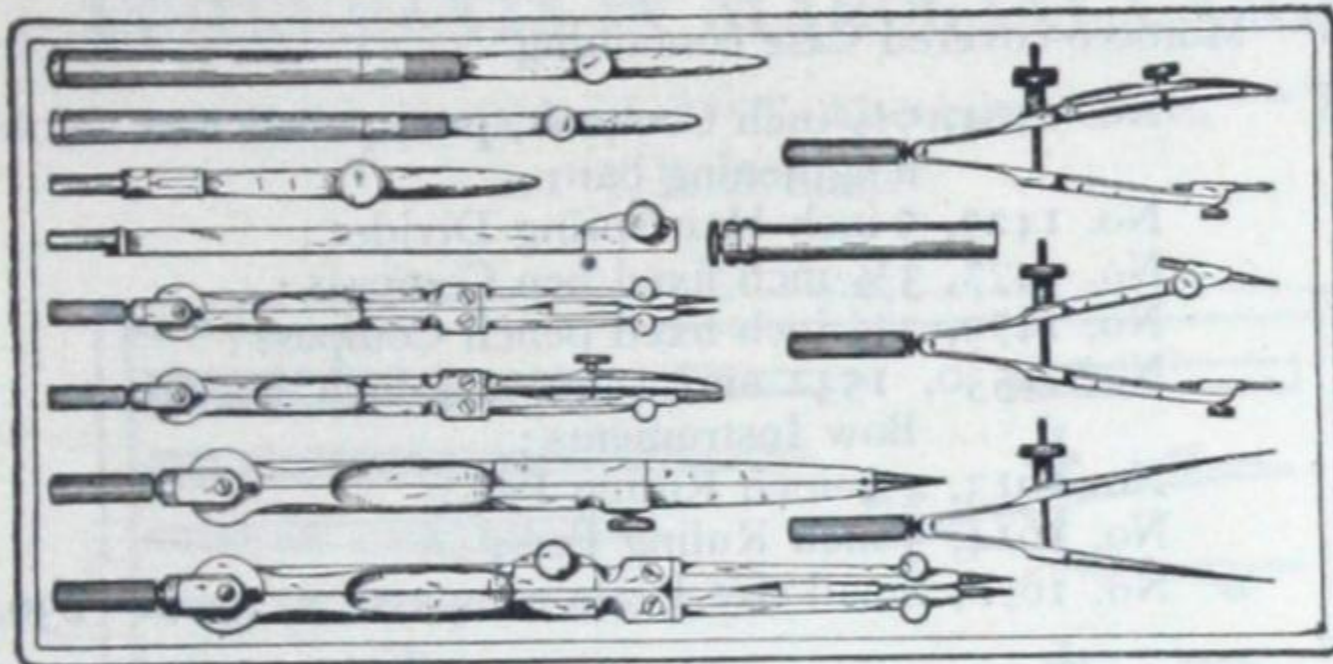


2077

2077. Morocco-covered Case containing :
- No. 1434, 5 1/2-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment ;
 - No. 1490, 3 1/2-inch Compass, pen and pencil, fixed needle-point leg with hair-spring adjustment ;
 - No. 1423, 5-inch Hair-spring Divider ;
 - Nos. 1530, 1532 and 1533, 3 1/4-inch Spring Bow Instruments ;
 - No. 1613, 4 1/4-inch Ruling Pen ;
 - No. 1614, 5-inch Ruling Pen ;
 - Nickel-plated lead case \$33.00

No. 2076 in Alteneder's Folding Pocket Case, \$31.50.
No. 2077 in Alteneder's Folding Pocket Case, \$34.50.

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."



2078

2078. Morocco-covered Case containing :

- No. 1404, 5 1/2-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg ;
- No. 1423, 5-inch Hair-spring Divider ;
- No. 1477, 3 1/2-inch fixed pen Compass ;
- No. 1479, 3 1/2-inch fixed pencil Compass ;
- Nos. 1530, 1532 and 1533, 3 1/4-inch Spring Bow Instruments ;
- No. 1613, 4 1/4-inch Ruling Pen ;
- No. 1614, 5-inch Ruling Pen \$32.00

2079. Morocco-covered Case containing :

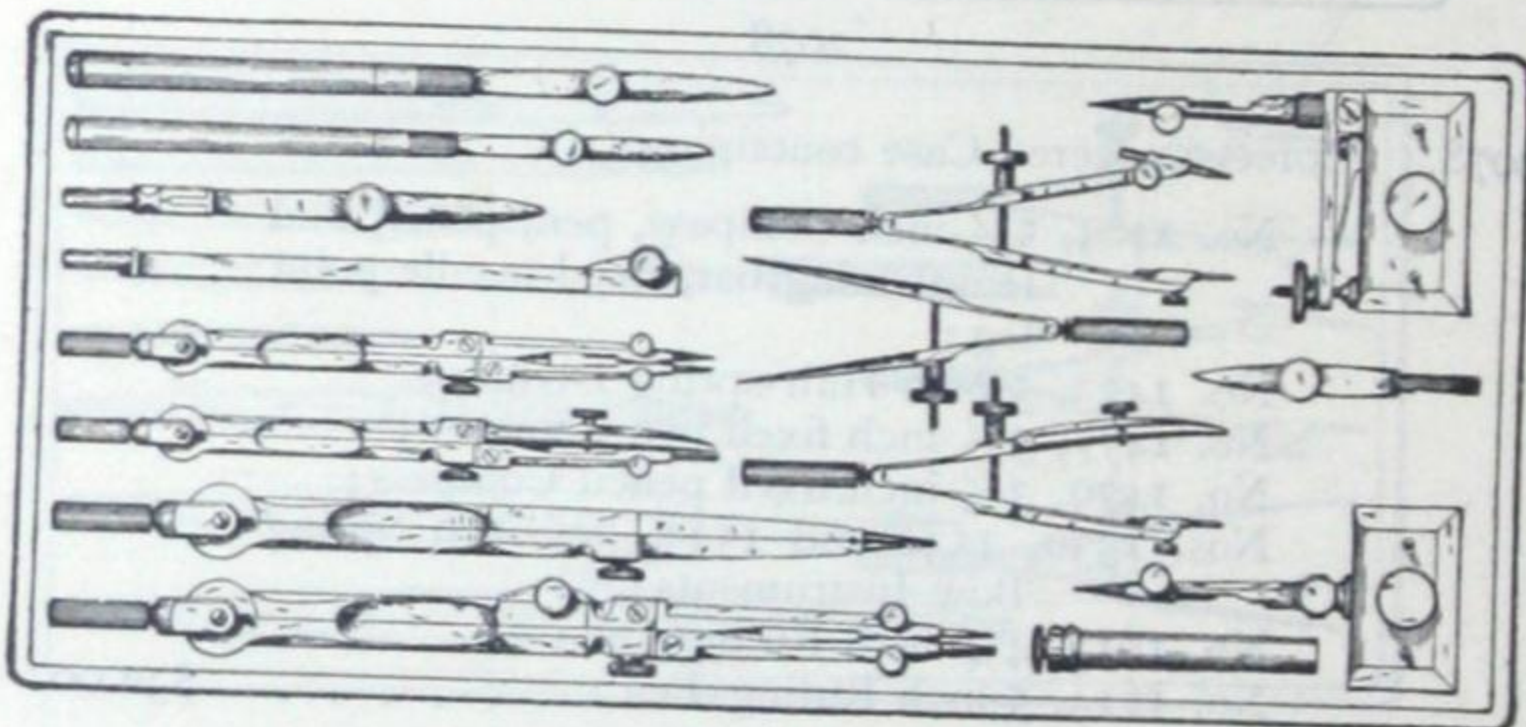
- No. 1434, 5 1/2-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment ;
- No. 1423, 5-inch Hair-spring Divider ;
- No. 1497, 3 1/2-inch fixed pen Compass with hair-spring adjustment ;
- No. 1499, 3 1/2-inch fixed pencil Compass with hair-spring adjustment ;
- Nos. 1530, 1532 and 1533, 3 1/4-inch Spring Bow Instruments ;
- No. 1613, 4 1/4-inch Ruling Pen ;
- No. 1614, 5-inch Ruling Pen \$36.50

No. 2078 in Alteneder's Folding Pocket Case, \$33.50.
No. 2079 in Alteneder's Folding Pocket Case, \$38.00.

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."

2080. Morocco-covered Case containing :

- No. 1404, 5½-inch Compass, pen, pencil and lengthening bar ;
 No. 1423, 5-inch Hair-spring Divider ;
 No. 1477, 3½-inch fixed pen Compass ;
 No. 1479, 3½-inch fixed pencil Compass ;
 Nos. 1530, 1532 and 1533, 3¼-inch Spring Bow Instruments ;
 No. 1613, 4¼-inch Ruling Pen ;
 No. 1614, 5-inch Ruling Pen ;
 No. 1670, Small size Beam-compass \$39.50



2081

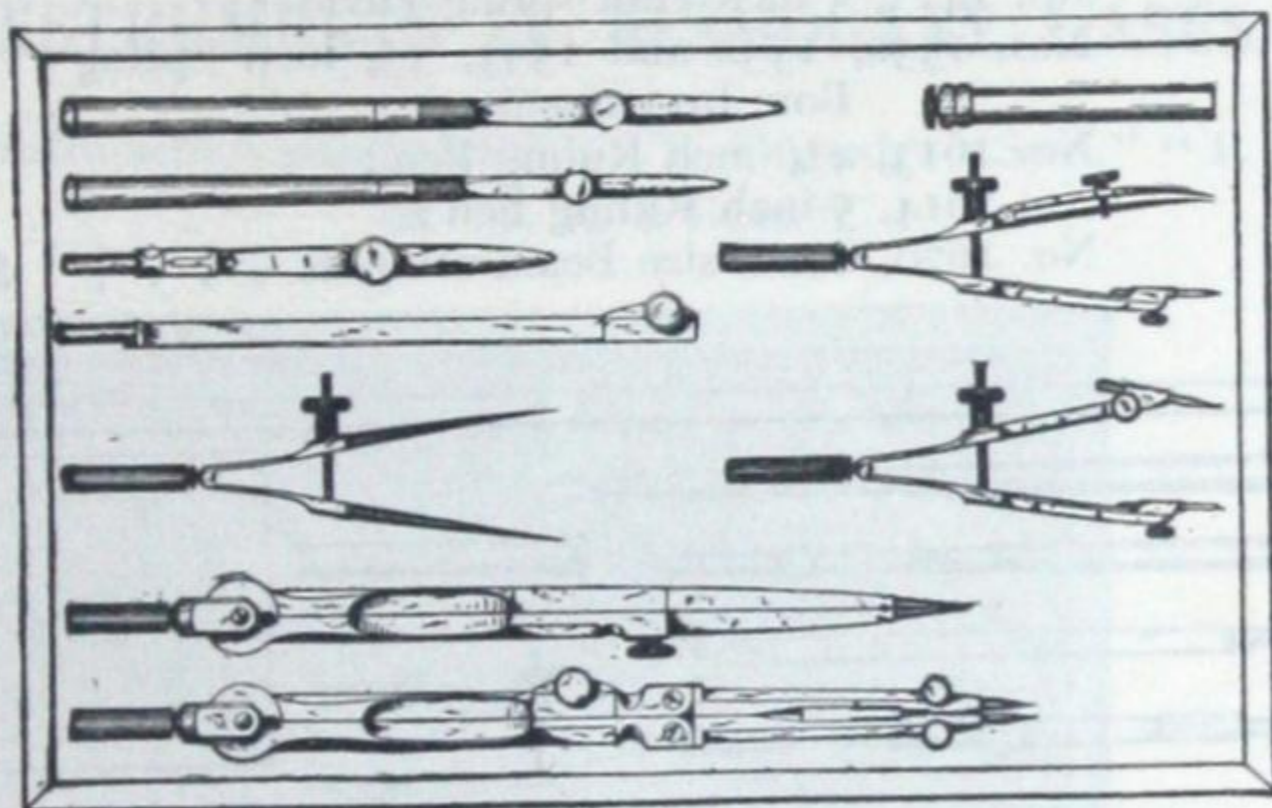
2081. Morocco-covered Case containing :

- No. 1434, 5½-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment ;
 No. 1423, 5-inch Hair-spring Divider ;
 Nos. 1497 and 1499, 3½-inch fixed pen and fixed pencil Compasses with hair-spring adjustment ;
 Nos. 1530, 1532 and 1533, 3¼-inch Spring Bow Instruments ;
 Nos. 1613 and 1614, Ruling Pens ;
 No. 1670, Small size Beam-compass \$44.00

No. 2080 in Alteneder's Folding Pocket Case, \$41.00.
 No. 2081 in Alteneder's Folding Pocket Case, \$45.50.

ALTENER'S INSTRUMENTS IN MAHOGANY CASES.

Each instrument is stamped either "T. Altener & Sons," "T. A."
or "T. A. & Sons."



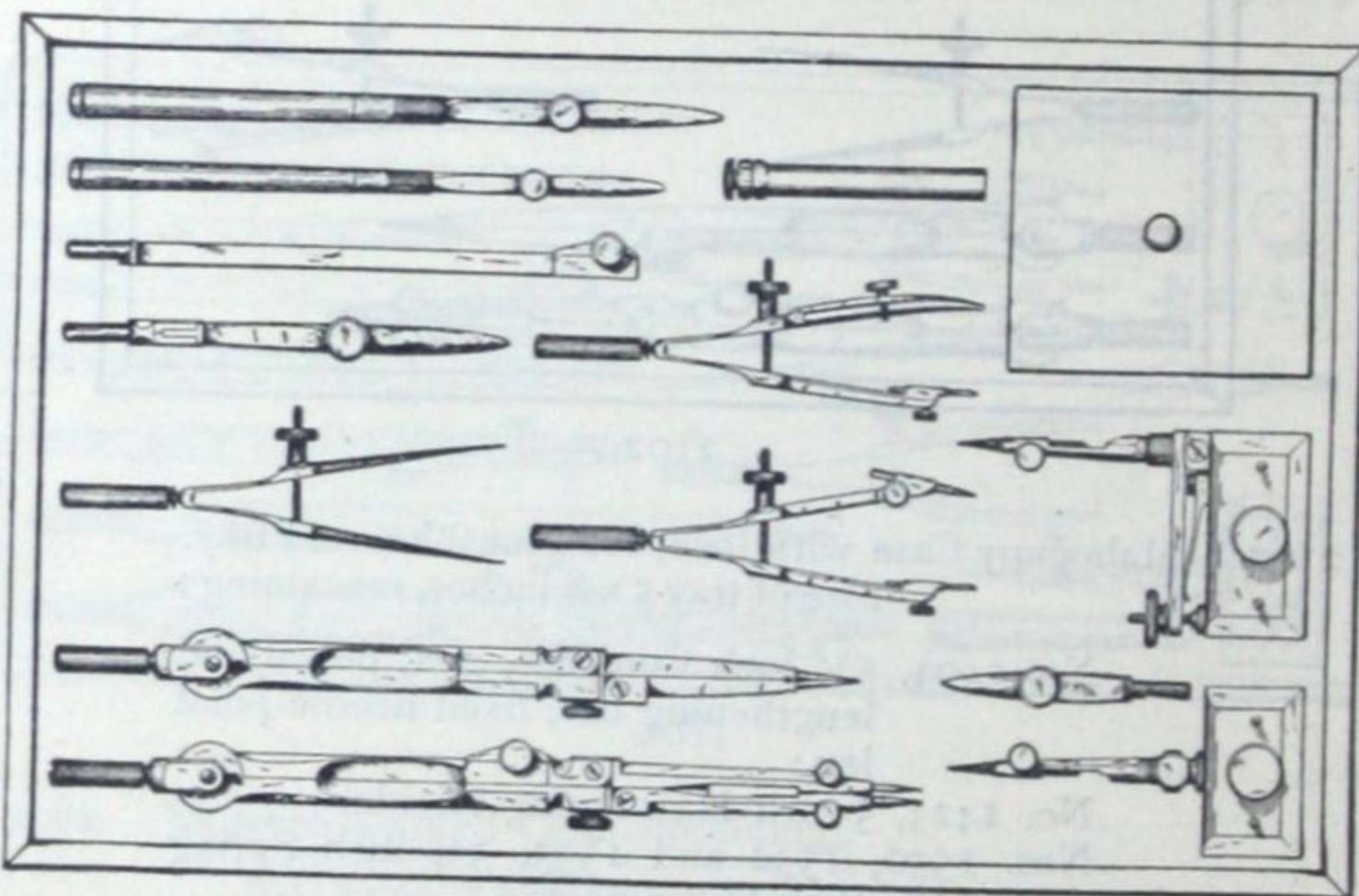
2102

- 2102.** Mahogany Case with lock, loose cushion and tray.
Size of tray 5 x 8 inches, containing :
- No. 1404, 5½-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg ;
 - No. 1423, 5-inch Hair-spring Divider ;
 - Nos. 1530, 1532 and 1533, ¾-inch Spring Bow Instruments ;
 - No. 1613, ¼-inch Ruling Pen ;
 - No. 1614, 5-inch Ruling Pen \$27.50
- 2103.** Mahogany Case with lock, loose cushion and tray.
Size of tray 5 x 8 inches, containing :
- No. 1434, 5½-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment ;
 - No. 1423, 5-inch Hair-spring Divider ;
 - Nos. 1530, 1532 and 1533, ¾-inch Spring Bow Instruments ;
 - No. 1613, ¼-inch Ruling Pen ;
 - No. 1614, 5-inch Ruling Pen \$29.00

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."

2120. Mahogany Case with lock, loose cushion and 6 x 9½-inch tray, containing:

- No. 1404, 5½-inch Compass, pen, pencil and lengthening bar;
- No. 1423, 5-inch Hair-spring Divider;
- Nos. 1530, 1532 and 1533, ¾-inch Spring Bow Instruments;
- No. 1613, ¼-inch Ruling Pen;
- No. 1614, 5-inch Ruling Pen;
- No. 1670, Small size Beam-compass \$35.25



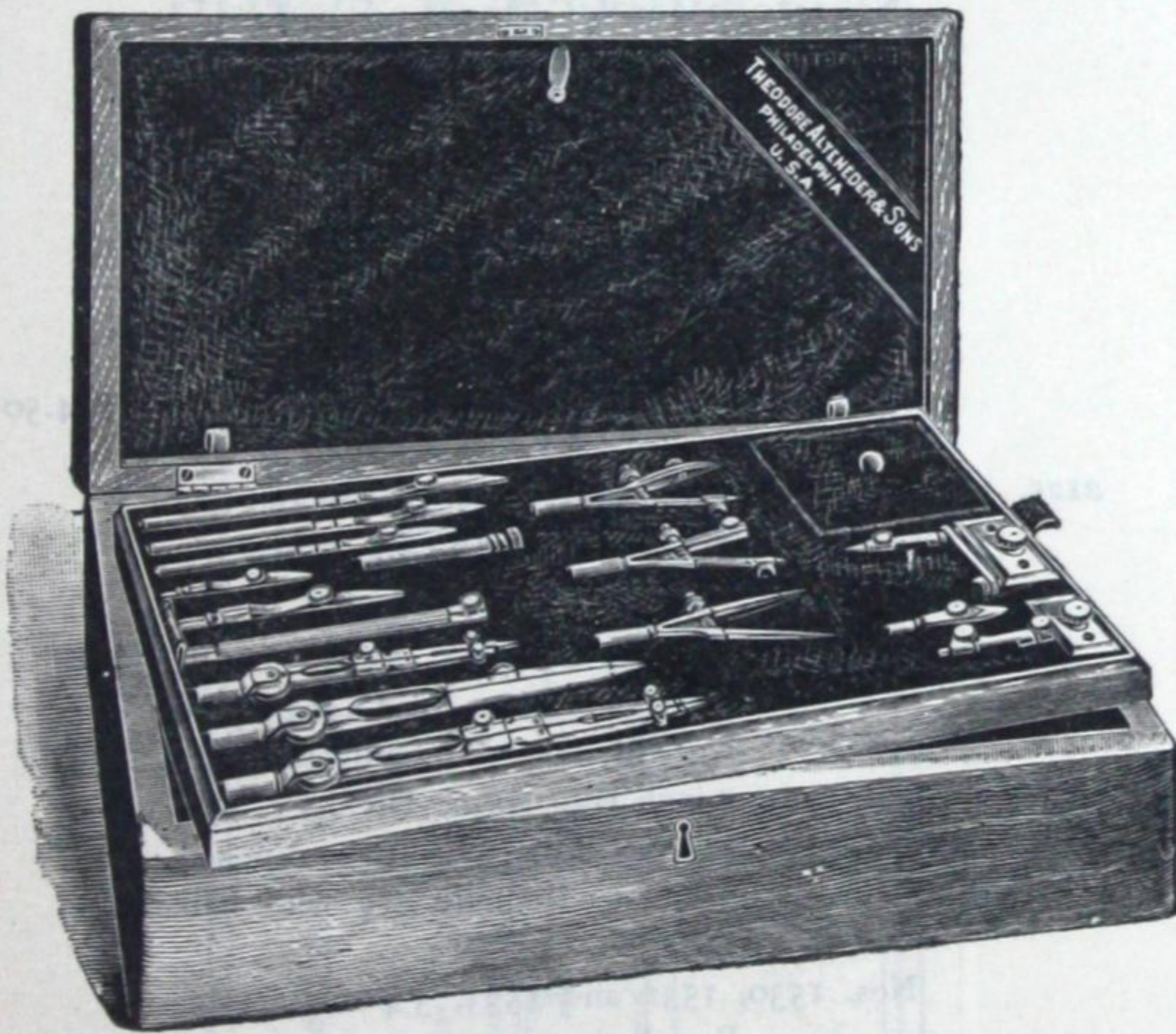
2121

2121. Mahogany Case with lock, loose cushion and 6 x 9½-inch tray, containing:

- No. 1434, 5½-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment;
- No. 1424, 5-inch Hair-spring Divider;
- Nos. 1530, 1532 and 1533, ¾-inch Spring Bow Instruments;
- No. 1613, ¼-inch Ruling Pen;
- No. 1614, 5-inch Ruling Pen;
- No. 1670, Small size Beam-compass \$37.75

ALTENER'S
INSTRUMENTS IN MAHOGANY CASES.

Each instrument is stamped either "T. Altener & Sons," "T. A."
or "T. A. & Sons."



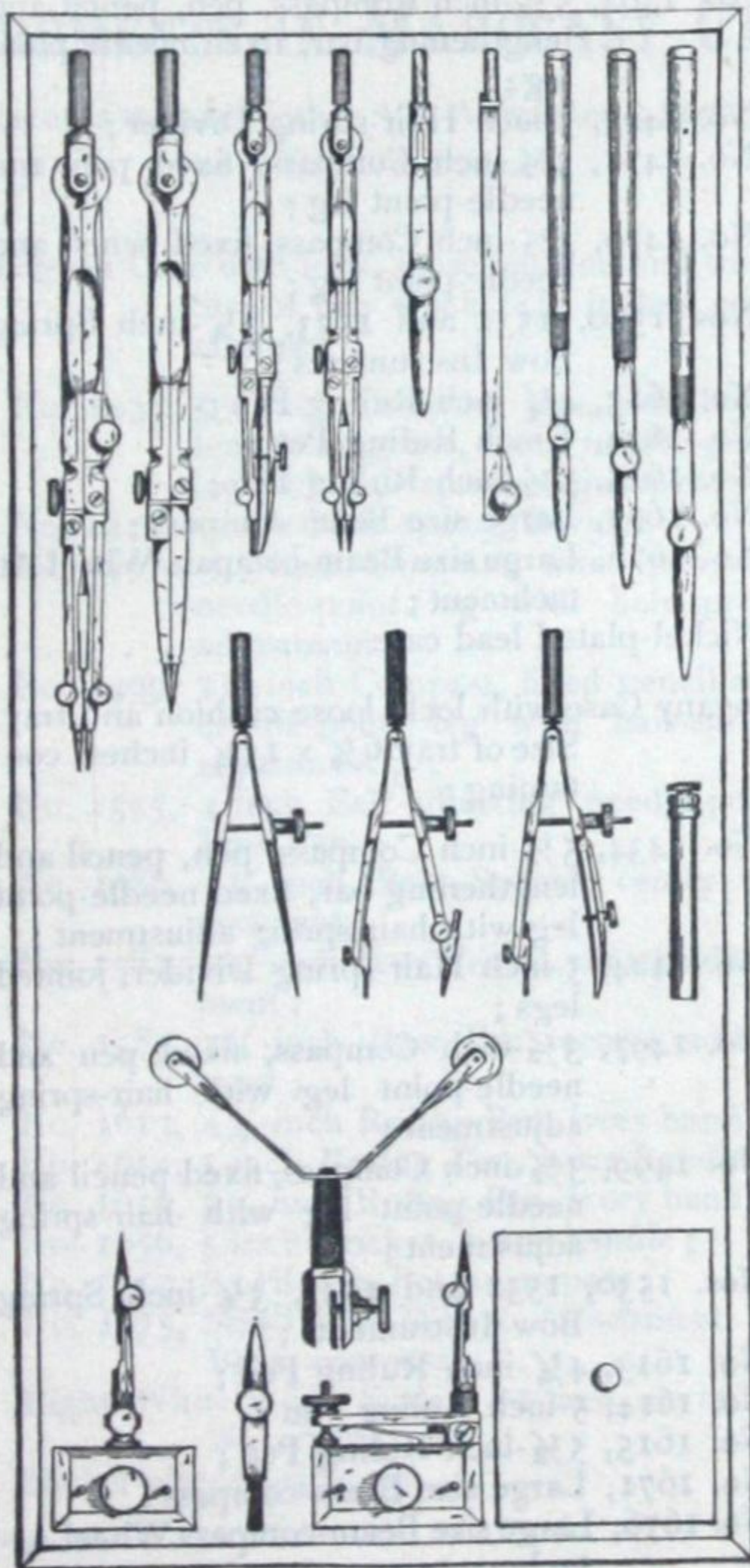
2124

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."

2124. Mahogany Case with lock, loose cushion and tray.
Size of tray $6\frac{1}{4}$ x $13\frac{1}{4}$ inches, containing:
- No. 1404, $5\frac{1}{2}$ -inch Compass, pen, pencil and lengthening bar, fixed needle-point leg;
 - No. 1423, 5-inch Hair-spring Divider;
 - No. 1470, $3\frac{1}{2}$ -inch Compass, pen and pencil, fixed needle-point leg;
 - Nos. 1530, 1532 and 1533, $3\frac{1}{4}$ -inch Spring Bow Instruments;
 - No. 1613, $4\frac{1}{4}$ -inch Ruling Pen;
 - No. 1614, 5-inch Ruling Pen;
 - No. 1615, $5\frac{1}{2}$ -inch Ruling Pen;
 - No. 1671, Large size Beam-compass;
 - Nickel-plated lead case \$44.50
2125. Mahogany Case with lock, loose cushion and tray.
Size of tray $6\frac{1}{4}$ x $13\frac{1}{4}$ inches, containing:
- No. 1434, $5\frac{1}{2}$ -inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment;
 - No. 1424, 5-inch Hair-spring Divider;
 - No. 1490, $3\frac{1}{2}$ -inch Compass, pen and pencil, fixed needle-point leg with hair-spring adjustment;
 - Nos. 1530, 1532 and 1533, $3\frac{1}{4}$ -inch Spring Bow Instruments;
 - No. 1613, $4\frac{1}{4}$ -inch Ruling Pen;
 - No. 1614, 5-inch Ruling Pen;
 - No. 1615, $5\frac{1}{2}$ -inch Ruling Pen;
 - No. 1671, Large size Beam-compass;
 - Nickel-plated lead case \$48.50

ALTENER'S INSTRUMENTS IN MAHOGANY CASES.

Each instrument is stamped either "T. Altener & Sons," "T. A."
or "T. A. & Sons."



2127

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."

2126. Mahogany Case with lock, loose cushion and tray.
Size of tray $6\frac{1}{4}$ x $13\frac{1}{4}$ inches, containing:
- No. 1404, $5\frac{1}{2}$ -inch Compass, pen, pencil and lengthening bar, fixed needle-point leg;
 - No. 1423, 5-inch Hair-spring Divider;
 - No. 1477, $3\frac{1}{2}$ -inch Compass, fixed pen and needle-point leg;
 - No. 1479, $3\frac{1}{2}$ -inch Compass, fixed pencil and needle-point leg;
 - Nos. 1530, 1532 and 1533, $3\frac{1}{4}$ -inch Spring Bow Instruments;
 - No. 1613, $4\frac{1}{4}$ -inch Ruling Pen;
 - No. 1614, 5-inch Ruling Pen;
 - No. 1615, $5\frac{1}{2}$ -inch Ruling Pen;
 - No. 1671, Large size Beam-compass;
 - No. 1676, Large size Beam-compass Wheel Attachment;
- Nickel-plated lead case \$49.00
2127. Mahogany Case with lock, loose cushion and tray.
Size of tray $6\frac{1}{4}$ x $13\frac{1}{4}$ inches, containing:
- No. 1434, $5\frac{1}{2}$ -inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment;
 - No. 1424, 5-inch Hair-spring Divider, jointed legs;
 - No. 1497, $3\frac{1}{2}$ -inch Compass, fixed pen and needle-point leg with hair-spring adjustment;
 - No. 1499, $3\frac{1}{2}$ -inch Compass, fixed pencil and needle-point leg with hair-spring adjustment;
 - Nos. 1530, 1532 and 1533, $3\frac{1}{4}$ -inch Spring Bow Instruments;
 - No. 1613, $4\frac{1}{4}$ -inch Ruling Pen;
 - No. 1614, 5-inch Ruling Pen;
 - No. 1615, $5\frac{1}{2}$ -inch Ruling Pen;
 - No. 1671, Large size Beam-compass;
 - No. 1676, Large size Beam-compass Wheel Attachment;
- Nickel-plated lead case \$54.50

ALTENER'S
INSTRUMENTS IN MAHOGANY CASES.

Each instrument is stamped either "T. Altener & Sons," "T. A."
or "T. A. & Sons."

2136. Mahogany Case with lock, loose cushion and tray.
Size of tray $6\frac{1}{2}$ x $14\frac{1}{4}$ inches, containing :

- No. 1434, $5\frac{1}{2}$ -inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment ;
- No. 1423, 5-inch Hair-spring Divider ;
- No. 1497, $3\frac{1}{2}$ -inch Compass, fixed pen and needle-point leg with hair-spring adjustment ;
- No. 1499, $3\frac{1}{2}$ -inch Compass, fixed pencil and needle-point leg with hair-spring adjustment ;
- No. 1575, 4-inch Self-adjusting needle-point Bow Pen ;
- No. 1580, $3\frac{1}{4}$ -inch Bow Spacer, center adjustment ;
- No. 1582, $3\frac{1}{4}$ -inch Bow Pencil, center adjustment ;
- No. 1585, $3\frac{1}{4}$ -inch Bow Pen, center adjustment ;
- No. 1613, $4\frac{1}{4}$ -inch Ruling Pen, ivory handle ;
- No. 1614, 5-inch Ruling Pen, ivory handle ;
- No. 1615, $5\frac{1}{2}$ -inch Ruling Pen, ivory handle ;
- No. 1656, 5-inch Pricker, ivory handle ;
- No. 1672, Small size Beam-compass ;
- No. 1675, Small size Wheel Attachment for Beam-compass ;
- Eight White Edge Scales, 12-inch, as in set No. 2775 ;
- Nickel-plated lead case \$75.00

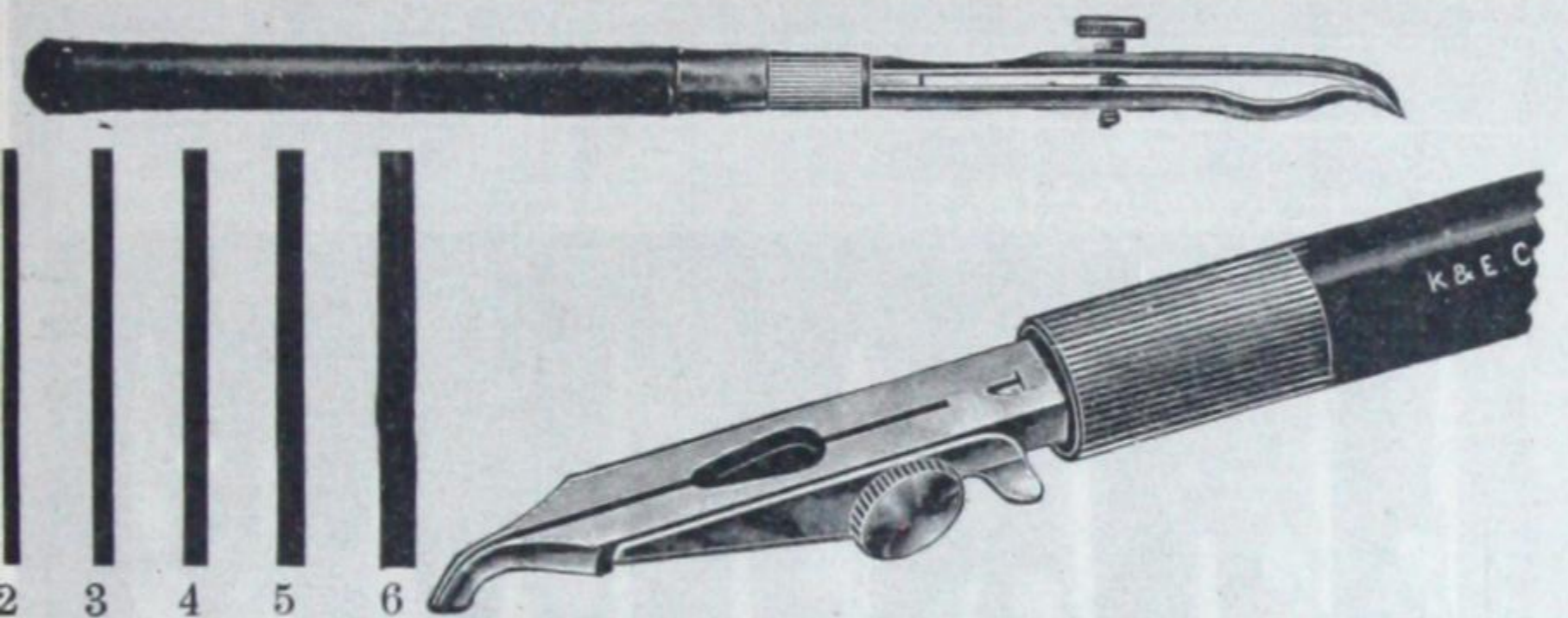
ALTENEDER'S INSTRUMENTS IN MAHOGANY CASES.

Each instrument is stamped either "T. Alteneder & Sons," "T. A."
or "T. A. & Sons."

2138. Mahogany Case with lock, loose cushion and tray.
Size of tray 7 x 14 $\frac{1}{4}$ inches, containing:
- No. 1434, 5 $\frac{1}{2}$ -inch Compass, *Spring-hinge Pen*, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment;
 - No. 1423, 5-inch Hair-spring Divider;
 - No. 1453, 4 $\frac{1}{2}$ -inch Hair-spring Divider;
 - No. 1497, 3 $\frac{1}{2}$ -inch Compass, fixed *Spring-hinge Pen* and needle-point leg with hair-spring adjustment;
 - No. 1499, 3 $\frac{1}{2}$ -inch Compass, fixed pencil and needle-point leg with hair-spring adjustment;
 - No. 1540, 4 $\frac{1}{4}$ -inch Bow Spacer;
 - No. 1575, 4-inch Self-adjusting needle-point Bow Pen;
 - No. 1580, 3 $\frac{1}{4}$ -inch Bow Spacer, center adjustment;
 - No. 1582, 3 $\frac{1}{4}$ -inch Bow Pencil, center adjustment;
 - No. 1584, 3 $\frac{1}{4}$ -inch Bow Pen, center adjustment, *with Spring-hinge Pen*;
 - No. 1600, 4 $\frac{1}{4}$ -inch *Spring-hinge Ruling Pen*, ivory handle;
 - No. 1602, 5-inch *Spring-hinge Ruling Pen*, ivory handle;
 - No. 1604, 5 $\frac{1}{2}$ -inch *Spring-hinge Ruling Pen*, ivory handle;
 - No. 1632, 6-inch wide blade Ruling Pen, aluminum handle;
 - No. 1656, 5-inch Pricker, ivory handle;
 - No. 1673, Large size Beam-compass *with Spring-hinge Pen*;
 - No. 1676, Large size Beam-compass Wheel Attachment;
 - No. 2861, One dozen $\frac{1}{2}$ -inch German-silver thumb tacks;
 - Twelve White Edge Flat Scales, 12-inch, as in set No. 2776;
 - Nickel-plated lead case \$100.00

PAYZANT LETTERING PENS (Freehand)

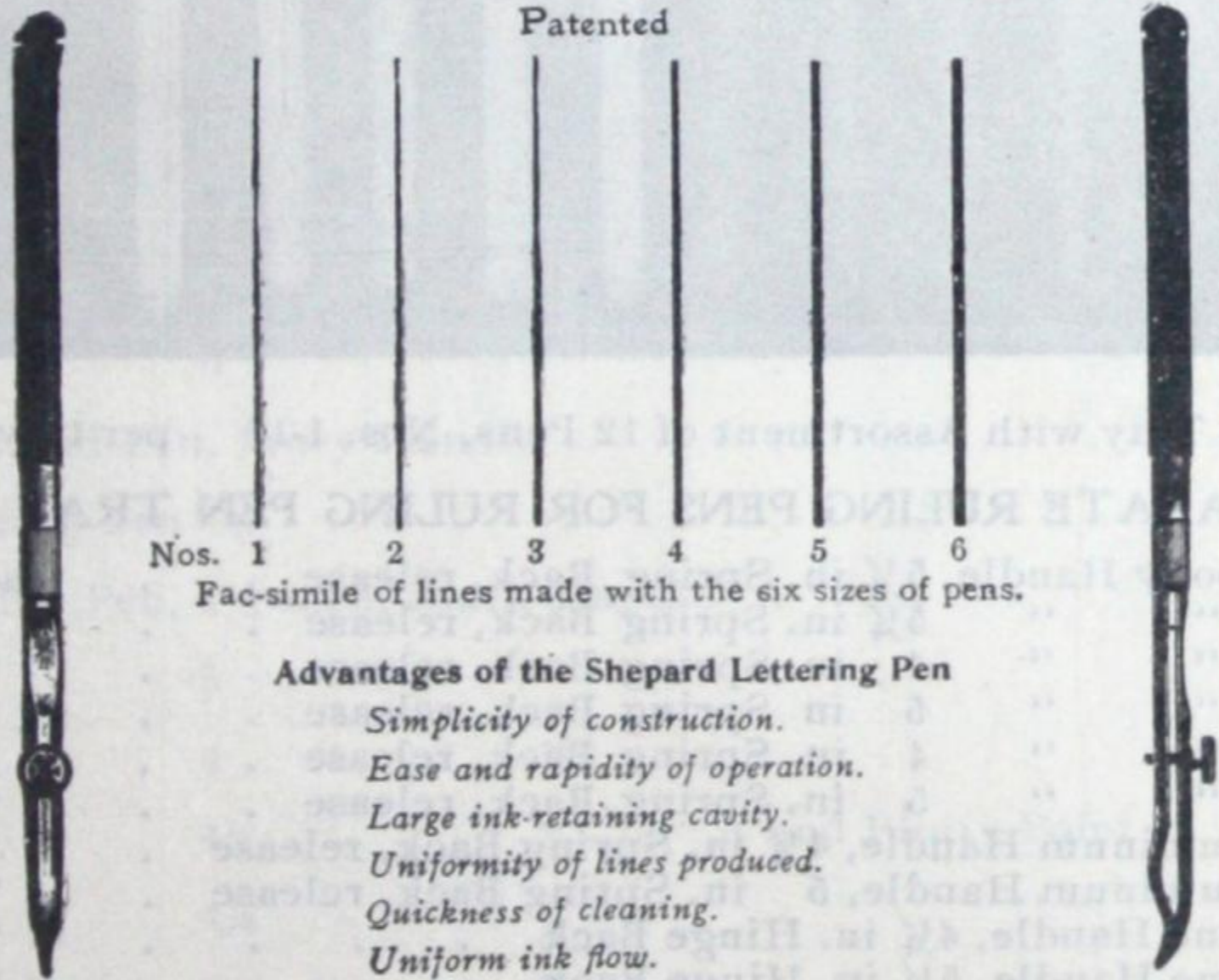
With Ink Reservoir



- Payzant Brass Lettering Pens, Nos. 1, 2, 3, 4, 5, 6 . . . each, \$1.00
- Payzant Brass Lettering Pens, Set of 6 Pens, Nos. 1, 2, 3, 4, 5, 6, in partitioned paper box . . . per set, 6.00
- Payzant German Silver Lettering Pens, Nos. 1, 2, 3, 4, 5, 6 . . . each, 1.35
- Payzant German Silver Lettering Pens, Set of 6 Pens, Nos. 1, 2, 3, 4, 5, 6, in partitioned paper box . . . per set, 8.10

SHEPARD LETTERING PENS

Patented

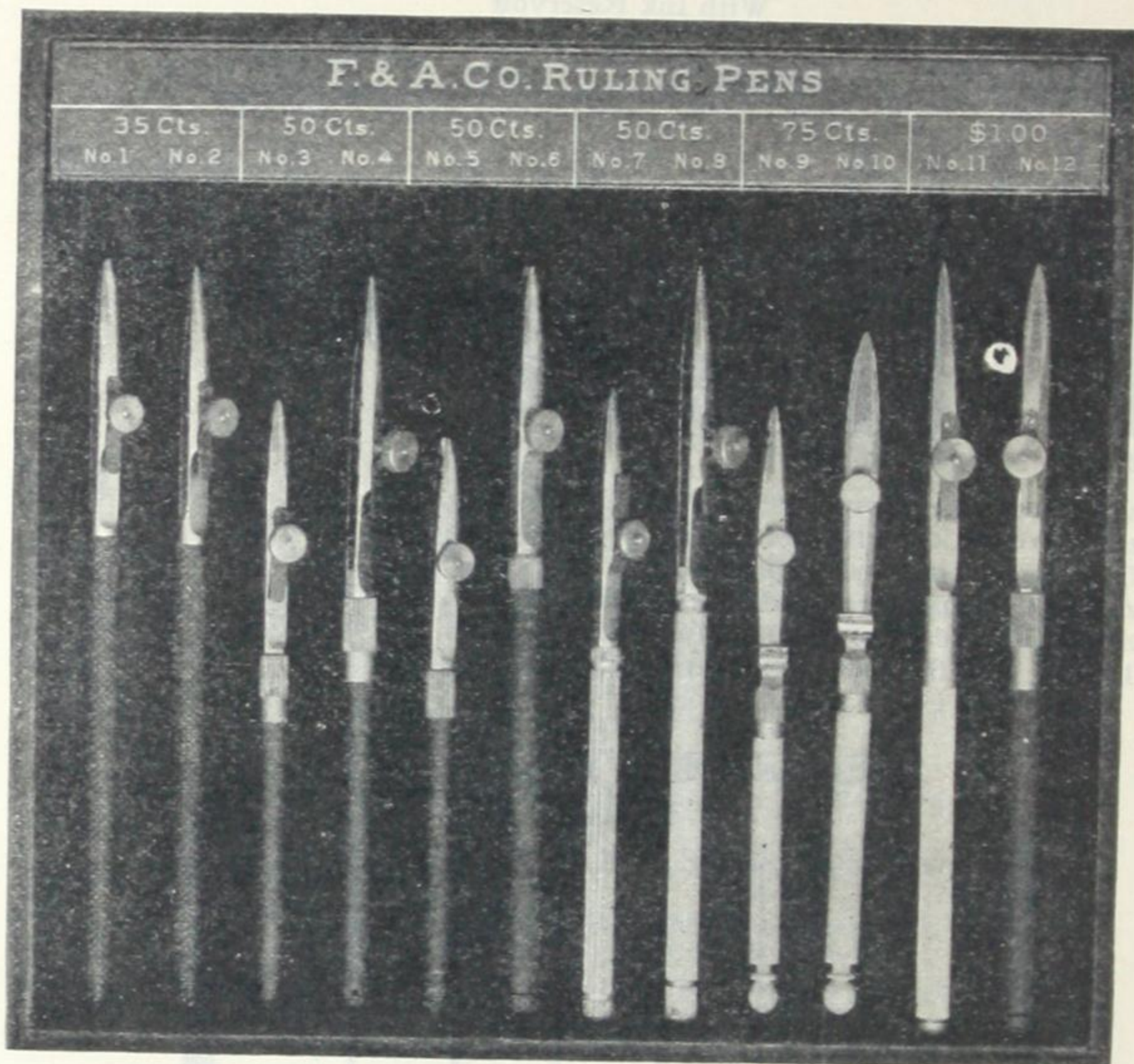


Fac-simile of lines made with the six sizes of pens.

- Advantages of the Shepard Lettering Pen**
- Simplicity of construction.*
 - Ease and rapidity of operation.*
 - Large ink-retaining cavity.*
 - Uniformity of lines produced.*
 - Quickness of cleaning.*
 - Uniform ink flow.*

- Shepard German Silver Lettering Pens, Nos. 1, 2, 3, 4, 5, 6, . . . each, \$1.35
- For Block Letters and Border Lines

FROST & ADAMS CO.'S RULING PEN TRAY

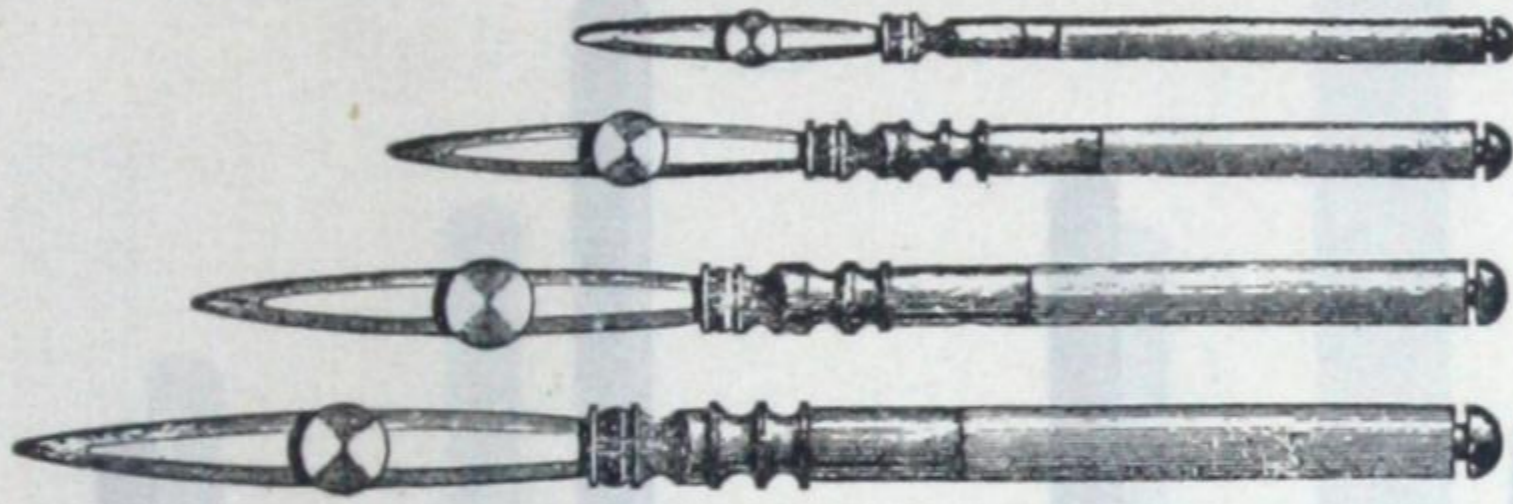


Ruling Pen Tray with Assortment of 12 Pens, Nos. 1-12 per tray, \$6.50

SEPARATE RULING PENS FOR RULING PEN TRAY

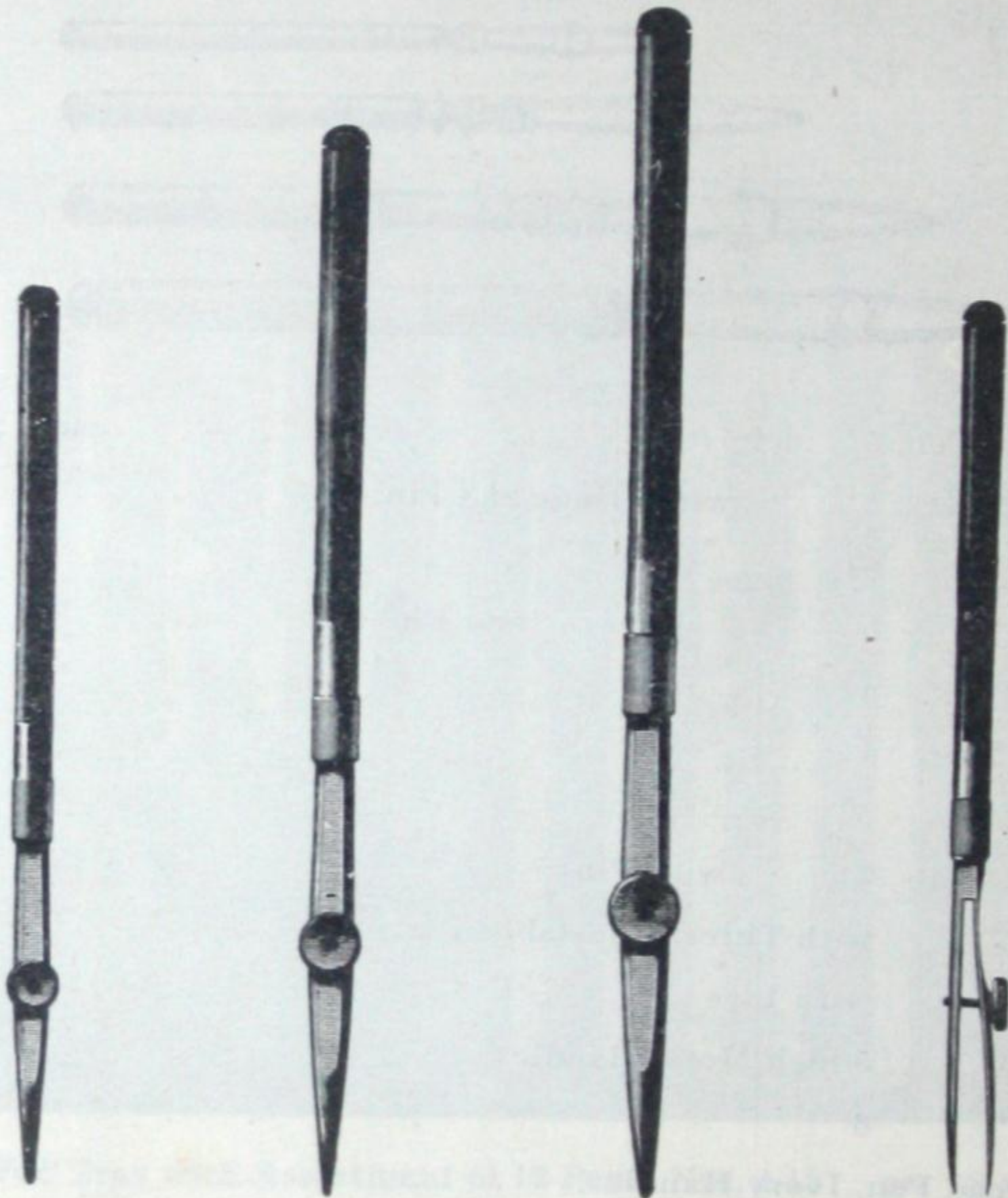
No. 1.	Ebony Handle, 5¼ in. Spring Back, release	each, .35
2.	" " 5¼ in. Spring Back, release	" .35
3.	" " 4 in. Spring Back, release	" .50
4.	" " 5 in. Spring Back, release	" .50
5.	" " 4 in. Spring Back, release	" .50
6.	" " 5 in. Spring Back, release	" .50
7.	Aluminum Handle, 4¼ in. Spring Back, release	" .50
8.	Aluminum Handle, 5 in. Spring Back, release	" .50
9.	Bone Handle, 4¼ in. Hinge Back	" .75
10.	Bone Handle, 5½ in. Hinge Back	" .75
11.	Aluminum Handle, 5¼ in. Spring Back, release	" 1.00
12.	Ebony Handle, 5¼ in. Spring Back, release	" 1.00

FROST & ADAMS CO'S RULING PENS



Ruling Pen, 5½ inch	.	.	.	.	.	.	.	each, \$1.00
" 5½ "	with Hinge and Pin	.	.	.	.	.	.	.75
" 5½ "	" "	.	.	.	.	.	.	.65
" 5 "	" and Pin	.	.	.	.	.	.	1.00
" 4 "	" "	.	.	.	.	.	.	.85
" 4 "	" "	.	.	.	.	.	.	.65
" 5 "	" "	.	.	.	.	.	.	.50
" 5½ "	with Pin	.	.	.	.	.	.	.65
"	with Three Adjustable Parts	.	.	.	.	.	.	1.25
"	with Five "	.	.	.	.	.	.	2 00
"	5 inch Metal Handle	.	.	.	.	.	.	.75
"	6 " "	.	.	.	.	.	.	1.00
Railroad Pen, Ivory Handle	.	.	.	.	.	.	.	" 2.25
Dotting Pen	.	.	.	.	.	.	.	" .90
Ruling Pen, 4½ inch, Black Handle	.	.	.	.	.	.	.	" 1.00
" 5 "	" "	.	.	.	.	.	.	" 1.25
" 4 "	" "	.	.	.	.	.	.	" 1.00
" 4¼ "	" and Plotty Point	.	.	.	.	.	.	" 1.00
" 4¾ "	" "	.	.	.	.	.	.	" 1.25
" 5½ "	" "	.	.	.	.	.	.	" 1.50
" 6¼ "	" "	.	.	.	.	.	.	" 1.75

FROST & ADAMS CO'S SUPERIOR RULING PENS



17

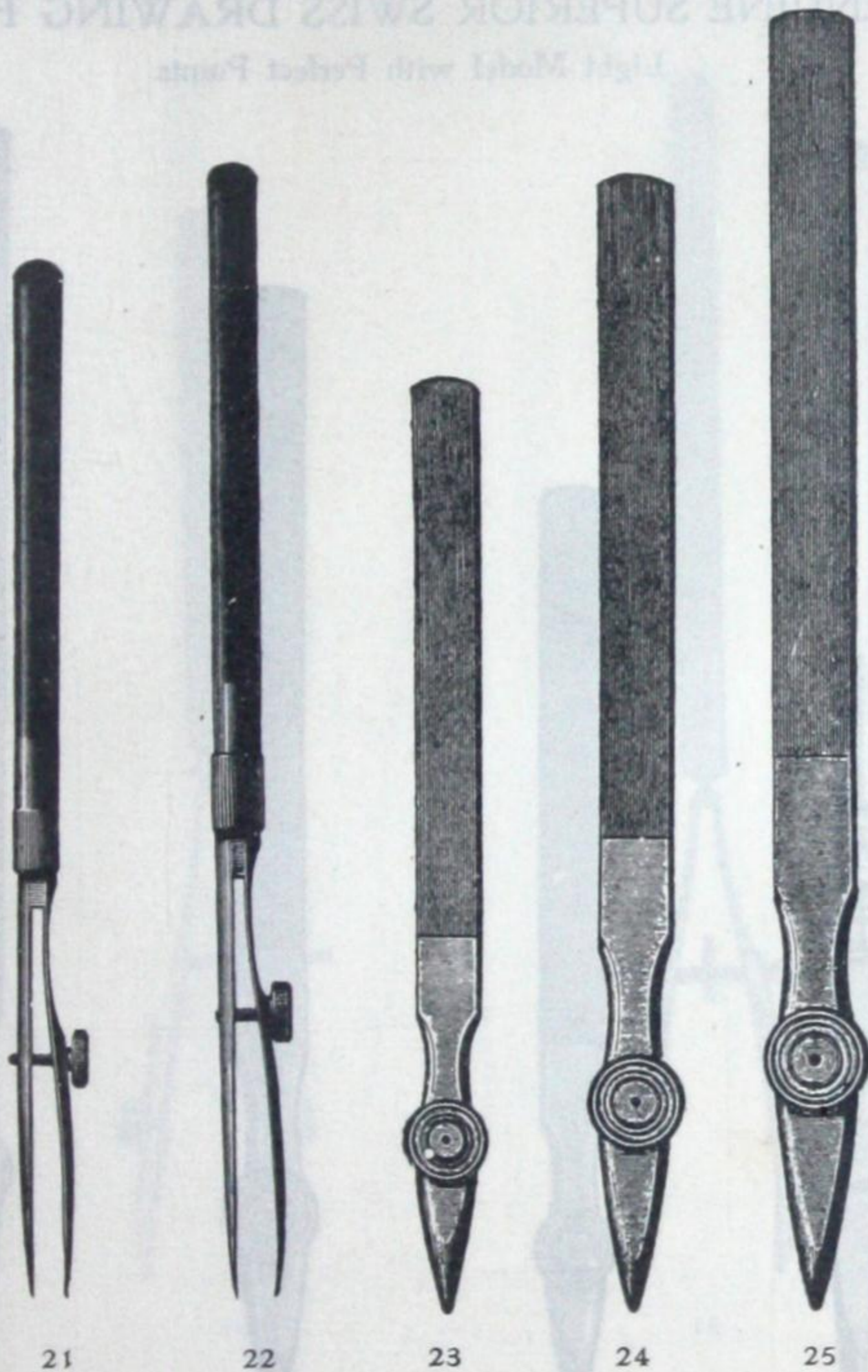
18

19

20

16.	Improved Dotting Pen with 1 set of Wheels, 6 varieties	each, \$1.00
17.	Ruling Pen, 4 inch, Ebony Handle	" 1.10
18.	" 5 " " "	" 1.25
19.	" 5½ " " "	" 1.25
20.	" 7½ " " " with Spring Nib	" 1.15

FROST & ADAMS CO'S SUPERIOR RULING PENS



Ruling Pen, 5 inch, Ebony, with Spring Nib . . .	each, \$1.65
Ruling Pen, 5½ inch, Ebony, with Spring Nib . . .	“ 1.90
Swedish Ruling Pen for Broad Lines, Ebony, 5 inch .	“ 1.75
Swedish Ruling Pen for Broad Lines, Ebony, 6 inch .	“ 2.00
Swedish Ruling Pen for Broad Lines, Ebony, 7 inch .	“ 2.25

KERN & CO.'S
 GENUINE SUPERIOR SWISS DRAWING PENS
 Light Model with Perfect Points



10K



15K



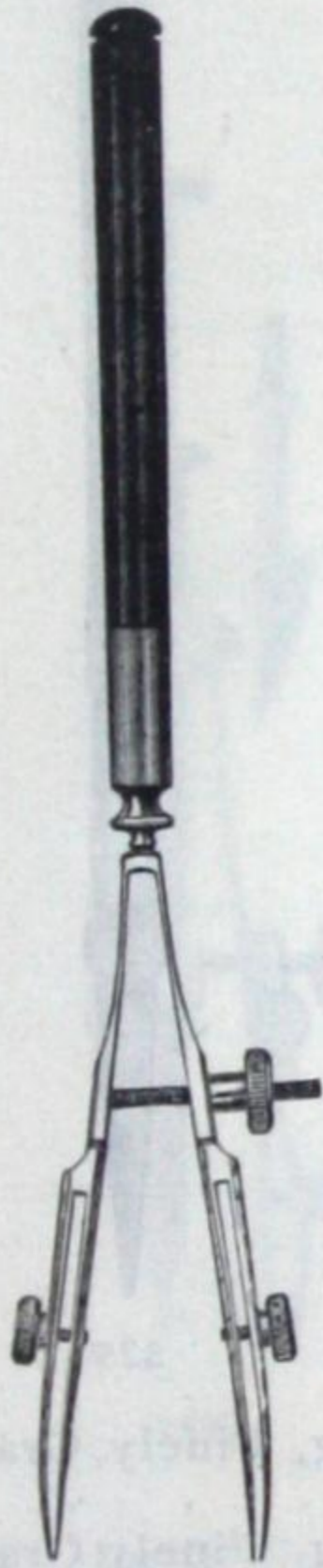
16K



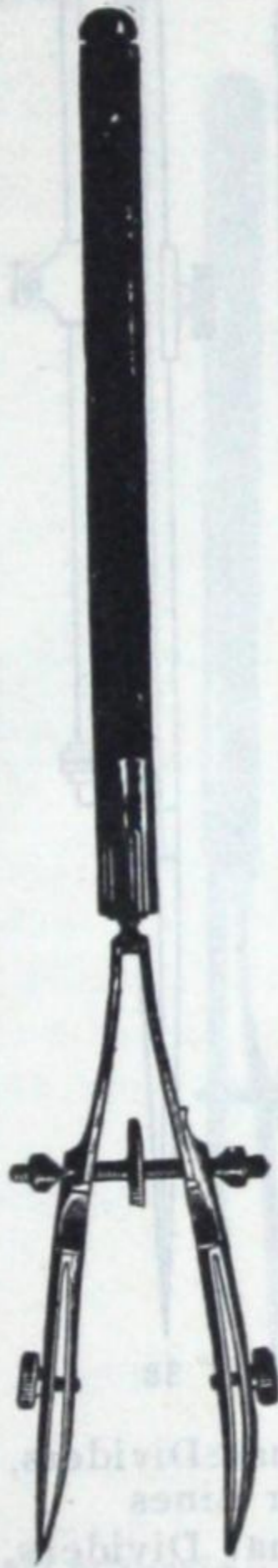
17K

No. 10K.	Drawing Pen, 6½ in.,	Joint and Pin, Ivory Handle	each, \$2.00
15K.	" " 5 "	Ebony Handle	" 2.00
16K.	" " 6 "	" " " "	" 2.25
17K.	" " 7 "	" " " "	" 2.50

FROST & ADAMS CO'S SUPERIOR RAILROAD PENS



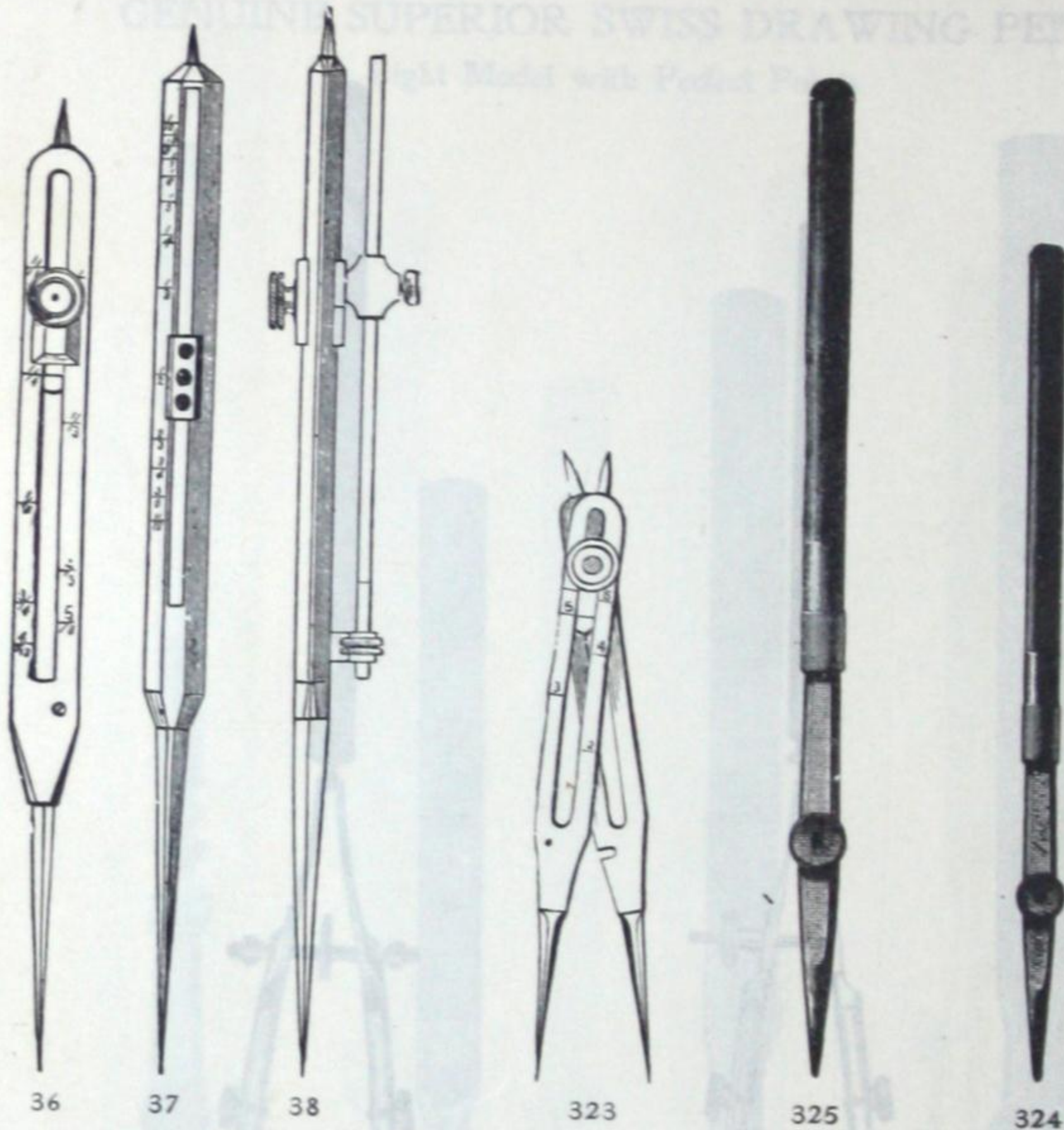
15½



15

- 15. Improved Railroad Pen with Centre Adjustment, 5 inch,
Ebony Handle each, \$4.50
- 15½. Improved Railroad Pen, 4 inch, Ebony Handle 3.50

FROST & ADAMS CO'S PROPORTIONAL DIVIDERS



- | | | |
|-------|---|--------------|
| 35. | Proportional Dividers, 6½ inches long, Finely Graduated for Lines | each, \$4.25 |
| 36. | Proportional Dividers, 6½ inches long, Finely Graduated for Lines and Circles | " 8.50 |
| 37. | Proportional Dividers, Finely Graduated for Lines and Circles | " 9.00 |
| 38. | Proportional Dividers, 9 inches long, Finely Graduated for Lines and Circles, with Micrometer Attachment and Rack | " 11.00 |
| 323. | Proportional Dividers, Half Divided | " 2.25 |
| 323½. | Proportional Dividers, German Silver, Half Divided | " 2.50 |
| 324. | Ruling Pen, Black Handle | " .20 |
| 325. | Ruling Pen, Ivory Handle | " .30 |

KERN & CO.'S
 GENUINE SUPERIOR SWISS INSTRUMENTS
 SPRING BOW PENS



72K



73K



4K



5K



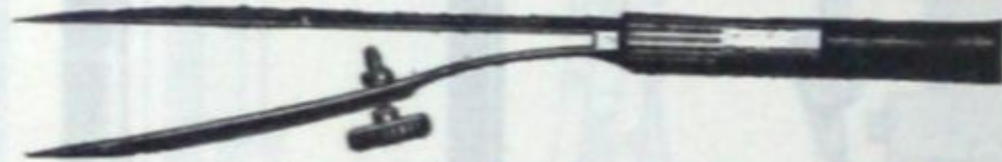
6K

- | | | |
|----------|--|--------------|
| No. 72K. | Drop Handle Spring Bow Pen, self adjusting | each, \$3.00 |
| 73K. | " " " " Pencil P't | " 4.25 |
| 4K. | Spring Bow Pen, 4½ in., upper blade with spring,
Ebony Handle | " 1.00 |
| 5K. | Spring Bow Pen, 5 in., upper blade with spring,
Ebony Handle | " 1.10 |
| 6K. | Spring Bow Pen, 5½ in., upper blade with spring,
Ebony Handle | " 1.20 |

ALTENER'S NON-DETACHABLE PEN SCREW.

Patented Jan. 19th, 1897.

IN pens of the spring-blade and ordinary hinge-joint pattern the adjusting-screw must be removed when cleaning, and is often mislaid, or slips from the fingers, to be lost or trodden upon. The improved screw obviates this disadvantage; a collar securely fastened upon the shank, serves to retain it in the upper blade when the points are separated for cleaning, thus:



and prevents its possible consequent loss. To draughtsmen located at a distance from an instrument maker the non-detachable screw affords a protection well worth the extra cost. It adds 15c. to the price of an instrument, and when desired should be specified thus:

“No. 1614 with non-detachable screw, \$1.80.”

Graduated Pen Screws.

The ability to adjust, or re-adjust, the pen-blades for a certain width of line without the usual method of trial and comparison must seem desirable to anyone who does much pen-work, and some of our customers have found the graduated screws here illustrated to be practically efficient in this respect. We will furnish any of our instruments with such a graduated screw for 10 cents additional, and when desired it should be specified thus:

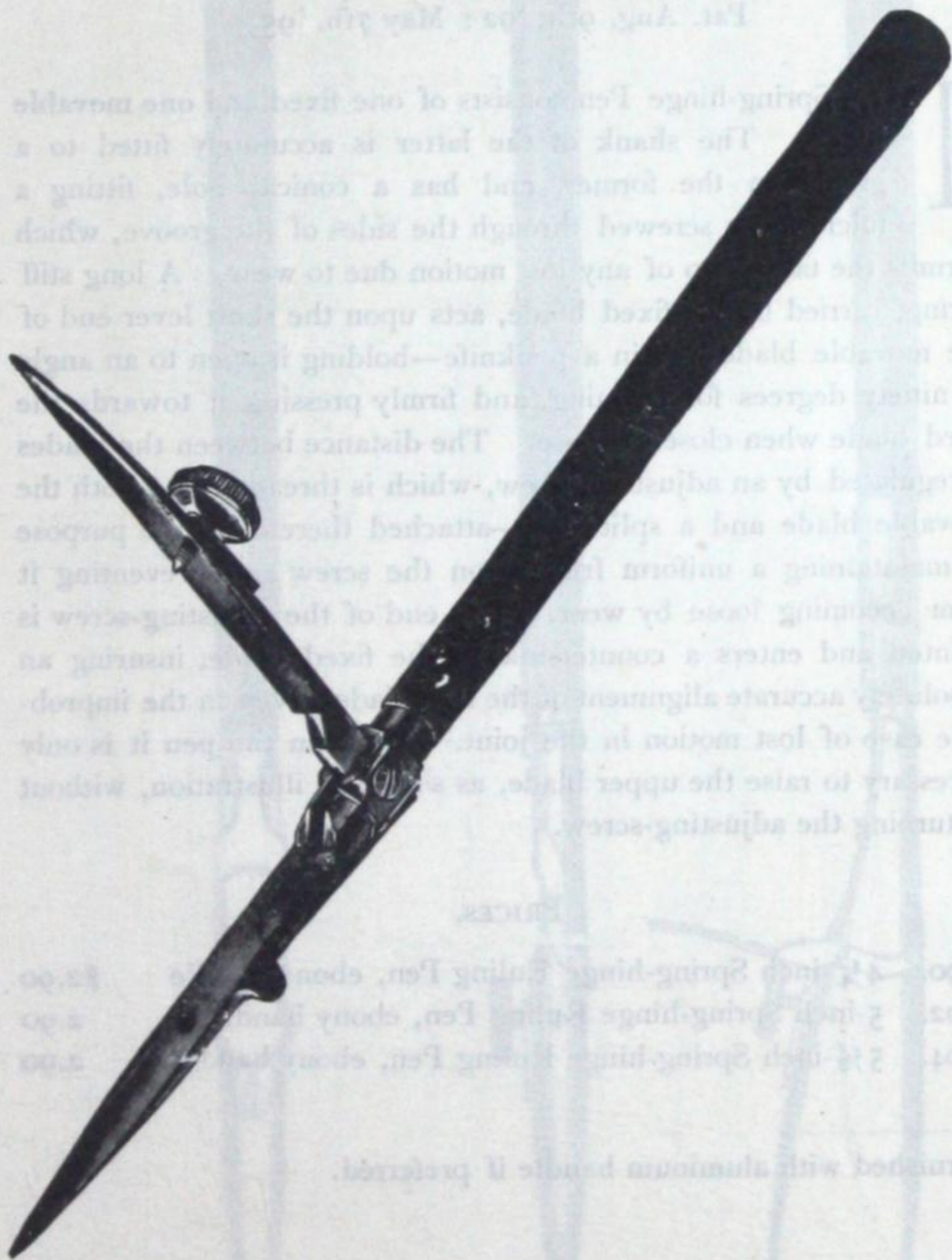
“No. 1615 with graduated screw, \$2.00.”



ALTENEDER'S SPRING-HINGE RULING PEN.

Each instrument is stamped with the trade-mark "T. A. & Sons."

Pat. Aug. 9th, '92; May 7th, '95.



Furnished with aluminum handle if preferred.

ALTENER'S SPRING-HINGE RULING PEN.

Each instrument is stamped with the trade-mark "T. A. & Sons."

Pat. Aug. 9th, '92; May 7th, '95.

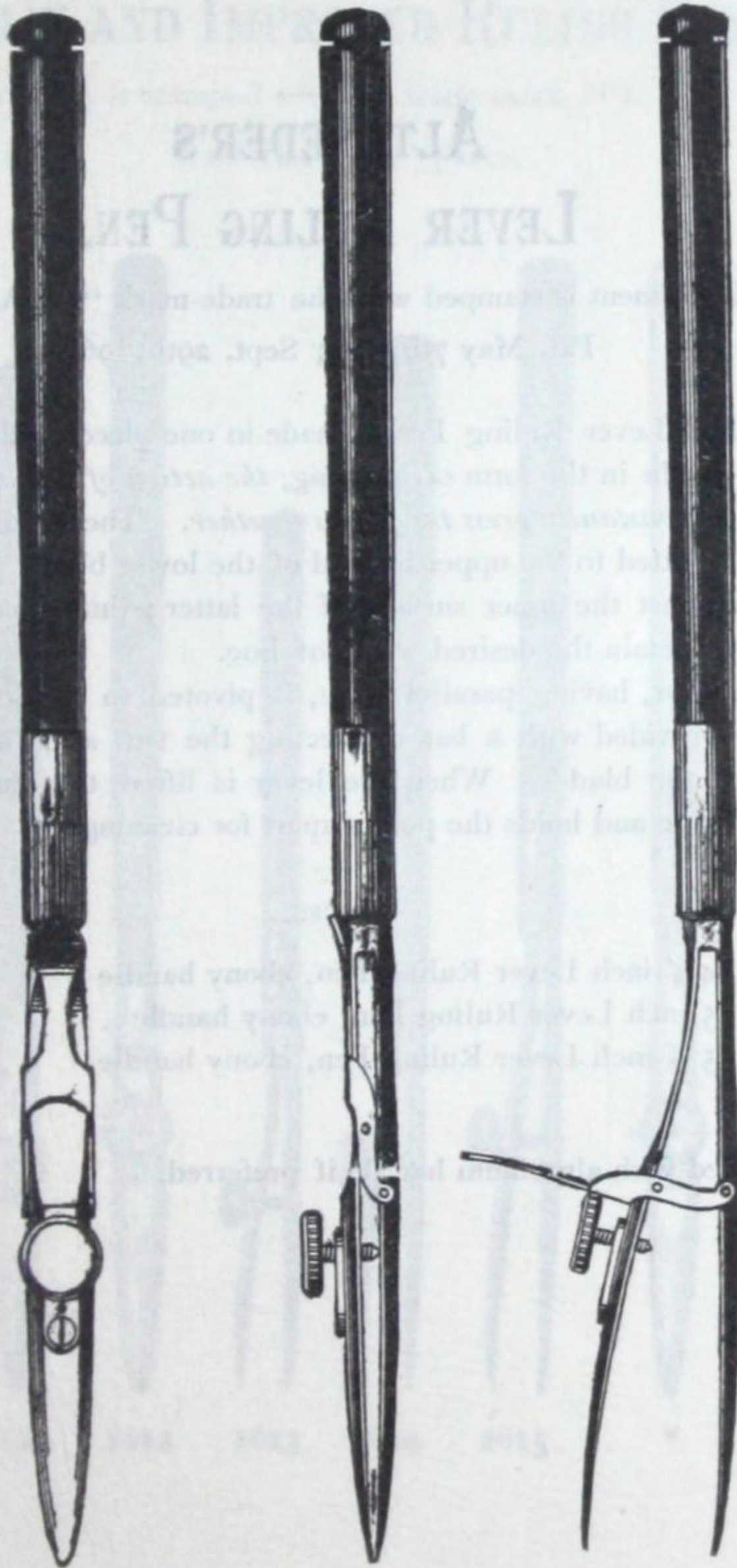
THE Spring-hinge Pen consists of one fixed and one movable blade. The shank of the latter is accurately fitted to a groove in the former, and has a conical hole, fitting a fulcrum-pin screwed through the sides of the groove, which permits the taking up of any lost motion due to wear. A long stiff spring, carried by the fixed blade, acts upon the short lever end of the movable blade—as in a penknife—holding it open to an angle of ninety degrees for cleaning, and firmly pressing it towards the fixed blade when closed for use. The distance between the blades is regulated by an adjusting-screw, which is threaded into both the movable blade and a split nut,—attached thereto for the purpose of maintaining a uniform friction on the screw and preventing it from becoming loose by wear. The end of the adjusting-screw is pointed and enters a countersink in the fixed blade, insuring an absolutely accurate alignment of the two blades, even in the improbable case of lost motion in the joint. To clean the pen it is only necessary to raise the upper blade, as shown in illustration, without disturbing the adjusting-screw.

PRICES.

1600.	4¼-inch Spring-hinge Ruling Pen, ebony handle	\$2.90
1602.	5-inch Spring-hinge Ruling Pen, ebony handle	2.90
1604.	5½-inch Spring-hinge Ruling Pen, ebony handle	2.90

Furnished with aluminum handle if preferred.

ALTENER'S LEVER RULING PEN.



ALTENER'S LEVER RULING PEN.

Each instrument is stamped with the trade-mark "T. A. & Sons."
Pat. May 7th, '95; Sept. 29th, '96.

THE Lever Ruling Pen is made in one piece, with the upper blade in the form of a spring, *the action of which is such as to constantly press the points together.* The adjusting-screw is fitted to the upper instead of the lower blade, and merely bears against the inner surface of the latter; thus separating the points to obtain the desired width of line.

A lever, having parallel arms, is pivoted to the lower blade, and is provided with a bar connecting the two arms and located between the blades. When the lever is lifted, the bar raises the upper blade and holds the points apart for cleaning.

PRICES.

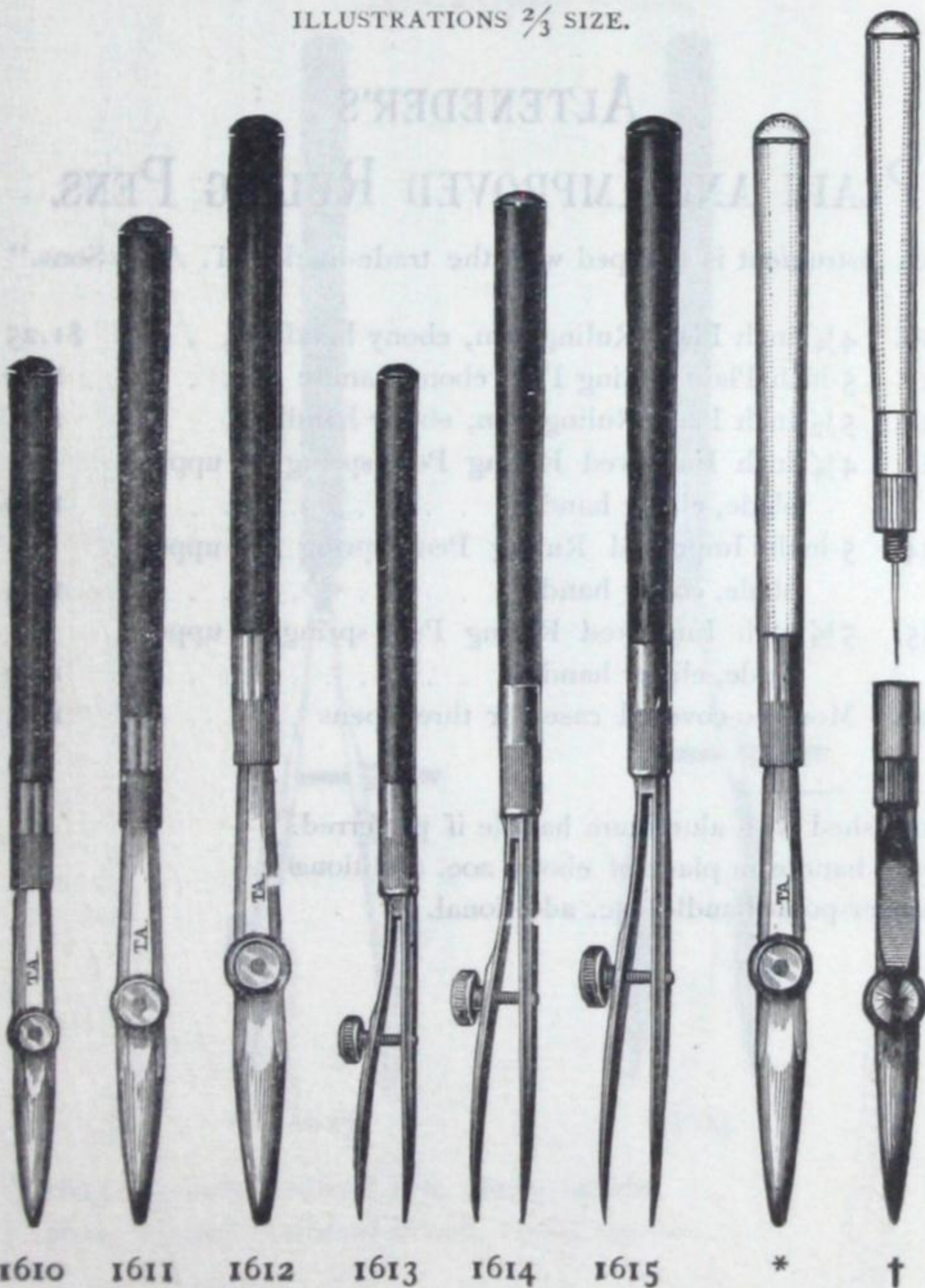
1605.	4¼-inch Lever Ruling Pen, ebony handle	\$2.50
1607.	5-inch Lever Ruling Pen, ebony handle	2.50
1609.	5½-inch Lever Ruling Pen, ebony handle	2.50

Furnished with aluminum handle if preferred.

ALTENER'S PLAIN AND IMPROVED RULING PENS.

Each instrument is stamped with the trade-mark, "T. A. & Sons."

ILLUSTRATIONS $\frac{2}{3}$ SIZE.



Copyright, 1892, by Theo. Altener & Sons.

ALTENER'S PLAIN AND IMPROVED RULING PENS.

Each instrument is stamped with the trade-mark "T. A. & Sons."

1610.	4¼-inch Plain Ruling Pen, ebony handle	\$1.25
1611.	5-inch Plain Ruling Pen, ebony handle	1.50
1612.	5½-inch Plain Ruling Pen, ebony handle	1.75
1613.	4¼-inch Improved Ruling Pen, spring on upper blade, ebony handle	1.40
1614.	5-inch Improved Ruling Pen, spring on upper blade, ebony handle	1.65
1615.	5½-inch Improved Ruling Pen, spring on upper blade, ebony handle	1.90
1620.	Morocco-covered case for three pens	1.25

Furnished with aluminum handle if preferred.

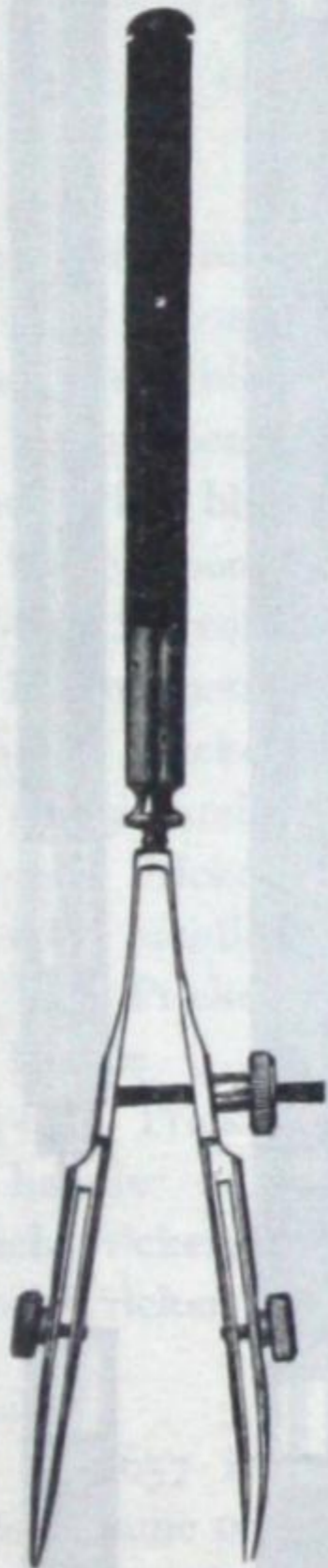
*Ivory handle in place of ebony 20c. additional

†Pricker-point handle 15c. additional.

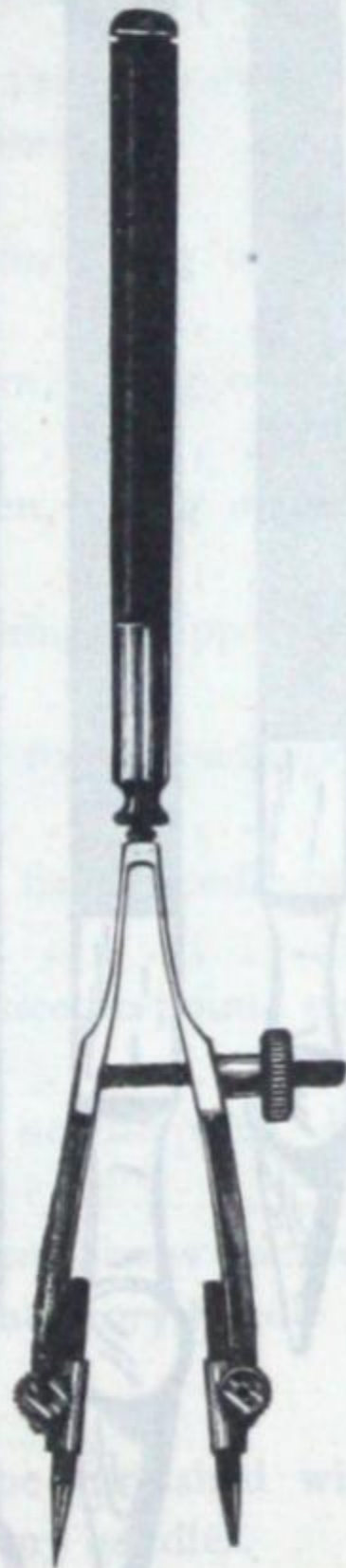
ALTENER'S RAILROAD PEN AND RAILROAD PENCIL.

Each instrument is stamped with the trade-mark "T. A."

ILLUSTRATIONS $\frac{2}{3}$ SIZE.



1623



1624

- | | | |
|-------|--|--------|
| 1623. | 5-inch Railroad Pen, ebony handle | \$3.50 |
| 1624. | 5-inch Railroad Pencil, ebony handle | 3.50 |

Furnished with aluminum handle if preferred.
Ivory handle in place of ebony 20c. additional.

ALTENER'S PENS AND PRICKERS.

Copyright, 1895, by Theo. Alteneder & Sons.



1630



1632



1634



1645



1650



1653



1656

ALTENEDER'S PENS AND PRICKERS.

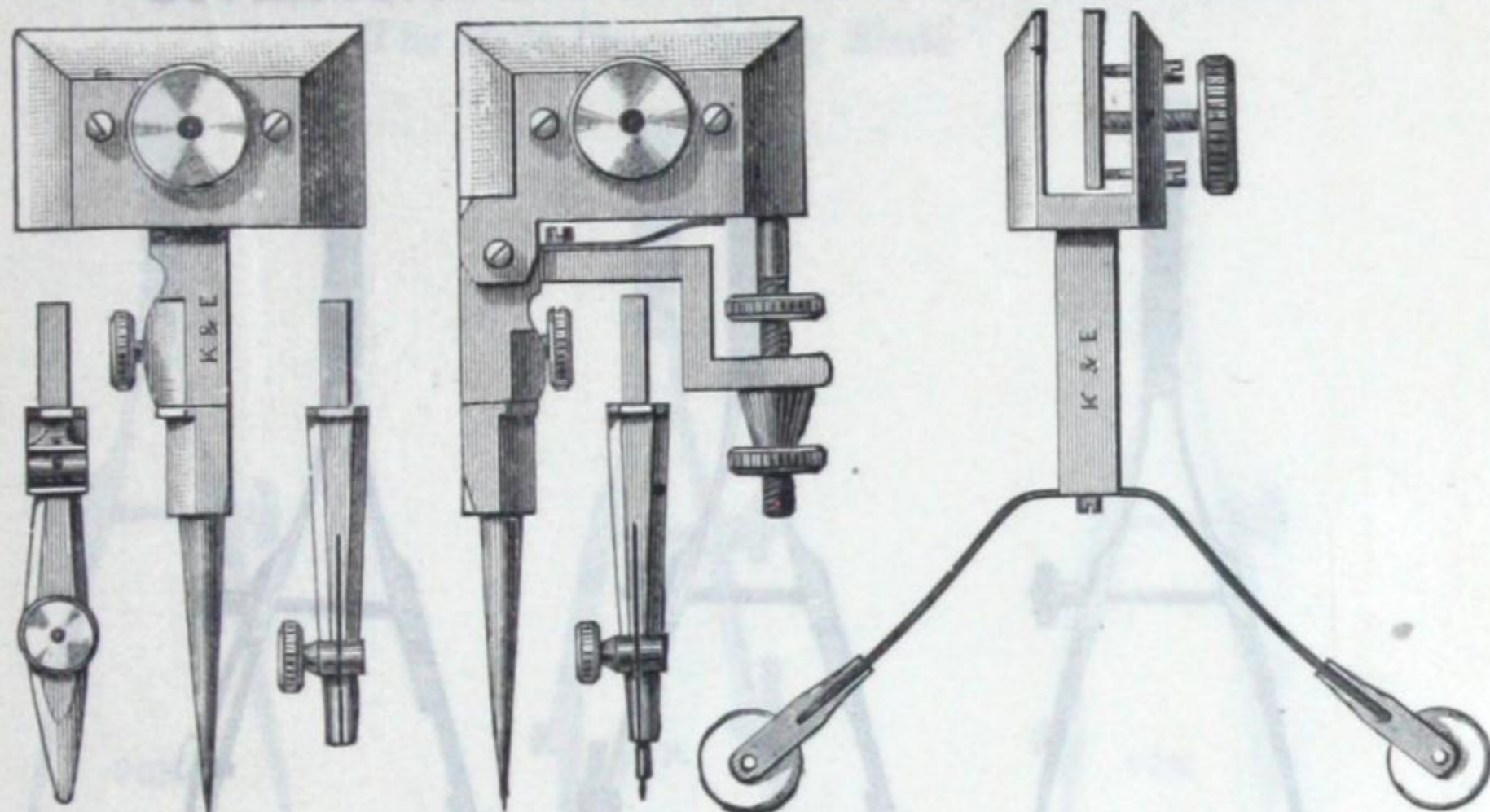
Each instrument is stamped with the trade-mark "T. A."
or "T. A. & Sons."

1630.	5-inch wide blade Ruling Pen, spring on upper blade, ebony handle	\$1.75
1632.	6-inch wide blade Ruling Pen, spring on upper blade, ebony handle	2.00
1634.	7-inch wide blade Ruling Pen, spring on upper blade, ebony handle	2.25
1645.	4 $\frac{3}{4}$ -inch Swivel Curve Pen, spring on upper blade, hollow metal handle	2.00
1650.	3 $\frac{1}{2}$ -inch Pricker, screw cap, fixed needle-point, ebony handle	0.70
1651.	3 $\frac{1}{2}$ -inch Pricker, screw cap, fixed needle-point, ivory handle	0.90
1653.	4 $\frac{1}{2}$ -inch Pricker, removable needle-point, ebony handle	1.00
1654.	4 $\frac{1}{2}$ -inch Pricker, removable needle-point, ivory handle	1.20
1656.	5-inch Pricker, taper steel point, ebony handle	1.00
1657.	5-inch Pricker, taper steel point, ivory handle	1.20

Nos. 1650 to 1657 inclusive will be furnished with aluminum handles at same price as with ebony handles.

Nos. 1630, 1632 and 1634 furnished with aluminum handles in place of ebony handles at an additional cost of \$0.50.

PARAGON BEAM COMPASSES AND RULING PENS



510

511

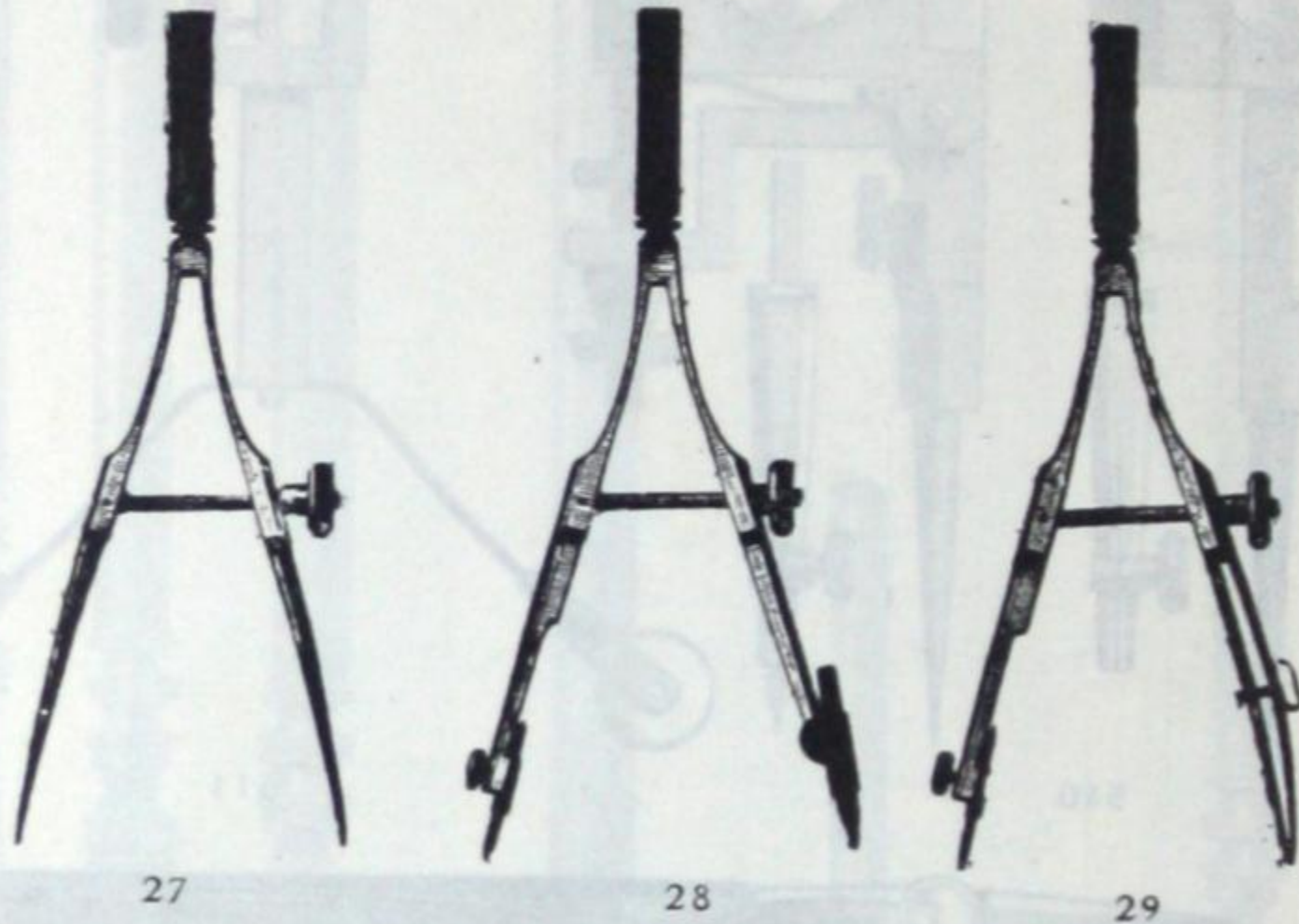
522

523

523 1/2

510.	Beam Compasses, with 2 Steel Points, Pen, Pencil and Needle Point	each, \$9.00
511.	Wheel Attachment for No. 510	" 2.25
	Morocco Case for No. 510	" 1.25
	Morocco Case for No. 510 and 511	" 1.75
522.	Ruling Pen, upper blade with spring, 4 1/2 inch	" 1.10
523.	Ruling Pen, upper blade with spring, 5 inch	" 1.20
523 1/2.	Ruling Pen, upper blade with spring, 5 1/2 inch	" 1.35

FROST & ADAMS CO'S
SUPERIOR BOW SPRING INSTRUMENTS

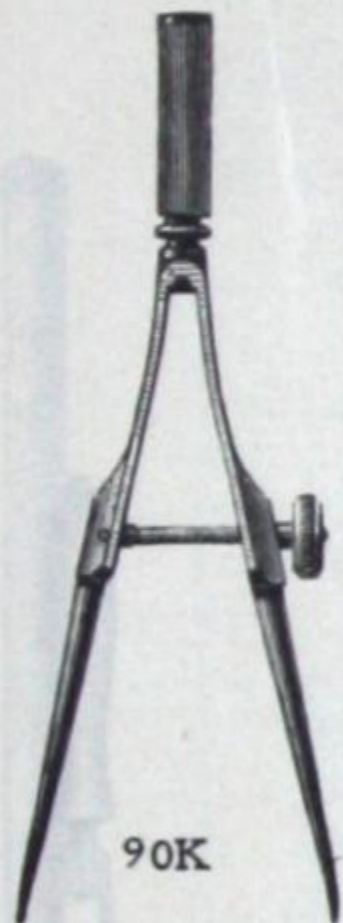


24.	Spacing Dividers, Plain, 3 inch, Metal Handle	each, \$1.75
24½.	" " 3½ inch, Metal Handle	" 2.00
25.	Bow Pencil, Needle Point, 3 inch, Metal Handle	" 2.50
25½.	" " 3½ " " "	" 2.50
26.	" " 3 " " "	" 2.50
26½.	" " 3½ " " "	" 2.50
27.	Steel Spacing Dividers, 3 inch	" 1.50
28.	Steel Bow Pencil, Needle Point, 3 inch	" 1.75
29.	Steel Bow Pen, Needle Point, 3 inch	" 1.75
2240.	Spacing Divider, 3 inch, Metal Handle	" 1.25
2241.	Bow Pen, 3 inch, Metal Handle	" 1.50
2242.	Bow Pencil, 3 inch, Metal Handle	" 1.50

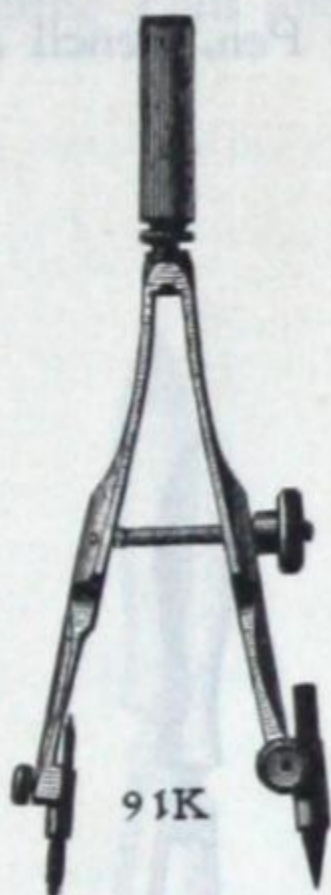
KERN & CO.'S

GENUINE SUPERIOR SWISS INSTRUMENTS

The Pens Have Spring Blade



90K

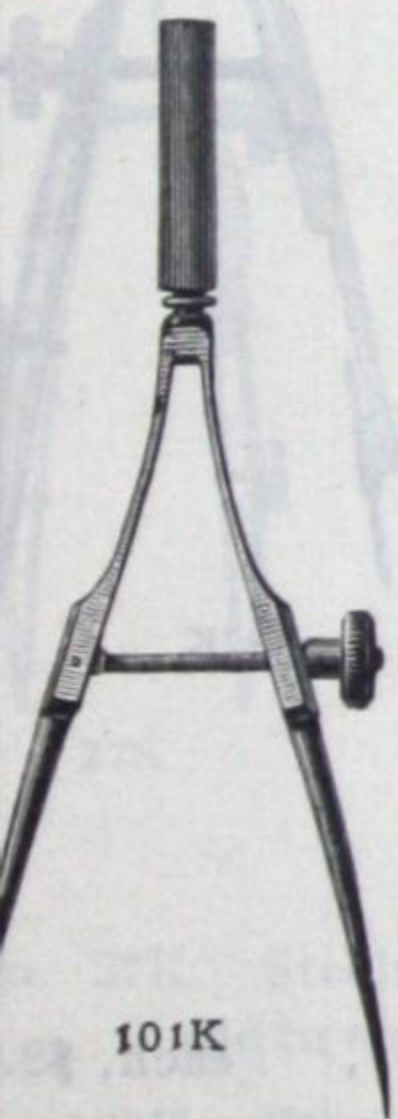


91K

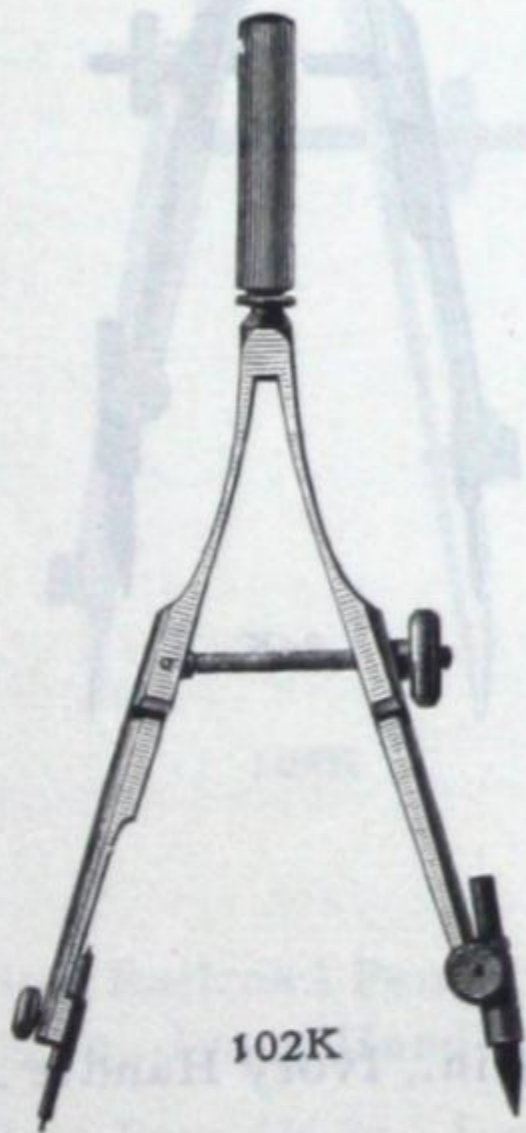


92K

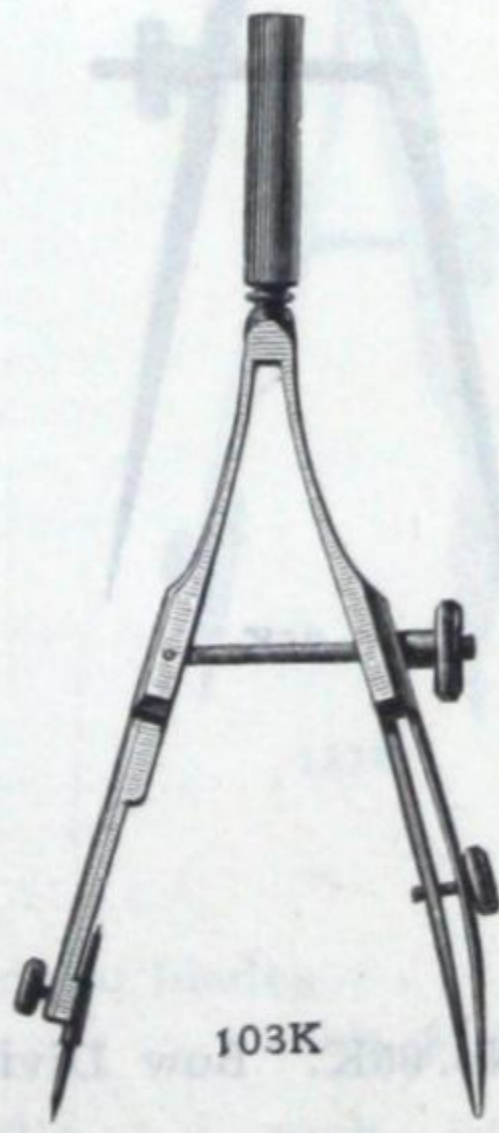
- | | | | | | |
|------|--------------------------|-------------|----------------------|-------|--------|
| 90K. | Steelspring Bow Divider, | 3 in., | German Silver Handle | each, | \$1.75 |
| 91K. | " | Bow Pencil, | 3 " " " " | " | 2.50 |
| 92K. | " | Bow Pen, | 3 " " " " | " | 2.50 |



101K



102K



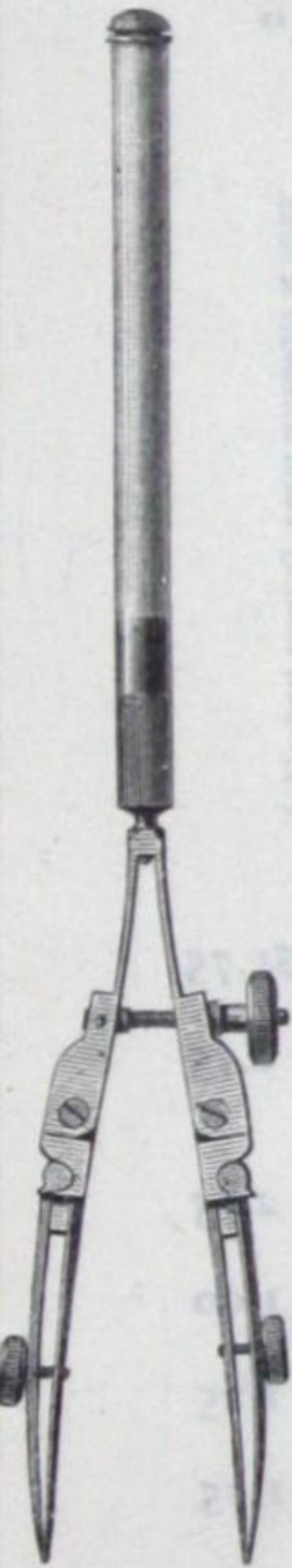
103K

- | | | | | | |
|-------|--------------------------|-------------|----------------------|-------|--------|
| 101K. | Steelspring Bow Divider, | 3 1/2 in., | German Silver Handle | each, | \$2.00 |
| 102K. | " | Bow Pencil, | 3 1/2 " " " " | " | 2.60 |
| 103K. | " | Bow Pen, | 3 1/2 " " " " | " | 2.60 |

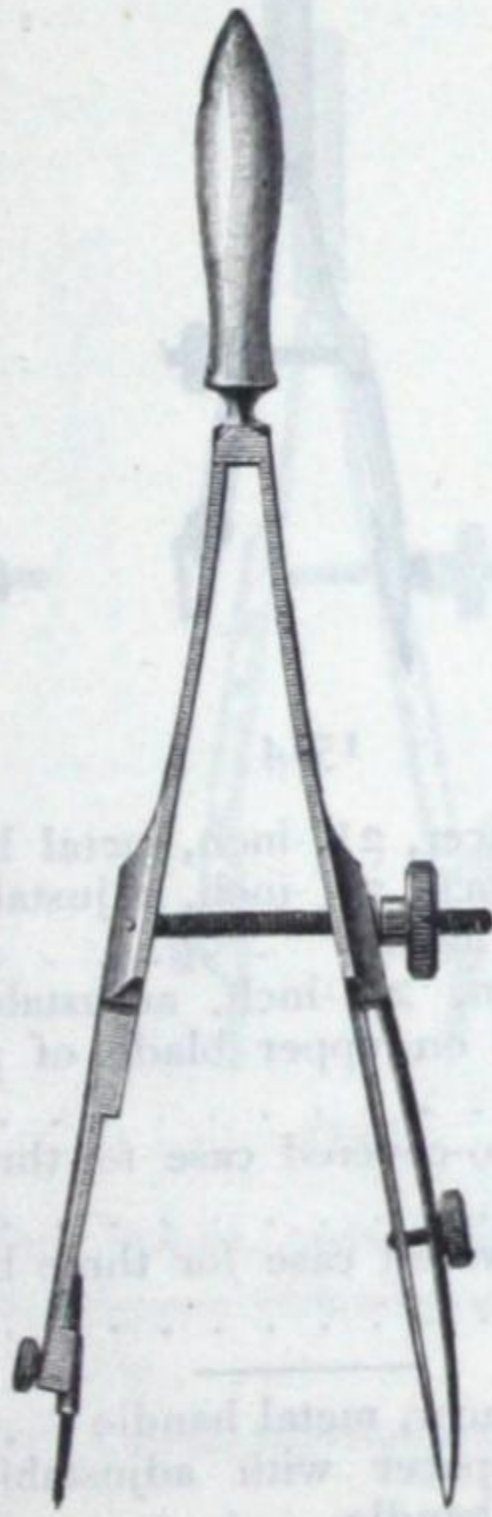
KERN & CO.'S

GENUINE SUPERIOR SWISS INSTRUMENTS

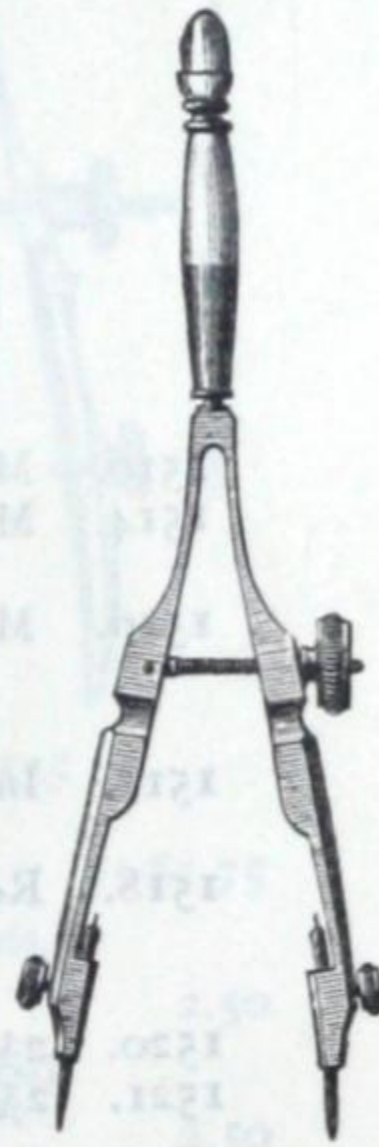
Bow Spring Pens and Divider



27K



109K



127K

- No. 27K. Steelspring Bow Railroad Pen, with joints to blades and in shanks, $5\frac{1}{2}$ in., Ivory Handle each, \$4.00
- 109K. Steelspring Bow Pen, $4\frac{3}{4}$ in., Ivory Handle each, 3.00
- 127K. Steelspring Bow Divider with two Needle Points, long Ivory Handle each, 3.00

ALTENEDER'S STEEL SPRING BOW INSTRUMENTS.

Each instrument is stamped with the trade-mark "T. A."

ILLUSTRATIONS $\frac{2}{3}$ SIZE.



1510



1514



1516

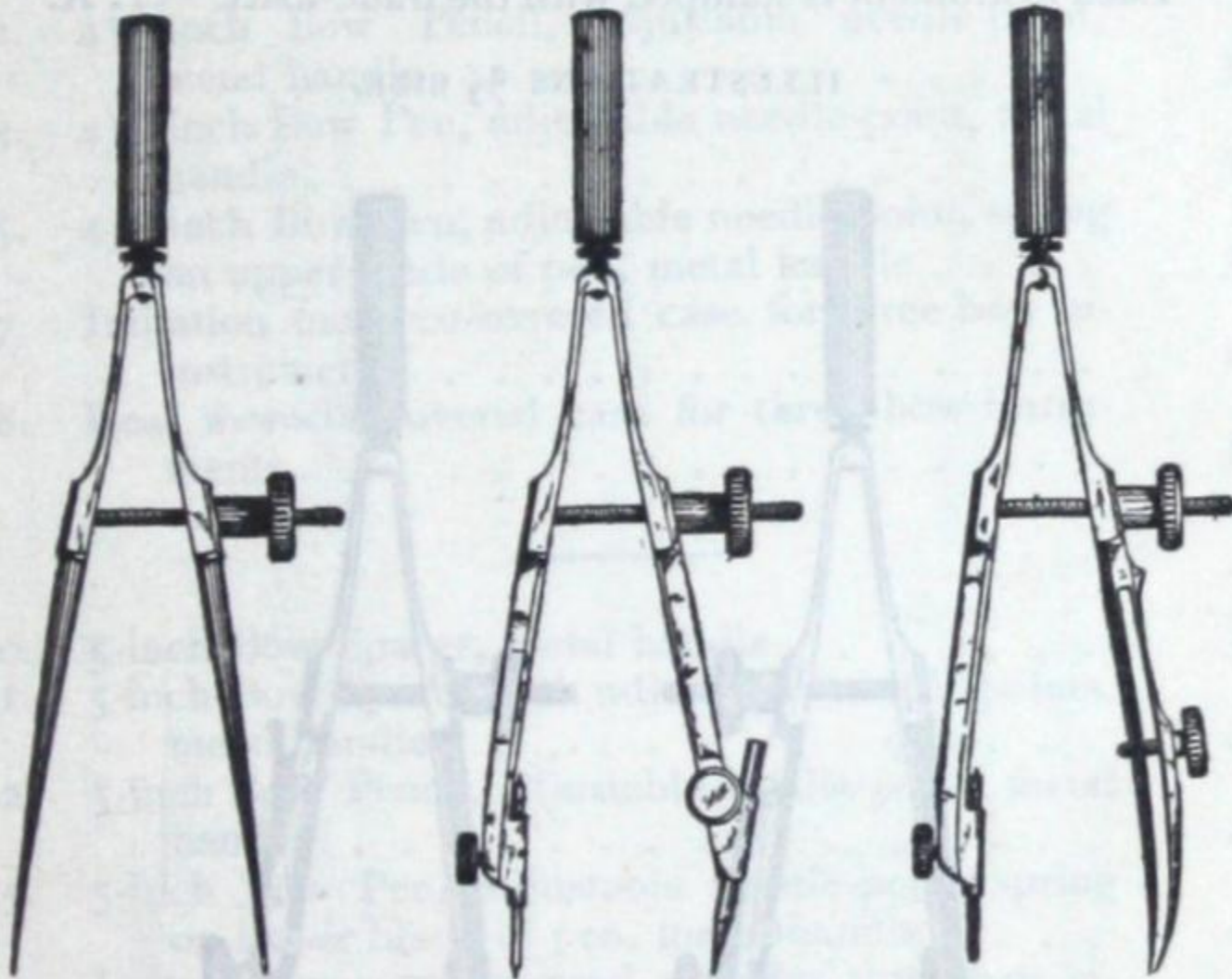
Copyright, 1892, by Theo. Alteneder & Sons.

1510.	Minute Bow Spacer, $2\frac{1}{4}$ -inch, metal handle . . .	\$1.75
1514.	Minute Bow Pencil, $2\frac{1}{4}$ -inch, adjustable needle-point, metal handle	2.75
1516.	Minute Bow Pen, $2\frac{1}{4}$ -inch, adjustable needle-point, spring on upper blade of pen, metal handle	2.75
1517.	Imitation morocco-covered case for three bow instruments	1.00
1518.	Real morocco-covered case for three bow instruments	1.25
—		
1520.	$2\frac{3}{4}$ -inch Bow Spacer, metal handle	1.75
1521.	$2\frac{3}{4}$ -inch Bow Spacer with adjustable needle-points, metal handle	2.50
1522.	$2\frac{3}{4}$ -inch Bow Pencil, adjustable needle-point, metal handle	2.50
1523.	$2\frac{3}{4}$ -inch Bow Pen, adjustable needle-point, metal handle	2.50
1525.	$2\frac{3}{4}$ -inch Bow Pen, adjustable needle-point, spring on upper blade of pen, metal handle	2.65
1527.	Imitation morocco-covered case for three bow instruments	1.00
1528.	Real morocco-covered case for three bow instruments	1.25

ALTENER'S STEEL SPRING BOW INSTRUMENTS.

Each instrument is stamped with the trade-mark "T. A."

ILLUSTRATIONS $\frac{2}{3}$ SIZE.



1530

1532

1535

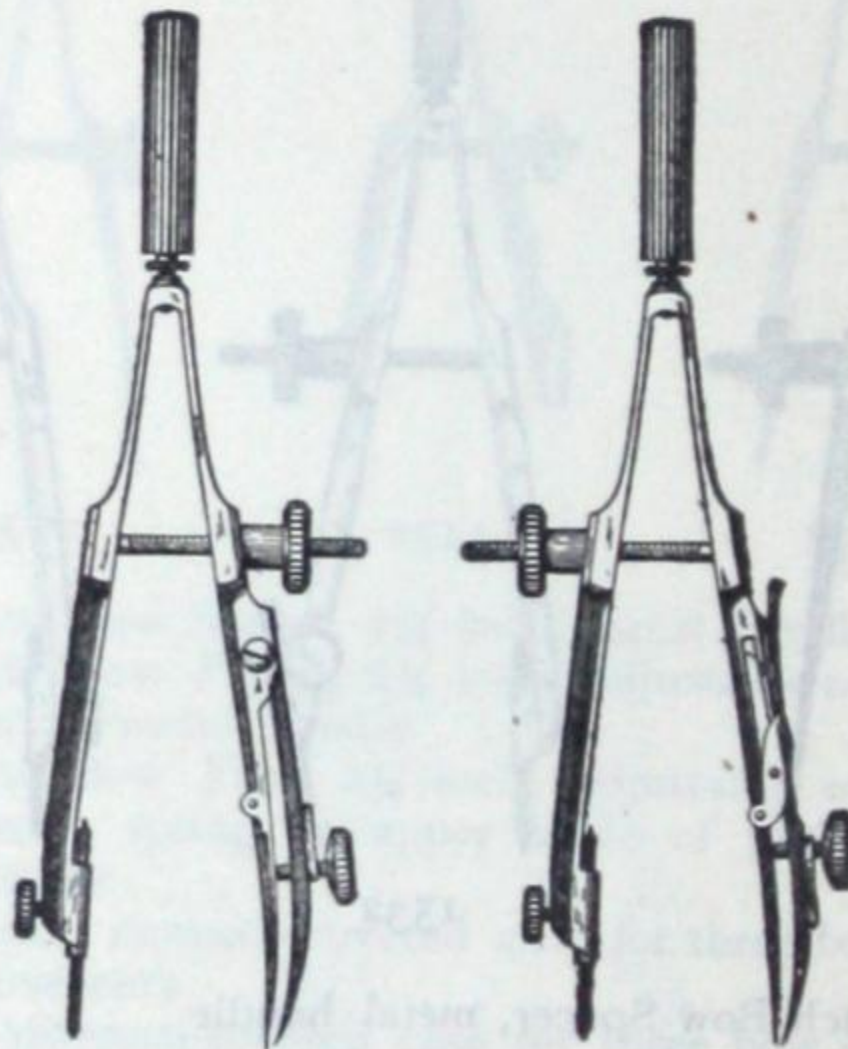
Copyright, 1899, by Theo. Alteneder & Sons.

1530.	3¼-inch Bow Spacer, metal handle	\$1 75
1531.	3¼-inch Bow Spacer with adjustable needle-points, metal handle	2.50
1532.	3¼-inch Bow Pencil, adjustable needle-point, metal handle	2.50
1533.	3¼-inch Bow Pen, adjustable needle-point, metal handle	2.50
1535.	3¼-inch Bow Pen, adjustable needle-point, spring on upper blade of pen, metal handle	2.65
1537.	Imitation morocco-covered case for three bow in- struments	1.00
1538.	Real morocco-covered case for three bow instru- ments	1.25

ALTENER'S
STEEL SPRING BOW INSTRUMENTS.

Each instrument is stamped with the trade-mark "T. A."

ILLUSTRATIONS $\frac{2}{3}$ SIZE.



1534

1536

- | | | |
|-------|--|--------|
| 1534. | 3 $\frac{1}{4}$ -inch Bow Pen, adjustable needle-point, with patent Spring-hinge Pen, metal handle | \$4.00 |
| 1536. | 3 $\frac{1}{4}$ -inch Bow Pen, adjustable needle-point, with patent Lever Pen, metal handle | 3.75 |

ALTENER'S STEEL SPRING BOW INSTRUMENTS.

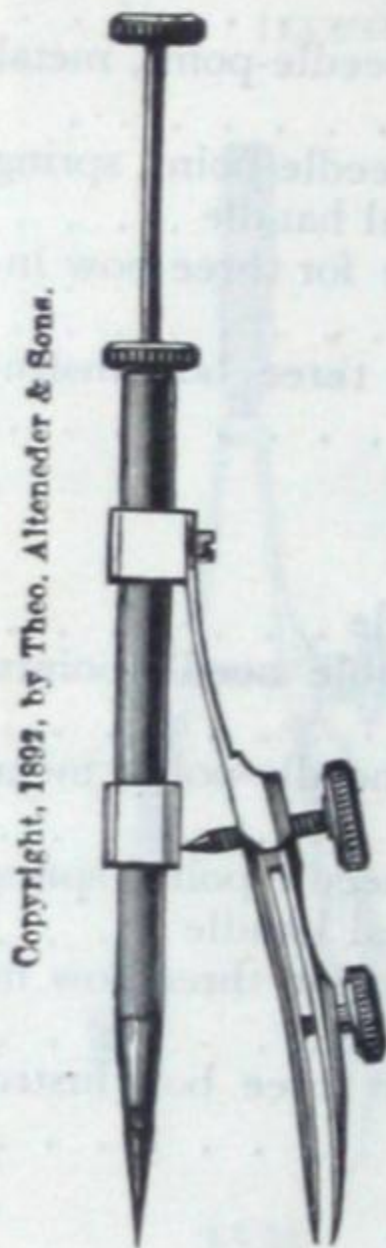
Each instrument is stamped with the trade-mark "T. A."

1540.	4¼-inch Bow Spacer, metal handle	\$2.50
1541.	4¼-inch Bow Spacer, with adjustable needle-points, metal handle	3.25
1542.	4¼-inch Bow Pencil, adjustable needle-point, metal handle	3.25
1543.	4¼-inch Bow Pen, adjustable needle-point, metal handle	3.25
1545.	4¼-inch Bow Pen, adjustable needle-point, spring on upper blade of pen, metal handle	3.40
1547.	Imitation morocco-covered case for three bow instruments	1.25
1548.	Real morocco-covered case for three bow instruments	1.65
—		
1550.	5-inch Bow Spacer, metal handle	3.25
1551.	5-inch Bow Spacer with adjustable needle-points, metal handle	4.00
1552.	5-inch Bow Pencil, adjustable needle-point, metal handle	4.00
1555.	5-inch Bow Pen, adjustable needle-point, spring on upper blade of pen, metal handle	4.15
1557.	Imitation morocco-covered case for three bow instruments	1.25
1558.	Real morocco-covered case for three bow instruments	1.65
—		
1560.	6-inch Bow Spacer, metal handle	4.00
1561.	6-inch Bow Spacer with adjustable needle-points, metal handle	5.00
1562.	6-inch Bow Pencil, adjustable needle-point, metal handle	5.00
1565.	6-inch Bow Pen, adjustable needle-point, spring on upper blade of pen, metal handle	5.15
1567.	Imitation morocco-covered case for three bow instruments	1.50
1568.	Real morocco-covered case for three bow instruments	1.90

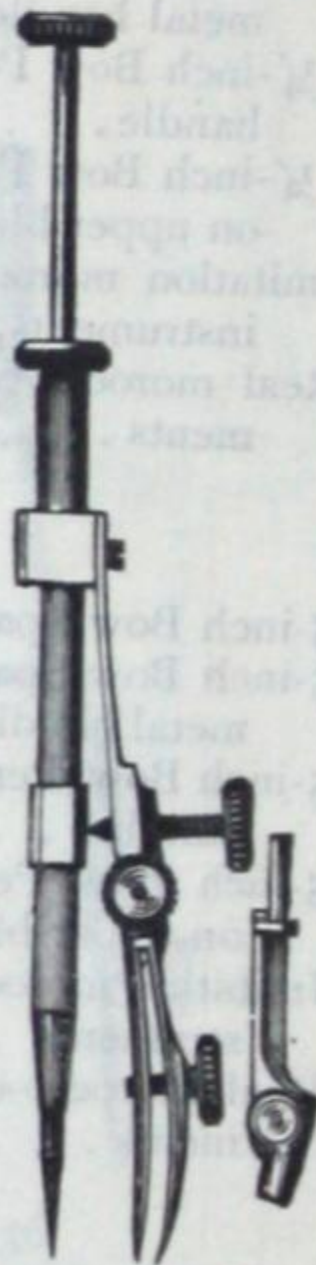
ALTENER'S SPRING BOW INSTRUMENTS. With Self-adjusting Needle-point.

Each instrument is stamped with the trade-mark "T. A. & Sons."

ILLUSTRATIONS $\frac{2}{3}$ SIZE.



1575



1576

Copyright, 1897, by Theo. Altener & Sons.

- | | | |
|-------|---|--------|
| 1575. | 4-inch Self-adjusting Needle-point Bow Pen . . . | \$4.00 |
| 1576. | 4-inch Self-adjusting Needle-point Bow Pen and Pencil | 5.00 |
| 1578. | Real morocco-covered case for No. 1575 | 1.00 |
| 1579. | Real morocco-covered case for No. 1576 | 1.00 |

ALTENER'S STEEL SPRING BOW INSTRUMENTS.

Center Adjustment.

Each instrument is stamped "T. Altener & Sons, Phila."

ILLUSTRATIONS $\frac{2}{3}$ SIZE.

Copyright, 1895, by Theo. Altener & Sons.



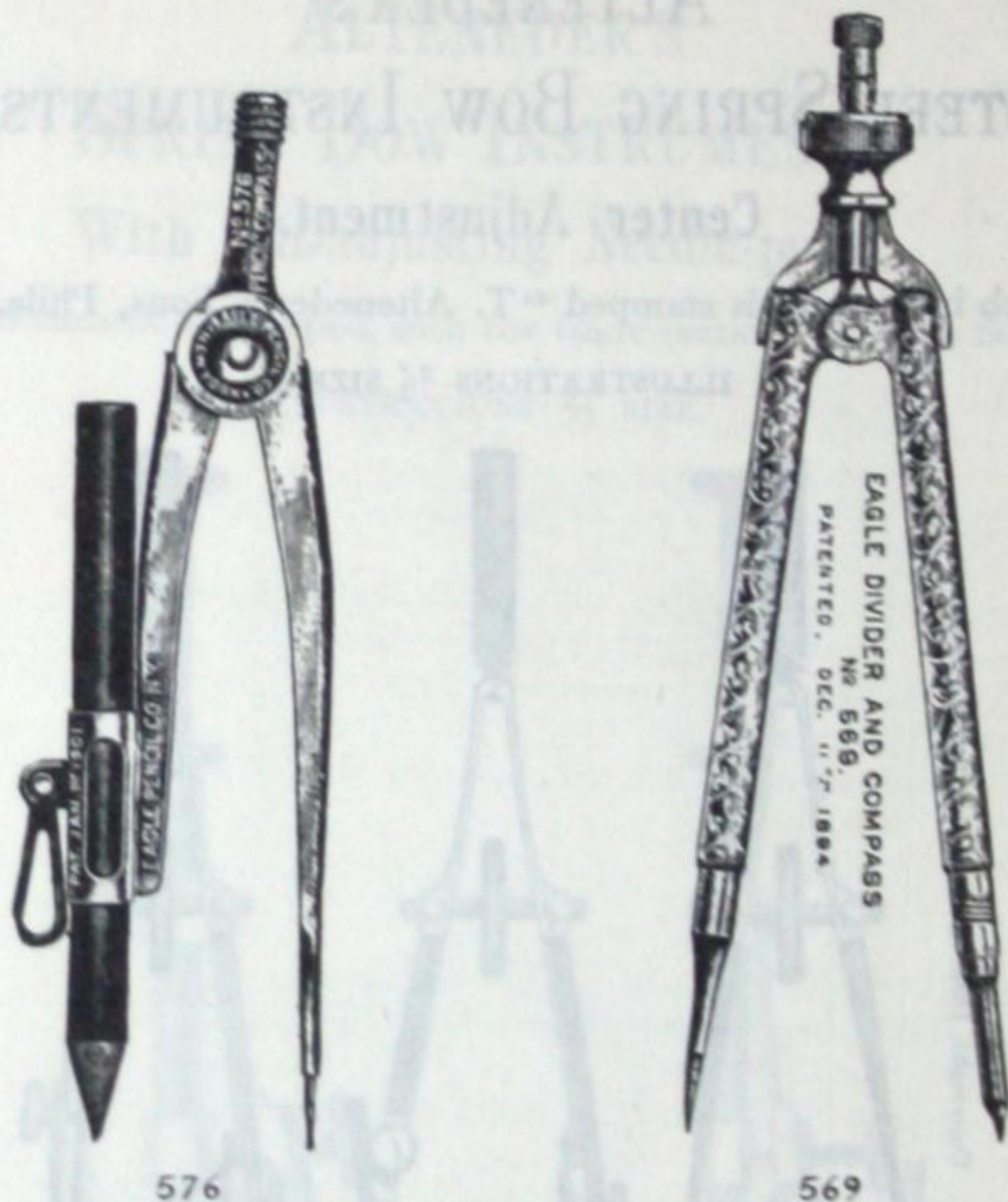
1580

1582

1585

- | | | |
|-------|---|--------|
| 1580. | 3¼-inch Bow Spacer, center adjustment, metal handle | \$2.60 |
| 1582. | 3¼-inch Bow Pencil, center adjustment, adjustable needle-point, metal handle | 3.25 |
| 1585. | 3¼-inch Bow Pen, center adjustment, adjustable needle-point, spring on upper blade of pen, metal handle | 3.40 |
| 1587. | Imitation morocco-covered case for three bow instruments | 1.00 |
| 1588. | Real morocco-covered case for three bow instruments | 1.25 |

EAGLE PENCIL COMPASS AND EAGLE DIVIDER



576. Eagle Pencil Compass each, .10
569. Eagle Divider Compass, with Pen, Pencil and Dividers,
Changable Ends " .25

No. 576. In introducing this Pencil Compass we present an implement which will prove very desirable for School use

It is made of highly finished nickel and has steel joints that will not wear out easily

The pencil attachment is secured by a lever, which makes it impossible for the pencil to slip

The practical advantages of this Compass will be readily seen and its cheapness will make it very popular

FROST & ADAMS CO'S
NICKEL PLATED SCHOOL INSTRUMENTS



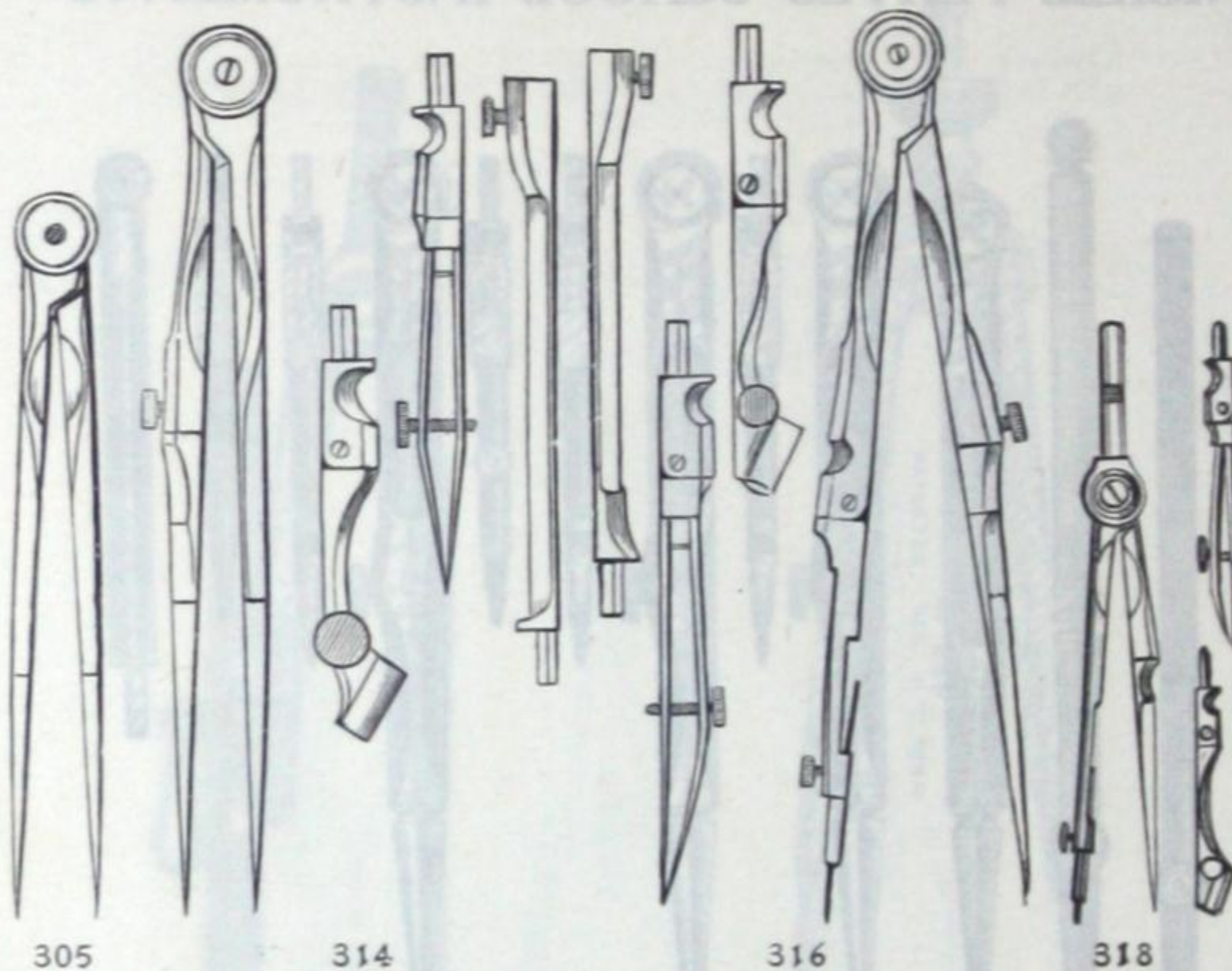
4200 4201 4205 4208 4210 4211

- 4200. Ruling Pen, Ebony Handle, 5 inch each, .25
- 4201. " White Bone Handle and Pin, 5½ inch " .35
- 4205. Dividers, 5½ inch, Nickel Plated " .30
- 4208. Compasses, 5½ inch, with Pencil Point, Nickel Plated " .45
- 4210. " 5½ " " Pen and Pencil Points, Nickel Plated " .60
- 4211. Compasses, 5½ inch, with Pen and Pencil Points and Lengthening Bar, Nickel Plated " .75

This line of low priced Instruments is a great improvement over the French Brass Instruments

FRENCH BRASS INSTRUMENTS

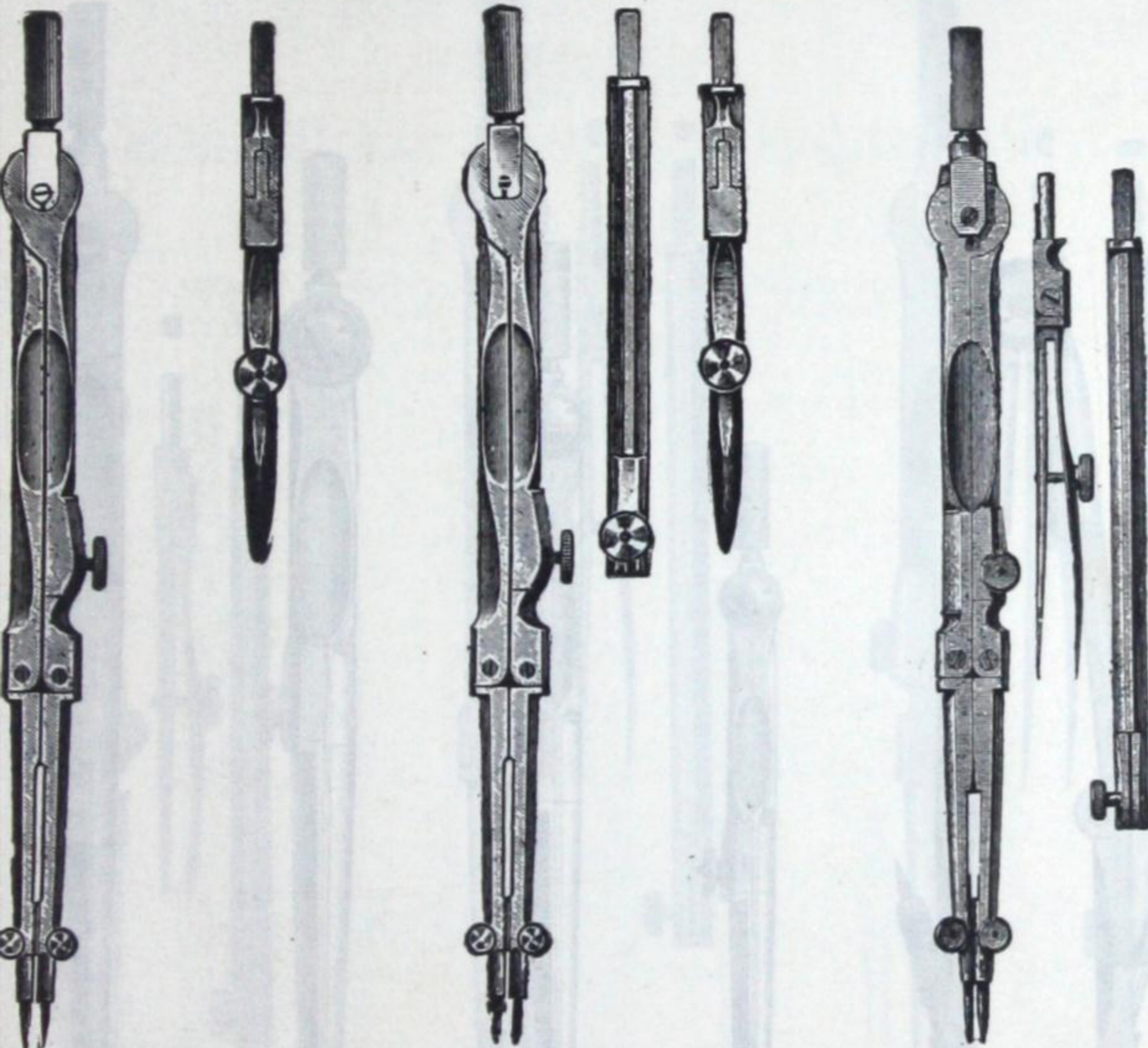
For Schools



305.	Dividers, Screw Joint, 3½ inches long	. . . . .	each, .25
306.	" " 4½ "	. . . . .	" .30
307.	" " 5½ "	. . . . .	" .38
308.	" " 6½ "	. . . . .	" .45
309.	" Rivet Head, 4½ "	. . . . .	" .20
310.	" " 5½ "	. . . . .	" .30
311.	" " 6½ "	. . . . .	" .35
314.	Dividers, 4½ inches long, with Pen and Pencil Points and Lengthening Bar	. . . . .	" .60
315.	Dividers, 6 inches long, with Pen and Pencil Points and Lengthening Bar	. . . . .	" .75
316.	Dividers, Needle Point, 4½ inches long, with Pen and Pencil Points and Lengthening Bar	. . . . .	" .75
317.	Dividers, Needle Point, 6 inches long, with Pen and Pencil Points and Lengthening Bar	. . . . .	" 1.00
318.	Dividers, 3 inches long, with Pen and Pencil Points	. . . . .	" .60

FROST & ADAMS CO.'S
 GERMAN SILVER DRAWING INSTRUMENTS

High Grade, Wrought Metal, Superior Quality



NO. 5200

NO. 5201

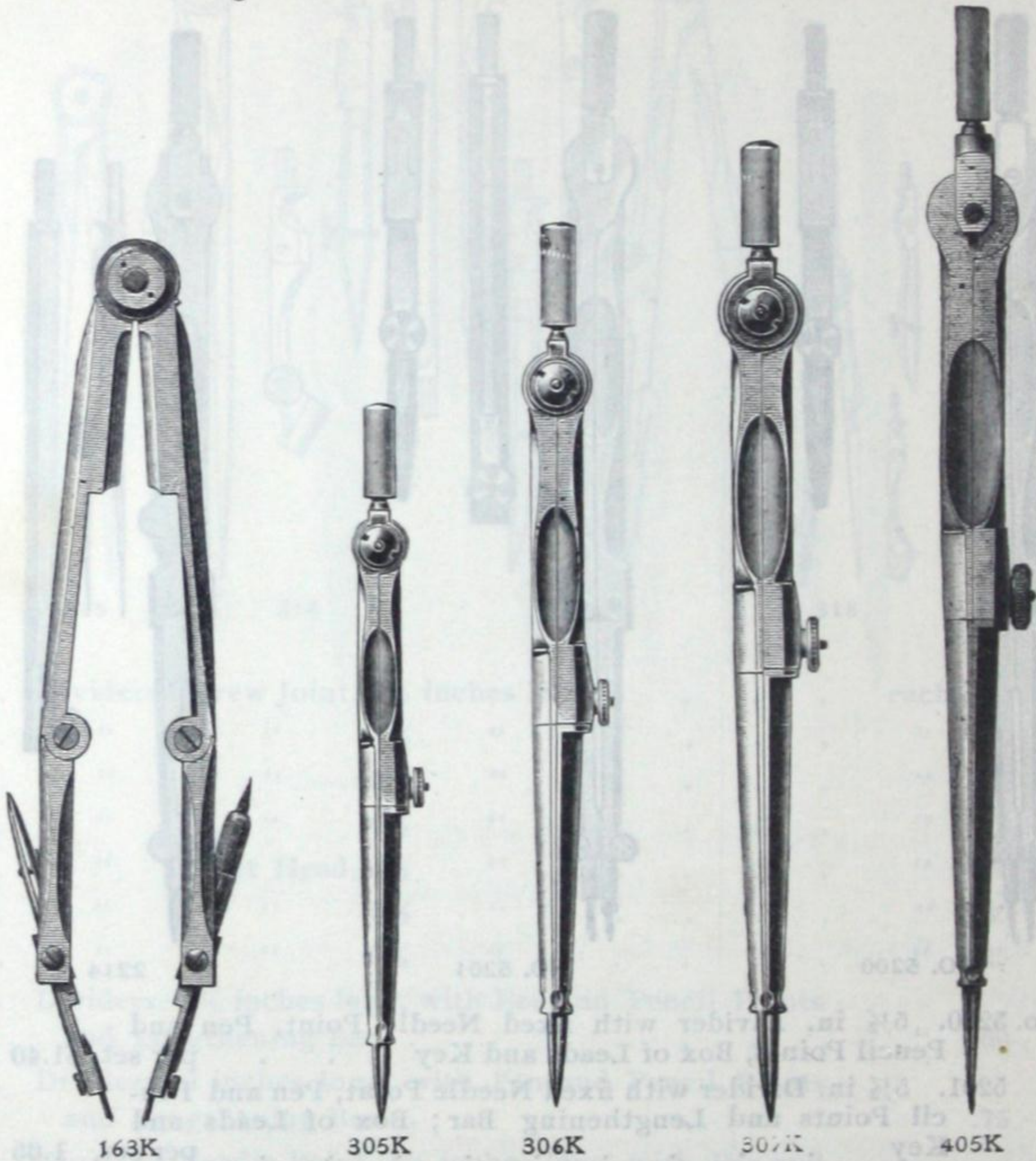
2214

- No. 5200. 5½ in. Divider with fixed Needle Point, Pen and Pencil Points, Box of Leads and Key . . . per set, \$1.40
- 5201. 5½ in. Divider with fixed Needle Point, Pen and Pencil Points and Lengthening Bar; Box of Leads and Key . . . per set, 1.65
- 2204. High Grade Set: 5½ in. Divider with fixed Needle Point, Pen and Pencil Points and Lengthening Bar per set, 3.25
- 2214. High Grade Set: 5½ in. Divider with fixed Needle Point, Pen and Pencil Points and Lengthening Bar, Box of Leads and Key . . . per set, 4.00
- 065. 5½ in. Plain Divider . . . each, .75

KERN & CO.'S

GENUINE SUPERIOR SWISS DRAWING INSTRUMENTS

Light Model with Perfect Pivot Pointed Heads

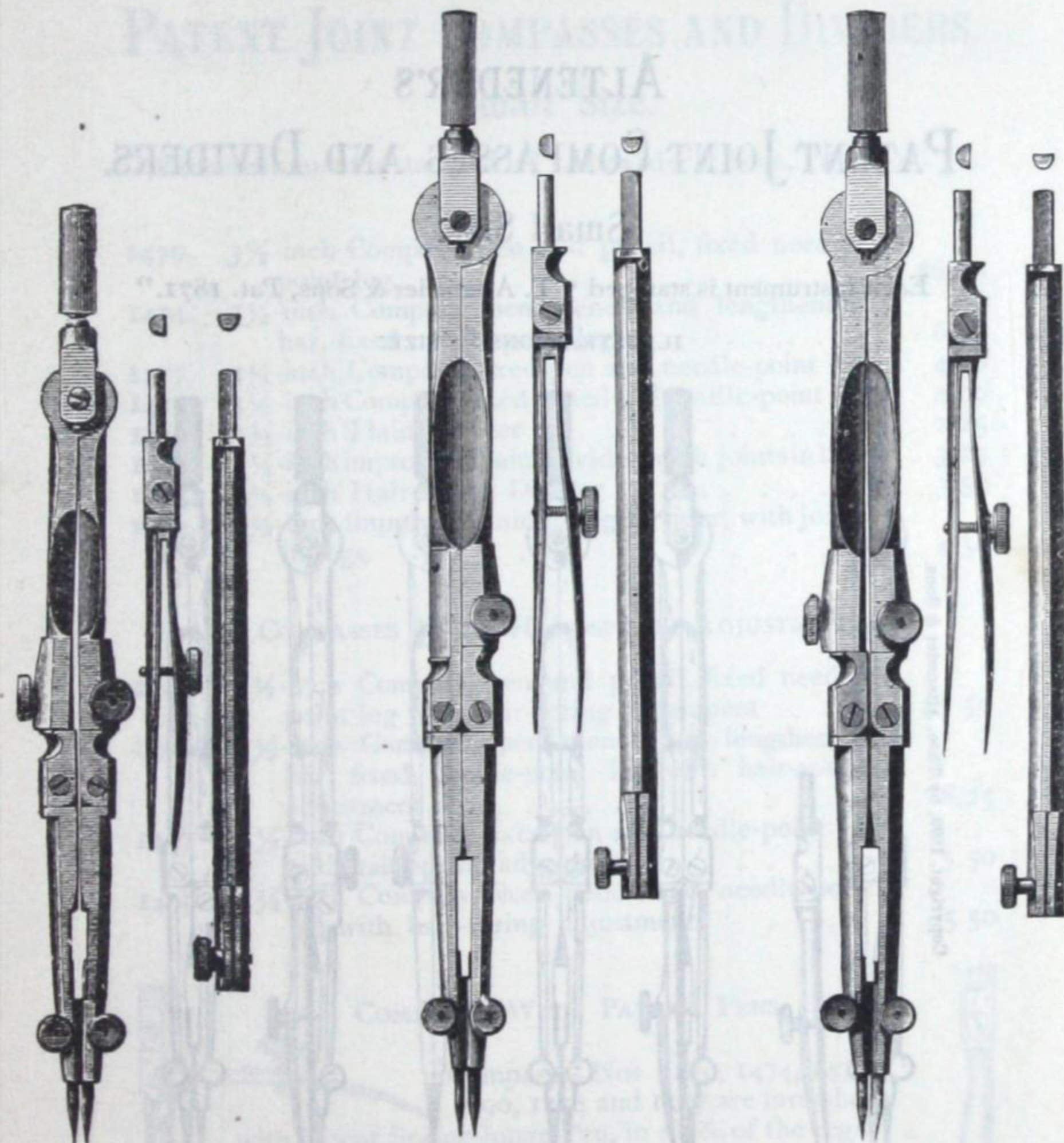


No. 163K.	Pocket Compass, with folding points	each, \$10.00
305K.	Hairspring Divider, 3 1/2 in.	3.50
306K.	" " 4 1/2 "	3.75
307K.	" " 5 "	3.85
405K.	" " 5 " rounded points	3.50

KERN & CO.'S

GENUINE SUPERIOR SWISS DRAWING INSTRUMENTS

Light Model, Perfect Head, Pivot Jointed



415K

416K

417K

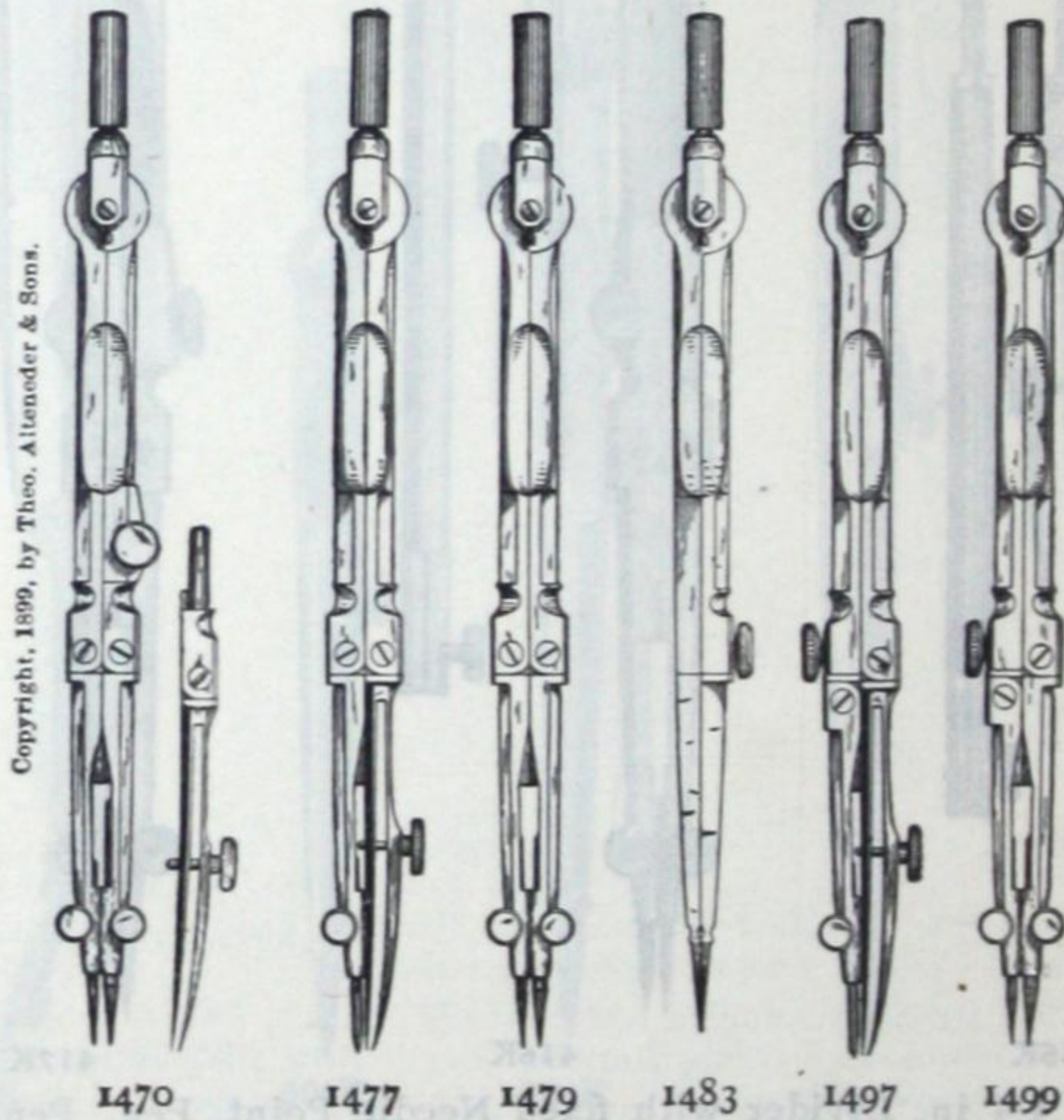
- No. 415K. 4½ in. Divider with fixed Needle Point, Pen, Pen-cil Point and Lengthening Bar; with hairspring each, \$6.50
 416K. 5½ in. Divider with fixed Needle Point, Pen, Pen-cil Point and Lengthening Bar each, 7.00
 417K. 5½ in. Divider with fixed Needle Point, Pen, Pen-cil Point and Lengthening Bar; with hairspring each, 8.00

ALTENER'S PATENT JOINT COMPASSES AND DIVIDERS.

Small Size.

Each instrument is stamped "T. Alteneder & Sons, Pat. 1871."

ILLUSTRATIONS $\frac{2}{3}$ SIZE.



Copyright, 1899, by Theo. Alteneder & Sons.

ALTENER'S PATENT JOINT COMPASSES AND DIVIDERS. Small Size.

Each instrument is stamped "T Altener & Sons, Pat. 1871."

1470.	3½-inch Compass, pen and pencil, fixed needle-point leg	\$6.00
1474.	3½-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg	6.75
1477	3½-inch Compass, fixed pen and needle-point leg	4.00
1479.	3½-inch Compass, fixed pencil and needle-point leg	4.00
1480.	3½-inch Plain Divider	2.25
1481.	3½-inch improved Plain Divider, with joints in legs	3.25
1483.	3½-inch Hair-spring Divider	3.50
1484.	3½-inch improved Hair-spring Divider, with joints in legs,	4.50

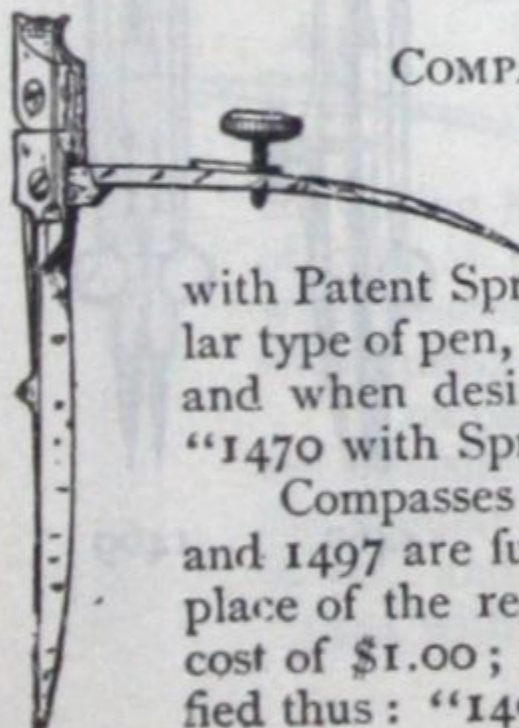
COMPASSES WITH HAIR-SPRING ADJUSTMENT.

1490.	3½-inch Compass, pen and pencil, fixed needle-point leg with hair-spring adjustment	\$7 50
1494.	3½-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment	8.25
1497	3½-inch Compass, fixed pen and needle-point leg with hair-spring adjustment	5 50
1499.	3½-inch Compass, fixed pencil and needle-point leg with hair-spring adjustment	5 50

COMPASSES WITH PATENT PENS.

Compasses Nos 1470, 1474, 1477, 1490, 1494 and 1497 are furnished with Patent Spring-hinge Pen, in place of the regular type of pen, at an additional cost of \$1.25; and when desired should be specified thus: "1470 with Spring-hinge Pen, \$7.25."

Compasses Nos. 1470, 1474, 1477, 1490, 1494 and 1497 are furnished with Patent Lever Pen, in place of the regular type of pen, at an additional cost of \$1.00; and when desired should be specified thus: "1497 with Lever Pen, \$6.50."

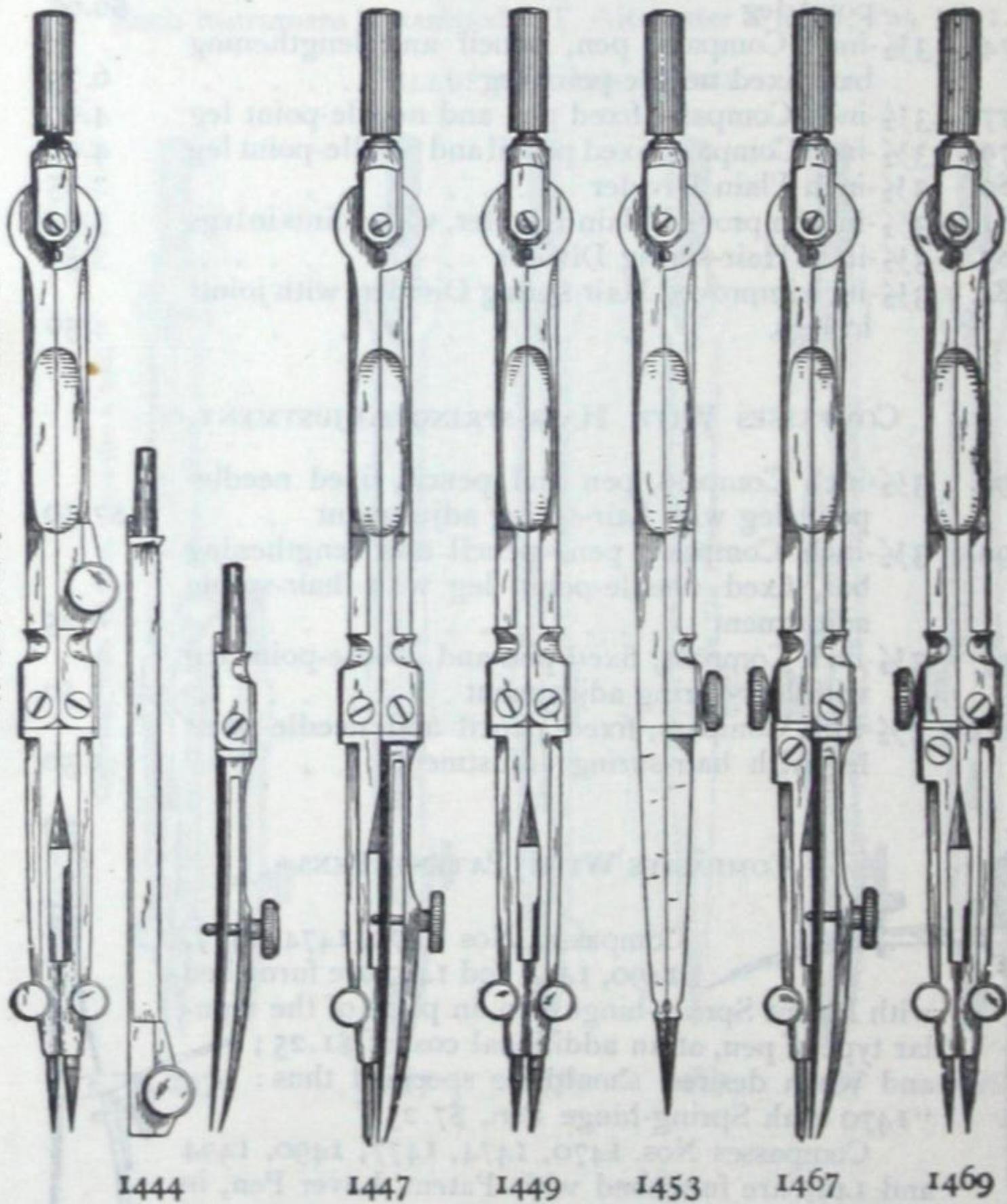


ALTENERER'S PATENT JOINT COMPASSES AND DIVIDERS. Intermediate Size.

Each instrument is stamped "T. Altenerer & Sons, Pat. 1871."

ILLUSTRATIONS $\frac{2}{3}$ SIZE.

Copyright, 1899, by Theo. Altenerer & Sons.



ALTENER'S PATENT JOINT COMPASSES AND DIVIDERS.

Intermediate Size.

Each instrument is stamped "T. Altener & Sons, Pat. 1871."

I444.	4 1/2-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg	\$7.25
I447.	4 1/2-inch Compass, fixed pen and needle-point leg	4.50
I449.	4 1/2-inch Compass, fixed pencil and needle-point leg	4.50
I450.	4 1/2-inch Plain Divider	2.50
I451.	4 1/2-inch improved Plain Divider, with joints in legs	3.50
I453.	4 1/2-inch Hair-spring Divider	3.75
I454.	4 1/2-inch improved Hair-spring Divider, with joints in legs	4.75

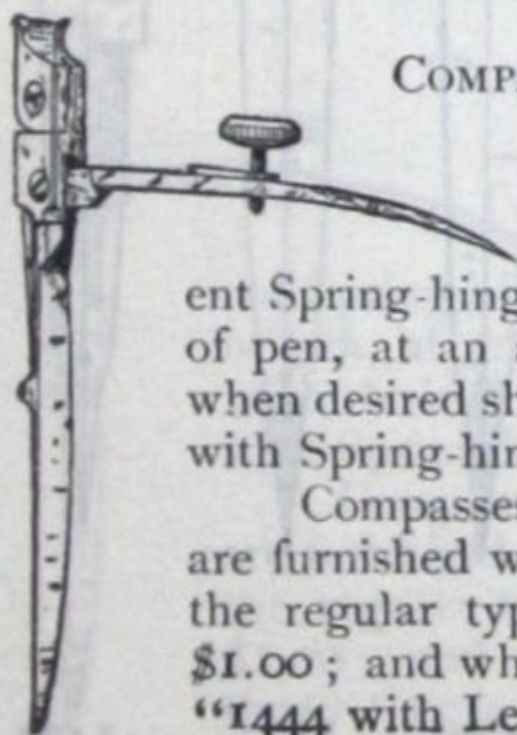
COMPASSES WITH HAIR-SPRING ADJUSTMENT.

I464.	4 1/2-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment	\$8.75
I467.	4 1/2-inch Compass, fixed pen and needle-point leg with hair-spring adjustment	6.00
I469.	4 1/2-inch Compass, fixed pencil and needle-point leg with hair-spring adjustment	6.00

COMPASSES WITH PATENT PENS.

Compasses Nos. I444, I447, I464 and I467 are furnished with Patent Spring-hinge Pen, in place of the regular type of pen, at an additional cost of \$1.25; and when desired should be specified thus: "I464 with Spring-hinge Pen, \$10.00."

Compasses Nos. I444, I447, I464 and I467 are furnished with Patent Lever Pen, in place of the regular type of pen, at an additional cost of \$1.00; and when desired should be specified thus: "I444 with Lever Pen, \$8.25."

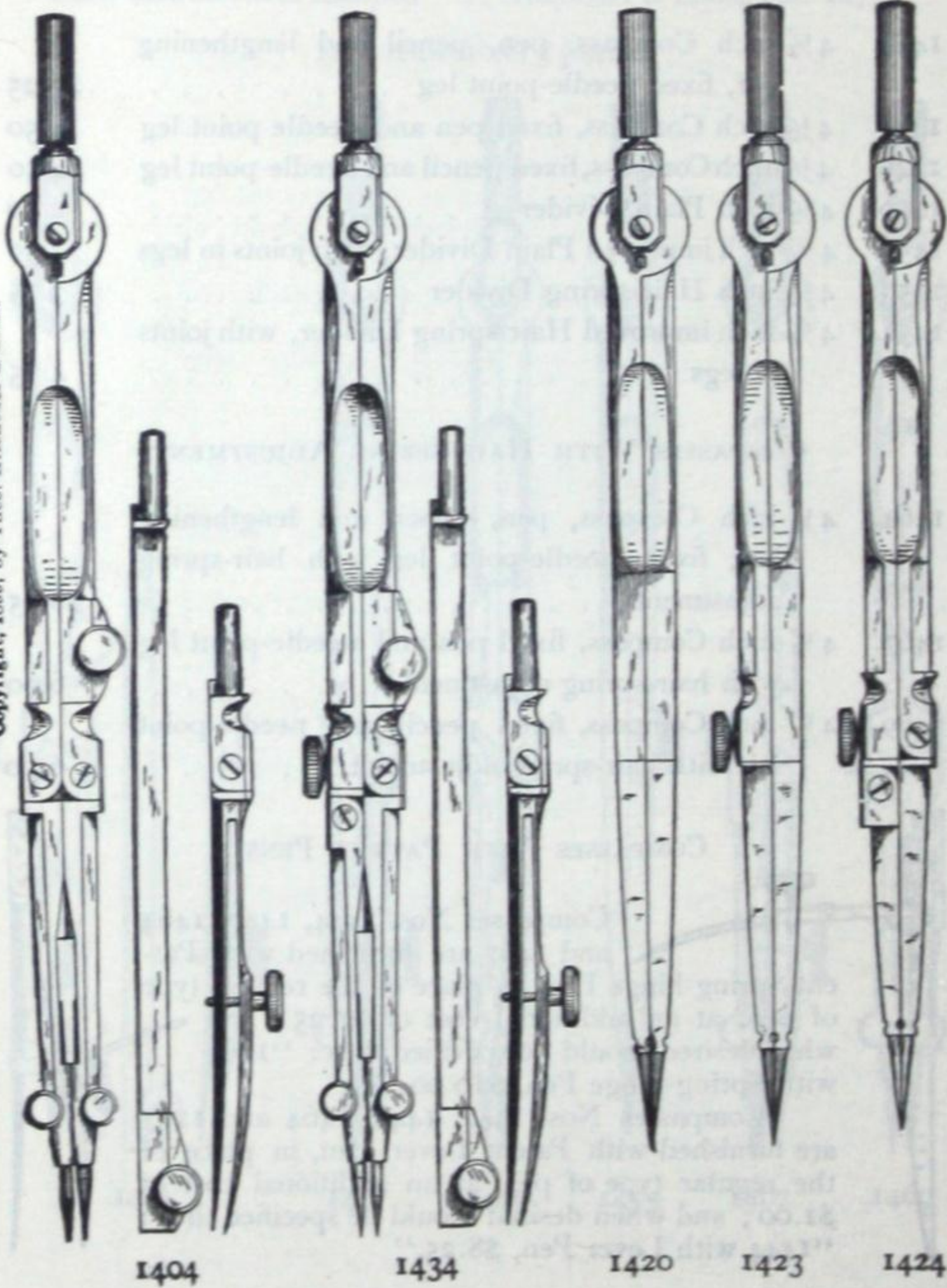


ALTENER'S
 PATENT JOINT COMPASSES AND DIVIDERS.
 Large Size.

Each instrument is stamped "T. Altener & Sons, Pat. 1871."

ILLUSTRATIONS $\frac{2}{3}$ SIZE.

Copyright, 1899, by Theo. Altener & Sons.



1404

1434

1420

1423

1424

ALTENERER'S PATENT JOINT COMPASSES AND DIVIDERS.

Large Size.

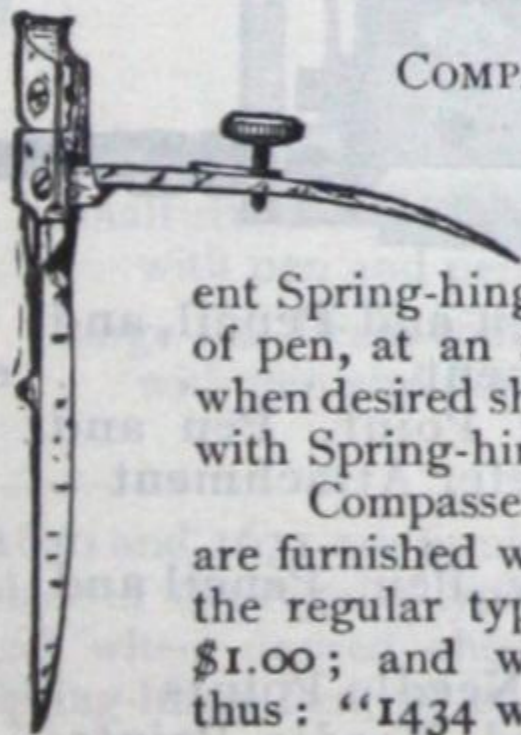
Each instrument is stamped "T. Altenerer & Sons, Pat. 1871."

I404.	5 1/2-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg	\$7.50
I407.	5 1/2-inch Compass, fixed pen and needle-point leg	5.00
I409.	5 1/2-inch Compass, fixed pencil and needle-point leg	5.00
I420.	5-inch Plain Divider	2.50
I421.	5-inch improved Plain Divider, with joints in legs	3.50
I423.	5-inch Hair-spring Divider	4.00
I424.	5-inch improved Hair-spring Divider, with joints in legs	5.00

COMPASSES WITH HAIR-SPRING ADJUSTMENT.

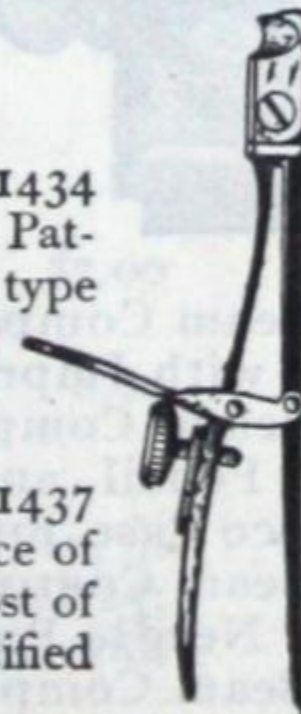
I434.	5 1/2-inch Compass, pen, pencil and lengthening bar, fixed needle-point leg with hair-spring adjustment	\$9.00
I437.	5 1/2-inch Compass, fixed pen and needle-point leg with hair-spring adjustment	6.50
I439.	5 1/2-inch Compass, fixed pencil and needle-point leg with hair-spring adjustment	6.50

COMPASSES WITH PATENT PENS.

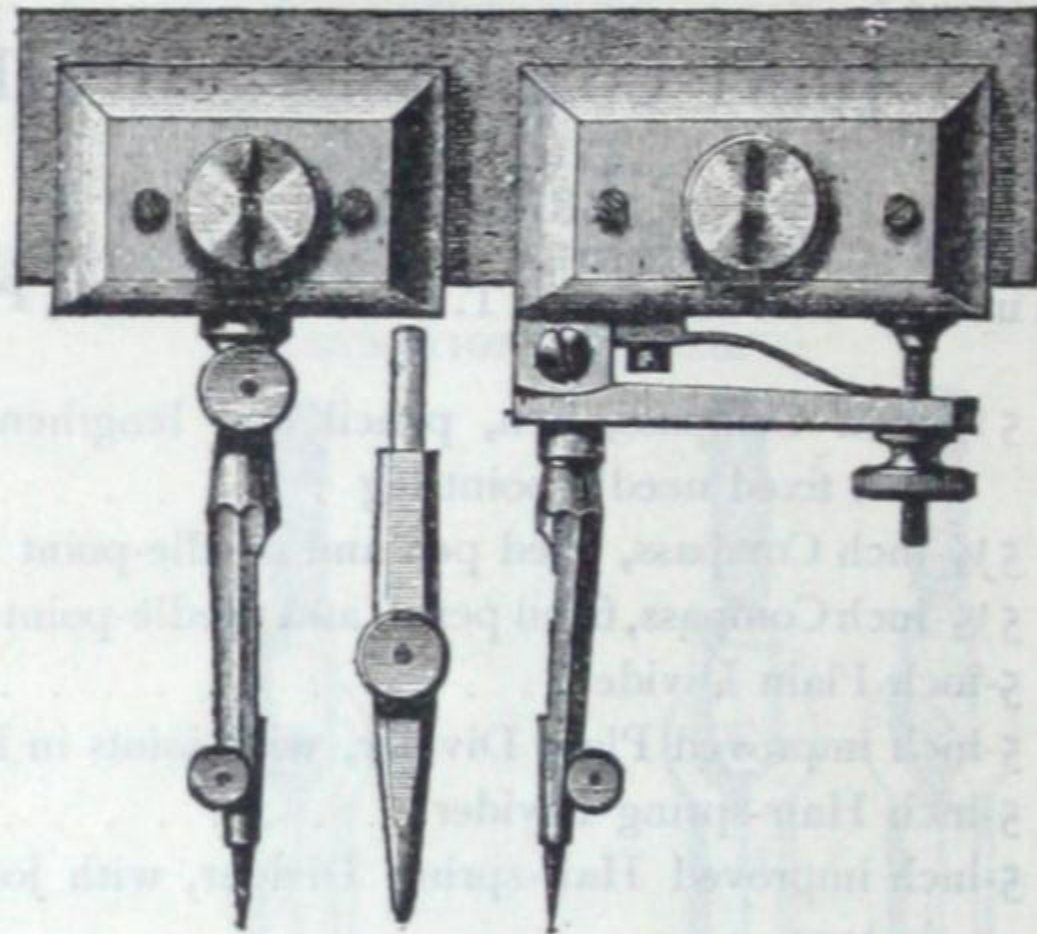


Compasses Nos. I404, I407, I434 and I437 are furnished with Patent Spring-hinge Pen, in place of the regular type of pen, at an additional cost of \$1.25; and when desired should be specified thus: "I404 with Spring-hinge Pen, \$8.75."

Compasses Nos. I404, I407, I434 and I437 are furnished with Patent Lever Pen, in place of the regular type of pen, at an additional cost of \$1.00; and when desired should be specified thus: "I434 with Lever Pen, \$10.00."



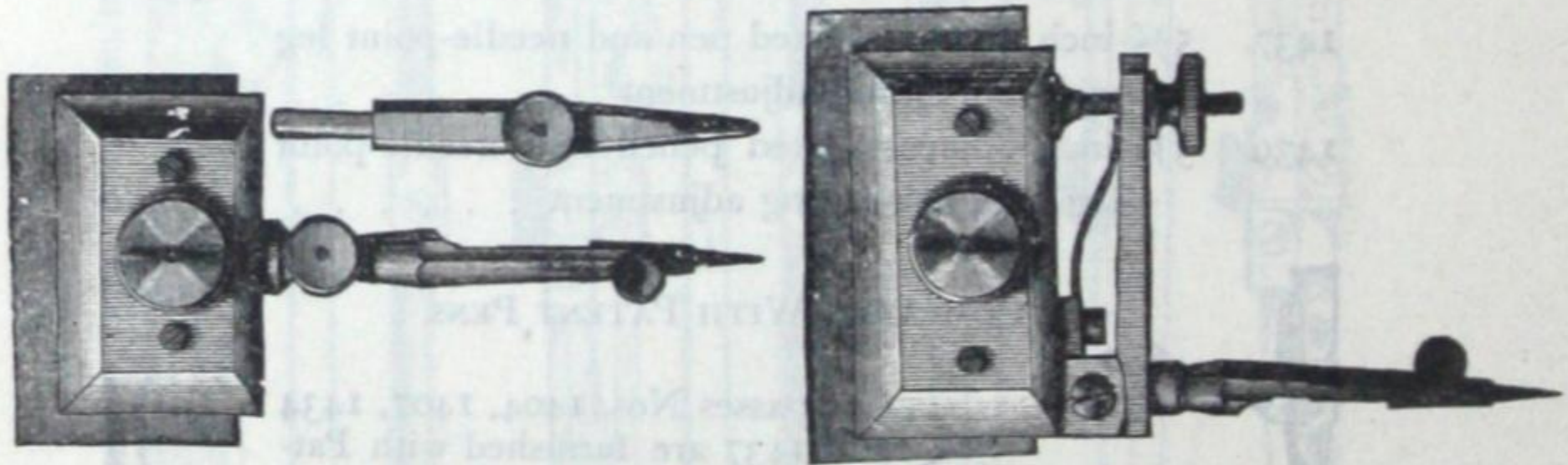
KERN & CO.'S
GENUINE SUPERIOR SWISS BEAM COMPASS



NO. 180K

- No. 180K. Beam Compasses, to fit on any straight edge, with 2 Needle Points, exchangeable for Lead and Pen Point, with Micrometer adjustment each, \$10.00

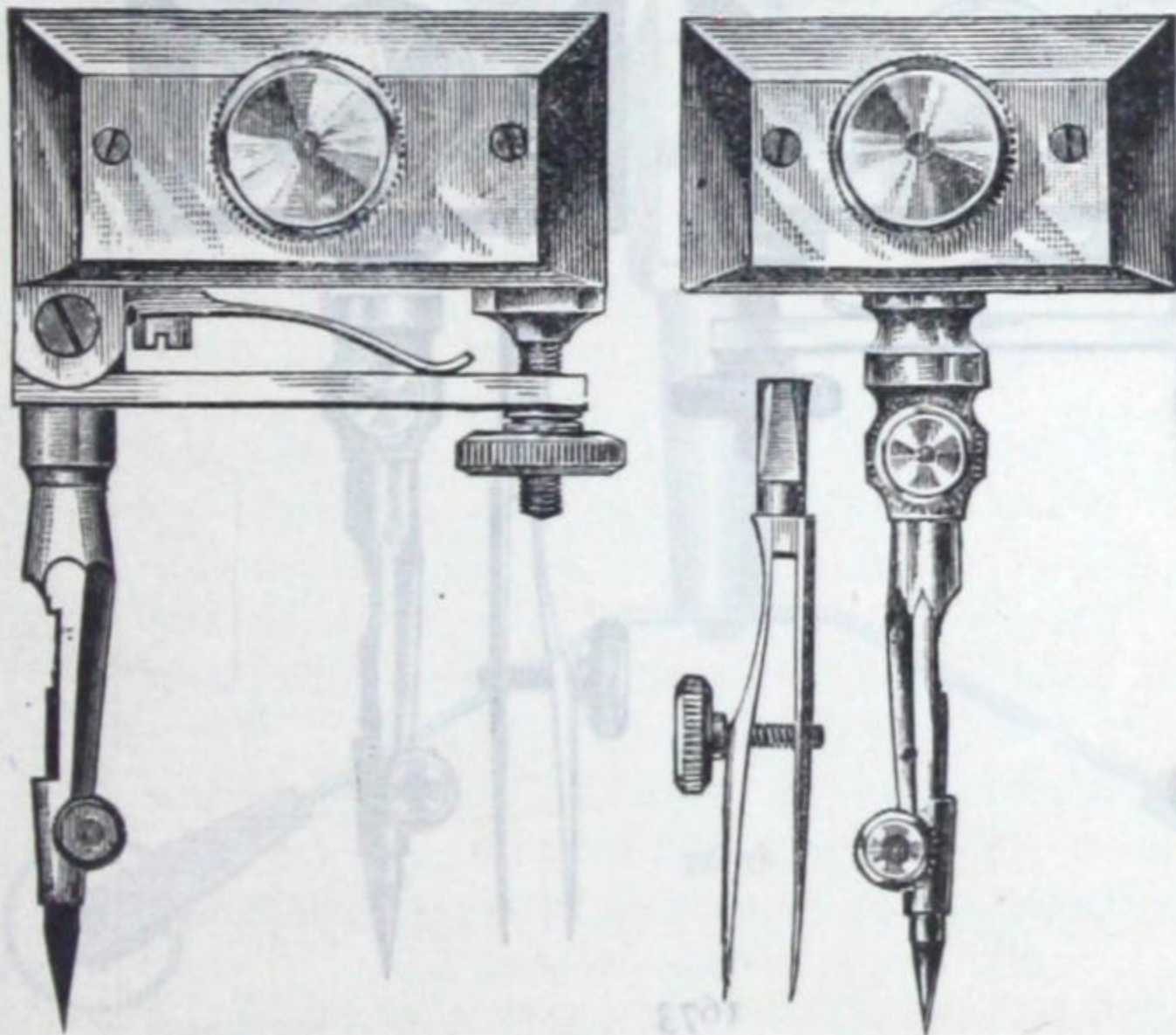
FROST & ADAMS CO'S SUPERIOR BEAM COMPASSES



- | | | |
|-----|---|--------------|
| 13. | Beam Compass, with Needle Point, Pen and Pencil, and with Improved Micrometer Adjustment | each, \$7.75 |
| 14. | Beam Compass, Large, with Needle Point, Pen and Pencil, and with Improved Micrometer Attachment | " 8.75 |
| | Morocco Case for same | " 1.00 |
| 40. | Beam Compass, with Adjusting Screw, Pen, Pencil and Needle Points | " 7.00 |
| 41. | Beam Compass, with Pen, Pencil and Needle Points | " 6.00 |
| 42. | Beam Compass, with Pen, Pencil and Needle Points, and Bar | " 8.00 |

ALTENER'S
MICROMETER-ADJUSTMENT
BEAM-COMASSES.

Each instrument is stamped "T. Altener & Sons."



1671

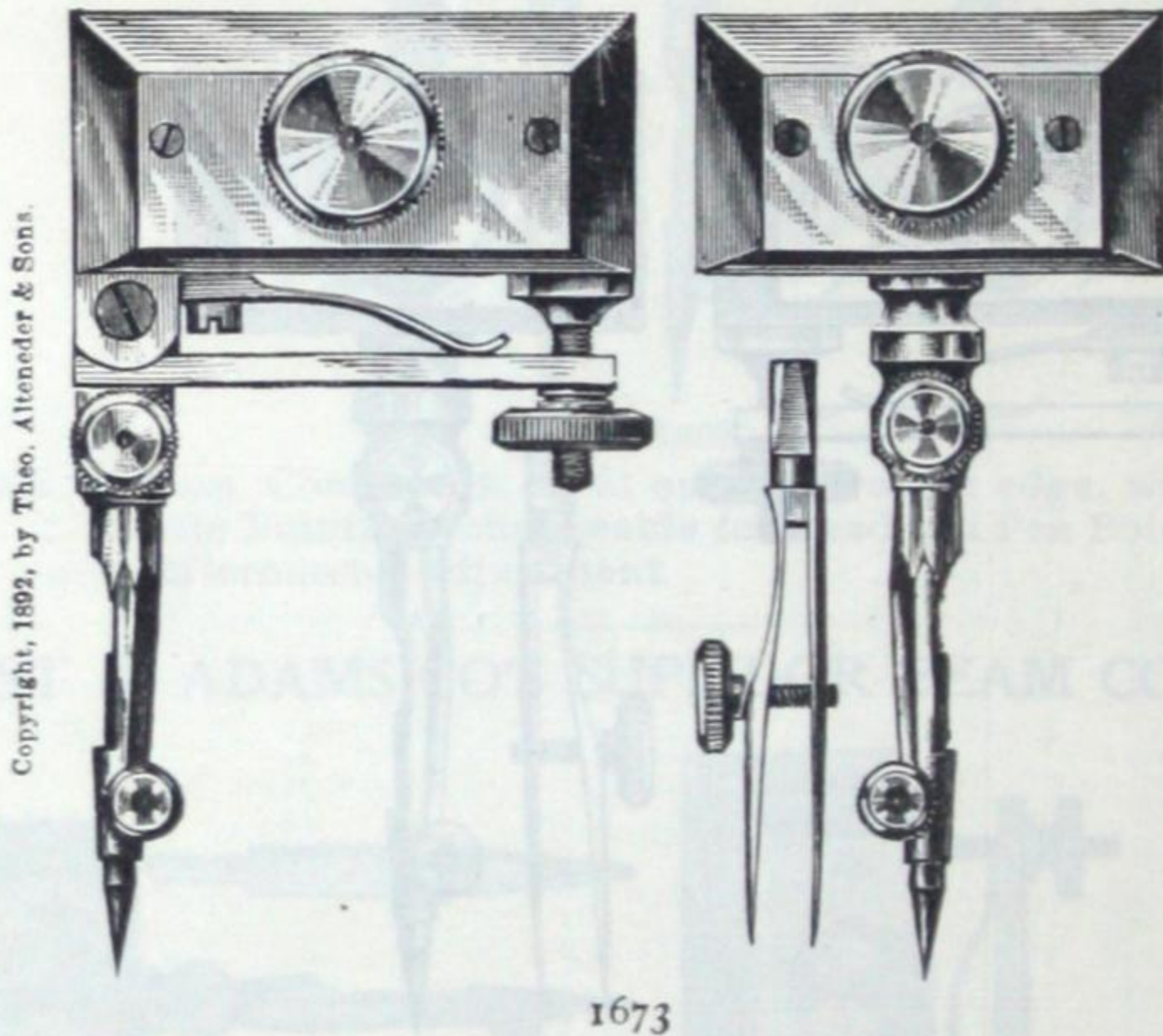
1670. Small size Beam-compass, fixed needle-point leg,
with pen and pencil, micrometer-adjustment \$7.00
1671. Large size Beam-compass, fixed needle-point leg,
with pen and pencil, micrometer-adjustment 8.00

Nos. 1670 and 1671 are furnished with Patent Spring-hinge Pen, in place of the regular type of pen, at an additional cost of \$1.25; and when desired should be specified thus: "1670 with Spring-hinge Pen, \$8.25."

Copyright, 1892, by Theo. Altener & Sons.

ALTENER'S MICROMETER-ADJUSTMENT BEAM-COMPASSSES.

Each instrument is stamped "T. Altener & Sons."



Copyright, 1892, by Theo. Altener & Sons.

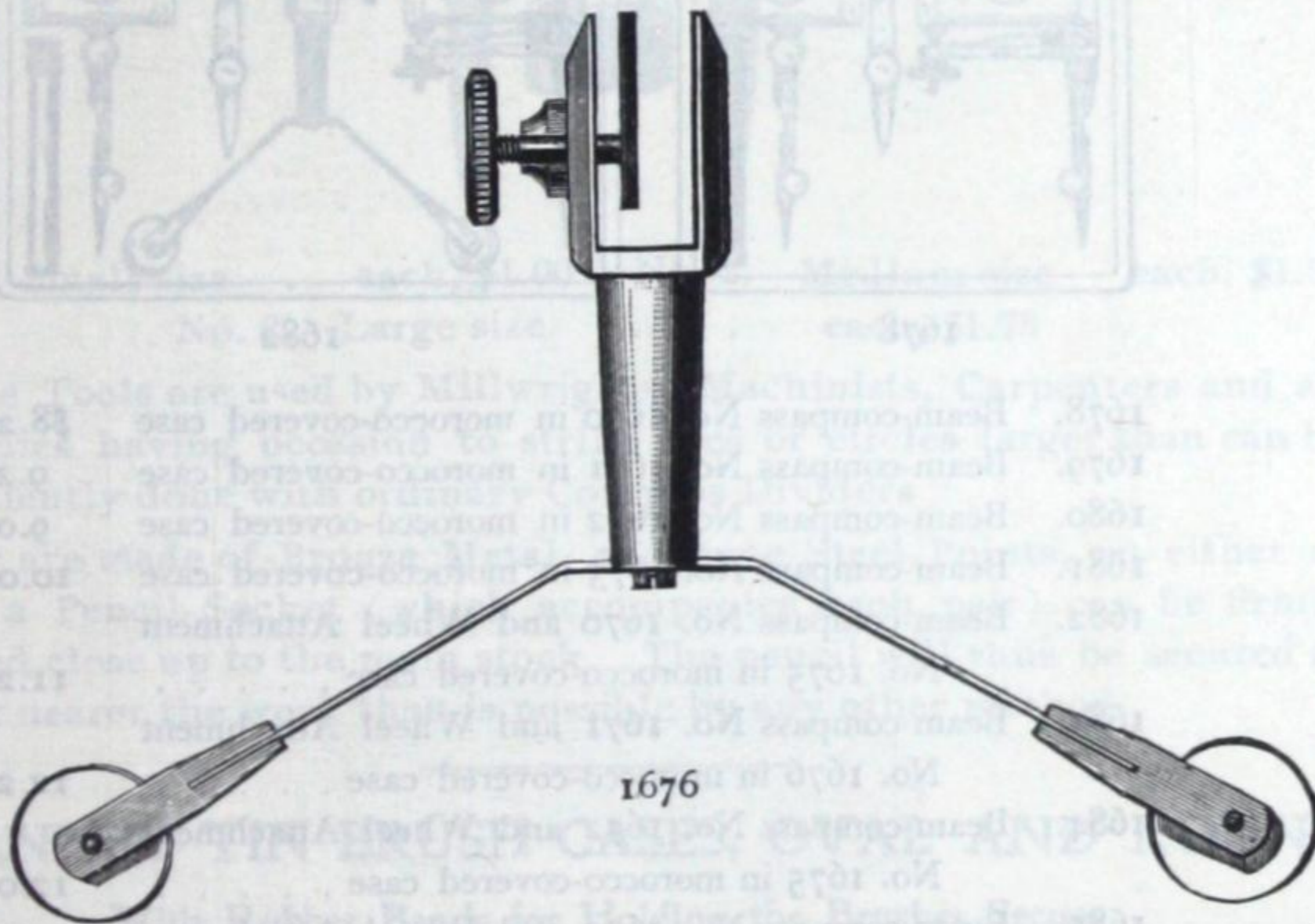
1673

- 1672. Small size Beam-compass, interchangeable needle-point, pen and pencil legs, micrometer-adjustment \$7.75.
- 1673. Large size Beam-compass, interchangeable needle-point, pen and pencil legs, micrometer-adjustment 8.75

Nos. 1672 and 1673 are furnished with Patent Spring-hinge Pen, in place of the regular type of pen, at an additional cost of \$1.25; and when desired should be specified thus: "1672 with Spring-hinge Pen, \$9.00."

ALTENER'S BEAM-COMPASS WHEEL ATTACHMENT.

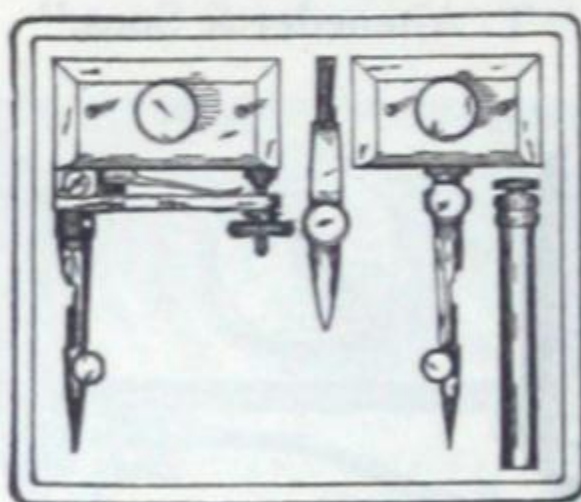
Each instrument is stamped "T. Aiteneder & Sons."



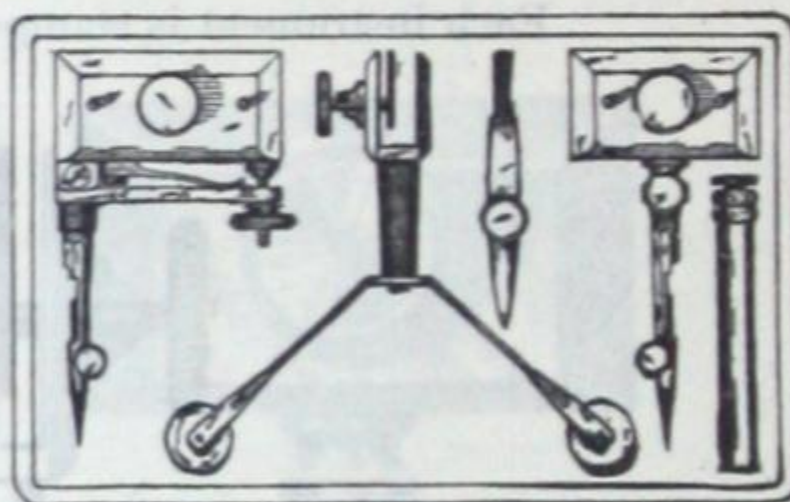
- | | | |
|-------|--|--------|
| 1675. | Small size Beam-compass Wheel Attachment . . | \$2.50 |
| 1676. | Large size Beam-compass Wheel Attachment . . | 2.50 |

ALTENER'S BEAM-COMPASSES IN MOROCCO CASES.

Each instrument is stamped "T. Alteneder & Sons."



1678



1682

1678.	Beam-compass No. 1670 in morocco-covered case	\$8.25
1679.	Beam-compass No. 1671 in morocco-covered case	9.25
1680.	Beam-compass No. 1672 in morocco-covered case	9.00
1681.	Beam-compass No. 1673 in morocco-covered case	10.00
1682.	Beam-compass No. 1670 and Wheel Attachment No. 1675 in morocco-covered case	11.25
1683.	Beam-compass No. 1671 and Wheel Attachment No. 1676 in morocco-covered case	12.25
1684.	Beam-compass No. 1672 and Wheel Attachment No. 1675 in morocco-covered case	12.00
1685.	Beam-compass No. 1673 and Wheel Attachment No. 1676 in morocco-covered case	13.00

Hard-wood Beam-compass Bars.

		12	18	24	30	36	42	48	60 inch
1689.	For small size	\$0.20	.25	.35	.40	.45	..	..	..
1690.	For large size	.20	.25	.35	.40	.45	.55	.65	.80

STANLEY IMPROVED TRAMMEL POINTS



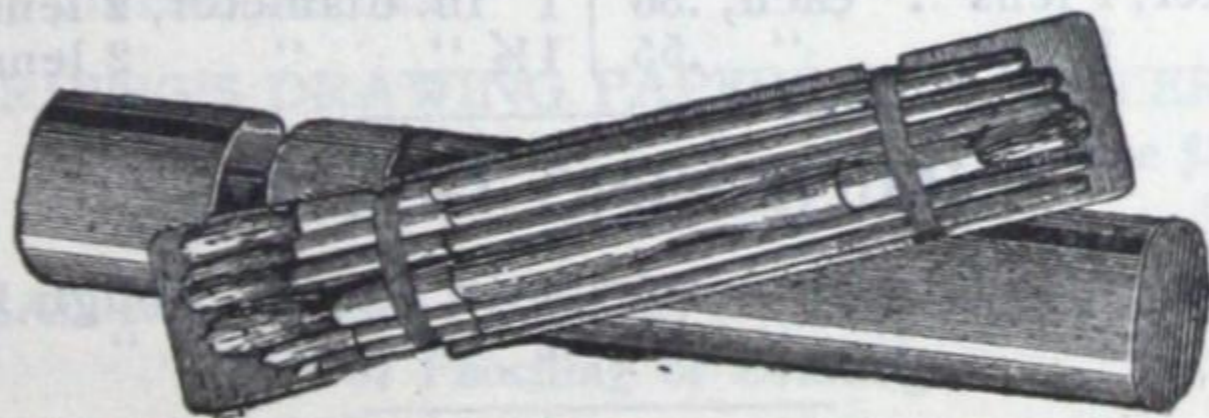
- No. 1. Small size . . . each, \$1.00 | No. 2. Medium size . . . each, \$1.25
 No. 3. Large size each, \$1.75

These Tools are used by Millwrights, Machinists, Carpenters and all Mechanics having occasion to strike arcs or circles larger than can be conveniently done with ordinary Compass Dividers

They are made of Bronze Metal, and have Steel Points, on either of which a Pencil Socket (which accompanies each pair) can be firmly clamped close up to the main stock. The pencil will thus be secured at a point nearer the work than is possible by any other method

JAPANNED TIN BRUSH CASES, OVAL AND ROUND

With Rubber Bands for Holding the Brushes Secure



- | | | | |
|--------|--------|--------------------------|-----------|
| No. 1. | Round, | 8½ inches long | each, .40 |
| 2. | Oval, | 10 " " | " .45 |
| 3. | Oval, | 12 " " | " .60 |
| 4. | Oval, | 14 " " | " .70 |

Nos. 2, 3 and 4 are fitted with slide, as shown in cut

MAGNIFYING OR READING GLASSES

German Silver Rim, Ebonized Handle



1 in. diameter	. . . . .	each, .40	3 in. diameter	. . . . .	each, .90
1 1/4 " "	. . . . .	" .45	3 1/2 " "	. . . . .	" 1.20
1 1/2 " "	. . . . .	" .50	4 " "	. . . . .	" 1.75
1 3/4 " "	. . . . .	" .60	4 1/2 " "	. . . . .	" 2.25
2 " "	. . . . .	" .65	5 " "	. . . . .	" 3.00
2 1/4 " "	. . . . .	" .70	6 " "	. . . . .	" 4.00
2 1/2 " "	. . . . .	" .80			

OVAL POCKET MAGNIFYING GLASSES

Mounted in Rubber



1 in. diameter, 1 lens	. . . . .	each, .35	1 in. diameter, 2 lenses	each, .60
1 1/2 " " 1 lens	. . . . .	" .55	1 1/2 " " 2 lenses	" 1.00

DIMINISHING GLASSES

1 1/2 in. Round, Ground Edges	each, .35	1 1/2 in. Round, Rough Edges	each, .25
2 " " " " "	.50	2 " " " " "	.35

CLAUDE LORRAINE GLASSES

Black Diminishing Glasses, in Morocco Cases

4x5 inches each,	\$4.50	6x7 inches each,	\$8.00	7x8 1/2 in. each,	\$10.00
5x6 " " "	5.75	6x8 " " "	9.00	7x9 " " "	11.00
5x7 " " "	6.75				

DRAWING PAPERS, IN SHEETS

WHATMAN'S HAND-MADE PAPERS

Cap,	13×17 in.,	15 lbs. to ream	quire,	.75 sheet,	.05
Demy,	15×20 "	25 " "	"	1.00 "	.05
Medium,	17×22 "	34 " "	"	1.60 "	.06
Royal,	19×24 "	44 " "	"	2.00 "	.07
Super Royal,	19×27 "	52 " "	"	2.50 "	.10
Imperial,	22×30 "	72 " "	"	3.00 "	.13
Imperial,	22×30 "	90 " "	"	5.00 "	.20
Imperial,	22×30 "	140 " "	"	7.50 "	.30
Imperial,	22×30 "	200 " "	"	11.00 "	.60
Imperial,	22×30 "	300 " "	"	20.00 "	1.25
Double Elephant,	27×40 "	133 " "	"	5.75 "	.25
Double Elephant,	27×40 "	210 " "	"	12.00 "	.50
Antiquarian,	32×52 "	240 " "	"	30.00 "	1.50

These papers are made with three different styles of surface:

HP. signifies "Hot Pressed," has a smooth surface; mostly used for pencil and very fine line-drawings

CP. signifies "Not Hot Pressed," has a finely grained surface; used for general purposes and water-color drawing

R. signifies "Rough" (Torchon Paper), has a coarsely grained surface; used for very bold drawing and sketching

Special prices by the ream

FROST & ADAMS CO.'S

EMPIRE DRAWING PAPER FOR WATER COLORS

The Successful Rival of Whatman's Paper

Royal,	19×24 in.	quire, \$1.60 sheet,	.08
Super Royal,	19×27 "	" 1.80 "	.10
Imperial,	22×30 "	" 2.50 "	.12
Double Elephant,	27×40 "	" 4.25 "	.20

Made Hot Pressed, "HP." or smooth surface, and Cold Pressed, "CP." or fine grained surface

J. D. HARDING'S DRAWING PAPERS FOR WATER COLORS

Imperial,	22×30 in., thin	quire \$3.00 sheet,	.13
Imperial,	22×30 " extra thick	" 6.00 "	.25

UNIVERSAL DRAWING PAPERS, HARD FINISHED SURFACE

For Penciling or Drafting

Cap,	14 ×17 in.	quire, .40 sheet,	.05
Demy,	15½×19½ "	" .50 "	.05
Medium,	17 ×22 "	" .60 "	.06
Royal,	19 ×24 "	" .84 "	.08
Super Royal,	19 ×27 "	" 1.00 "	.08
Imperial,	22 ×30 "	" 1.30 "	.08
Double Elephant,	27 ×40 "	" 2.75 "	.18

Drawing Papers in Sheets—continued

ENGLISH METALLIC PAPER

Royal,	17×23 in.	quire, \$2.00	sheet, .10
Unexcelled for Pencil Sketching and Shading			
Samples furnished on application			

ECLIPSE, OR AMERICAN COLD PRESSED DRAWING PAPERS

Medium,	17×22 in.	quire, .35	sheet, .02
Royal,	19×24 "	" .75	" .03
Imperial,	22×30 "	" 1.00	" .04
Double Elephant,	27×40 "	" 2.25	" .10

NORMAL DRAWING PAPERS

Royal,	19×24 in.	quire, \$1.65	sheet, .08
Imperial,	22×30 "	" 2.35	" .10
Double Elephant,	27×40 "	" 3.60	" .15

A paper of Superior Quality for Ink or Pencil

DUPLEX DRAWING PAPERS

Royal,	19×24 in., Cream Color	quire, \$1.10	sheet, .05
Imperial,	22×30 " "	" 1.60	" .07
Double Elephant,	27×40 " "	" 2.60	" .12
Double Elephant,	27×40 " Drab Color	" 3.10	" .15

ENGLISH PRIME PARCHMENT, IN SHEETS

Genuine Sheepskin

Size 12×16 in.	sheet, .40	Size 16×22 in.	sheet, .85
" 13×17 "	" .50	" 17×22 "	" .90
" 14×17 "	" .55	" 18×24 "	" .95
" 14×18 "	" .60	" 19×25 "	" 1.00
" 15×20 "	" .65	" 20×24 "	" 1.05
" 15×21 "	" .70	" 22×26 "	" 1.10
" 16×20 "	" .75	" 24×28 "	" 1.40

STRATHMORE WATER COLOR AND DRAWING PAPERS

No. 945.	Smooth Surface,	22×31 in.,	72 lbs to rm.	rm., \$43.20	qr., \$2.50
946.	Medium	" 22×31 "	72 "	" 43.20	" 2.50
947.	Smooth	" 27×40 "	133 "	" 79.80	" 4.75
948.	Medium	" 27×40 "	133 "	" 79.80	" 4.75

Samples furnished on application

Drawing Paper in Sheets—continued

COQUILLE PAPER

In sheets 23×29 inches per doz., \$2.00 sheet, .10

This paper, sometimes called board, has a finely stippled surface, and is especially adapted for water color or free-hand charcoal

WESTON'S IMPERIAL LINEN RECORD PAPER

For Pen and Ink Drawing

Imperial, 22×30 inches quire, \$2.50 sheet, .10
 Double Elephant, 27×40 " " 4.00 " .20

BROWN'S LINEN RECORD PAPER

For Pen and Ink Drawing

Imperial, 22×30 inches quire, \$2.50 sheet, .10
 Double Elephant, 27×40 " " 4.00 " .20

BLOTTING PAPER

White, 19×24 qr., \$1.00 sheet, .05 | Pink, 19×24 qr., \$1.00 sheet, .05
 Blue, " " 1.00 " .05 | Gray, " " 1.00 " .05

GOLD AND SILVER PAPERS

Gold, Cap	13 × 13½ in.	quire, .75	sheet, .04
" Lion, II	15½ × 18½ "	" 1.50	" .08
" Coquille, W II	17½ × 22 "	" 3.00	" .15
" " II., ½ fine	17½ × 22 "	" 5.00	" .25
" " I., fine, burnished	17½ × 22 "	" 6.00	" .30
" " I., fine, dull	17½ × 22 "	" 6.00	" .30
" Genuine, burnished or dull	10½ × 17 "	" 16.50	" .75
" Embossed, Lion, II	15½ × 18½ "	" 1.50	" .08
" " Coquille, I., ½ fine	17½ × 22 "	" 3.50	" .20
Silver, Cap	13 × 13½ "	" .75	" .04
" Lion	15½ × 18½ "	" 1.50	" .08
" ½ fine	17½ × 22 "	" 2.50	" .12
" Genuine	17½ × 22 "	" 6.75	" .35
" Embossed, Lion	15½ × 18½ "	" 1.50	" .08
" " ½ fine	17½ × 22 "	" 3.50	" .20

COPPER FOIL OR TINSEL

White 100 sheets, \$4.00 sheet, .05	Magenta 100 sheet, \$4.50 sheet, .05
Brown " 4.50 " .05	Orange " 4.50 " .05
Blue " 4.50 " .05	Red " 4.50 " .05
Crimson " 4.50 " .05	Ruby " 4.50 " .05
Fire " 4.50 " .05	Solferino " 4.50 " .05
Green, Light " 4.50 " .05	Scarlet " 4.50 " .05
" Deep " 4.50 " .05	Violet " 4.50 " .05
Gold " 4.50 " .05	

Drawing Papers in Sheets—continued

ENGLISH TINTED CRAYON PAPERS

Imperial,	22×30 in.,	20 tints	. . .	quire, \$2.50	sheet, .12
Double Elephant,	26×40 "	6 "	. . .	" 4.50	" .20
Imperial,	22×30 "	Hand Made	. . .	" 6.00	" .25

FRENCH CHARCOAL PAPERS

Ordinary,	Royal,	19×25 in.,	13 tints and white, M.B.M.	quire, .75	sheet, .05
Michalet,	"	"	12 " "	" 1.00	" .06
Lalanne,	"	"	White	" 1.00	" .06
Allonge,	"	"	White and Cream	" 1.75	" .08
Strathmore,	"	"	White	" .75	" .05
Coquelin,	"	"	White	" 2.00	" .10

Sample Book of Charcoal Papers on application

FRENCH PASTEL PAPERS

Royal	. . .	19×25 in.	. . . . .	quire, \$5.00	sheet, .20
Super Royal	. . .	22×28 "	. . . . .	" 6.00	" .25
Colombier	. . .	24×34 "	. . . . .	" 10.00	" .50
Grand Aigle	. . .	26×40 "	. . . . .	" 14.00	" .60

FRENCH PASTEL BOARDS

No. 6.	13×16 in.	doz., \$4.50	sheet, .40	No. 12.	20×24 in.	doz., \$7.00	sheet, .60
8.	15×18 "	" 5.00	" .45	15.	21×26 "	" 7.50	" .65
10.	18×22 "	" 6.00	" .50	20.	23×29 "	" 9.00	" .75

FROST & ADAM'S CO.'S PASTEL BOARDS

Superior Quality, 22×28 in. doz., \$4.20 sheet, .40

Six Finishes: No. 1, White, fine grain; No. 2, Light Cream, medium grain; No. 3, Light Cream, coarse grain; No. 4, Cool Gray, velvet finish; No. 5, Buff, medium grain; No. 6, Buff, coarse grain

JAPANESE WATER COLOR PAPERS

No. 1.	Thin,	10½×15½ in.	. . .	ream, \$8.00	doz., .20	sheet, .02
2.	Medium,	12 ×17½ "	. . .	" 8.00	" .20	" .02
3.	Thick,	12 ×16½ "	. . .	" 8.00	" .25	" .02

ENGLISH CARBON TRANSFER PAPERS

Extra Quality

11×18 in.	{	Blue, Black, Green, Red, Yellow,	{	doz., .30	sheet, .05
18×22 "	{	Purple and White	{	" .60	" .10

ROSS' RELIEF HAND STIPPLE DRAWING PAPERS

For Photo-Engraving and Litho-Transferring



Size 11×14 in. sheet, .30 | Size 14×22 in. sheet, .50 | Size 22×28 in. sheet, .75

No.	Description	11×14	14×22	22×28
No. 1.	Embossed fine stipple	11×14	14×22	22×28
1½.	" " " "	11×14	.	.
2.	" " " "	11×14	14×22	22×28
3.	" coarse and fine stipple	11×14	14×22	22×28
4A.	" square cross line	11×14	14×22	.
4B.	Black over embossed square line	11×14	14×22	.
5.	Embossed grain . . . . .	.	14×22	.
6.	Embossed basket pattern . . . . .	.	14×22	.
6B.	Embossed basket pattern, printed . . . . .	.	14×22	.
7.	Black ruling printed on steel . . . . .	.	14×22	.
8.	Embossed very fine stipple	11×14	.	.
9.	Very fine stipple	11×14	.	.
10.	Black line one way and embossed across . . . . .	.	14×22	.
11.	Embossed cross lines	11×14	14×22	.
11B.	" " " fine . . . . .	.	14×22	.
11P.	" " " printed . . . . .	.	14×22	.
12.	Fine black line one way, emb. across	11×14	.	.
13.	Crayon and stipple	11×14	14×22	.
14.	Printed crayon tint . . . . .	.	14×22	.
15.	Printed crayon tint and embossed line . . . . .	.	14×22	.
16.	Embossed diamond stipple	11×14	.	.
17.	Very fine printed lines	11×14	.	.
18.	Embossed lines	11×14	.	.
19.	Very fine printed cross lines	11×14	.	.
20.	Very fine printed cross lines	11×14	.	.
21.	Very fine black lines one way, emb. across. . . . .	.	14×22	.
22.	Printed lines and crayon . . . . .	.	14×22	.
23.	Printed dotted lines	11×14	.	.
24.	Black line one way embossed stipple	11×14	.	.
25.	Printed cross hatch . . . . .	.	14×22	.
27.	Embossed very fine stipple . . . . .	.	14×22	.
29.	Printed lines and crayon . . . . .	.	14×19	.
31.	Printed diag. lines and fine stipple . . . . .	.	14×19	.
37.	Printed lines and crayon . . . . .	.	14×22	.
38.	Printed fantastic hatch . . . . .	.	14×22	.

By rubbing crayon over surface of paper the picture is formed in stipple, in light and shade, at will. High lights are made by erasure

TRACING PAPERS IN SHEETS

FRENCH VEGETABLE TRACING PAPERS

Telliere,	13×17 in., Extra Fine	quire, .75 sheet, .05
Ecu,	15×20 " "	" 1.25 " .10
Grand Raisin,	19×25 " "	" 2.00 " .15
Jesus,	22×28 " "	" 2.50 " .20
Grand Aigle,	26×40 " "	" 9.00 " .40

ENGLISH AND FRENCH TRACING PAPERS

No. 1. Rowney's,	20×30 in.	quire, \$1.35 sheet, .10
8. " "	20×30 " "	" 1.00 " .05
9. " "	19×24 " gelatine or glass finish	" 2.50 " .15
240P. French,	20×30 " "	" 1.35 " .10

CRANE & CO.'S BOND TRACING PAPERS

No. 16. Crane's,	19×30 in., Bond	quire, \$1.25 sheet, .06
21. " "	19×30 " "	" 1.35 " .07
25. " "	19×30 " "	" 1.50 " .08
29. " "	19×30 " "	" 1.80 " .09
16. " "	21×33 " "	" 1.35 " .07
21. " "	21×33 " "	" 1.50 " .08
25. " "	21×33 " "	" 2.00 " .10
29. " "	21×33 " "	" 2.25 " .12
16. " "	27×40 " "	" 2.50 " .15
21. " "	27×40 " "	" 2.75 " .15
25. " "	27×40 " "	" 3.00 " .15
29. " "	27×40 " "	" 3.50 " .15
10. " "	21×31 " Flaxine	" 3.00 " .15
10. " "	21×31 " Old Style	" 3.00 " .15
" "	17×22 " Onion Skin	" .75 " .05

Samples furnished on application

TRACING PAPERS, CONTINUOUS

FROST & ADAMS CO.'S TRACING AND BOND PAPERS



No. 1.	Rowney's English, Thin White	40 in.	20 yd.	roll,	\$2.50
1½.	Bowdoin, Thin, White, very trans. unpre.	54 "	22 "		2.30
2.	Bowdoin, Thin, White,	54 "	44 "		4.60
3.	Pemberton, Thin, Tough,	42 "	20 "		1.50
4.	Park, Transparent Sketching Paper	36 "	50 "		2.00
5.	Rowney's English, Thin, Blue Glazed	40 "	20 "		2.50
5½.	Park, Transparent Sketching Paper	60 "	50 "		3.25
6.	Rowney's English, Thick, Blue Glazed	40 "	20 "		3.00
6½.	Beacon, Medium Thick, tough, trans.	42 "	20 "		2.00
7.	Buff Tint	48 "	22 "		1.00
8.	Buff Tint	48 "	44 "		2.00
47.	Economy, Trans. Sketching Paper	36 "	50 "		2.00
47.	" " " "	60 "	50 "		3.25
177D.	Vellum, Bond, Dull Finish, very tough	42 "	20 "		1.35
185D.	Vellum, Medium Thick	39 "	20 "		3.60
190.	Parchment, Medium, very tough, unpre.	37 "	20 "		3.50
191.	Parchment, Thick, very tough, unpre.	37 "	20 "		4.30
192.	Abacus, very Thin, transparent	42 "	10 "		2.75
194.	Patera, Stout, very tough, for machinists	42 "	20 "		3.75
195M.	Colonna, Medium Thick	30 "	20 "		2.60
195M.	" " " "	36 "	20 "		3.20
195M.	" " " "	42 "	20 "		3.80
195T.	" Thin	30 "	20 "		2.25
195T.	" " " "	36 "	20 "		2.75
195T.	" " " "	42 "	20 "		3.25
195F.	Vellum, beyond comparison	36 "	20 "		4.00
196F.	" " " "	42 "	20 "		5.00
196.	Corinthian, very tough and trans., well adapted for photo-printing	39 "	20 "		3 20
198.	Gothic, very tough and transparent	42 "	20 "		3.40
200.	Doric, Medium Thick	42 "	20 "		2.60
202.	Alba, for transferring, unprepared	54 "	44 "		4.60
202.	" " " "	54 "	22 "		2.30
204.	Lotus, Thin, tough and trans., unpre.	42 "	20 "		1.50
206.	Libra, Med. Thick, like No. 204, unpre.	42 "	20 "		2.00
4805.	Electric, natural, cold pressed	56 "	44 "		4.50
4806.	" " " "	56 "	22 "		2.25
8000.	Banknote, Trans. White	36 "	20 "		1.65

Samples furnished on application

No. 195F and No. 196F are rolled on a 2-inch core (to prevent curling), then placed in a substantial cardboard tube fitted with a cap. Write for special descriptive circular

TRANSPARENT TRACING PAPERS

No. 9. Frost & Adams Co.'s Sandow Tracing Paper

36 in. wide	. . . . .	per 20 yard roll, \$2.00
42 "	. . . . .	" " 2.25

No. 30. Frost & Adams Co.'s Reliance Tracing Paper, strong, tough white paper for sketching and transferring

36 in. wide	. . . . .	per 50 yard roll, \$2.30
62 "	. . . . .	" " 3.40

No. 47L. Economy Transparent Sketching Paper, white, light weight

36 in. wide	. . . . .	per 50 yard roll, \$1.75
42 "	. . . . .	" " 2.25
60 "	. . . . .	" " 2.90

No. 47. Economy Transparent Sketching Paper, white, medium

36 in. wide	. . . . .	per 50 yard roll, \$2.00
42 "	. . . . .	" " 2.50
60 "	. . . . .	" " 3.25

No. 47H. Economy Transparent Drawing Paper, white, heavy

36 in. wide	. . . . .	per 20 yard roll, \$1.50
42 "	. . . . .	" " 1.80
60 "	. . . . .	" " 2.50

No. 208. Banknote (not prepared) medium thick

36 in. wide	. . . . .	per 20 yard roll, \$1.20
42 "	. . . . .	" " 1.50

IMPERIAL TRACING OR VELLUM CLOTH

Glazed on One Side and Dull on the Other



Imperial, 18 in. wide	24 yd. roll,	\$4.50 yd.,	.25
" 30 "	24 "	7.55 "	.35
" 36 "	24 "	8.40 "	.45
" 41 "	24 "	11.30 "	.55
" 48 "	24 "	14.95 "	.75
" 54 "	24 "	15.90 "	.80

DOWSE'S TRACING OR VELLUM CLOTH

Glazed on One Side and Dull on the Other

Dowse's, 18 in. wide	24 yd. roll,	\$3.80 yd.,	.25
" 30 "	24 "	6.10 "	.35
" 36 "	24 "	7.00 "	.40
" 41 "	24 "	9.20 "	.45



VELLUM TRACING CLOTH
DOWSE'S PATENT

Samples sent on application

TRACING CLOTH POWDER

Powder for Tracing Cloth, in tin shakers

each, .15



When cloth will not take ink readily, dust on a small quantity of the Powder and rub it in evenly with a soft fabric until the cloth has lost its excessive gloss. The powder must be thoroughly removed before applying the ink

FROST & ADAMS CO.'S
MANILA DETAIL PAPERS, CONTINUOUS

Rough and Smooth, in rolls of about 100 lbs., 36 in., 42 in.,
 48 in., 54 in. wide per lb., .10

The Smooth Manila papers, intended mainly for stencils and patterns,
 are used for detail and preliminary drawings. While we exercise all
 possible care in their selection, we cannot assume any responsibility for
 their being suitable for drawing, and at all times alike in color

No. 6'. Climax, light weight, in rolls of about 100 to 125 lbs.
 in 36 in., 42 in., 48 in. wide, in original rolls per lb., .15

36 in.	. . . . .	per 50 yard roll, \$1.80	per 100 yard roll, \$3.25
42 "	. . . . .	2.00	3.75
48 "	. . . . .	2.20	4.15

No. 80. Climax, medium weight, in rolls of about 100 to 125 lbs.
 in 36 in., 42 in., 48 in. wide, in original rolls per lb., .15

36 in.	. . . . .	per 50 yard roll, \$2.25	per 100 yard roll, \$4.00
42 "	. . . . .	2.45	4.35
48 "	. . . . .	2.60	4.70

No. 100. Climax, heavy weight, in rolls of about 100 to 125 lbs.
 in 36 in., 42 in., 48 in. wide, in original rolls per lb., .15

36 in.	. . . . .	per 50 yard roll, \$2.75	per 100 yard roll, \$5.00
42 "	. . . . .	2.90	5.75
48 "	. . . . .	3.65	6.75

Strathmore Detail Drawing Paper, Buff Tint, in rolls of about 30
 to 45 lbs., 30 in., 36 in., 42 in., 48 in. wide per lb., .30

Manila Detail Papers, Continuous — continued

Smooth Manila, three weights: X, XX, XXX, in rolls of about
 100 lbs., 36 in., 40 in., 48 in., 54 in. wide per lb., .12

No. 60G.G. Rough Manila, light weight, in rolls of about 125 to
 150 lbs., 36 in., 40 in., 42 in., 48 in. wide, in original rolls per lb., .15

36 in.	. . . . .	per 50 yard roll, \$1.80	per 100 yard roll, \$3.25
40 "	. . . . .	" " 2.00	" " 3.75
42 "	. . . . .	" " 2.20	" " 4.15
48 "	. . . . .	" " 2.50	" " 4.60

No. 80G.G. Rough Manila, medium weight, in rolls of about
 125 to 150 lbs., 36 in., 40 in., 42 in., 48 in., 54 in. wide, in
 original rolls per lb., .15

36 in.	. . . . .	per 50 yard roll, \$2.25	per 100 yard roll, \$4.00
40 "	. . . . .	" " 2.45	" " 4.35
42 "	. . . . .	" " 2.60	" " 4.70
48 "	. . . . .	" " 2.95	" " 5.35
54 "	. . . . .	" " 3.25	" " 6.00

No. 100G.G. Rough Manila, heavy weight, in rolls of about
 125 to 150 lbs., 36 in., 40 in., 42 in., 48 in., 54 in. wide, in
 original rolls per lb., .15

36 in.	. . . . .	per 50 yard roll, \$2.75	per 100 yard roll, \$5.00
40 "	. . . . .	" " 2.90	" " 5.25
42 "	. . . . .	" " 3.10	" " 5.75
48 "	. . . . .	" " 3.65	" " 6.75
54 "	. . . . .	" " 4.00	" " 7.50

No. 110G.G. Rough Manila, in rolls of 125 to 150 lbs., 36 in.,
 42 in., 48 in., 54 in., in original rolls per lb., .15

Manila Detail Papers, Continuous — continued

No. 60. Ribbed Manila, light weight, in rolls of about 125 to 150 lbs., 36 in., 40 in., 42 in., 48 in., 54 in. wide, in original rolls per lb., .15

36 in.	per 50 yard roll, \$1.80	per 100 yard roll, \$3.25
40 "	" " 2.00	" " 3.75
42 "	" " 2.20	" " 4.15
48 "	" " 2.50	" " 4.60
54 "	" " 2.95	" " 5.25

No. 80. Ribbed Manila, medium weight, in rolls of about 125 to 150 lbs., 36 in., 40 in., 42 in., 48 in., 54 in. wide, in original rolls per lb., .15

36 in.	per 50 yard roll, \$2.25	per 100 yard roll, \$4.00
40 "	" " 2.45	" " 4.35
42 "	" " 2.60	" " 4.70
48 "	" " 2.95	" " 5.35
54 "	" " 3.25	" " 6.00

No. 100. Ribbed Manila, heavy weight, in rolls of about 125 to 150 lbs., 36 in., 40 in., 42 in., 48 in., 54 in. wide, in original rolls per lb., .15

36 in.	per 50 yard roll, \$2.75	per 100 yard roll, \$5.00
40 "	" " 2.90	" " 5.25
42 "	" " 3.10	" " 5.75
48 "	" " 3.65	" " 6.75
54 "	" " 4.00	" " 7.50

No. 110. Ribbed Manila, in rolls of about 125 to 150 lbs., 36 in., 40 in., 42 in., 48 in., 54 in. wide, in original rolls per lb., .15

Manila Detail Papers, Continuous — continued

No. 60. Cobbossee, light weight, in rolls of about 100 to 125 lbs.

36 in., 40 in., 42 in., 48 in. wide, in original rolls . per lb., .15

36 in.	.	.	.	per 50 yard roll, \$1.80	per 100 yard roll, \$3.25
40 "	.	.	.	" " 2.00	" " 3.75
42 "	.	.	.	" " 2.20	" " 4.15
48 "	.	.	.	" " 2.50	" " 4.60

No. 80. Cobbossee, medium weight, in rolls of about 100 to 125

lbs., 36 in., 40 in., 42 in., 48 in., in original rolls . per lb., .15

36 in.	.	.	.	per 50 yard roll, \$2.25	per 100 yard roll, \$4.00
40 "	.	.	.	" " 2.45	" " 4.35
42 "	.	.	.	" " 2.60	" " 4.70
48 "	.	.	.	" " 2.95	" " 5.35

No. 100. Cobbossee, heavy weight, in rolls of about 100 to 125 lbs.

36 in., 40 in., 42 in., 48 in. wide, in original rolls . per lb., .15

36 in.	.	.	.	per 50 yard roll, \$2.75	per 100 yard roll, \$5.00
40 "	.	.	.	" " 2.90	" " 5.25
42 "	.	.	.	" " 3.10	" " 5.75
48 "	.	.	.	" " 3.65	" " 6.75

Samples of Detail Papers furnished on applications

DRAWING PAPERS, CONTINUOUS

UNIVERSAL. MEDIUM

36 inch, rolls weighing 30 to 40 pounds	per pound,	.40
36 " " " " " "	per 10 yard roll,	1.70
36 " " " " " "	per yard,	.20
42 " " " " " "	per pound,	.40
42 " " " " " "	per 10 yard roll,	2.00
42 " " " " " "	per yard,	.24
56 " " " " " "	per pound,	.40
56 " " " " " "	per 10 yard roll,	3.00
56 " " " " " "	per yard,	.35
62 " " " " " "	per pound,	.40
62 " " " " " "	per 10 yard roll,	3.40
62 " " " " " "	per yard,	.40

DUPLEX. MEDIUM, CREAM COLOR

30 inch, rolls weighing 30 to 40 pounds	per pound,	.29
30 " " " " " "	per 10 yard roll,	1.15
30 " " " " " "	per yard,	.13
36 " " " " " "	per pound,	.29
36 " " " " " "	per 10 yard roll,	1.35
36 " " " " " "	per yard,	.15
42 " " " " " "	per pound,	.29
42 " " " " " "	per 10 yard roll,	1.70
42 " " " " " "	per yard,	.20
56 " " " " " "	per pound,	.29
56 " " " " " "	per 10 yard roll,	2.15
56 " " " " " "	per yard,	.25
62 " " " " " "	per pound,	.29
62 " " " " " "	per 10 yard roll,	2.50
62 " " " " " "	per yard,	.30

DUPLEX. THICK, DRAB COLOR

36 inch, rolls weighing 30 to 40 pounds	per pound,	.29
36 " " " " " "	per 10 yard roll,	1.60
36 " " " " " "	per yard,	.18
56 " " " " " "	per pound,	.29
56 " " " " " "	per 10 yard roll,	2.65
56 " " " " " "	per yard,	.30

LEONINE

36 inch, rolls weighing 30 to 40 pounds	per pound,	.45
36 " " " " " "	per 10 yard roll,	2.15
36 " " " " " "	per yard,	.25
42 " " " " " "	per pound,	.45
42 " " " " " "	per 10 yard roll,	2.65
42 " " " " " "	per yard,	.30
62 " " " " " "	per pound,	.45
62 " " " " " "	per 10 yard roll,	4.00
62 " " " " " "	per yard,	.45

Drawing Papers, Continuous—continued

PARAGON

58 inch, rolls weighing 30 to 40 pounds	per pound,	.50
58 " " " " " "	per 10 yard roll,	4.00
58 " " " " " "	per yard,	.45

PARAGON. MEDIUM, ROUGH

36 inch, rolls weighing 30 to 40 pounds	per pound,	.50
36 " " " " " "	per 10 yard roll,	3.00
36 " " " " " "	per yard,	.33
42 " " " " " "	per pound,	.50
42 " " " " " "	per 10 yard roll,	3.50
42 " " " " " "	per yard,	.38
58 " " " " " "	per pound,	.50
58 " " " " " "	per 10 yard roll,	4.50
58 " " " " " "	per yard,	.50

EGGSHELL. ROUGH

36 inch, rolls weighing 30 to 40 pounds	per pound,	.50
36 " " " " " "	per 10 yard roll,	3.00
36 " " " " " "	per yard,	.33
42 " " " " " "	per pound,	.50
58 " " " " " "	per pound,	.50
58 " " " " " "	per 10 yard roll,	4.50
58 " " " " " "	per yard,	.50

EGGSHELL. THICK, SMOOTH

58 inch, rolls weighing 30 to 40 pounds	per pound,	.50
58 " " " " " "	per 10 yard roll,	5.75
58 " " " " " "	per yard,	.65

I X L HEAVY, SMOOTH WHITE PAPER FOR MONUMENT AND MARBLE WORKERS

SPECIAL FOR AIR BRUSH WORK

42 inch, rolls weighing 30 to 40 pounds	per pound,	.40
42 " " " " " "	per 10 yard roll,	2.00
42 " " " " " "	per yard,	.24
56 " " " " " "	per pound,	.40
56 " " " " " "	per 10 yard roll,	3.00
56 " " " " " "	per yard,	.35

WHATMAN'S IMITATION. ROUGH SURFACE

56 inch,	per 10 yard roll,	4.00
56 "	per yard,	.50

STEINBACH'S PAPERS

Steinbach's Solar Printing and Crayon Paper, 53 inch, Thin	per yard,	.35
" " " " " " 53 " Thick	"	.50
Drawing Parchment, Medium, 38 inch	per 20 yard roll,	3.00
" " Thick, 38 "	per 10 yard roll,	3.20

Drawing Papers, Continuous — continued

FROST & ADAMS CO.'S

CLOTH BACKED OR MOUNTED DRAWING PAPERS

A.	Whatman's Dbl. Elephant, Mtd.	27×40 in., C. P.	per sheet, \$1.00
B.	" Imperial,	22×30 " " "	.60
C.	Universal, 36 inch, Mtd.	per 10 yard roll, \$6.50	per yard, .80
C.	" 42 " "	" " " "	.90
B.	" 56 " "	" " " "	1.20
E.	Egg Shell, 24 " "	" " " "	.80
E.	" 30 " "	" " " "	.90
E.	" 38 " "	" " " "	1.00
E.	" 42 " "	" " " "	1.10
E.	" 54 " "	" " " "	1.20
E.	" 59 " "	" " " "	1.35
G.	Cartoon, 30 " "	" " " "	.75
G.	" 60 " "	" " " "	1.30
L.	Leonine, 30 " "	" " " "	.90
L.	" 36 " "	" " " "	1.00
L.	" 42 " "	" " " "	1.10
L.	" 62 " "	" " " "	1.60
L.	" 72 " "	" " " "	2.00
P.	Paragon, 36 " "	" " " "	1.00
P.	" 42 " "	" " " "	1.10
P.	" 59 " "	" " " "	1.40
W.	Whatman's, 54 " " Imitation	" " " "	1.20

STRATHMORE'S WHITE DETAIL DRAWING PAPERS

Not Mounted

30 inch,	about 30 lbs. to the roll	per lb. .30
36 " "	35 " "	" .30
42 " "	40 " "	" .30
48 " "	45 " "	" .30

TRANSPARENT WHITE GELATINE

For Etchers and Engravers

Thin, 17×20½	per sheet, .25	Thick, 17×20½	per sheet, .30
--------------	----------------	---------------	----------------

THE ROLL PAPER BRACKET

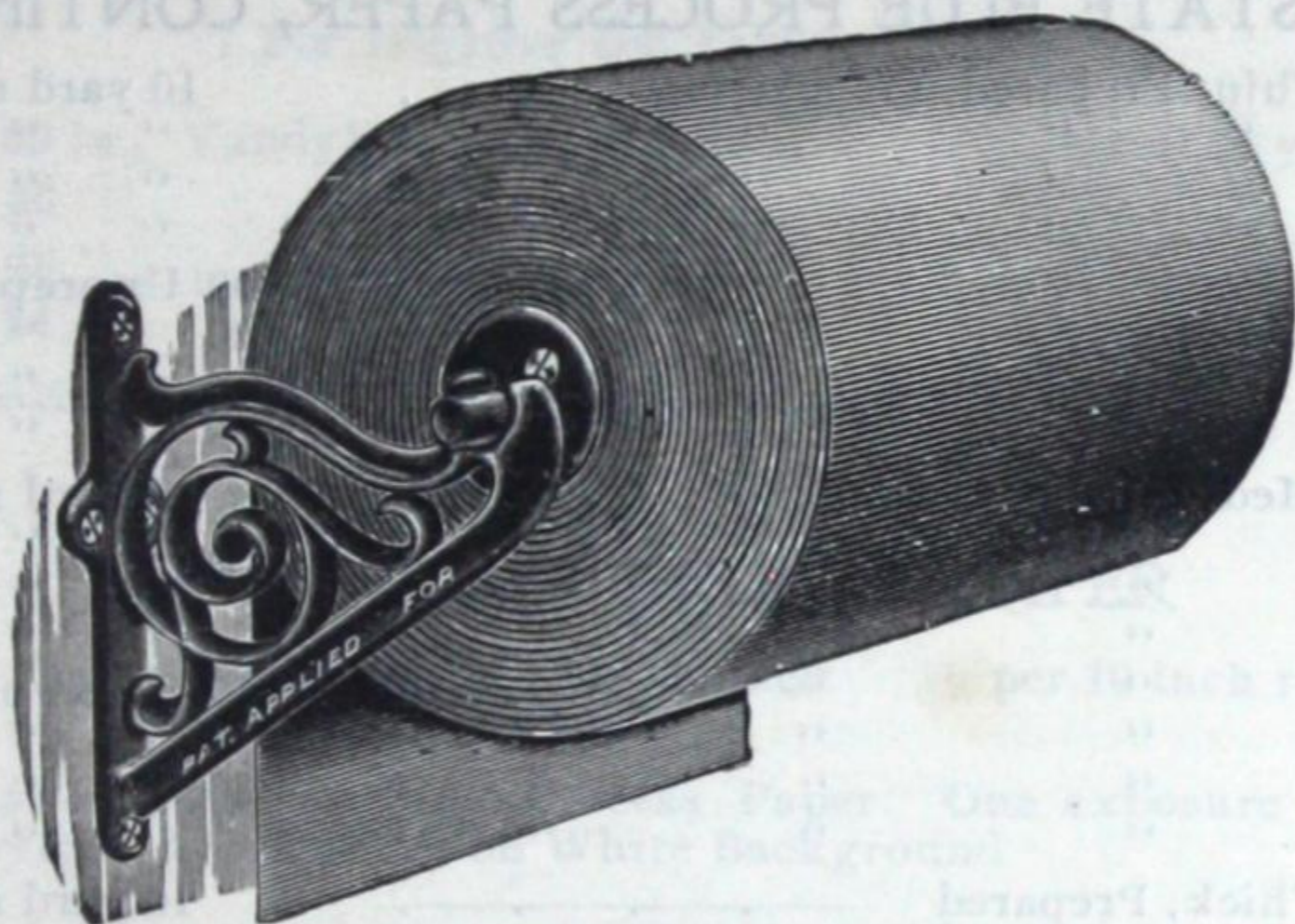


FIG. 1

Roll Paper Bracket, complete per pair, \$2.00

The above cut illustrates a new and useful device, which fills a want long felt by architects, engineers, draughtsmen, tailors and all those using paper in the form of a roll. It is also equally convenient in handling "Marline." Hitherto, no convenient method has been devised and it has been the custom to use some expensive and crude apparatus for suspending the rolls of paper

Having received many complaints as to the difficulty of handling roll paper, we are pleased to be able to place before our customers a simple and effectual device, consisting of a pair of ornamental black and gilt brackets of unique design, as illustrated in Fig. 2. These brackets are formed to receive a roll provided with a flange (shown in Fig. 3) so made as to be screwed to the wooden plugs which are found in the ends of roll paper

These brackets can be screwed to the wall, desk or any convenient place, and the exact amount of paper which is required readily drawn down and cut off, thus saving great waste



FIG. 2



FIG. 3

FROST & ADAMS CO.'S
BAY STATE BLUE PROCESS PAPER, CONTINUOUS

24 inch, Thin, Prepared, for mailing			10 yard roll, \$1.00
30 " " " " " "			" " 1.25
36 " " " " " "			" " 1.40
42 " " " " " "			" " 1.60
24 " " " " " "	50 yard roll, \$3.00	Unprepared,	1.90
30 " " " " " "	" " 3.50	" "	2.35
36 " " " " " "	" " 4.00	" "	2.80
42 " " " " " "	" " 4.50	" "	3.30
24 " Medium Thick, Prepared		10 yard roll,	1.00
30 " " " " " "		" "	1.25
36 " " " " " "		" "	1.40
42 " " " " " "		" "	1.60
24 " " " " " "	50 yard roll, \$3.15	Unprepared,	2.75
30 " " " " " "	" " 3.75	" "	3.35
36 " " " " " "	" " 4.30	" "	4.00
42 " " " " " "	" " 4.85	" "	4.70
24 " Thick, Prepared		10 yard roll,	1.00
30 " " " " " "		" "	1.20
36 " " " " " "		" "	1.45
42 " " " " " "		" "	1.60
24 " " " " " "	50 yard roll, \$4.00	Unprepared,	3.00
30 " " " " " "	" " 4.75	" "	3.50
36 " " " " " "	" " 5.50	" "	4.50
42 " " " " " "	" " 6.25	" "	5.25

LINAURA BLUE PRINT CLOTH

30 in., Prepared	10 yd. roll, \$3.30	30 in., Unprepared	10 yd. roll, \$2.70
36 " " "	10 " 3.60	36 " " "	10 " 3.00
42 " " "	10 " 4.80	42 " " "	10 " 4.20

Blueprint Cloth, on account of its strength, is preferred for prints intended for rough handling, especially in out-door work

MOULDED PAPER PULP CASES

For Preserving Drawings, Etc.



2×31 in., inside measure	each, .50	3×43 in., inside measure	each, .80
2×37 " " "	" .60	4×31 " " "	" .70
2×43 " " "	" .70	4×37 " " "	" .80
3×31 " " "	" .60	4×43 " " "	" .90
3×37 " " "	" .70	Larger Sizes made to order	

VANDYKE SOLAR CLOTH

For Negative and Positive Prints

No. 231.	30 in.,	Vandyke Cloth, prepared	.	roll 10 yds.,	\$4.20
	36 "	" " "	.	" "	4.80
	42 "	" " "	.	" "	6.00
	54 "	" " "	.	" "	9.60

Fixing Salt and Full Directions accompany every roll

DIRECT BLACK PROCESS PAPER

0 inch	.	per 10 yard roll,	\$2.50	|	42 inch	.	per 10 inch roll,	\$3.00
6 "	.	" "	2.70	|		.		

Manipulation same as Blue Process Paper. One exposure and one washing; result, Black Lines on White Background

UMBRA BLACK PROCESS PAPER

0 inch	.	per 10 yard roll,	\$1.65	|	42 inch	.	per 10 yard roll,	\$2.35
6 "	.	" "	2.00	|		.	Requires Water Bath only	

PREPARED NIGROSINE PAPER

Black Lines on a White Background. To Be Used With a Developer

0 inch	.	per 10 yard roll,	\$1 50	|	42 inch	.	per 10 yard roll,	\$2.50
6 "	.	" "	2.00	|		.		

DEVELOPER FOR NIGROSINE PROCESS. POWDER IN BOTTLES

ounce	.	per bottle,	.60	|	16 ounce	.	per bottle,	\$2.00
"	.	" "	1.10	|		.		

TUBES FOR PRESERVING BLUE PRINT PAPER



4 in., for 10 yard roll	each,	\$1.00	|	24 in., for 50 yard roll	each,	\$1.20
6 "	"	1.15	|	30 "	"	1.40
8 "	"	1.25	|	36 "	"	1.55
12 "	"	1.35	|	42 "	"	1.70

These Tubes are made of tin, with close fitting covers, and are the best thing in which to keep the cut rolls of paper, as they exclude the light and moisture

VANDYKE SOLAR PAPER

30 inch, Medium Thick	per 10 yard roll, \$1.80
36 " "	" " 2.10
42 " "	" " 2.40
30 " Thin, for Mailing and for Negatives	" " 1.80
36 " " " " " "	" " 2.10
42 " " " " " "	" " 2.40

Fixing Salt furnished with every roll

Vandyke Salt, for intensifying and fixing prints	per 4 ounce box, .15
" " " " " "	per 1 pound box, .40

A Perfect Paper for Positive Prints, which is easily manipulated, keeps well, does not become brittle, prints rapidly, saves original tracing, cannot spoil positive prints by over-exposure

From the original tracing a copy is made on Vandyke Paper with white transparent lines on an opaque dark-brown background. This copy is used in place of the original tracing to print from. Positive Copies, either Black Lines on White Background (by printing on Vandyke Paper, with an exposure of about one minute in strong sunlight) or Blue Lines on White Background (by printing on regular Blueprint Paper, with about four minutes' exposure in good sunlight, or on rapid Blueprint Paper, with about one minute exposure in good sunlight)

The thin and most transparent Vandyke Solar Print Paper is, of course, the most suitable to make Positive Copies from

If a Vandyke Print is only to serve as a Negative, it should be made from a tracing placed into the frame with the wrong side (not picture side) against the glass. By this method the lines of the tracing come into direct contact with the surface of the sensitive paper thus shutting out all light that might otherwise come sideways between the tracing and the Vandyke Solar Paper

DIRECTIONS FOR MAKING VANDYKE PRINTS

If printing from an original tracing expose about one minute in sunlight

The exposure is sufficient when the paper protruding over the edge of the original assumes a dark tan color, and when the lines of the original assume a little color on the copy. Wash the print for about three to five minutes in water (running water is preferable), and then, wet as it is, fix it by immersion in a solution consisting of about one half ounce of fixing salt to one quart of water

For a small number of Vandyke Prints it will be more convenient to apply the fixing solution with a brush or sponge. After the fixing solution has been applied, wash the print again in water and then hang it up to dry

The simplest method to smoothen (for the purpose of printing) a large copy made on this paper is to roll it into the smallest possible size

STANDARD PROFILE PAPERS

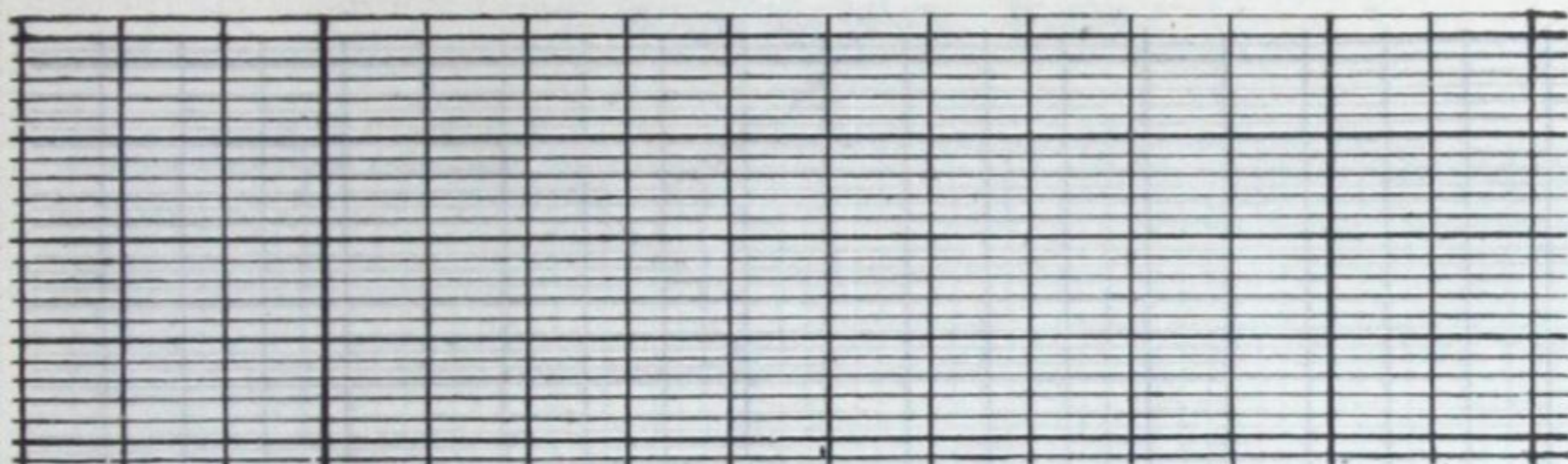


PLATE A, 4 x 20 TO ONE INCH

250.	Sheets, Engraving 15 x 42 in.	per quire, \$8.50	per sheet, .40
253.	Roll, 20 in. wide		per yard, .30
254.	" 10 "		" .20
255.	" 20 " Mounted on Muslin		" .75
256.	" 10 " " "		" .50
257.	" 20 " on Tracing Paper (Orange only)		" .30

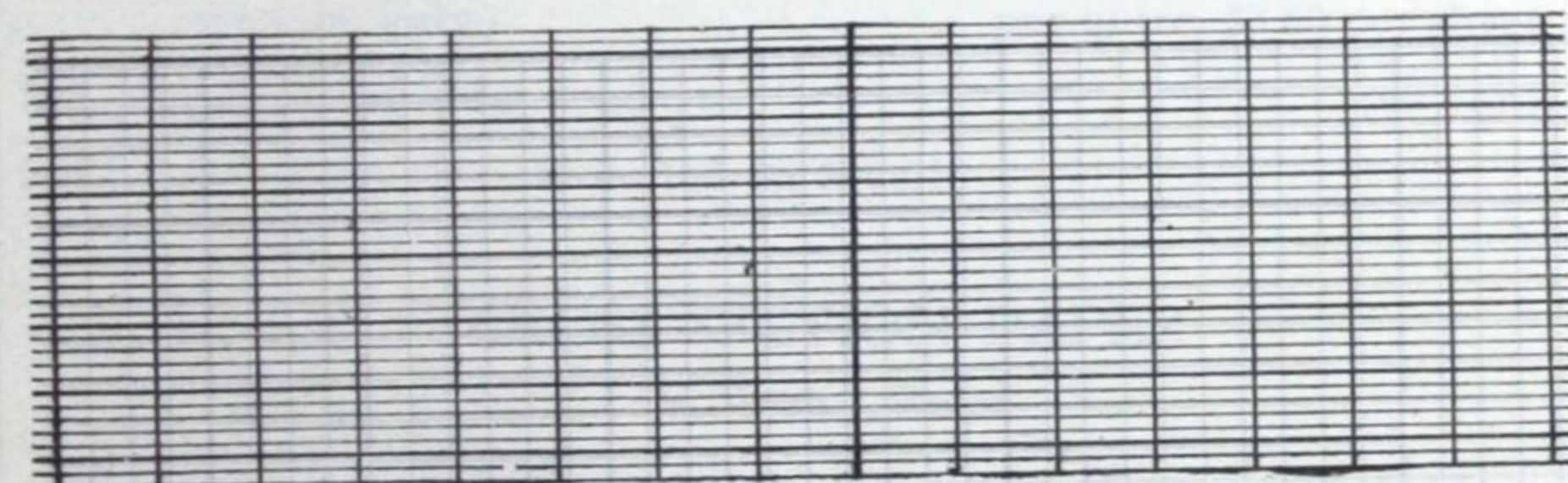


PLATE B, 4 x 30 TO ONE INCH

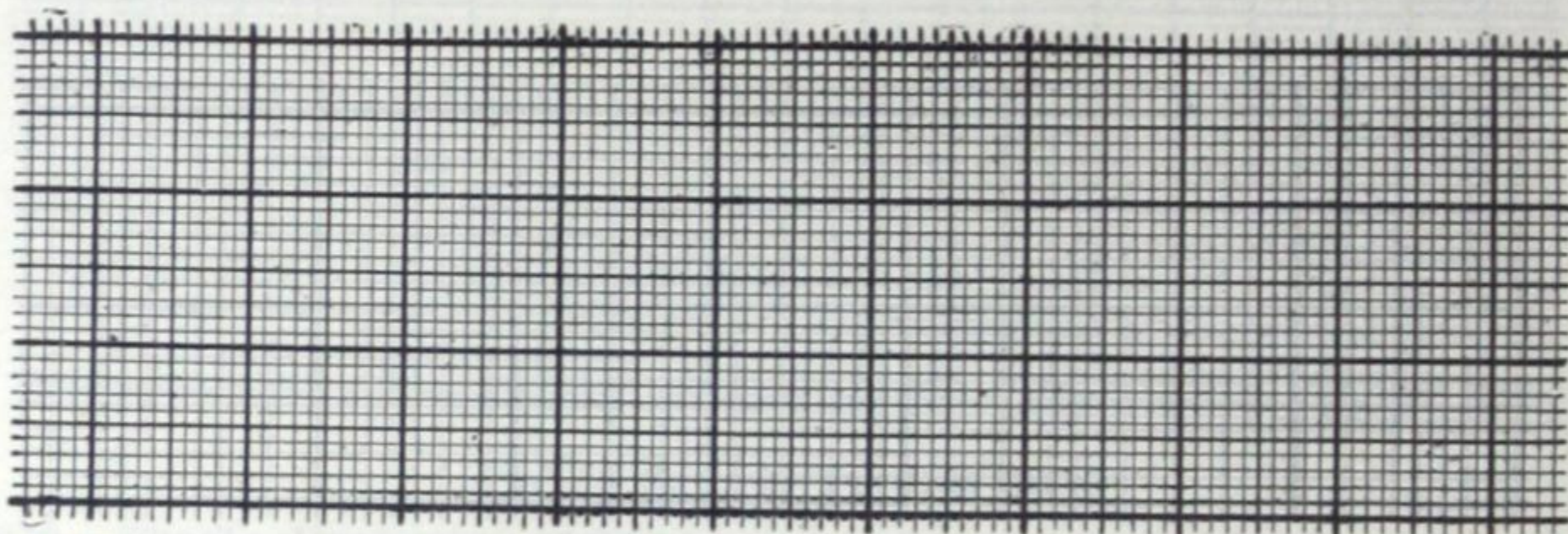
260.	Sheets, Engraving 13½ x 42 in.	per quire, \$8.50	per sheet, .40
263.	Roll, 20 in. wide		per yard, .30
264.	" 9 "		" .20
265.	" 20 " Mounted on Muslin		" .75
266.	" 9 " " "		" .50
267.	" 20 " on Tracing Paper (Orange only)		" .30

Unmounted in Rolls of 50 yards. Mounted on Muslin in Rolls of 20 yards. Printed in Orange or Green. We call attention to the quality of the paper we use for our "Standard" Profile and Cross Section Papers. It is a fine, tough Drawing Paper. The lines are more distinct than on other Profile Papers

Please state color when ordering above papers

CROSS SECTION PAPER

In Sheets and Rolls. Ruled

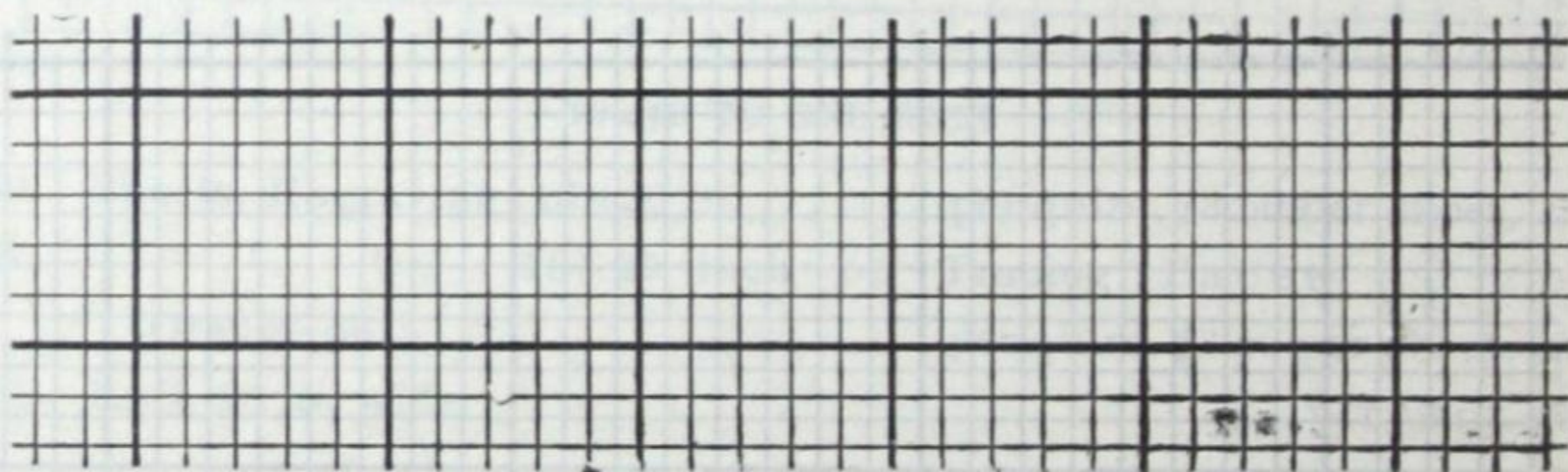


MILLIMETER

300.	Sheets, Engraving, 40×50 cm.	per quire, \$3.50 per sheet, .20
301.	" " 40×50 " on Tracing Paper (Orange only)	per quire, \$3.50 per sheet, .20
303.	Roll, 50 cm. wide	per yard, .24
305.	" 50 " Mounted on Muslin	" .65
306.	" 75 " " " " " " " " " " "	" .50
308.	" 75 " Mounted on Muslin	" 1.00
307.	" 50 " on Tracing Paper (Orange only)	" .24

CROSS SECTION PAPER

In Sheets. Ruled

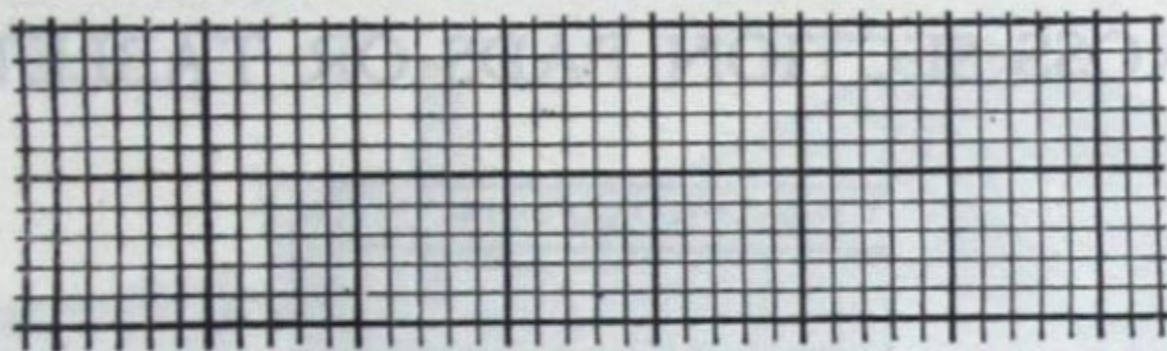


8x8 TO ONE INCH

310.	Sheets, 16¼ × 21⅞ in.	per quire, \$3.50 per sheet, .20
311.	" 16¼ × 21⅞ " on Tracing Paper (Orange only)	per quire, \$3.50 per sheet, .20

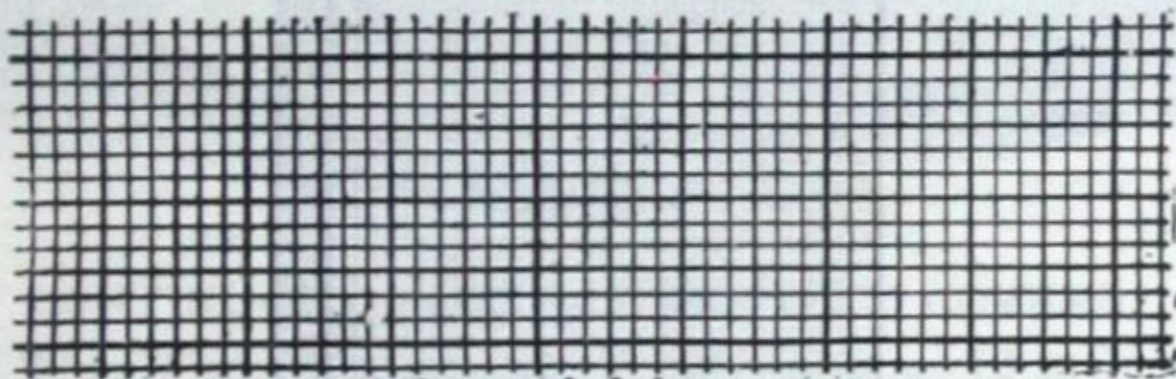
Please state color when ordering above papers

CROSS SECTION PAPERS



5 x 5 TO ONE-HALF INCH

- 320 B. Sheets, engraving, 16x20 in. quire, \$3.50 sheet, .20
 321 R. " " 16x20 " on Tracing " 3.50 " .20
 Paper (Orange only) " 3.50 " .20



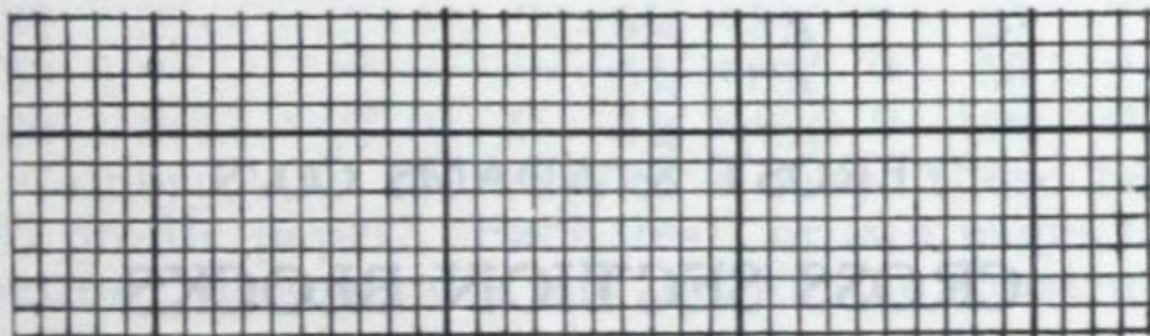
12 x 12 TO ONE INCH

322. Sheets, engraving, 16x20 in. (Green only) quire, \$3.50 sheet, .20



5 x 5 TO ONE INCH

330. Sheets, ruled, 16x21 in. (Blue only) quire, \$1.00 sheet, .05



10 x 10 TO ONE INCH

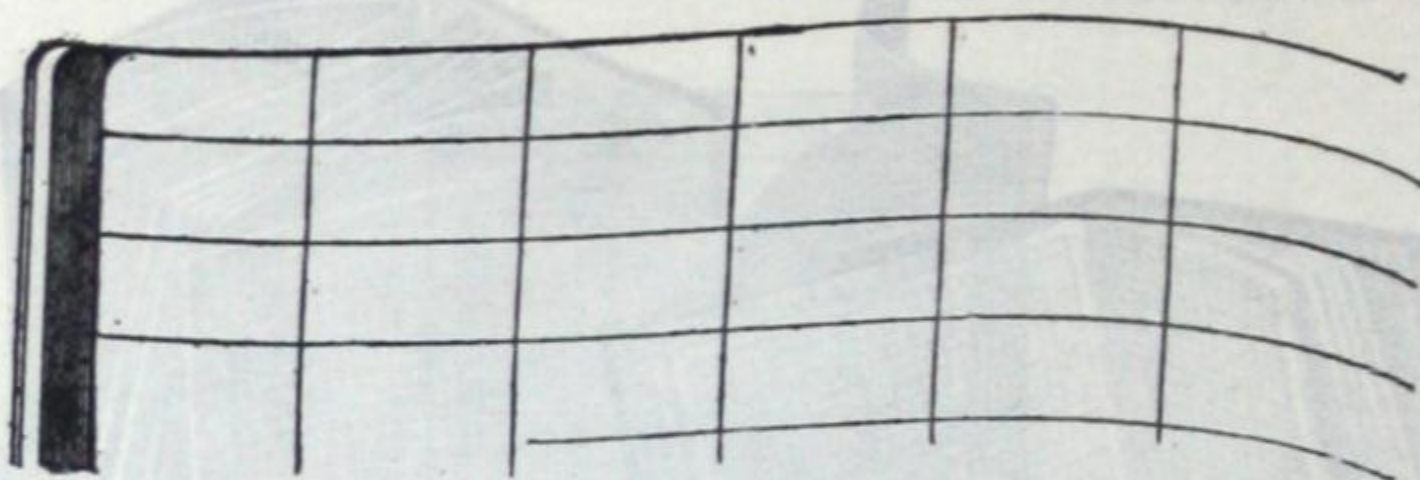
331. Sheets, ruled, 16x21 in. (Blue only) quire, \$1.00 sheet, .05

FROST & ADAMS CO.'S CROSS SECTION PAPERS

333. Sheets, engraved, 6 x 8 in. quire, .40 sheet, .02
 334. Sheets, engraved, 7½ x 10 " " .60 " .03

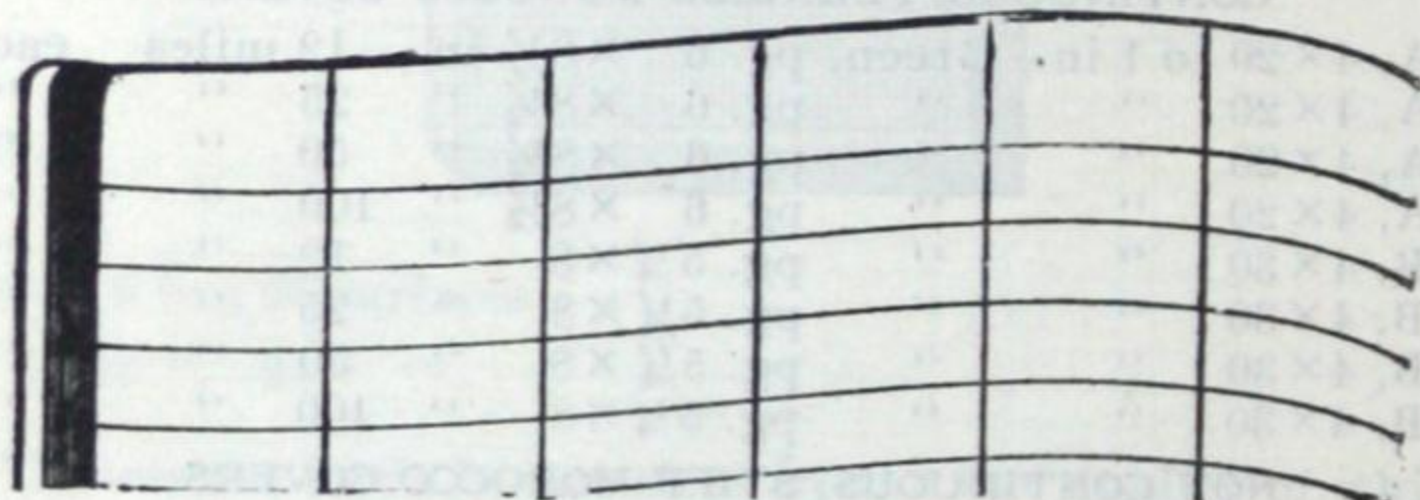
Both sizes printed in Blue, Dark Olive Green, Light Yellow Green
 Divided 1 inch, ½ inch, ¼ inch, and subdivided 20 parts to the inch
 Used by Massachusetts' Institute of Technology, Cornell University,
 and others. Please state color when ordering above papers

ENGINEERS' FIELD, LEVEL AND TRANSIT BOOKS



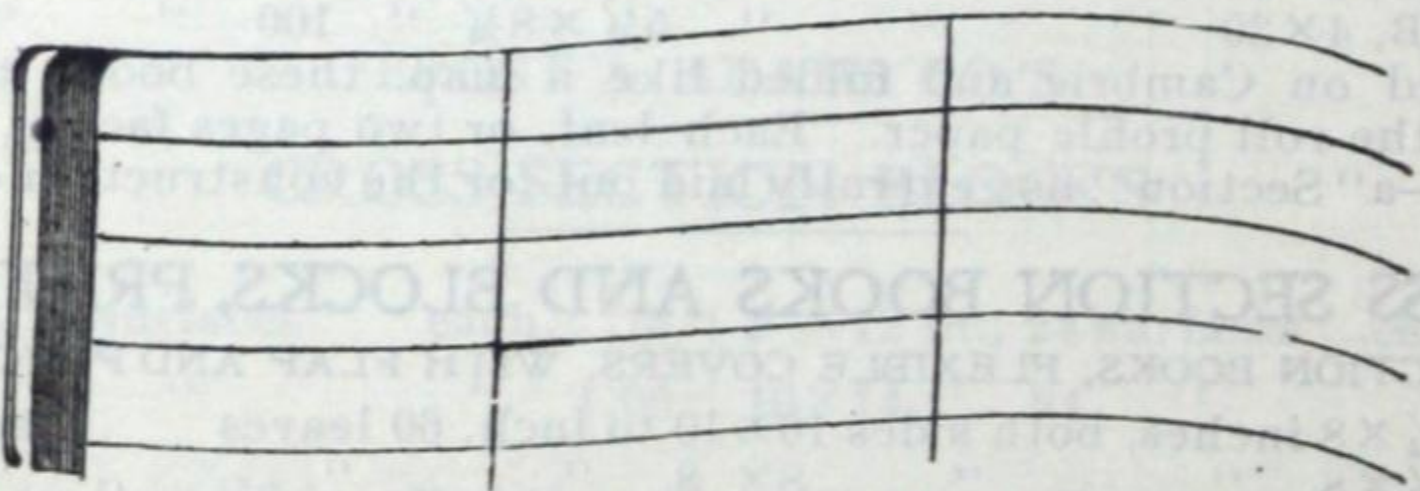
FIELD BOOK, LEFT-HAND PAGE

- Field Book, 4 × 7 inches, 80 leaves with Locke's Tables . . . each, .50
 " 4½ × 7½ inches, 80 leaves with Locke's Tables . . . " .60



LEVEL BOOK, LEFT-HAND PAGE

- Level Book, 4½ × 7½ inches, 80 leaves with Locke's Tables . . . each, .60

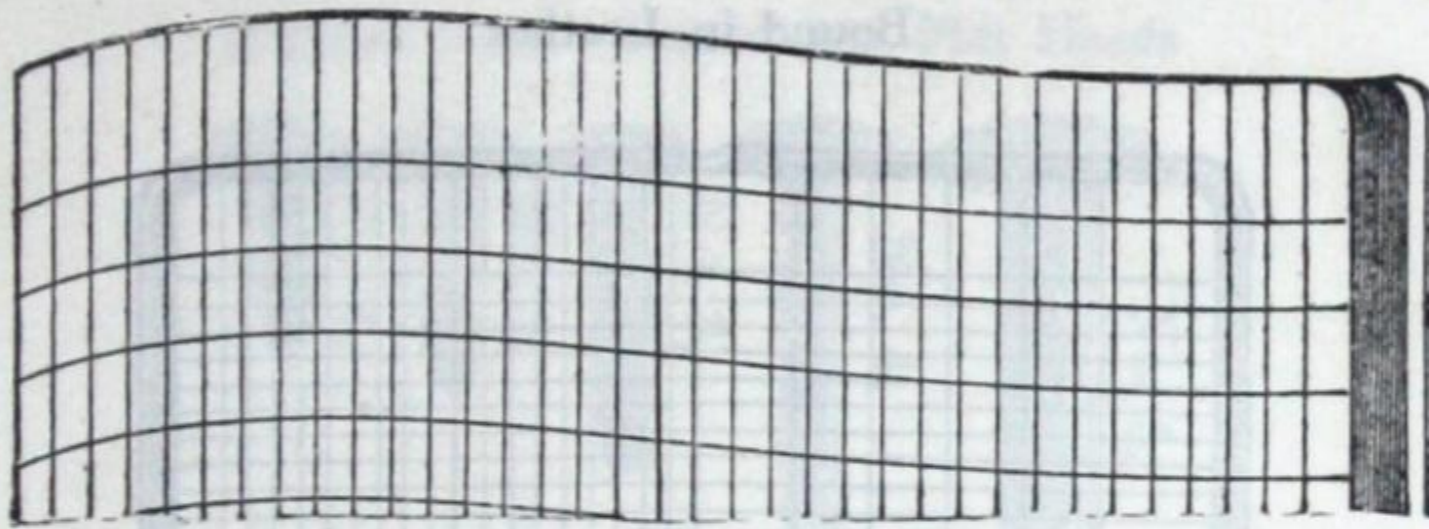


TRANSIT BOOK, LEFT-HAND PAGE

- Transit Book, 4½ × 7½ inches, 80 leaves with Locke's Tables . . . each, .60

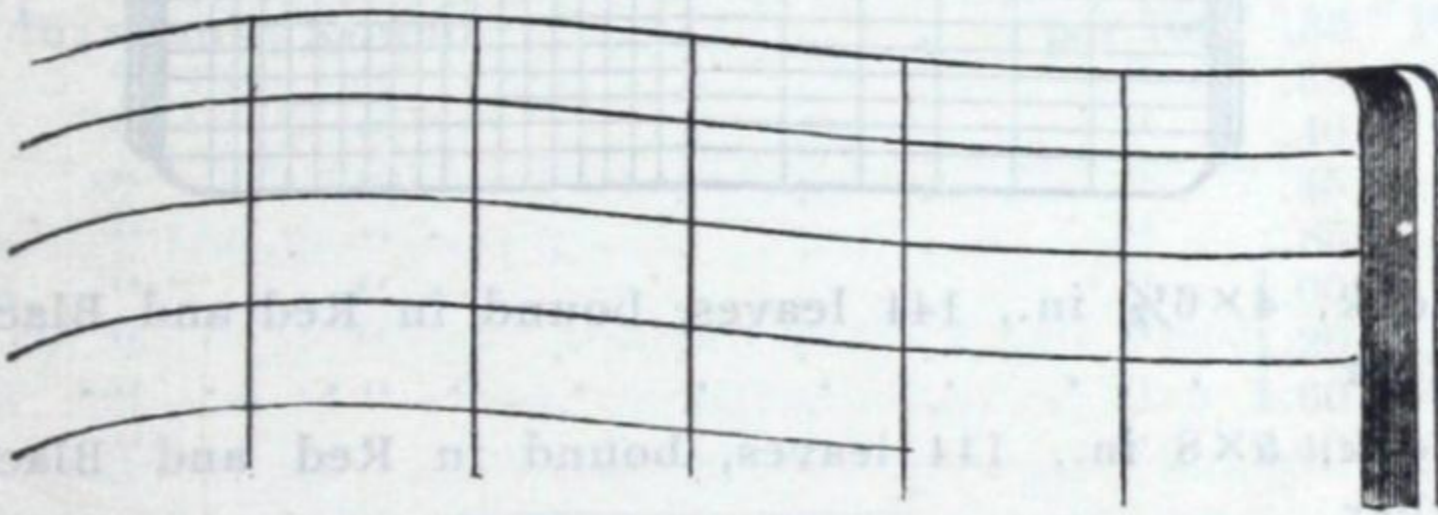
The paper is high grade, taking both ink and pencil. Substantially bound in sheepskin to open flat. Round corners.

Engineers' Field, Level and Transit Books—continued



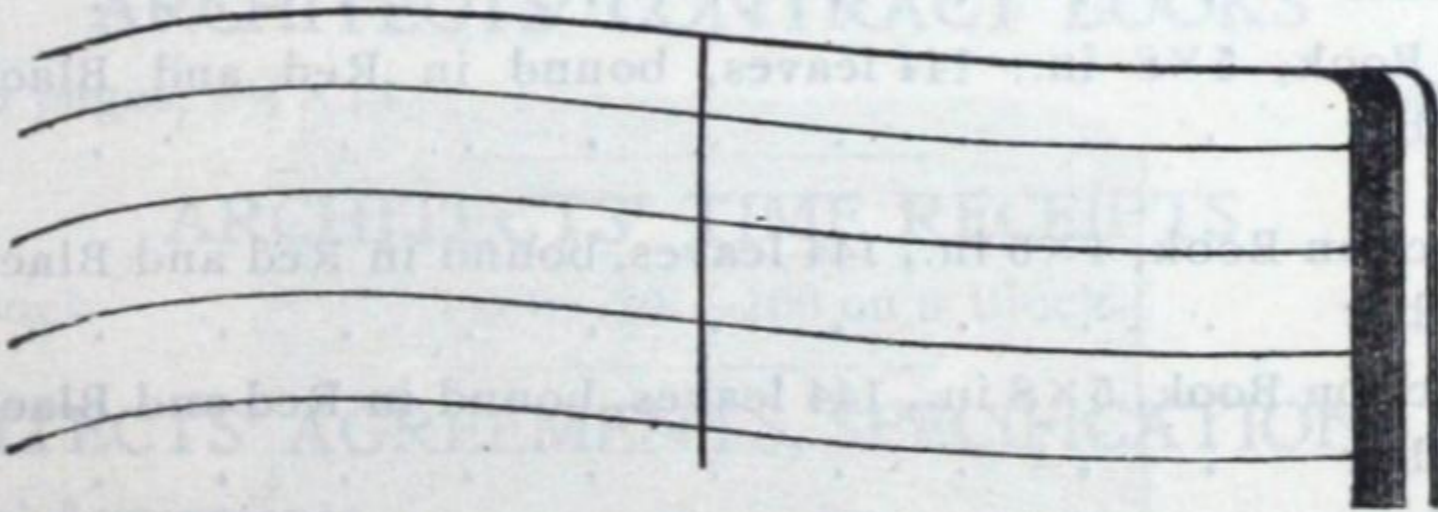
FIELD BOOK, RIGHT-HAND PAGE

Description and prices opposite



LEVEL BOOK, RIGHT-HAND PAGE

Description and prices opposite

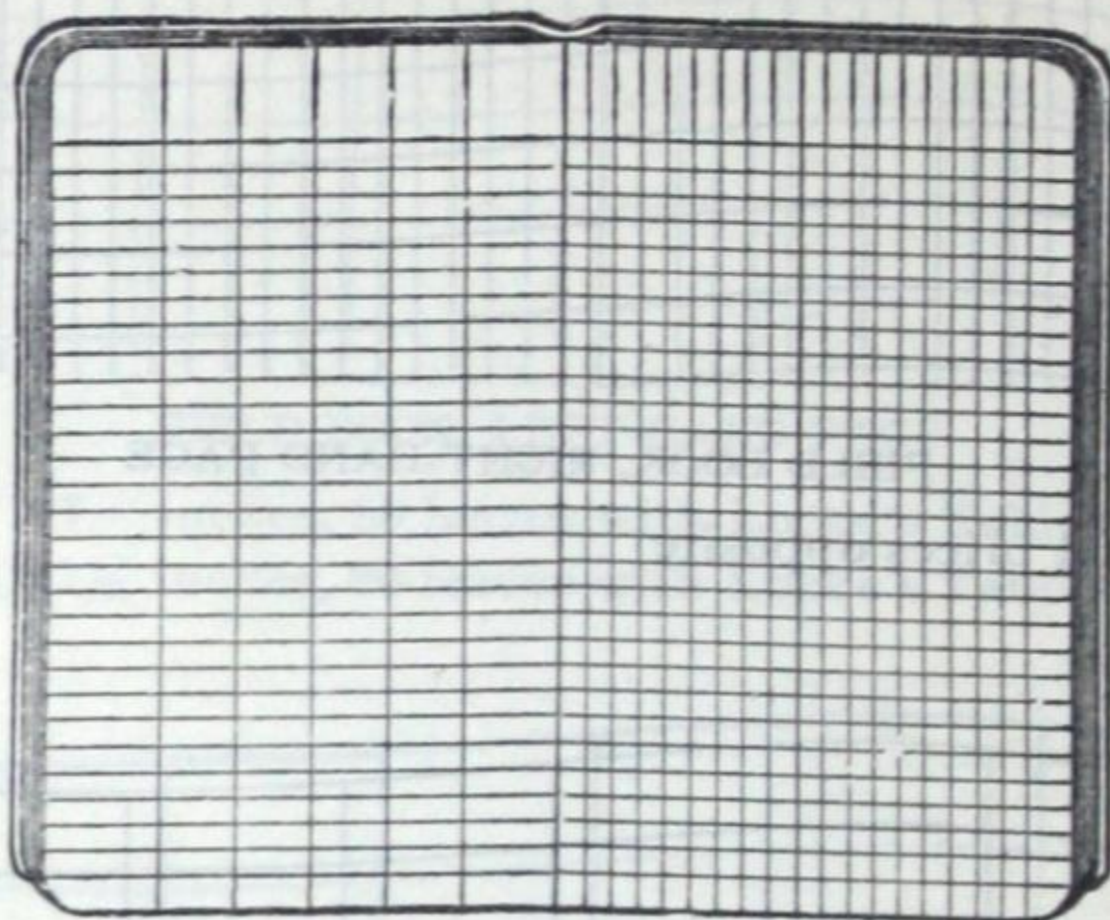


TRANSIT BOOK, RIGHT-HAND PAGE

Description and prices opposite

LEVEL, TRANSIT AND ENGINEERS' FIELD BOOKS

Bound in Leather

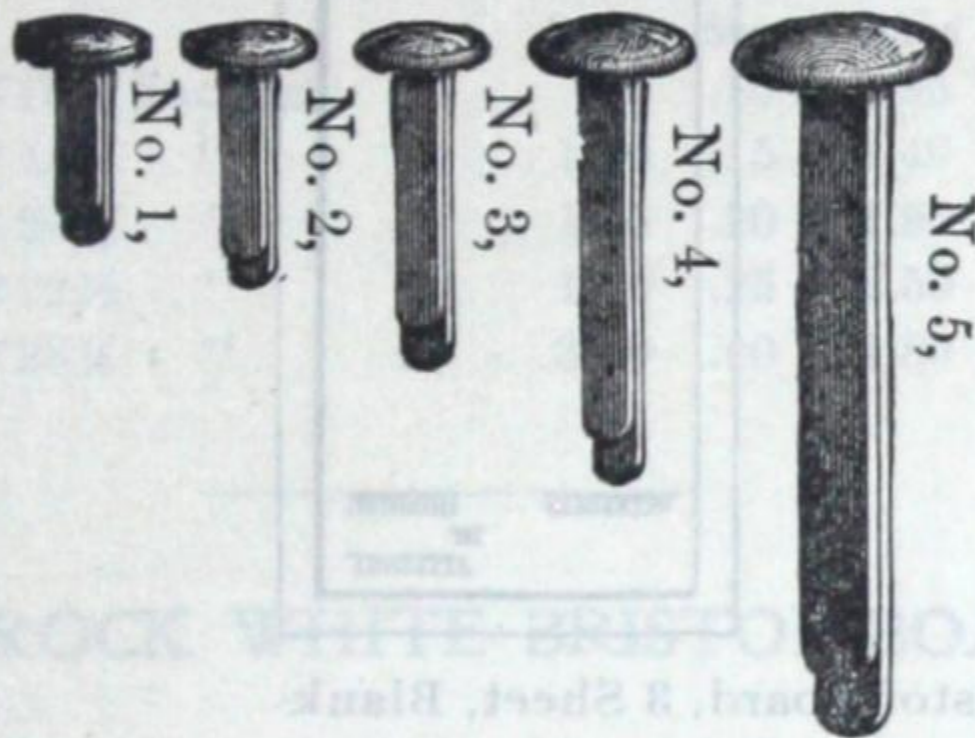


Level Book, 4×6½ in., 144 leaves, bound in Red and Black Leather	each, .50
Level Book, 5×8 in., 144 leaves, bound in Red and Black Leather	“ .75
Transit Books, 4×6½ in., 144 leaves, bound in Red Cloth only	“ .50
Transit Book, 4×6½ in., 144 leaves, bound in Red and Black Leather	“ .50
Transit Book, 5×8 in., 144 leaves, bound in Red and Black Leather	“ .75
Cross Section Book, 4×6 in., 144 leaves, bound in Red and Black Leather	“ .50
Cross Section Book, 5×8 in., 144 leaves, bound in Red and Black Leather	“ .75
Field Book, 4×6½ in., 144 leaves, bound in Red and Black Leather	“ .50
Field Book, 5×8 in., 144 leaves, bound in Red and Black Leather	“ .75

With printed head lines

McGILL'S PATENT PAPER FASTENERS

Regular Sizes. Round and Flat Heads



No.	Shank Size	Head Type	per 100	Flat
No. 1.	1/4 in.	Round	.35	.25
2.	1/2	"	.38	.27
3.	3/4	"	.40	.30
4.	1	"	.45	.35
5.	1 1/4	"	.85	.63
6.	1 1/2	"	1.00	.70
7.	2	"	1.20	1.00
8.	3	"	1.60	1.40
9.	4	"	2.40	2.00

ARCHITECTS' CERTIFICATE BOOKS

100 Receipts . . . each, .75 | 200 Receipts . . . each, \$1.25

ARCHITECTS' CONTRACT BOOKS

Round, 50 pages, 8 1/2 x 14 each, \$3.50

ARCHITECTS' TIME RECEIPTS

50 on a Block each, .30 | 100 on a Block each, .50

ARCHITECTS' AGREEMENTS, SPECIFICATIONS, ETC.

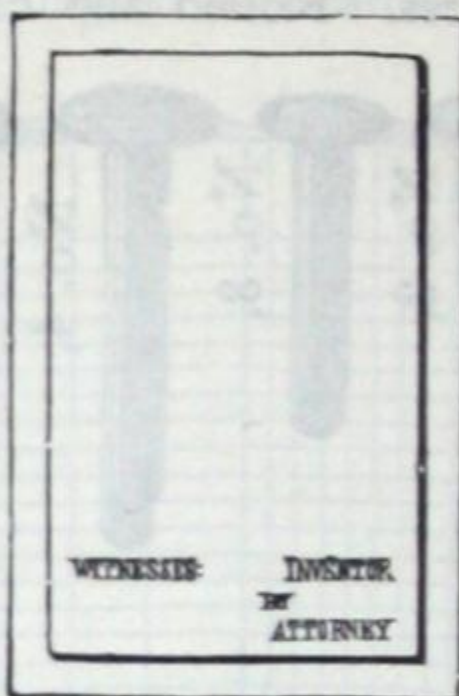
Architects' Agreements each, .05
 Architects' Specifications " .30
 Architects' Uniform Contracts " .05

ENAMEL CLOTH FOR ARCHITECTS

Used to Cover and Protect Plans and Tracings

54 inches wide per yard, .40

SUPERIOR BRISTOL BOARDS



Patent Office Bristol Board, 3 Sheet, Blank

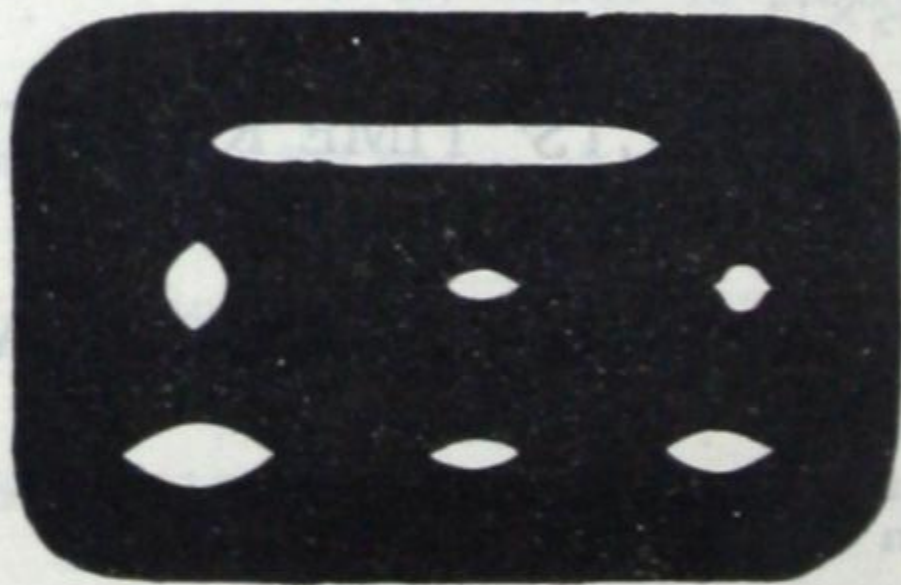
10×15 inches (U. S. size)	per gross, \$6.50	per dozen, .60
15×20 " (English size)	" 13.00	" 1.20

Patent Office Bristol Board, 3 Sheet, Printed with Border, etc.

10×15 inches	per gross, \$8 65	per dozen, .85
--------------	-------------------	----------------

This Bristol Board has a Hard Surface, possesses Unlimited Erasing Properties, and can be rolled without injury. It has the Thickness, Color, Quality and Size required by the U. S. Patent Office and is far preferable to other Bristol Boards, because it does not have their high glossy surface

ERASING SHIELDS



Metal Erasing Shield, Nickel Plated, 2½ × 3¾ inches	each, .25
Celluloid Erasing Shield, Transparent, 2½ × 4½	" .20
" " " " 3 × 5	" .25

REYNOLDS' WHITE BRISTOL BOARDS

		2 SHEET		3 SHEET		4 SHEET	
		Dozen	Sheet	Dozen	Sheet	Dozen	Sheet
Cap,	12½ × 15¼ inches	.60	.10	.95	.13	\$1.20	.15
Demy,	14⅝ × 18¼ "	1.00	.15	1.40	.20	1.90	.25
Medium,	16½ × 20¾ "	1.30	.20	1.90	.25	2.60	.30
Royal,	18¼ × 22¾ "	1.60	.25	2.50	.35	3.30	.40
Imperial,	22 × 28¼ "	3.20	.40	4.80	.45	6.40	.55

SHAMROCK WHITE BRISTOL BOARDS

		2 SHEET		3 SHEET		4 SHEET	
		Dozen	Sheet	Dozen	Sheet	Dozen	Sheet
Cap,	12½ × 15¼ inches	.60	.10	.90	.15	\$1.20	.15
Demy,	14⅝ × 18¼ "	1.00	.15	1.50	.20	2.00	.25
Medium,	16½ × 20¾ "	1.30	.20	2.00	.25	2.70	.30
Royal,	18¼ × 22¾ "	2.00	.25	2.70	.35	3.50	.40

STRATHMORE

PATENT OFFICE WHITE BRISTOL BOARDS

10×15, Plain	per 100 sheets, \$3.90 per doz.,	.50
10×15, Ruled	" 100 "	.60

FROST & ADAMS CO.'S

SUPERIOR WHITE WEDDING BRISTOL BOARDS

For Pen and Ink Work

Barrington Bristol,	22×28 inches	per sheet,	.25
Epson Bristol,	22×28 "	"	.35
Eagle Bristol,	22×28 "	"	.20

STRATHMORE DRAWING PAPERS OR BRISTOL BOARDS

White, Smooth or Rough Surface

No. 5.	1 Sheet, A, 23 × 29 in.,	per 100 sheets, \$ 6.00	per sheet, .07
"	" B, 14½ × 23 "	3.00	" .04
"	" C, 11½ × 14½ "	1.50	" .02
No. 7.	2 Sheet, A, 23 × 29 "	12.00	" .12
"	" B, 14½ × 23 "	6.00	" .06
"	" C, 11½ × 14½ "	3.00	" .03
No. 8.	" A, 23 × 29 "	12.00	" .12
"	" B, 14½ × 23 "	6.00	" .06
"	" C, 11½ × 14½ "	3.00	" .03
No. 10.	3 Sheet, A, 23 × 29 "	18.00	" .18
"	" B, 14½ × 23 "	9.00	" .10
"	" C, 11½ × 14½ "	4.50	" .05
No. 11.	" A, 23 × 29 "	18.00	" .18
"	" B, 14½ × 23 "	9.00	" .10
"	" C, 11½ × 14½ "	4.50	" .05
No. 12.	4 Sheet, A, 23 × 29 "	24.00	" .25
"	" B, 14½ × 23 "	12.00	" .12
"	" C, 11½ × 14½ "	6.00	" .06
No. 13.	" A, 23 × 29 "	24.00	" .25
"	" B, 14½ × 23 "	12.00	" .13
"	" C, 11½ × 14½ "	6.00	" .06
No. 14.	5 Sheet, A, 23 × 29 "	30.00	" .30
"	" B, 14½ × 23 "	15.00	" .15
"	" C, 11½ × 14½ "	7.50	" .10
No. 15.	" A, 23 × 29 "	30.00	" .30
"	" B, 14½ × 23 "	15.00	" .15
"	" C, 11½ × 14½ "	7.50	" .10

STRATHMORE VELLUM MOUNTS

No. 738.	2 Sheet, 22½ × 28½ in., white	100 sheets, \$ 6.00	sheet, .07
739.	" 22½ × 28½ " buff	6.00	" .07
740.	" 22½ × 28½ " brown	6.00	" .07
741.	3 Sheet, 22½ × 28½ " white	8.75	" .10
742.	" 22½ × 28½ " buff	8.75	" .10
743.	" 22½ × 28½ " brown	8.75	" .10
744.	5 Sheet, 22½ × 28½ " white	14.50	" .15
745.	" 22½ × 28½ " buff	14.50	" .15
746.	" 22½ × 28½ " brown	14.50	" .15

STRATHMORE RIPPLE MOUNTS

No. 679.	25 Points, 22½ × 28½ in., white	100 sheets, \$8.00	sheet, .10
680.	" 22½ × 28½ " buff	8.00	" .10
681.	" 22½ × 28½ " brown	8.00	" .10

Samples furnished on application

STRATHMORE MARBLE MOUNTS

No. 725.	2 Sheets, 22½ × 28½ in.,	white and buff	100 sheets, \$8.00 sheet,	.10
726.	" 22½ × 28½ "	sepia and brown	" 8.00 "	.10
727.	4 Sheets, 22½ × 28½ "	white and buff	" 14.00 "	.15
528.	" 22½ × 28½ "	sepia and brown	" 14.00 "	.15
729.	25 Points, 22½ × 28½ "	white	" 9.00 "	.10
730.	" 22½ × 28½ "	buff	" 9.00 "	.10
731.	" 22½ × 28½ "	brown	" 9.00 "	.10
732.	50 Points, 22½ × 28½ "	white	" 12.00 "	.15
733.	" 22½ × 28½ "	buff	" 12.00 "	.15
734.	" 22½ × 28½ "	brown	" 12.00 "	.15
735.	75 Points, 22½ × 28½ "	white	" 15.00 "	.18
736.	" 22½ × 28½ "	buff	" 15.00 "	.18
737.	" 22½ × 28½ "	brown	" 15.00 "	.18

STRATHMORE ILLUSTRATION BOARDS

For Illustrations, Wash and Water Color Drawings

Illustration Boards, 22 × 28 in.,	thick	doz., \$3.00 sheet,	.25
" " 20 × 30 "	"	" 2.40 "	.20
" " 30 × 40 "	"	" 4.80 "	.40
" " 22 × 30 "	lightweight	" 2.00 "	.25

WINSOR & NEWTON'S ILLUSTRATION BOARDS

For Illustrations, Wash and Water Color Drawings

Imperial,	20 × 30 in.,	thin	per doz., \$3.75 per sheet,	.30
"	22 × 30 "	thick	" 4.20 "	.35
Double Elephant,	30 × 40 "	thin	" 6.00 "	.50
"	30 × 40 "	thick	" 7.00 "	.60
"	30 × 40 "	special	" 5.00 "	.45

Special prices by the 100 sheets

Samples furnished on application

WINSOR & NEWTON'S
WATER COLOR SKETCHING BOARDS

London Made

Imperial Size 21¼ × 29 inches, C. P. Surface	each,	.60
Imperial Size 21¼ × 29 inches, H. P. Surface	“	.60

Mounting Boards covered on one side with Whatman's Drawing Paper

WINSOR & NEWTON'S
WATER COLOR SKETCHING BOARDS

American Made

Imperial Size, 22 × 30 inches, C. P. Surface, 72 lbs.	each,	.40
“ “ “ H. P. “ “	“	.40
“ 20 × 30 “ C. P. “ 140 lbs.	“	.70
“ “ “ H. P. “ “	“	.70

Mounting Boards covered on one side with Whatman's Drawing Paper

LINEN FACE WATER COLOR BRISTOL BOARD

Size 22 × 28 per doz., \$1.50 per sheet, .15

This board has a smooth linen finish and is made about the same thickness as post cards, is expressly intended for decorative water color work such as Hand Painted Post Cards, Season Cards, Birthday Cards, Dinner Favors, Tally-Place Cards etc. Samples on Request.

FRISKET, OR AIR BRUSH TRACING PAPER

Very Transparent

Frisket Paper, 20 × 24 inches, very transparent per doz., \$2.00 per sheet, .15

FROST & ADAMS CO.'S ILLUSTRATION BOARDS

Illustration Boards, 30 × 40 inches, thick	per doz.,	\$4.80 per sheet, .40
Illustration Boards, 20 × 30 inches, thick	“	2.40 “ .20

For Illustrations, Wash and Water Color Drawings

Send for samples

WHITE CARD BOARDS FOR MOUNTING PICTURES

4 Ply, 22x28 sheet, .06	12 Ply, 22x28 sheet, .12	14 Ply, 30x40 sheet, .25
6 " " " .07	14 " " " .15	12 " 26x44 " .25
8 " " " .08	16 " " " .20	12 " 28x44 " .30
10 " " " .10	12 " 30x40 " .25	10 " 30x44 " .35

COLORED, MELTON CARD BOARDS FOR MOUNTING PHOTOS

5 Ply Carbon, 22x28, per sheet, .10	10 Ply Carbon, 22x28 per sheet, .15
" Sct Gray " " .10	" Sct Gray " " .15
" Steel Blue " " .10	" Steel Blue " " .15
" Ivy Green " " .10	" Ivy Green " " .15
" Brown " " .10	" Brown " " .15
10 Ply Carbon 30x40 " .30	10 Ply Ivy Green, 30x40 " .30
" Sct Gray " " .30	" Brown " " .30
" Steel Blue " " .30	

POSTER BOARDS, COLORED, THIN FOR MOUNTING PHOTOS

Carbon Black, 30x40 per sheet, .12	Brown, 30x40 . per sheet, .12
Green " " .12	Drab " " .12
Red " " .12	Sct Gray " " .12

EXTRA SMOOTH PULP BOARDS FOR MOUNTING PICTURES

Thick, 30x40 . per sheet, .10	Triple, 30x40 . per sheet, .25
Double " " .15	

CARTRIDGE BOARDS FOR WATER COLOR PAINTING

Tinted

Bx1, White, 22x34 per sheet, .12	Bx10, Yellow, 22x34 per sheet, .12
Bx2, Pink " " .12	Bx11, Green, Dk. " " .12
Bx3, Blue " " .12	Bx12, Purple " " .12
Bx4, Green, Lt. " " .12	Bx13, Maroon " " .12
Bx5, Cream " " .12	Bx14, Gray, Dk. " " .12
Bx6, Gray, Lt. " " .12	Bx15, Green, Dk. " " .12
Bx7, Brown " " .12	Bx16, Brown, Dk. " " .12
Bx8, Red " " .12	Bx17, Gray, Med. " " .12
Bx9, Salmon " " .12	

Full line of Samples furnished to Dealers on application

MAT BOARDS

For Mounting or Picture Mats, with an Egg Shell or Torchon Surface,
Cream Tint on One Side and Buff Tint on the Other

No.	0.	Thin,	30×40	.	.	.	.	per sheet,	.20
	x.	Thick,	30×40	.	.	.	.	"	.30
	xx.	Double Thick,	30×40	.	.	.	.	"	.40
	xxx.	Treble Thick,	30×40	.	.	.	.	"	.50
	x.	Thick,	38×52	.	.	.	.	"	.50
	xx.	Double Thick,	38×52	.	.	.	.	"	.75
	xxx.	Treble Thick,	38×52	.	.	.	.	"	1.00
	x.	Smooth Gold,	30×40	.	.	.	.	"	1.50
	x.	Light Rough Gold,	30×40	.	.	.	.	"	1.40
	x.	Dark Rough Gold,	30×40	.	.	.	.	"	1.40

COLORED MAT BOARDS

Colored Mat Boards, 30×40 inches per sheet, .25

No. 46.	Yale Blue	No. 86.	Smooth Light Gray
70.	Rough Red	86½.	" Dark Gray
71.	" Green, light	87.	" Nut Brown
72.	" Yellow	87½.	" Medium Gray
73.	" Blue	88.	" Medium Gray
74.	" Brown	89.	" Jet Black
75.	" Terra Cotta	89½.	" Gray Green
77.	" Red	90.	Rough Gray
78.	" Dark Green	92.	Smooth Blue Gray
79.	Smooth Red	100.	" Pale Gray
80.	Smooth White	118.	" Fawn
81.	Rough White	119.	" Plum
82A.	Smooth Brown	120.	" Red Brown
82½.	" Wine Tint	121.	Rough Cream
83.	" Dark Brown	122.	Rough Gray
84.	" Dark Green	125.	Smooth Brown
84½.	" Light Green	118.	" Slate
85.	" Cream Tint	126.	" Brown
85½.	" Cream Tint	127.	" Dark Brown

VENEER BOARDS

Veneer Boards, 20×30 inches per sheet, .30
" 24×40 " " .60

No. 117.	Wood Color, 20×30 in.	No. 117L.	Gray Color, 20×30 in.
117A.	Oak " " "	117M.	Wood " " "
117B.	Gray " " "	117N.	Gray " " "
117G.	Steel " " "	123.	Mahogany, 24×40 "
117H.	Green " " "	124.	Oak, " "
117K.	Olive " " "		

Samples furnished on application

HALL'S STYK-UM-PHAST GUMMED CLOTH

In 10 Yard Rolls, 10 Colors, $\frac{7}{8}$ in. Wide

Lt. Green doz. rolls, \$1.20 each, .10	Ecreu doz. rolls, \$1.20 each, .10
Dark Green " 1.20 " .10	Gray " 1.20 " .10
Blue " 1.20 " .10	Brown " 1.20 " .10
Black " 1.20 " .10	Red " 1.20 " .10
White " 1.20 " .10	Maroon " 1.20 " .10

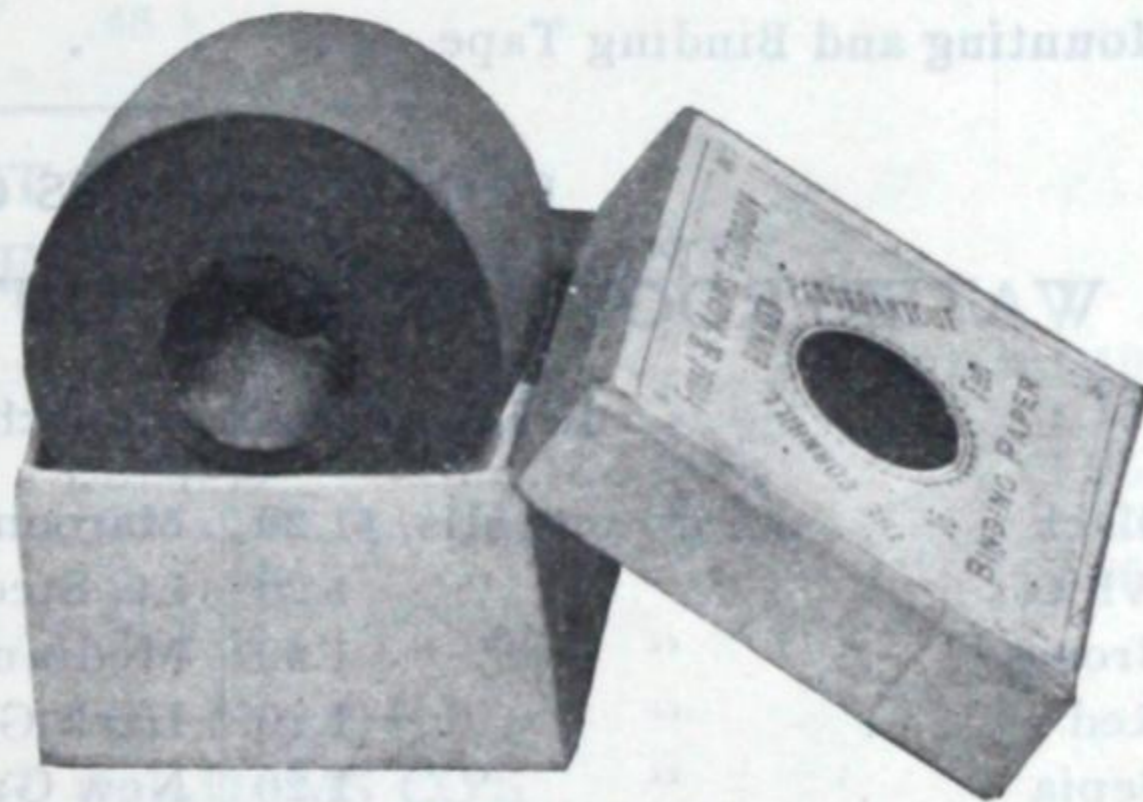
FROST & ADAMS CO.'S

CORNHILL PASSEPARTOUT BINDING PAPER

Gummed. In 25 Feet Rolls, $1\frac{1}{4}$ in. Wide



HALL'S



F. & A. CO.'S

White doz. rolls, \$1.80 each, .15	Red doz. rolls, \$1.80 each, .15
New Green " 1.80 " .15	Maroon " 1.80 " .15
Black " 1.80 " .15	Sage Green " 1.80 " .15
Brown " 1.80 " .15	Med. Steel Gray " 1.80 " .15

The best Binding made for Framing and Preserving Pictures. Tough Pebbled Paper, gummed. Soft colors, ready for use, guaranteed to stick

FROST & ADAMS CO.'S

BAY STATE PASSEPARTOUT BINDING PAPER

Gummed. In 12 Yard Rolls, $\frac{7}{8}$ in. Wide

White doz. rolls, \$1.20 each, .10	Black doz. rolls, \$1.20 each, .10
Gray " 1.80 " .10	Brown " 1.20 " .10
Red " 1.80 " .10	Green " 1.20 " .10
Crimson " 1.80 " .10	Blue " 1.20 " .10
New Green " 1.80 " .10	Bright Gold " 1.20 " .10

Packed one dozen rolls of each color in a box. Sample cards furnished

CROWELL ADHESIVE TAPE



For the use of Draughtsmen and all who have occasion to mount or stretch paper for Drawing, Designing or Painting, and for binding drawings to prevent them from being torn

Made in 50 foot Rolls, put up in a neat, sealed paper box, with the end of the Tape through a slit in the periphery of the box, which can be drawn from the Roll and cut in lengths to suit, Absolutely no waste

Mounting and Binding Tape per 50 foot roll, .25

FROST & ADAMS CO'S

WATERPROOF PASSEPARTOUT BINDING PAPER

In 5 Yard Rolls, 1 1/4 Inch Wide

Black	per dozen rolls, \$1.20	Maroon	per dozen rolls, \$1.20
White	" " 1.20	Lt. Steel Gray " " 1.20	
Brown	" " 1.20	Medium Gray " " 1.20	
Red	" " 1.20	Dark Gray " " 1.20	
Sepia	" " 1.20	New Green " " 1.20	
Blue	" " 1.20	Sage Green " " 1.20	
Olive Green " " 1.20		Gold	" " 2.40

Same Colors in Rolls 5, 10, 25, 50 and 100 yds. 25 in. wide per yard, .30

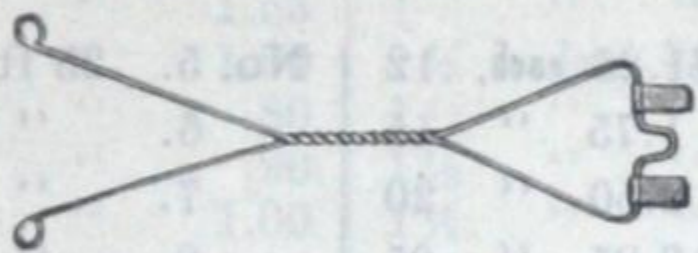
DENNISON'S GUMMED PASSEPARTOUT BINDING

In 12 Yard Rolls, except Plaid contains 5 yards, width 7/8 in. except Nos. 21 and 22, 1/4 in.

No. 1. Black	doz. rolls, \$1.20	No. 10. Dull Silver	doz. rolls, \$2.40
2. White	" 1.20	15. Sage Green	" 1.20
3. Gray	" 1.20	16. Scotch Plaid	" 1.20
4. Bottle Green	" 1.20	18. Bright Gold	" 2.40
5. Brown	" 1.20	19. Bronze Blue	" 1.20
6. Red	" 1.20	20. Bronze Green	" 1.20
7. Blue	" 1.20	21. Narrow Gold	" 1.20
8. Crimson	" 1.20	22. Narrow Silver	" 1.20
9. Dull Gold	" 2.40	23. Bronze Violet	" 1.20

Sample cards furnished on application

FROST & ADAMS CO'S
WHITE WIRE EASEL BACK RESTS



3 inch	per dozen, .28	9 inch	per dozen, .50
4 "	" .30	10 "	" .56
5 "	" .32	11 "	" .60
6 "	" .36	12 "	" .70
7 "	" .44	14 "	" .80
8 "	" .48		

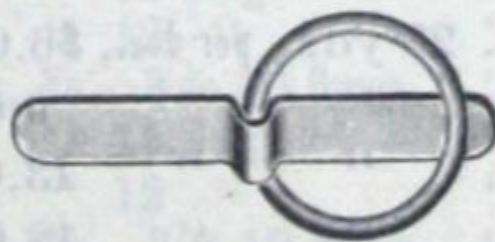
FROST & ADAMS CO'S
BRASS WIRE EASEL BACK RESTS

3 inch	per dozen, .65	9 inch	per dozen, 1.10
4 "	" .70	10 "	" 1.15
5 "	" .75	11 "	" 1.25
6 "	" .80	12 "	" 1.35
7 "	" .85	14 "	" 1.65
8 "	" 1.00		

FROST & ADAMS CO'S
PERFECTION BRASS WIRE EASEL BACK RESTS

3 inch	per dozen, \$1.04	8 inch	per dozen, \$1.80
4 "	" 1.20	9 "	" 1.94
5 "	" 1.34	10 "	" 2.24
6 "	" 1.50	12 "	" 2.40
7 "	" 1.64	14 "	" 2.70

FROST & ADAMS CO'S
BRASS PASSEPARTOUT RINGS



FULL SIZE CUT

Packed one gross in a box per dozen, .10

Special Catalogue of Wire Goods furnished on application

WHITE BRAIDED WIRE PICTURE CORD

25 Feet, Full Length

No. 0.	25 ft.	per doz., \$1.25 each, .12	No. 5.	25 ft.	per doz., \$5.00 each, .40
1.	"	" 1.75 " .15	6.	"	" 6.50 " .50
2.	"	" 2.50 " .20	7.	"	" 8.50 " .60
3.	"	" 3.25 " .25	8.	"	" 11.00 " .75
4.	"	" 4.00 " .35			

WHITE BRAIDED WIRE PICTURE CORD

25 Yards, Full Length

No. 0.	25 yds.	per doz., \$2.50 each, .20	No. 5.	25 yds.	per doz., \$10.00 each, .75
1.	"	" 3.50 " .30	6.	"	" 13.00 " 1.00
2.	"	" 5.00 " .40	7.	"	" 17.00 " 1.20
3.	"	" 6.50 " .50	8.	"	" 22.00 " 1.50
4.	"	" 8.00 " .60			

GILT BRAIDED WIRE PICTURE CORD

25 Feet, Full Length

No. 10.	25 ft.	per doz., \$3.00 each, .30	No. 15.	25 ft.	doz., \$16.00 each, \$1.50
11.	"	" 4.50 " .45	16.	"	" 20.00 " 1.75
12.	"	" 6.50 " .60	17.	"	" 25.00 " 2.25
13.	"	" 9.00 " .90	18.	"	" 30.00 " 2.50
14.	"	" 12.00 " 1.20			

GILT BRAIDED WIRE PICTURE CORD

25 Yards, Full Length

No. 10.	25 yds.	per doz., \$6.00 each, .50	No. 15.	25 yds.	doz., \$32.00 each, \$2.50
11.	"	" 9.00 " .80	16.	"	" 40.00 " 3.25
12.	"	" 13.00 " 1.25	17.	"	" 50.00 " 4.00
13.	"	" 18.00 " 1.60	18.	"	" 60.00 " 4.50
14.	"	" 24.00 " 2.00			

Special Catalogue of Wire Goods furnished on application

WIRE BRADS FOR PICTURE FRAMES

1/4	in. long, No. 19 Gauge	per lb., \$1.00	1	in. long, No. 18 Gauge	per lb., .43
1/4	" " 20 "	" 1.25	1	" " 19 "	" .53
1/4	" " 21 "	" 1.55	1	" " 20 "	" .64
1/4	" " 22 "	" 1.90	1 1/8	in. long, No. 7 to 12 Gauge	" .30
3/8	in. long, No. 18 Gauge	" .80	1 1/8	" " 13 Gauge	" .31
3/8	" " 19 "	" .90	1 1/8	" " 14 to 15 Gauge	" .32
3/8	" " 20 "	" 1.00	1 1/8	" " 16 Gauge	" .35
3/8	" " 21 "	" 1.25	1 1/8	" " 17 "	" .40
3/8	" " 22 "	" 1.55	1 1/8	" " 18 "	" .43
1/2	in. long, No. 14 to 16 Gauge	" .55	1 1/8	" " 19 "	" .53
1/2	" " 17 Gauge	" .60	1 1/4	and 1 3/8 in. long, No. 6 to 12 Gauge	" .29
1/2	" " 18 "	" .65	1 1/4	" 1 3/8 " " 13 Gauge	" .30
1/2	" " 19 "	" .75	1 1/4	" 1 3/8 " " 14 "	" .31
1/2	" " 20 "	" .85	1 1/4	" 1 3/8 " " 15 "	" .32
1/2	" " 21 "	" 1.00	1 1/4	" 1 3/8 " " 16 "	" .34
1/2	" " 22 "	" 1.25	1 1/4	" 1 3/8 " " 17 "	" .39
5/8	in. long, No. 12 to 14 Gauge	" .43	1 1/2	and 1 5/8 in. long, No. 4 to 13 Gauge	" .29
5/8	" " 15 Gauge	" .45	1 1/2	" 1 5/8 " " 14 Gauge	" .30
5/8	" " 16 "	" .50	1 1/2	" 1 5/8 " " 15 "	" .31
5/8	" " 17 "	" .52	1 1/2	" 1 5/8 " " 16 "	" .33
5/8	" " 18 "	" .58	1 1/2	" 1 5/8 " " 17 "	" .38
5/8	" " 19 "	" .65	1 3/4	in. long, No. 4 to 13 Gauge	" .28
5/8	" " 20 "	" .75	1 3/4	" " 14 Gauge	" .29
5/8	" " 21 "	" .85	1 3/4	" " 15 "	" .30
5/8	" " 22 "	" 1.10	1 3/4	" " 16 "	" .32
3/4	in. long, No. 10 to 12 Gauge	" .36	1 3/4	" " 17 "	" .38
3/4	" " 13 to 14 "	" .38	2	in. long, No. 3 to 10 Gauge	" .27
3/4	" " 15 Gauge	" .42	2	" " 11 to 13 Gauge	" .28
3/4	" " 16 "	" .43	2	" " 14 Gauge	" .29
3/4	" " 17 "	" .46	2	" " 15 "	" .30
3/4	" " 18 "	" .52	2	" " 16 "	" .35
3/4	" " 19 "	" .60	2 1/4	in. long, No. 3 to 10 Gauge	" .27
3/4	" " 20 "	" .70	2 1/4	" " 11 to 13 "	" .28
3/4	" " 21 "	" .85	2 1/4	" " 14 Gauge	" .29
7/8	in. long, No. 8 to 12 Gauge	" .33	2 1/2	in. long, No. 3 to 10 Gauge	" .26
7/8	" " 13 Gauge	" .34	2 1/2	" " 11 to 12 Gauge	" .27
7/8	" " 14 "	" .35	2 1/2	" " 13 Gauge	" .28
7/8	" " 15 "	" .36	2 3/4	in. long, No. 3 to 10 Gauge	" .26
7/8	" " 16 "	" .39	2 3/4	" " 11 to 12 "	" .27
7/8	" " 17 "	" .43	3	in. long, No. 3 to 10 Gauge	" .25
7/8	" " 18 "	" .45	3	" " 11 Gauge	" .26
7/8	" " 19 "	" .56	3	" " 12 "	" .27
7/8	" " 20 "	" .67	3 1/4	in. long, No. 3 to 10 Gauge	" .25
1	in. long, No. 7 to 12 Gauge	" .30	3 1/4	" " 11 Gauge	" .26
1	" " 13 Gauge	" .31	3 1/4	" " 12 "	" .27
1	" " 14 "	" .32	3 1/2	in. long, No. 3 to 10 Gauge	" .25
1	" " 15 "	" .33	3 1/2	" " 11 Gauge	" .26
1	" " 16 "	" .86	4	in. long, No. 3 to 10 Gauge	" .25
1	" " 17 "	" .40	4	" " 11 Gauge	" .26

BRIGHT STEEL SCREW EYES, LONG SCREW

No. 114.	per gross, \$1.50	per doz., .10	No. 110.	per gross, \$2.50	per doz., .15
113.	" 1.50	" .10	109.	" 2.80	" .15
112.	" 1.70	" .10	108.	" 3.30	" .20
111.	" 2.00	" .15	106.	" 4.50	" .25

BRIGHT STEEL SCREW EYES, SHORT SCREW

No. 114½.	per gross, \$1.50	per doz., .10	No. 110½.	per gross, \$2.50	per doz., .15
113½.	" 1.50	" .10	109½.	" 2.80	" .15
112½.	" 1.70	" .10	108½.	" 3.30	" .20
111½.	" 2.00	" .15	106½.	" 4.50	" .25

BRIGHT STEEL SCREW EYES, SMALL EYES

MEDIUM SCREWS

No. 217½.	per gross, \$1.50	per doz., .15	No. 212½.	per gross, \$1.70	per doz., .15
216¾.	" 1.50	" .15	211½.	" 2.00	" .15
216½.	" 1.50	" .10	210½.	" 2.50	" .15
215½.	" 1.50	" .10	209½.	" 2.80	" .15
214½.	" 1.50	" .10	208½.	" 3.30	" .20
213½.	" 1.50	" .10	206½.	" 4.50	" .25

BRASS TURN BUTTONS



No. 1



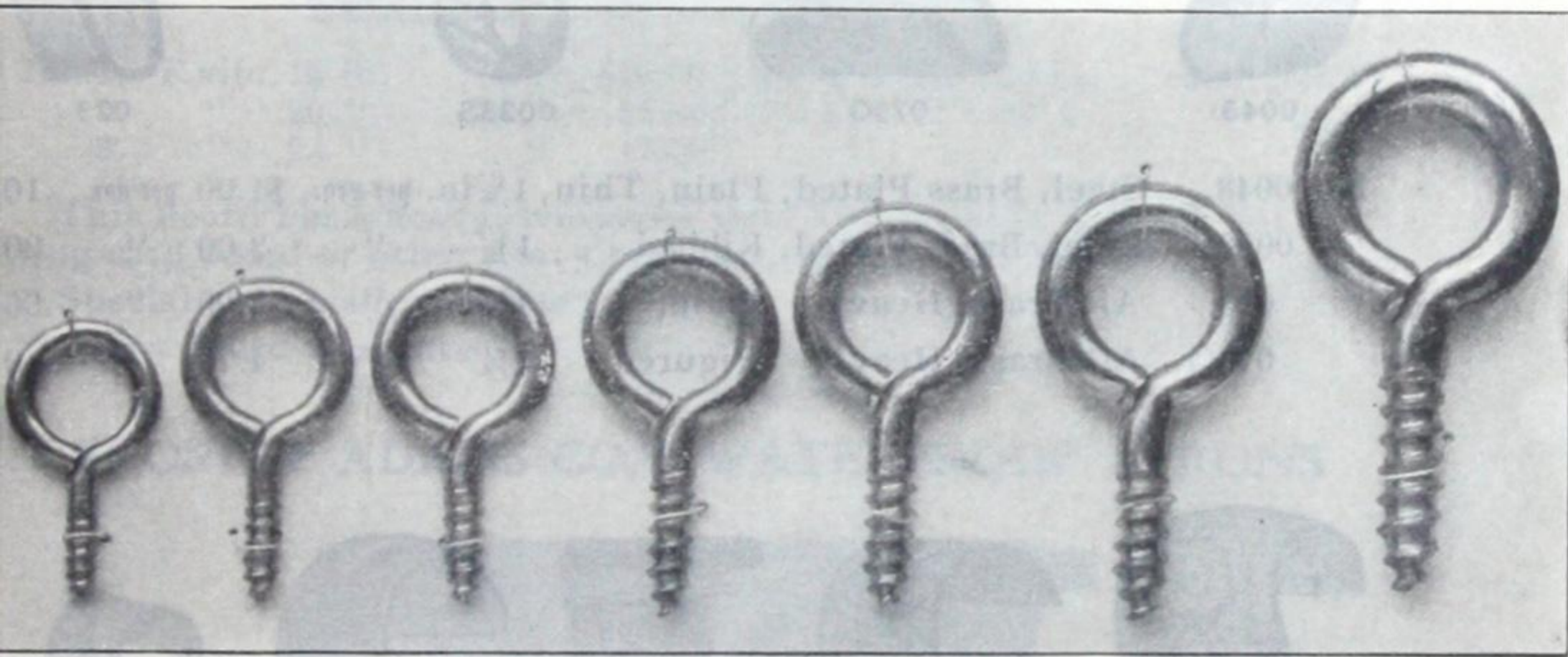
No. 2



No. 3

No. 1.	.	.	.	.	.	per gross, \$1.40
2.	.	.	.	.	.	" 1.60
3.	.	.	.	.	.	" 2.00

Special Catalogue of Wire Goods furnished on application



BRASS PICTURE HOOKS

Will fit any Moulding



0043



073G



0023S



023

No. 0043.	Steel, Brass Plated, Plain, Thin, $1\frac{1}{4}$ in.	per gro.,	\$1.00	per doz.,	.10
0023S.	Steel, Brass Plated, Ribbed	$1\frac{3}{4}$	"	2.00	" .20
023.	All Brass, Heavy, Plain,	$1\frac{1}{4}$	"	4.00	" .35
073G.	All Brass, Heavy, Figured,	$1\frac{1}{2}$	"	4.70	" .40



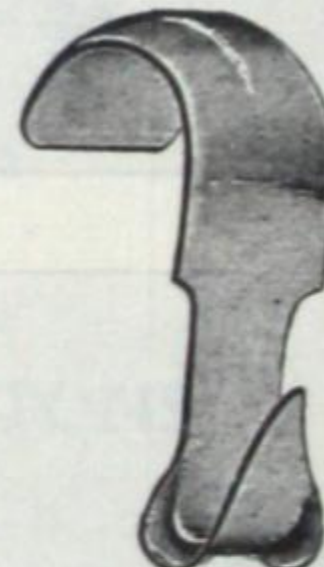
073F



127



5



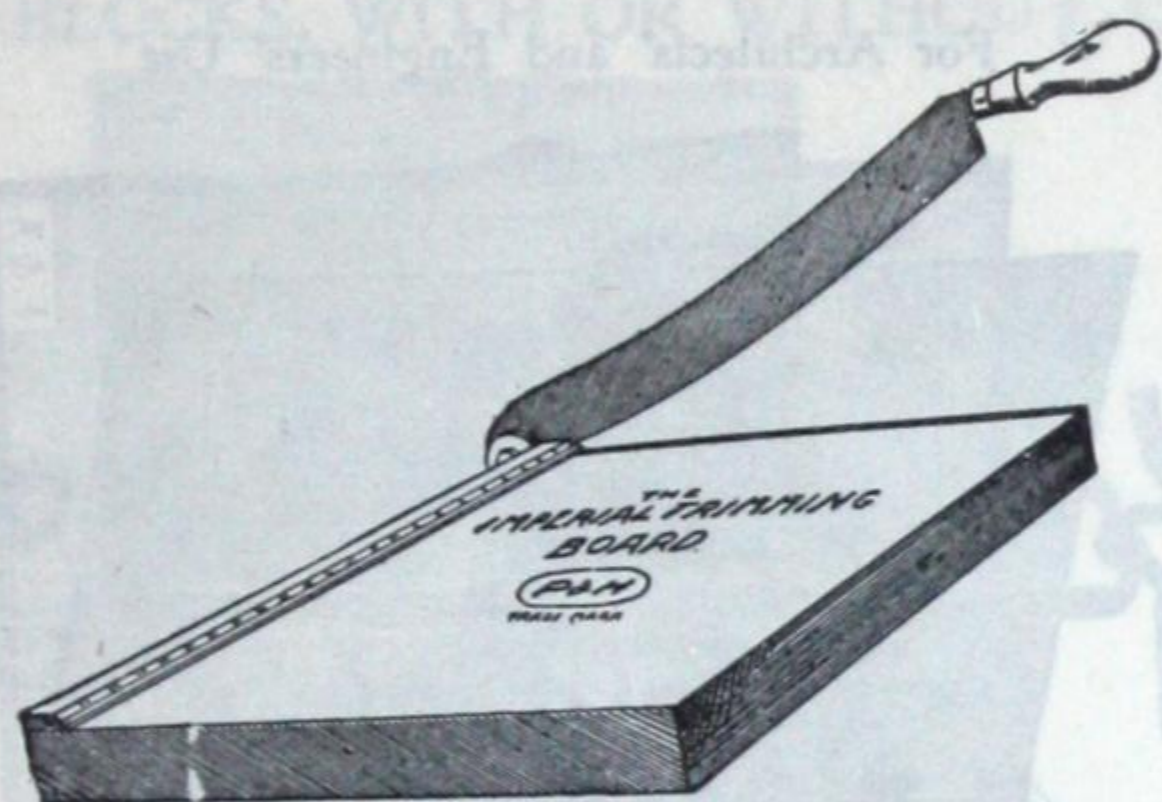
043F



022

No. 127.	Brass, Figured,	$1\frac{1}{4}$ in.	per gro.,	\$1.60	per doz.,	.15
043F.	Brass, Plain, Burnished,	$1\frac{1}{2}$	"	2.85	"	.25
022.	Brass, Plain, Heavy,	$1\frac{1}{4}$	"	3.00	"	.30
073F.	Brass, Figured,	$1\frac{1}{4}$	"	3.00	"	.30
5.	Brass, Crown,	2	"	6.00	"	.60

IMPERIAL CUTTING BOARDS OR TRIMMERS



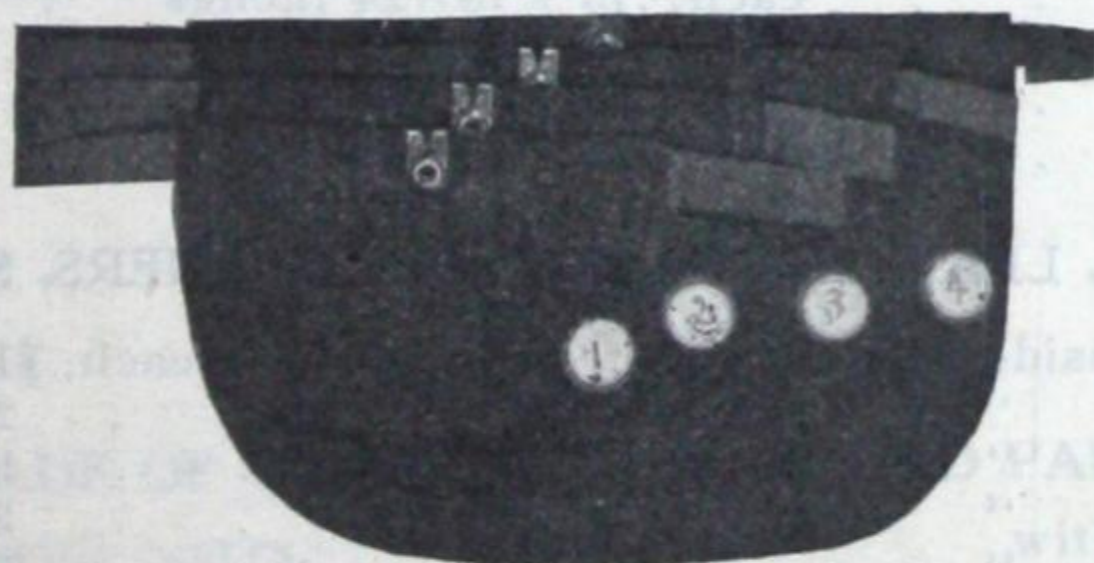
No. 1. Knife, 15 in.	. . . each, \$10.00	No. 4. Knife, 30 in.	. . . each, \$24.00
2. " 20 "	. . . " 12.00	5. " 36 "	. . . " 25.00
3. " 24 "	. . . " 17.00		

This Board has a heavy, tempered steel knife, and is suitable for cutting card board or other heavy material, such as Mat Boards, etc.

Special sizes made to order

Every Board warranted

FROST & ADAMS CO.'S WATERPROOF APRONS

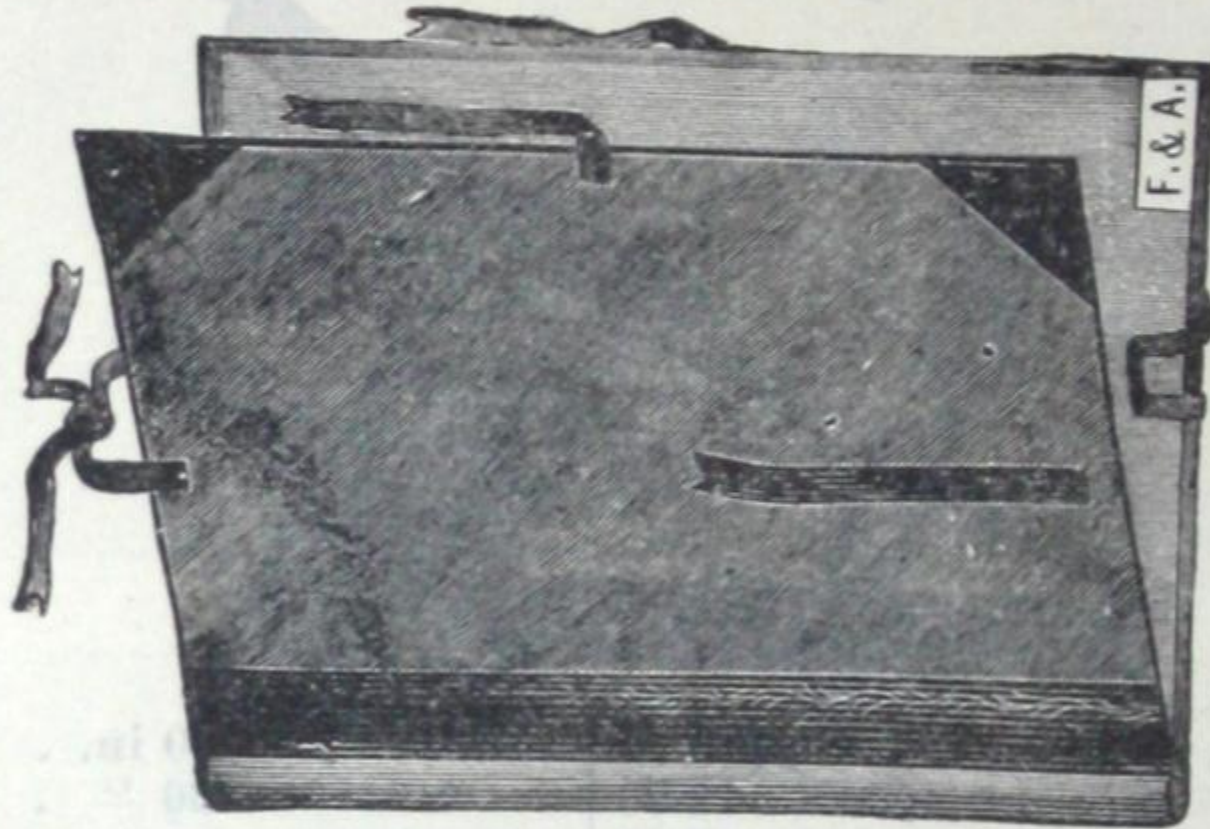


No. 1. 9×11	. . . each, .25	No. 4. 12×17	. . . each, .40
2. 10×12	. . . " .30	04. 18×36	. . . " 1.00
8. 11×14	. . . " .35		

These Aprons are reversible; waterproof cloth on one side, rubber on the other, with a seam at the top and a tape within long enough to surround the belt. They protect the clothing from wear and soiling when working over the desk, table or counter. Wear like iron

FROST & ADAMS CO'S PORTFOLIOS

For Architects' and Engineers' Use



PAPER SIDES, CLOTH BACKS AND CORNERS

10×14 inches	each, .55	18×24 inches	each, \$1.15
12×16 "	" .60	19×25 "	" 1.25
14×18 "	" .70	22×30 "	" 1.30
16×22 "	" .85	30×40 "	" 3.75

PAPER SIDES, LEATHER BACKS AND CORNERS

10×14 inches	each, .75	18×24 inches	each, \$ 1.45
12×16 "	" .85	19×25 "	" 1.65
14×18 "	" 1.20	22×30 "	" 1.50
16×22 "	" 1.30	30×40 "	" 4.50

CLOTH SIDES, LEATHER BACKS AND CORNERS, SILK STRINGS

10×14 inches, inside flaps	each, \$1.88	plain, \$1.00
12×16 "	2.25	" 1.20
14×18 "	2.63	" 1.50
16×22 "	3.38	" 1.90
18×24 "	3.75	" 2.25
22×30 "	4.50	" 2.80
30×40 "		" 6.00

Made from the Best Bookbinders' Junk Board in the most substantial manner

Larger and irregular sizes made to order, in any style of binding, at short notice

Prices for School Folios, any size, on application

FROST & ADAMS CO'S
SOLID BLOCKS, WITH OR WITHOUT COVERS



MADE OF WHATMAN'S 72 POUND PAPER

4½ × 5½ inches	each, .35	9 × 12 inches	each, 1.00
5 × 7 " " " "	" .40	10 × 14 " " " "	" 1.35
5½ × 9 " " " "	" .50	12 × 18 " " " "	" 1.75
7 × 10 " " " "	" .70	14 × 20 " " " "	" 2.50

MADE OF WHATMAN'S 90 POUND PAPER

4½ × 5½ inches, with covers,	each, \$1.00	without covers,	.40
5 × 7 " " " "	1.10	" "	.55
5½ × 9 " " " "	1.30	" "	.60
7 × 10 " " " "	1.40	" "	.85
9 × 12 " " " "	1.75	" "	1.20
10 × 14 " " " "	3.00	" "	1.60
12 × 18 " " " "	3.40	" "	2.10
14 × 20 " " " "	4.00	" "	3.00

MADE OF WHATMAN'S 140 POUND PAPER

5 × 7 inches, with covers,	each, \$1.35	without covers,	.80
6 × 9 " " " "	1.80	" "	1.15
7 × 10 " " " "	2.30	" "	1.40
9 × 12 " " " "	3.25	" "	2.25
10 × 14 " " " "	4.00	" "	2.50
12 × 18 " " " "	7.00	" "	4.25
14 × 20 " " " "	8.00	" "	4.70

Made of Whatman's Papers in 3 surfaces, H.P. (Smooth), C.P. (Rough)
R. (Extra Rough)

FROST & ADAMS CO.'S
ECLIPSE SOLID SKETCH BLOCKS

For Pencil Sketches and School Use



25 SURFACES

5 × 8 in.	per doz., \$1.50 each, .12	9 × 12 in.	per doz., \$3.00 each, .25
6 × 9 "	" 2.00 " .15	10 × 14 "	" 3.50 " .35
7 × 10 "	" 2.50 " .20		

Made from High Grade Drawing Paper. Extra heavy back, bound on four sides. Made expressly for College and High School Students

FROST & ADAMS CO.'S
SPECIAL WATER COLOR BLOCKS

24 SURFACES

5 × 7 in.	per doz., \$3.50 each, .35	9 × 12 in.	per doz., \$9.40 each, .80
7 × 10 "	" 6.00 " .55	10 × 14 "	" 11.00 " 1.00

Made from 72 lb. paper, C.P. Surface

FROST & ADAMS CO.'S
EXCELSIOR SOLID SKETCH BLOCKS

For Pen and Pencil and Water Color Sketches

24 SURFACES

5 × 7 in.	per doz., \$1.25 each, .10	10 × 14 in.	per doz., \$4.00 each, .35
7 × 10 "	" 2.00 " .20	12 × 18 "	" 6.00 " .55
9 × 12 "	" 2.75 " .25	14 × 20 "	" 7.20 " .65

WESTON'S SOLID SKETCH BLOCKS

For Pen and Ink Drawing

5 × 7 inches, 24 Surfaces	each, .25	9 × 12 inches, 24 Surfaces	each, .75
6 × 9 " " " "	.40	10 × 14 " " " "	.95
7 × 10 " " " "	.50	14 × 20 " " " "	1.50

Made of Weston's High Finish, Smooth Paper

SOLID SKETCH BLOCKS, MADE OF GERMAN PAPER

For Pencil

4½ × 7 inches	each, .20	7 × 10 inches	each, .40
5 × 8 " "	.25	9 × 11 " "	.65
6 × 9 " "	.30	10 × 14 " "	.75

GIBSON'S BRISTOL BOARD BLOCKS

Three Ply Wedding Bristol Boards

7 × 10 in.	doz., \$4.80	each, .50	10 × 14 in.	doz., \$8.40	each, .75
9 × 12 " "	" 7.20	" .65	12 Surfaces in each		

ENGLISH METALLIC PAPER SOLID SKETCH BLOCKS

For Shading and Pencil Sketches

5 × 7 inches, 24 Surfaces	each, .35	10 × 14 inches, 24 Surfaces	each, .95
7 × 10 " " " "	.55	12 × 18 " " " "	2.00
9 × 12 " " " "	.75	14 × 20 " " " "	2.75

WINSOR & NEWTON'S

"KENSINGTON" SOLID SKETCH BLOCKS

5 × 7 inches	each, .30	9 × 12 inches	each, .50
7 × 10 " "	.40	10 × 14 " "	.75

These Blocks, which are made throughout of a high quality paper, specially selected and manufactured for the purpose, present a very agreeable surface for Pen Work, take color well, and will be found practically equal to many of the more expensive makes

FROST & ADAMS CO.'S CANVAS SKETCH BLOCKS

Containing 12 Sheets

NO. 3 TWILLED CANVAS

9×12 inches	each, .80	12×18 inches	each, \$1.65
10×14 "	" 1.20	14×20 "	" 2.00
12×16 "	" 1.50		

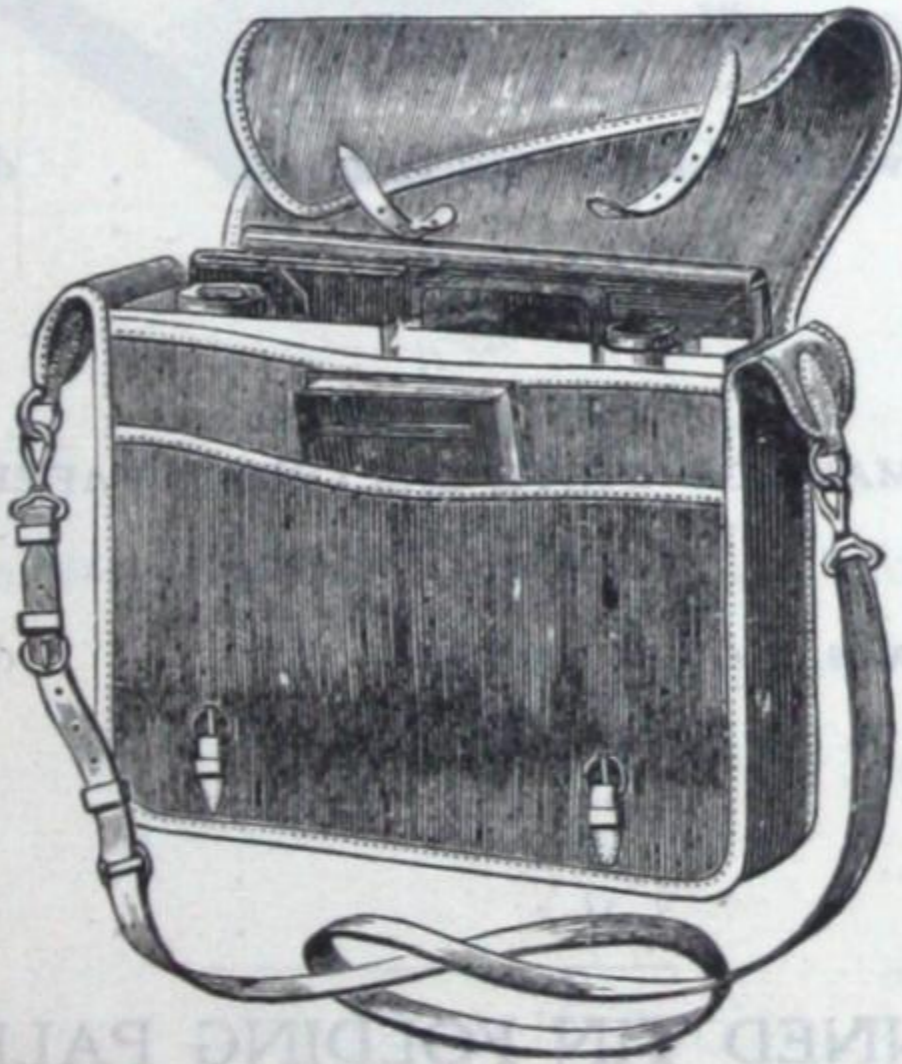
NO. 4 SMOOTH ACADEMY CANVAS

9×12 inches	each, .75	12×18 inches	each, \$1.50
10×14 "	" 1.00	14×20 "	" 1.80
12×16 "	" 1.40		

NO. 7 TWILLED SINGLE PRIME CANVAS

9×12 inches	each, .75	12×18 inches	each, \$1.50
10×14 "	" 1.00	14×20 "	" 1.80
12×16 "	" 1.40		

ENGLISH TOURIST'S SKETCHING BAGS



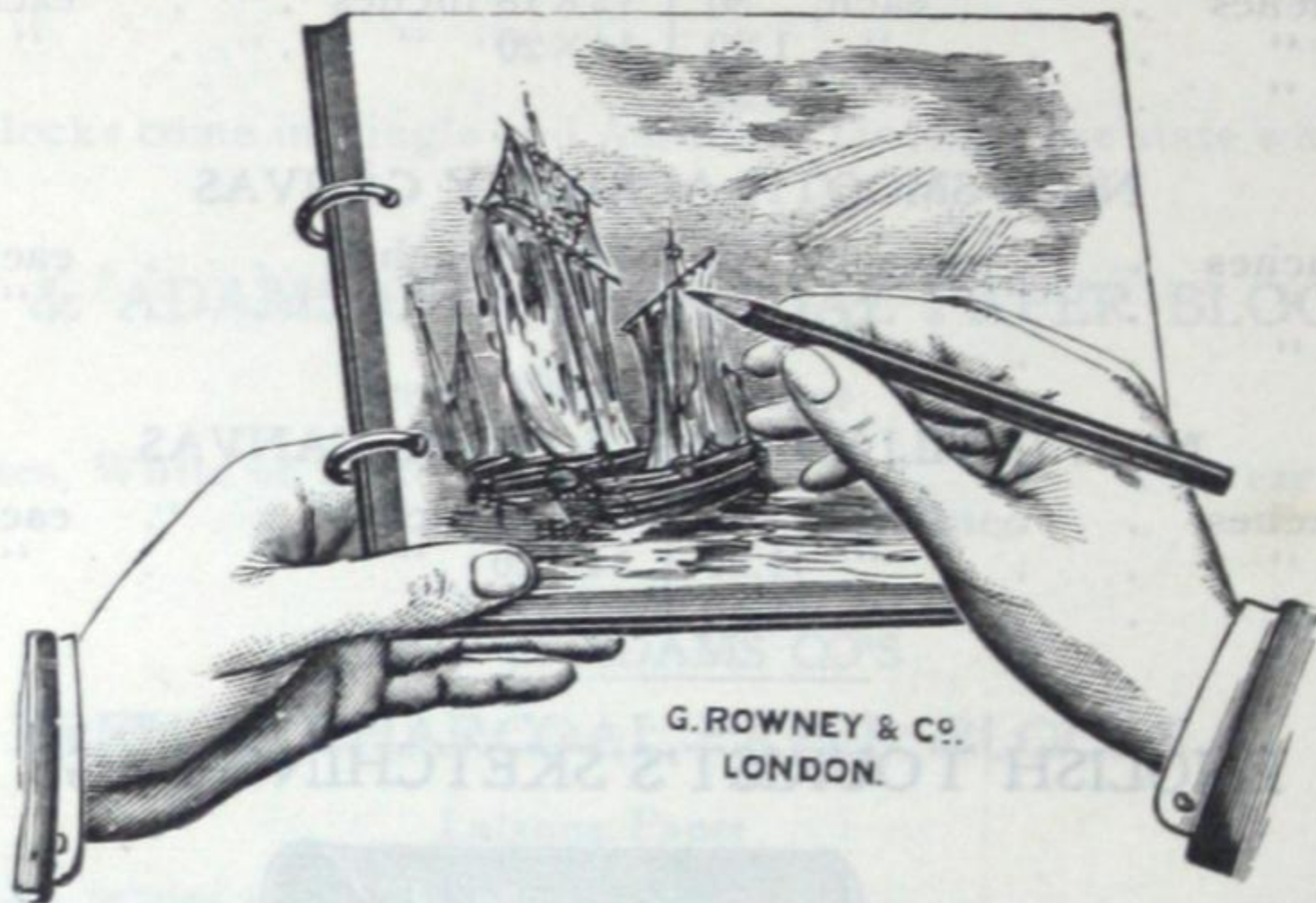
10×12 inches, without fittings	each, \$6.00
11×15 " " " "	" 6.25

Made of Sateen and arranged to hold Sketching Block, Color Box, Water Bottle, Sketch Book, Brush Pouch, etc. Fittings supplied separately

ROWNEY'S PATENT RING BOUND SKETCH BOOKS

MADE OF WHATMAN'S BEST "PERFECT" PAPER

For Water Color Sketches



3½ × 5 in., 30 leaves, Cold Pressed Surface	doz., \$4.50	each, .45
4½ × 5½ " " " " " "	" 6.00	" .60
5 × 7 " " " " " "	" 7.50	" .75
5½ × 9 " " " " " "	" 9.00	" .90
7 × 10 " " " " " "	" 13.50	" 1.25

MADE OF WHITE CARTRIDGE PAPER

For Pencil Sketches

3½ × 5 in., 30 leaves, Rough Surface	doz., \$3.25	each, .30
4½ × 5½ " " " " " "	" 4.25	" .40
5 × 7 " " " " " "	" 5.50	" .50
5½ × 9 " " " " " "	" 6.50	" .60
7 × 10 " " " " " "	" 8.75	" .80
9 × 12 " " " " " "	" 11.00	" 1.10

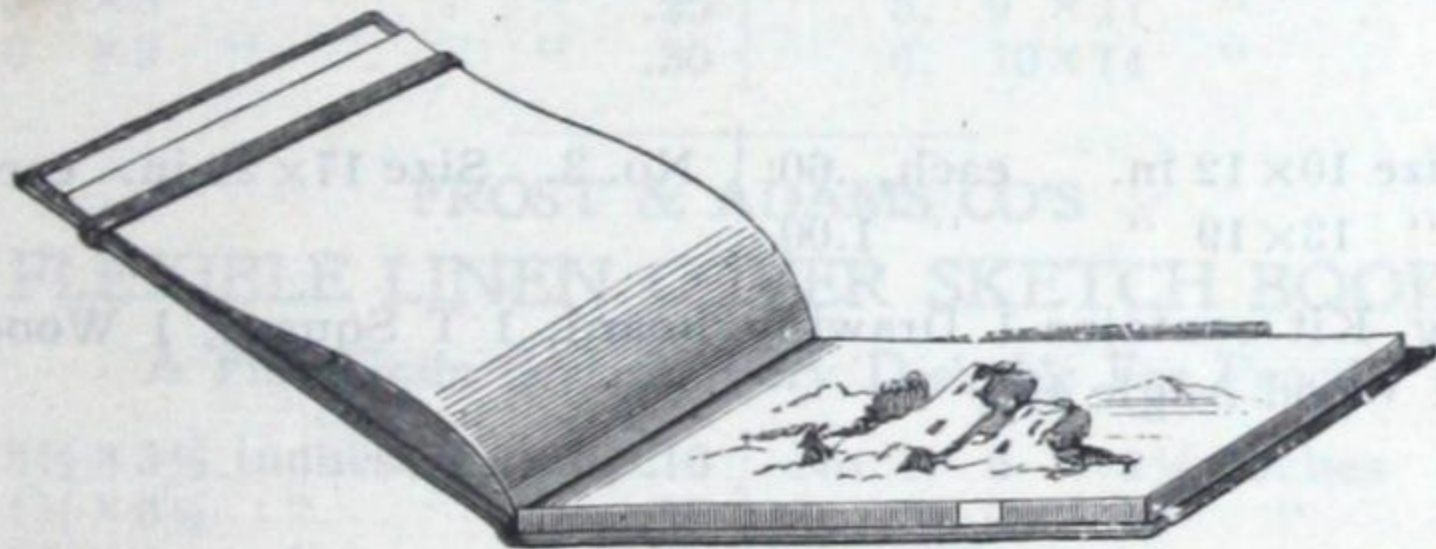
JAPANNED TIN FOLDING PALETTES

For Water Colors

5 × 8 in., folded, 12 Divisions	each, \$1.20
5 × 10 " " 16 " "	" 1.20
6 × 12 " " 18 " "	" 1.50
7 × 14 " " 24 " "	" 1.75

FROST & ADAMS CO.'S
FRENCH SKETCH BOOKS

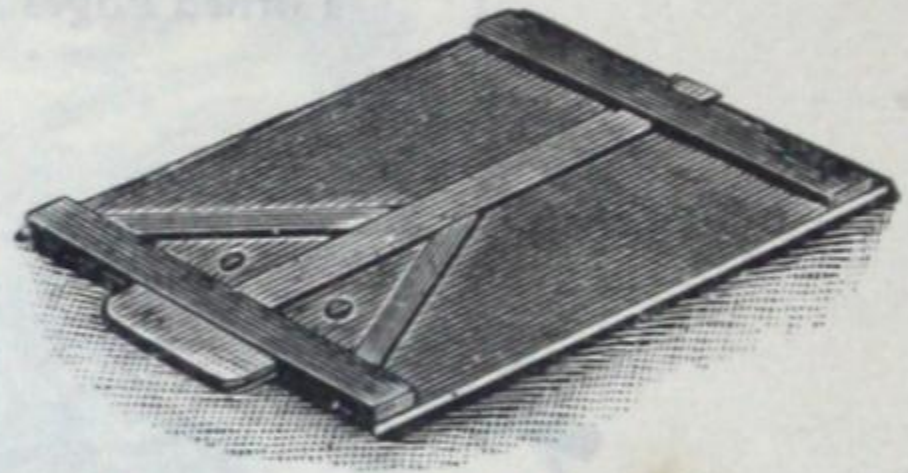
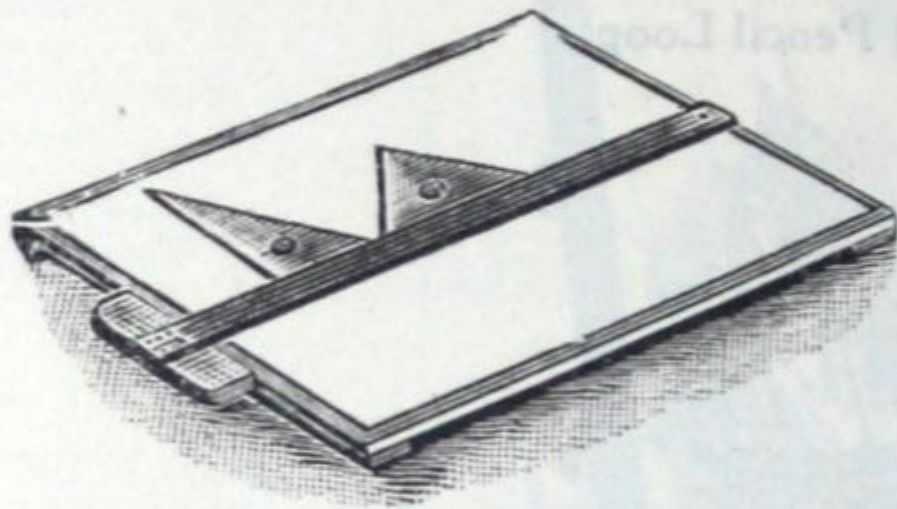
White Paper for Pencil or Water Color Sketches, Full Linen Flexible Covers,
 Turned Edges and Pencil Loop



No. 1.	$3\frac{3}{8} \times 5$	inches	doz., \$1.65	each, .20
2.	4×6	"	2.15	" .25
3.	$4\frac{1}{8} \times 6\frac{3}{4}$	"	2.40	" .30
4.	$4\frac{3}{4} \times 7\frac{1}{2}$	"	2.95	" .35
5.	$5\frac{1}{8} \times 8\frac{1}{4}$	"	3.20	" .40

As there have been many inquiries for a book of this description we
 have put it on the market to supply the want

FROST & ADAMS CO.'S
SCHOOL DRAWING KITS



No. 1. Size 10×12 in.	each, .60	No. 3. Size 17×22 in.	each, \$1.50
2. " 13×19 "	" 1.00		

Drawing Kit contains 1 Drawing Board, 1 T Square, 1 Wood Angle 30°×60°, 1 Wood Angle 45°.

FROST & ADAMS CO.'S
SCHOOL SKETCHING BLOCKS

WHITE PAPER, BOUND ON TOP AND RIGHT EDGES

Size 6×9 in.	44 Surfaces	each, .10
" 9×12 "	22 " "	" .10

FROST & ADAMS CO.'S
SCHOOL DRAWING TABLETS

WHITE PAPER IN BOOK FORM

Size 9×12 in.	20 Surfaces	each, .10
" 10×14 "	20 " "	" .15

FROST & ADAMS CO'S "STUDENT'S" SKETCH BOOKS

White Paper, Stiff Canvas Covers, Stamped on Cover "Sketches"



No. 1.	4 × 7 inches .	each, .20	No. 4.	8 × 10 inches .	each, .40
2.	5½ × 8 " .	" .25	5.	9 × 11 " .	" .50
3.	6 × 9 " .	" .30	6.	10 × 14 " .	" .65

FROST & ADAMS CO'S

FLEXIBLE LINEN COVER SKETCH BOOKS

A Fine Grain Surface, Very Desirable For Pencil

No. 1.	3½ × 5½ inches	each, .10	No. 4.	6 × 8¼ inches	each, .25
2.	4½ × 6½ " "	" .15	5.	7 × 10 " "	" .30
3.	5¼ × 8 " "	" .20	6.	8½ × 11 " "	" .35

GEO. ROWNEY & CO'S CARTRIDGE SKETCH BOOKS

Suitable For Water Color Sketches

No. 1.	5 × 7 inches	each, .45	No. 3.	7 × 10 inches	each, .80
2.	5½ × 9 " "	" .60			

FROST & ADAMS CO'S

WATER COLOR SKETCH BOOKS

Of Whatman's Paper, Full Linen Covers

No. 1.	3½ × 5 inches .	each, .35	No. 4.	7 × 10 inches	each, .85
2.	5 × 7 " .	" .55	5.	9 × 11½ " "	" 1.25
3.	5½ × 9 " .	" .65	6.	10 × 14 " "	" 2.00

ENGLISH METALLIC PAPER SKETCH BOOKS

For Shading and Pencil Sketches. Full Linen Covers

No. 1.	4 × 6 inches	each, .35	No. 4.	9 × 12 inches .	each, \$1.25
2.	5 × 7 " "	" .50	5.	10 × 14 " "	" 2.00
3.	7 × 10 " "	" .85			

TEXT BOOKS ON ART, MECHANICAL DRAWING, ETC.

ARCHITECTURE

American Homes, by Radford (100 designs with estimates)	each, \$1.00
American Vignola, Part I—The Orders, Part II—Carpentry, by Ware	" 2.50
Architect's and Builder's Pocket Book, by Kidder	" 5.00
Architectural Drawing, by C. F. Edminster	" 2.00
Architectural Drawing for Home Study, by F. T. Hodgson (350 pages, 250 illustrations)	" 1.50
Architectural Perspective, by Hicks	" .50
Artistic Bungalows, by Radford (208 plans with estimates)	" 1.00
Artistic Homes, by Radford (250 plans with estimates)	" 1.00
Attractive Moderate Cost Bungalows, by Saylor	" 1.50
Automobile Garages, How to Build, by Radford. (55 plans)	" 1.00
Barn Plans, Cribs and Out Buildings, by Radford (350 illus- trations)	" .50
Blue Prints, How to Make Them	" .25
Boat Building for Amateurs, by A. Neison, C.E. (70 designs, 136 pages)	" 1.00
Book of Bungalows, by Wilson	" 1.00
Book of Plans, Building Construction, by Wm. Dustman, L.A. (250 pages with plans)	" 2.00
Bricklayer and Mason's Assistant, by Fred T. Hodgson (12mo., 305 pages)	" 1.50
Builders' Architectural Drawing, by Hodgson	" 2.00
Builders' and Contractors' Guide to Measurements, by Hodgson	" 1.50
Builders' Guide, by Hicks	" 1.00
Building Construction, by Davidson	" 1.00
Building Construction, Part I, of Masonry, by Kidder	" 6.00
Building Construction, Part II, of Carpentry, by Kidder	" 6.00
Building Construction, Part III, of Roofs, by Kidder	" 3.00
Building Foreman's Hand Book, by Ritchie	" 5.00
Building Mechanics', Carpenter-Woodworkers' Hand Book, by Ritchie	" 1.50
Building Plans and How to Draw Them, by Hicks (75 pages)	" .50
Building Superintendence, by Edward Nichols	" 1.50
Carpentry, a complete comprehensive manual, by Gilbert Townsend	" 1.50
Cement Houses, fully illustrated, by Radford (87 plans with estimates)	" 1.00
Cement Houses and Garages, by Williams	" 1.50
Construction of Dwelling Houses and Bungalows, by Wm. Dustman	" 1.00
Contracts and Specifications, for Architects, Contractors, Owners, by Jas. C. Plant	" 1.00
Cost of Materials, Construction, by Gillett	" 5.00
Cottage Designs, Construction Details, by Williams	" 1.50

Text Books on Art, Mechanical Drawing, Etc. — continued

Details of Building Construction, by Radford	each, \$1.50
Easy Lesson in Architecture, by Mitchell (150 illustrations)	“ .50
Easy Steps in Architecture	“ 1.50
Elbow Patterns, by Kidder	“ 1.00
Estimating for Contractors and Builders, by Edward Nichols	“ 1.00
Exterior Painting, Wood, Iron and Brick, by Maire (Red Book)	“ .60
Framing, House, Barn and Roof, by Radford (200 illustrations)	“ 1.00
Graining and Marbling, by Maire (Red Book)	“ .60
Hardwood Finishing, Staining and Polishing, by F. T. Hodgson	“ 1.00
Home Mechanics for Amateurs	“ 1.50
House Decoration, by Hasluck	“ .50
Inexpensive Homes of Individuality	“ .75
Interior Painting in Water-Oil Colors, by Maire (Red Book)	“ .60
Light and Heavy Timber Framing, by Hodgson (12 mo., 300 pages)	“ 2.00
Making and Reading of Architectural Drawings, by Rhoades	“ 1.00
Masonry and Reinforced Concrete, by Walter L. Webb, C.E.	“ 3.00
Masonry and Stone Cutting, by Dobson	“ 1.00
Modern American Homes, by H. V. von Holst, A.B.	“ 3.00
New Building Estimator, The, by Arthur (Leather)	“ 3.00
New System of Hand Railing, by Hicks	“ .50
Orders of Architecture, The, by Frank A. Bourne, Boston (530 pages, 220 illustrations)	“ 3.00
Practical Bungalows and Cottages, by Hodgson (420 pages, 400 illustrations)	“ 1.00
Practical Carpentry, Volume I, by Radford (400 illustrations)	“ 1.00
Practical Carpentry, Volume II, by Radford (400 illustrations)	“ 1.00
Practical House Framing, by Fair (100 illustrations)	“ .50
Principles of Perspective, by Geo. Trowbridge	“ 2.50
Roof Framing, by Maginnis	“ 1.00
Short Cuts in Carpentry, by Albert Fair	“ .50
Stair Building made Easy, by David Meyer (128 Pages)	“ .50
Stair Building, Steel Square, by Fred T. Hodgson	“ 1.00
Steel Square, by Stoddard (Pocket Book)	“ .50
Stores and Flat Buildings, by Radford (57 plans with estimates)	“ 1.00
Two Family and Twin Houses	“ 2.00

ART

Amateur Artist: Painting in Oil or Water Color without aid of Teacher, by Maire	each, \$1.00
Art of Making and Using Sketches, by Fraipont	“ .60
Artist's Manual, by Beard	“ .50
Artistic Anatomy, by Duval	“ 1.50
Book of Borders, Designs for China, Volume I, by D. M. Campana	“ .60
Book of Borders, Designs for China, Volume II, by D. M. Campana	“ .60

Text Books on Art, Mechanical Drawing, Etc. — continued

Charcoal Drawing, by Roberts	each, \$1.00
China Painting, by Florence Lewis	“ 1.50
China Painting, by Louise Macloughlin	“ 1.00
China Painting, 100 Lustres, Combination of, by Campana	“ .45
China Painting, by Monochisi	“ 1.25
Clay Modelling and Plaster Casting	“ .50
Clay Modelling, by Unwin	“ 1.00
Colorist, The; How to produce colors, tints; with complete color chart for the artist, by J. Arthur Natt (8vo., 95 pages)	“ 1.50
Color Problems, scientifically treated, viz:—showing what colors to use and how to obtain these colors, by Vanderpoel	“ 5.00
Colors: What they are and what to expect of them, by Maire (Red Book)	“ .60
Crayon Drawing, by Fowler	“ 2.50
Cyclopedia of Receipts and Formulas, for the Home	“ 5.00
Dutch School of Painting, by Howard	“ 2.00
Elements of Perspective, by Penley	“ .30
Elements of Perspective, by Warren	“ 1.00
Figure Composition, by Hatton	“ 2.75
Figure Drawing, by Hatton	“ 2.75
Figure Painting, by McArthur	“ 3.00
Flowers, How to Paint them, by Naftel	“ 1.00
Freehand and Perspective Drawing, by H. E. Everett	“ 1.00
Heraldry, Illustrated, by Abbott	“ 2.00
Guide to Oil Painting with chapter on Pasteloid, by Hume Nesbit	“ .60
How to Draw, Illustrating, Designing and Caricature, by Leon Barrett	“ 2.00
How to Judge Pictures, by Margaret Thomas	“ .65
How to Mix Paints, by Godfrey	“ .50
Human Anatomy for Art Student, by Fripp-Thompson	“ 1.75
Human Figure, by Vanderpoel	“ 2.00
Landscape Gardening, by Labor	“ 2.00
Landscape Painting in Oil, by Alfred East (illustrated)	“ 3.00
Landscape Painting in Oil, by Liedel	“ .75
Leather Crafting, by Campana	“ .40
Lessons on Art, by J. Harding	“ 1.00
Linear Drawing by Cassell	“ 1.00
Linear Perspective, by Warren,	Reduced to “
Marine Painting, by May	“ 1.50
Modelling and Sculpture, by Toft	“ 1.75
Modern Painter's Cyclopedia, by Maire	“ 1.50
Money Making Art	“ .25
Notes on Color Mixing, Permanence of Color	“ .25
Oil Painting, by Solomon	“ 1.75
Painter in Oil, by Parkhurst	“ 1.25
Painting in Oil, by Hume Nesbit	“ .60
Pen-Ink Drawing, by Maginnis	“ 1.00

Text Books on Art, Mechanical Drawing, Etc. — continued

Practice and Science of Drawing, by Harold Speed	each, \$1.75
Roses, How to Paint them, by Campana	“ .75
Tapestry Painting, by M. T. Wynne	“ .50
Teacher of China Painting, The, by Campana	“ .75
Teacher of Water Color Painting, by Campana	“ .60
Water Color Sketch Book, by McWhirter (illustrated)	“ 1.50
Water Color Painting, by Allen	“ 1.25
Water Color Painting, by Herrick	“ 1.00
Water Color Painting, by Nesbit	“ .60

AUTOMOBILES

Automobile Hand Book, by L. Elliott Brooks (16mo. 470 pages, Leather)	each, \$2.00
Automobile Motors and Mechanism, by Thos. H. Russell, A.M., M.E.	“ 1.00
Automobiles, their care and operation, by Morris A. Hall	“ 1.00
Flying Machines, Construction, Operation, by W.J. Jackman, M. E.	“ 1.00
Gasolene Automobile, The, by Victor Loughheed	“ 2.00
Gas and Oil Engines, by Brooks (Leather)	“ 1.50
Ignition, Timing and Valve Setting for Automobiles, by Thos. H. Russell	“ 1.00
Monoplanes, Biplanes, by Loening	“ 2.50
Motor Boats, Construction and Operation, by Thos. H. Russell	“ 1.00
Questions and Answers on Auto, by Audel	“ 1.50

ELECTRICAL

Alternating Current Machinery, by William Esty, S.B., M.A.	each, \$3.00
Armature and Magnet Winding, by Horstmann-Tousley (Leather)	“ 1.50
Dynamo, Electric Machinery, by F. B. Crocker, E.M. (complete treatise)	“ 1.50
Electric Railways, by James R. Cravath (authentic)	“ 1.00
Electric Telegraph, The, by Chas. Thorn, of Western Union Telegraph and Telephone Company	“ 1.00
Electric Wiring and Lighting, by Chas. E. Knox, E.E.	“ 1.00
Electrical Wiring and Construction Tables, by Horstmann-Tousley (Leather)	“ 1.50
Electricians' Operating and Testing Manual, by Horstmann-Tousley (Leather)	“ 1.50
(12mo., 508 pages)	“ 1.25
Electricity Made Simple, by C. C. Haskins	“ 1.00
Electroplating, by H. C. Reetz (nicely illustrated)	“ .50
Electroplating, Up-to-date Hand Book, by James H. Weston	1.00
Elementary Electricity up-to-date, by S. A. Small, M.A. (Leather)	“ 1.50
Modern Electrical Construction, by Horstmann-Tousley (Leather)	“ 1.50

Text Books on Art, Mechanical Drawing, Etc. — continued

Modern Wiring Diagrams, Descriptions, by Horstmann-Tousley (Leather)	each, \$1.50
Practical Lessons in Electricity, by F. B. Crocker, E.M.	" 1.50
Telegraphy Self Taught, by Thos. A. Edison	" 1.50
Telephony, by Kempster B. Miller, M.E., and Samuel C. McMeen (Complete Telephone Hand Book, 960 pages)	" 4.00
Wireless Set, How to make, by Arthur Moore	" .50
Wireless Telegraph and Telephone, by Chas. G. Ashley, E.E.	" 1.00
Wireless Telegraph and Telephone Operators Hand Book, by Victor Laughter	" 1.00

ENGINEERING

American Civil Engineer's Hand Book, by Merriman (Leather)	each, \$5.00
Boiler Accessories, by Walter S. Leland, S.B.	" 1.00
Bridge Engineering, Roof Trusses, by Frank O. Dufour, C.E.	" 3.00
Catechism for Steam and Electrical Engineers, by Roper (Leather)	" 2.00
Catechism of Steam, Gas and Electrical Engineering, by C. F. Swingle, M.E. (Leather)	" 1.50
City Roads and Pavements, by Judson	" 2.00
Civil Engineer's Hand Book, by Fry (Leather)	" 5.00
Civil Engineer's Pocket Book, by Trautwine (Indexed)	" 5.00
Complete Examination Questions and Answers for Marine and Stationary Engineers, by C. F. Swingle (Leather)	" 1.50
Construction, Maintenance of R. R. Roadbed and Track, by Fred'k J. Prior (Leather)	" 2.00
Dustless Roads and Macadam, by Smith	" 3.50
Engineer Field Book, by Henck	" 3.00
Engineer's Hand Book for Steam and Electrical Engineers, by Roper	" 3.00
Engineer's Pocket Book, by Haswell (Leather)	" 4.00
Expeditious Measurer of Stone, by Nash	" 2.00
Field and Office Tables, by Allen	" 2.00
Field Engineering, by Searles	" 3.00
Field Engineers' Tables, by Stiles	" 1.00
Field Systems, by Gilbreth	" 3.00
Hall's Tables of Square, by Hall	" 2.00
Highway Construction, by Alfred E. Phillips, C.E.	" 1.00
Hydraulic Engineering, by Fred'k E. Turneure.	" 3.00
Marine Engineer's Pocket Book, by Routhwait	" 3.00
Mechanical Engineer's Hand Book, by Kent	" 5.00
Mechanical Engineer's Pocket Book, by Suplee	" 5.00
Plane Surveying, by Alfred E. Phillips, C.E. (Plainly written for Student)	" 1.50
Plane Surveying, by Tracy	" 3.00
Railroad Curves and Earth Works with Tables, by Allen	" 3.00
Railroad Engineering, by W. Loring Webb	" 3.00
Sanitary Engineering of Buildings, by Gerhard	" 5.00

Text Books on Art, Mechanical Drawing, Etc. — continued

Sewers and Drains, by A. Marston, C.E.	each, \$1.00
Strength of Materials, by Merriman	" 1.50
Strength of Materials, by Ed. Rose Maurer	" 1.00
Surveying, Part I, by Breed-Hosmer	" 3.00
Surveying, Part II, by Breed-Hosmer	" 2.50
Surveying, Easily Learned, by Baker-Dixon	" .75
Surveying, Land, Mining, by G. R. Leston	" 2.00
Surveying, Scientific, thorough treatise, by J. Whitelaw, Jr.	" 3.00
Surveying Instruments, uses and care, by Ira Baker	" 3.00
Water Supply, Sources, Purity, etc., by Fred'k E. Turneaure	" 1.00

LETTERING

Alphabets, Book of, by Heney	each, .50
American Text Book of Letters, by Dearborn	" 2.00
Architectural Drawing and Lettering, by Frank A. Bourne, M.S.	" 1.50
Art of Lettering by Valpey	" 1.00
A Show at Show Cards, by Atkinson	" 3.00
Atkinson's Sign Painter (75 distinct alphabets) by Atkinson	" 3.00
Book of Scrolls and Ornaments, by Haney	" 1.00
David's Practical Letterer, Show Card Writer	" 1.00
Draftsmen's Alphabets, by K. & E.	" 1.00
Easy Lettering, by Cromwell	" .50
Excelsior Alphabet Book	" .50
Freehand Lettering, by Reinhardt	" 1.00
Gilder's Manual	" .50
Letter Engraving, by Wheelby	" 2.00
Letters and Lettering, by Browne	" 2.00
Manual of Sign and Carriage Decoration	" .50
Modern Lettering, by Heney	" 2.00
Modern Show Card Writer, by Thompson	" 1.00
Monograms, by Campana	" .40
Ornamental Penmanship, by Becker	" 2.00
Painters' Manual	" .50
Reinhardt's Alphabet Book	" 1.00
Show Card Writing, by Faust	" 1.50
Show Card Writing, by Hurst & Nowak, 25 alphabets	" 2.00
Signists, Modern Book of Alphabets, by Delamotte (208 pages, 100 designs)	" 1.50
Standard Scroll Book	" 1.00
Standard Sign Writer	" 2.00
Students' Alphabets, by K. & E.	" .25
Vapley's Alphabet Book	" 1.00

Text Books on Art, Mechanical Drawing, Etc. — continued

Engineering as a Vocation, by McCullough	each, \$1.00
Estimate Blanks for Residences and Small Public Buildings. A list of everything all ready for cost figures, by A. W. Joslin, Boston, 1913, (32 pages)	each, .25 doz., 2.50
Estimate and Contract Record Book for Plumbers, by Gray	each, .50
Estimating Frame and Brick Houses, by F. T. Hodgson, 1913	" 1.00
Estimating the Cost of Buildings, 1914, by A. W. Joslin. An excellent text book with course on plan reading (228 pages)	" 1.00
Estimating and Contracting Hand Book, by Radford (900 pages)	" 2.00
Estimator's Price Book and Pocket Companion, 1914, by I. P. Hicks (217 pages)	" 1.00
Ever-Ready Pipe and Elbow Chart, by Pehls	" 1.00
Hot Water Supply and Kitchen Boiler Connection, by W. Hutton (211 pages)	" 1.50
House Chimneys	" .25
Jobbing Work for the Carpenter, 1914, by Crussell (284 pages)	" 1.50
Johnston & Jacobs Manual of Mechanical Drawing, arranged to meet requirements of new course adopted by Board of Education, New York	" 2.00
Joint Wiping and Lead Work, by Hutton	" .25
New Metal Worker Pattern Book, by Kittredge	" 5.00
Practical Sheet Metal Work and Demonstrated Patterns (12 Vols.)	" 1.50
Principles of Heating, by Wm. S. Snow	" 2.00
Questions and Answers on Theory and Practice of Sanitary Plumbing, by Starbuck (2 vols.)	" 1.00
Repair Kinks for Plumbers, by Kaiser	" .50
Stair Builder's Guide, 1914, by Williams (228 pages)	" 1.00
Specification Blanks, by I. P. Hicks	each, .25 doz., 2.50
Structural Drafting, by Frank O. Dufour	each, 1.00
Suburban Homes with Constructive Details, by Williams	" 1.50
Suggestions for Home Builders, by Arthur (228 pages)	" 1.00
Tinsmith's Helper and Pattern Book, by Vosburgh	" 1.00

RADFORD'S ESTIMATING AND CONTRACTING

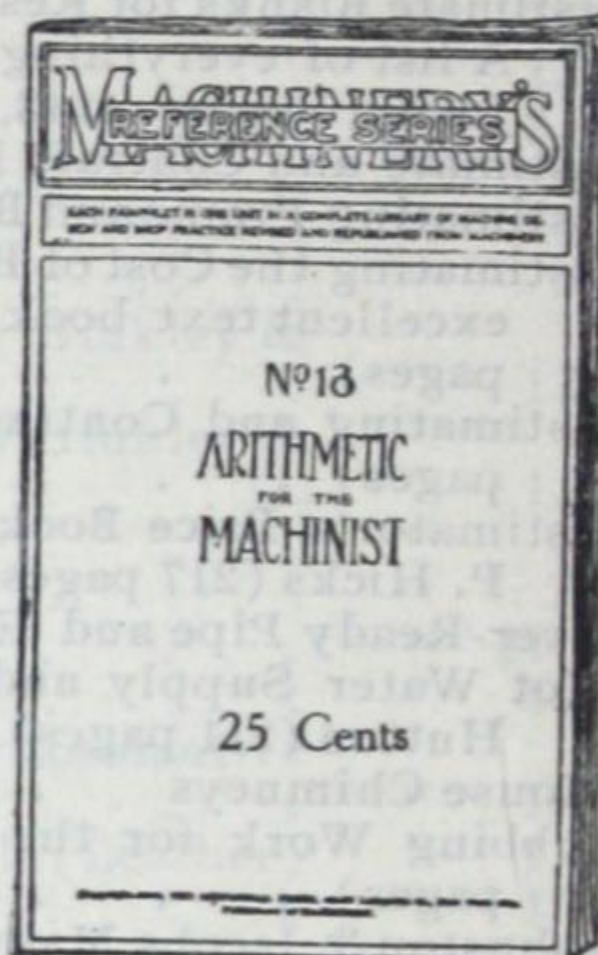
PUBLISHED DECEMBER, 1913

A Brand-New Practical Manual of Up-to-date Methods for
Rapid and Accurate Calculation of Costs for all kinds of
Approved Modern Construction, (896 pages) each, \$2.00

The ability to make correct estimates of cost is the very foundation of
business success for the modern builder. In this new "Radford" book,
for the first time, you will find estimating reduced to a science—so
simple and systematic that anyone can use it. Covers entire field of con-
struction in Concrete, Stucco, Brick, Stone, Steel, Wood, etc.; Roads
and Bridges; Plastering; Plumbing; Heating; Decorating; Wiring, etc.

THE REFERENCE BOOKS

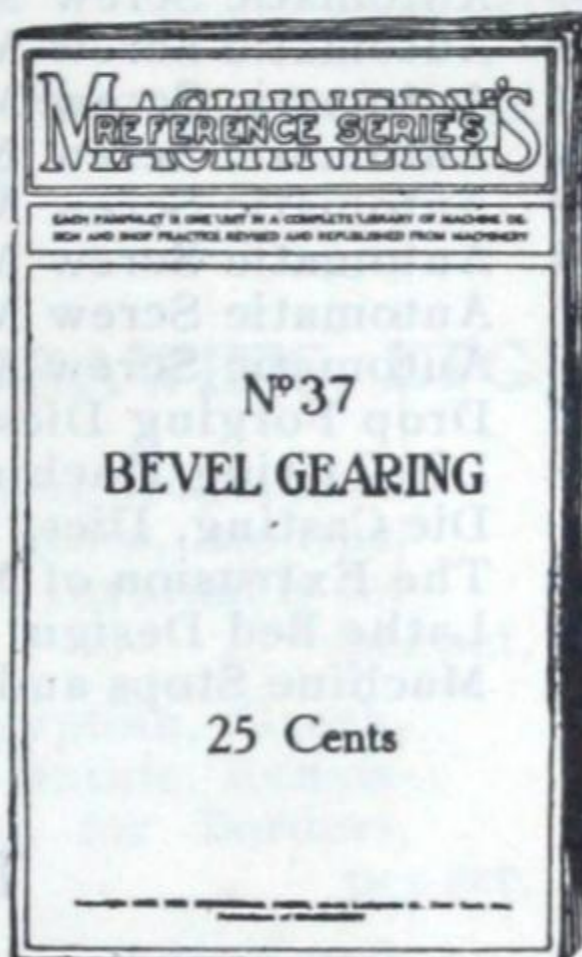
- No. each, .25
- 1 Worm Gearing
 - 2 Drafting-Room Practice
 - 3 Drill Jigs
 - 4 Milling Fixtures
 - 5 First Principles of Theoretical Mechanics
 - 6 Punch and Die Work
 - 7 Lathe and Planer Tools
 - 8 Working Drawings and D. R. Kinks
 - 9 Designing and Cutting Cams
 - 10 Examples of Machine Shop Practice
 - 11 Bearings
 - 12 *Out of Print*
 - 13 Blanking Dies.
 - 14 Details of Machine Tool Design
 - 15 Spur Gearing
 - 16 Machine Tool Drives
 - 17 Strength of Cylinders
 - 18 Shop Arithmetic for the Machinist
 - 19 Use of Formulas in Mechanics
 - 20 Spiral Gearing
 - 21 Measuring Tools
 - 22 Calculations of Elements of Machine Design
 - 23 Theory of Crane Design
 - 24 Examples of Calculating Designs
 - 25 Deep Hole Drilling
 - 26 Modern Punch and Die Construction
 - 27 Locomotive Design, Boiler and Cylinders
 - 28 Locomotive Design, Valve Motion
 - 29 Locomotive Design, Smokebox, Frames and Driving Machinery
 - 30 Locomotive Design, Springs, Trucks Cab, and Tender
 - 31 Screw Thread Tools and Gages
 - 32 Screw Thread Cutting
 - 33 Systems and Practice of the Drafting-Room
 - 34 Care and Repair of Dynamos and Motors
 - 35 Tables and Formulas for Shop and Drafting-Room
 - 36 Iron and Steel
 - 37 Bevel Gearing
 - 38 Grinding and Grinding Machines
 - 39 Fans, Ventilation and Heating
 - 40 Fly-Wheels
 - 41 Jigs and Fixtures, Principles of Design, etc.
 - 42 Jigs and Fixtures, Open and Closed Drill Jigs
 - 43 Jigs and Fixtures, Principles of Boring Jig Design, etc.
 - 44 Machine Blacksmithing
 - 45 Drop Forging
 - 46 Hardening and Tempering



These books have been wonderfully successful. More than 800,000 copies have been sold in our years.

The Reference Books — continued

- 47 Electric Over-Head Cranes
 48 Files and Filing
 49 Girders for Electric Over-Head Cranes
 50 Principles and Practice of Assembling Machine Tools—Part I
 51 Principles and Practice of Assembling Machine Tools—Part II
 52 Advanced Shop Arithmetic for the Machinist
 53 Use of Logarithms and Logarithmic Tables
 54 Solution of Triangles—Part I
 55 Solution of Triangles—Part II
 56 Ball Bearings
 57 Metal Spinning
 58 Helical and Elliptic Springs
 59 Machines, Tools and Methods of Automobile
 Manufacture
 60 Construction and Manufacture of Automob-
 iles
 61 Blacksmith Shop Practice
 62 Hardness and Durability Testing of Metals
 63 Heat Treatment of Steel
 64 Gage Making and Lapping
 65 Formulas and Constants for Gas Engine
 Design
 66 Heating and Ventilating Shops and Offices
 67 Steam Boilers
 68 Boiler Furnaces
 69 Feed Water Appliances
 70 Steam Engines
 71 Steam Turbines
 72 Pumps, Condensers, Steam and Water Piping
 73 Principles and Applications of Electricity—Part I
 74 Principles and Applications of Electricity—Part II
 75 Principles and Applications of Electricity—Part III
 76 Principles and Applications of Electricity—Part IV
 77 Principles and Applications of Electricity—Part V
 78 Principles and Applications of Electricity—Part VI
 79 Locomotive Building, Main and Side Rods
 80 Locomotive Building, Wheels; Axles; Driving Boxes
 81 Locomotive Building, Cylinders and Frames
 82 Locomotive Building, Valve Motion
 83 Locomotive Building, Boiler Shop Practice
 84 Locomotive Building, Erecting
 85 Mechanical Drawing, Instruments; Materials; Geometrical Problems
 86 Mechanical Drawing, Projection
 87 Mechanical Drawing, Machine Details
 88 Mechanical Drawing, Machine Details
 89 The Theory of Shrinkage and Forced Fits
 90 Railway Repair Shop Practice
 91 Operation of the Lathe—Part I



The Reference Books — continued

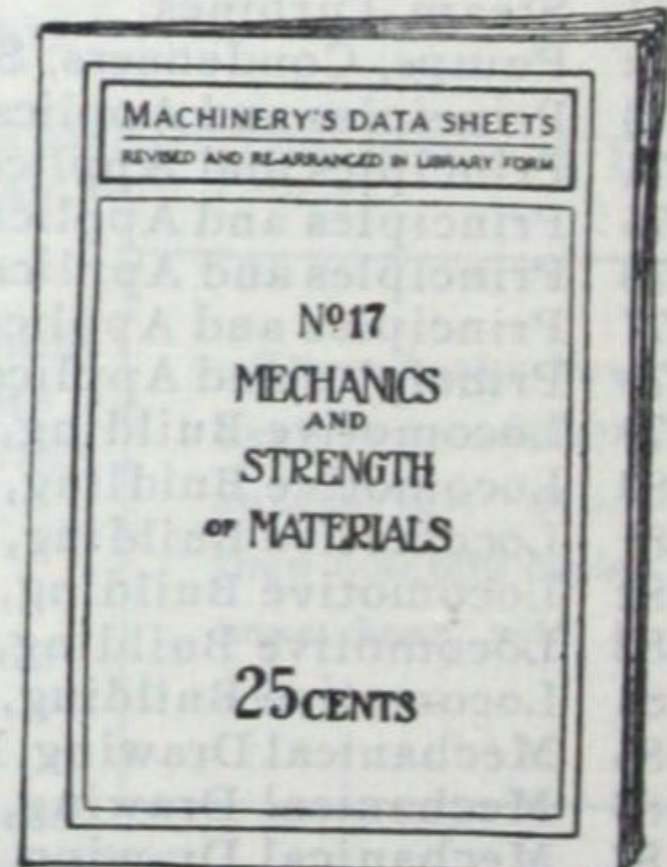
- 92 Operation of the Lathe—Part II
- 93 Operation of Planer, Shaper and Slotter
- 94 Operation of Drilling Machines
- 95 Operation of Vertical and Horizontal Boring Machines
- 96 Operation of Milling Machines—Part I
- 97 Operation of Milling Machines—Part II
- 98 Operation of Grinding Machines
- 99 Automatic Screw Machine Practice, Part I
- 100 Automatic Screw Machine Practice, Part II
- 101 Automatic Screw Machine Practice, Part III
- 102 Automatic Screw Machine Practice, Part IV
- 103 Automatic Screw Machine Practice, Part V
- 104 Automatic Screw Machine Practice, Part VI
- 105 Automatic Screw Machine Practice, Part VII
- 106 Automatic Screw Machine Practice, Part VIII
- 107 Drop Forging Dies and Die Sinking
- 108 Die Casting Machines
- 109 Die Casting, Dies, Machines, Methods
- 110 The Extrusion of Metals
- 111 Lathe Bed Design
- 112 Machine Stops and Locking Devices

THE DATA BOOKS

No.

- 1 Screw Threads
- 2 Screws, Bolts and Nuts
- 3 Taps and Dies
- 4 Reamers, Sockets, Drills and Milling Cutters
- 5 Spur Gearing
- 6 Bevel, Spiral and Worm Gearing
- 7 Shafting, Keys and Keyways
- 8 Bearings, Couplings, Clutches, Chains and Hooks
- 9 Springs, Slides and Machine Details
- 10 Motor Drive, Speeds and Feeds, etc.
- 11 Milling Machine Indexing, etc.
- 12 Pipe and Pipe Fittings
- 13 Boilers and Chimneys
- 14 Locomotive and Railway Data
- 15 Steam and Gas Engines
- 16 Mathematical Tables
- 17 Mechanics and Strength of Materials
- 18 Beam Formulas and Structural Design
- 19 Belt, Rope and Chain Drives
- 20 Wiring Diagrams, Heating and Ventilation, etc.

each, .25



Books of Alphabets, Lettering, Etc. — continued

A TEXT BOOK OF FREEHAND LETTERING

By FRANK T. DANIELS, A.M.B., Instructor of Civil Engineering in Tufts College

34 pages Text. 13 Folding Plates (cloth) each, \$1.00

LETTERING FOR DRAFTSMEN, ENGINEERS AND STUDENTS

By CHARLES W. REINHARDT, Chief Draftsman for "Engineering News"

Oblong, 8×11 inches each, \$1.00

A Practical System of Freehand Lettering for Working Drawings, 23 pages text, 44 illustrations, and 9 full-page plates

HENRY W. POOR'S BOOKS ON DRAWING, ETC.

Pose Drawing, nine plates. Numerous examples of proportions and details of human figure—heads, eyes, noses, mouths, ears, facial expressions, action studies, etc. Invaluable for teachers, students and pupils per set, .25

Historic Ornaments, 600 units, nine plates. Egyptian, Greek, Roman, Byzantine, Romanesque, Saracenic, Gothic, Renaissance, Japanese. Used in making designs for Borders, Surface Patterns, Head and Tail Pieces, etc. per set, .25

Wild Flower Designs, 200 units, twelve plates. Conventionalized, idealized and natural. Used in making designs for Borders, Surface Patterns, Head and Tail Pieces, etc. per set, .25

Animal Drawing, nine plates. 250 examples of Horses, Cows, Dogs, Cats, Lions, Tigers, Goats, Sheep, Birds, Ducks, Geese, Turkeys, etc. Children are delighted with them per set, .25

Magic Drawings, (100) nine plates. For Blackboard Work in the Lower grades. Changing Letters, Curves, Fruit, etc., by a few rapid strokes into comical drawings. The children are greatly interested per set, .25

Principles of Design, twenty-four large charts. Each chart measures 32×44 inches. They contain an abundance of material for design, with practical illustrations of the methods of using such material to the best advantage per set, 6.00

Trees in Pencil, from Nature, (50) nine plates. Showing the various strokes used in drawing different kinds of trees, foliage in masses, foreground, middleground and distance per set, .25

Freehand Alphabets, (25) fourteen plates, both simple and complex. For lettering Book Covers, Poems, Title Pages, Working Drawings, Decorating Blackboards, etc. per set, .25

VERE FOSTER'S DRAWING COPY BOOKS

New Edition. With Illustrations and Paper to Draw on. In
Seventy Numbers, Paper Covers each, .10

FREEHAND SERIES. 20 Numbers

- A1. Elementary — Easy Objects (straight lines)
- A2. " Simple Objects (straight lines)
- B1. Straight Line Objects (flat)
- B2. " " (perspective)
- C1. Curved Line Objects (flat)
- C2. " " (perspective)
- D1. Leaves from Nature — Simplest Forms
- D2. Natural Foliage and Sprays
- E1. Plants from Nature
- E2. Simple Floral Forms
- F1. Flowers from Nature
- F2. " and Fruit
- G1. Ornamental Leaves
- G2. " Foliage and Fruit
- H1. " Objects (simple)
- H2. " " (advanced)
- I1. Elementary Ornament
- I2. Floral Ornament, Pateras, etc.
- I3. Anthemion and Ornamental Forms
- I4. Advanced Outline Ornament

LANDSCAPE SERIES. 12 Numbers

- J1. Trees — Oak, Fir, etc.
- J2. " Beech, Elm, etc.
- J3. " Ash, Chestnut, etc.
- J4. " Larch, Lime, Willow, etc.
- K1. Landscape — Simple Sketching, Shading
- K2. " Sketches Boldly Shaded
- K3. " Fully Shaded Drawings
- K4. " Highly Finished Sketches, etc.
- L1. Rustic Figures. By E. Duncan, R.W.S.
- M1. Marine Objects — Boats, etc.
- M2. Fishing Boats, Coasters, etc.
- M3. Yachts, Vessels, Studies of Water, etc.

ANIMAL AND HUMAN FIGURES. 16 Numbers

- O. Elementary Animal Drawing
- O1. Quadrupeds and Birds
- O2. Poultry (various breeds)
- O3. British Small Birds
- O4. " Wild Animals
- O5. Horses — Arab, Hunter, Dray, etc.
- O6. " Racer, Pony, Mule
- O7. Dogs (seventeen species)
- O8. Cattle, Sheep, Pigs, Goats, etc.
- O9. Cattle, Lambs, Ass, Foal, etc.

Vere Foster's Drawing Copy Books—continued

- O10. Foreign Wild Animals
- O11. Cats and Kittens
- Q1. Human Figure—Elementary
- Q2. " " in Outline
- Q3. " " " (advanced)
- Q4. " " Slightly Shaded

GEOMETRICAL SERIES. 12 Numbers

- R1. Practical Geometry—Simple Problems
- R2. " " Circle, Ellipse, etc.
- R3. Applied Geometry
- R4. Solid Geometry
- S1. Drawing to Scale—Simple Lessons
- S2. " " More Advanced
- S3. " " Architectural
- S4. " " Building Details
- T1. Mechanical—Initiatory Subjects
- T2. Details of Tools, etc.
- T3. Working Drawings, Mechanics, etc.
- T4. Details of Machines, etc.

PERSPECTIVE, MODEL DRAWING, SHADING. 10 Numbers

- U1. Perspective (definitions, etc.)
- U2. " (picture plane, ground plane)
- U3. " (circles, pyramids, objects)
- U4. " (squares, cylinders, objects)
- V1. Model and Object Drawing (simple)
- V2. " " " (advanced)
- V3. " " " "
- V4. " " " "
- W1. Shading—Models
- W2. Shading—Ornaments

Embracing Every Description of Drawing

In Eighteen Parts, each complete in itself . . . each, .46

<p>Part I. Elementary. Contains A1, A2, B1, B2</p> <p>" II. Objects. Contains C1, C2, H1, H2</p> <p>" III. Plants. Contains E1, E2, F1, F2</p> <p>" IV. Ornamental Foliage. Contains D1, D2, G1, G2</p> <p>" V. Ornament. Contains I1, I2, I3, I4</p> <p>" VI. Trees. Cont. J1, J2, J3, J4</p> <p>" VII. Landscape. Contains K1, K2, K3, K4</p> <p>" VIII. Marine. Contains L1, M1, M2, M3</p> <p>" IX. Cats, Dogs, etc. Contains O, O1, O7, O11</p>	<p>Part X. Cattle, etc. Contains O4, O8, O9, O10</p> <p>" XI. Horses, etc. Contains O2, O3 O5, O6</p> <p>" XII. Human Figure. Contains Q1, Q2, Q3, Q4</p> <p>" XIII. Geometry. Contains R1, R2, R3, R4</p> <p>" XIV. Mechanical. Contains T1, T2, T3, T4</p> <p>" XV. Perspective. Contains U1, U2, U3, U4,</p> <p>" XVI. Model. Contains V1, V2, V3, V4</p> <p>" XVII. Architecture</p> <p>" XVIII. Shading</p>
--	--

WINSOR & NEWTON'S HAND BOOKS ON ART

<p>Paper Covers per doz., \$3.00 each, .30</p> <p>No. 1. Half Hour Lecture on Drawing and Painting</p> <p>2. Sketching from Nature</p> <p>3. Landscape Painting in Water Colors</p> <p>4. System of Water Color Painting</p> <p>5. Marine Painting in Water Colors</p> <p>6. Sketching in Water Color from Nature</p> <p>7. Portrait Painting in Water Colors</p> <p>8. Miniature Painting in Water Colors</p> <p>9. Flower Painting in Water Colors</p> <p>10. Landscape Painting in Oil Colors</p> <p>11. Portrait Painting in Oil Colors</p> <p>12. Marine Painting in Oil Colors</p> <p>13. Elements of Perspective</p> <p>14. Botanical Drawing</p> <p>15. Manual of Illumination</p> <p>17. Figure Drawing</p> <p>18. Treatise on the Human Figure</p> <p>19. Anatomy of the Human Figure</p> <p>21. Anatomy of the Horse</p> <p>23. Drawing in Colored Crayons</p> <p>24. Mural Decoration</p> <p>25. Transparency Painting on Linen</p>	<p>No. 26. Transparent Painting on Glass</p> <p>27. Principles of Coloring in Painting</p> <p>28. Principles of Form in Ornamental Art</p> <p>30. Instructions for Cleaning, Repairing, Lining and Restoring Oil Paintings</p> <p>32. Comparative Anatomy as Applied to the Purposes of Artists</p> <p>33. Etching Explained and Illustrated</p> <p>34. Painting on China; with a Chapter on Terra Cotta Painting</p> <p>36. Dictionary of Water Color Technique</p> <p>37. Flower Painting in Oil Colors. With Colored Illustrations</p> <p>39. Fruit and Still Life Painting in Oil Colors. With Colored Illustrations</p> <p>40. Pen and Ink Drawing</p> <p>41. Trees and How to Draw Them</p> <p>42. Rudiments of Decorative Painting. With Colored Illustrations</p> <p>43. A Description of Modern Water Color Pigments. Illustrated with Washes of 72 Colors</p> <p>44. Oil Painting on Glass</p> <p>45. Cartlidge's Oil Painting for Beginners. With Colored Illustrations</p>
---	--

In ordering it is sufficient to mention the number which is prefixed to each book. Nos. 16, 20, 22, 29, 31, 35 and 38 are out of print

GEO. ROWNEY & CO'S TREATISES ON THE FINE ARTS

Per Dozen, \$4.20

No. 1.	Hints on Sketching from Nature. Part I. By N. E. Green. Illustrated by the Author. 25th Edition	each, .40
2.	Hints on Sketching from Nature. Part II. By N. E. Green. Illustrated by the Author. 22d Edition	“ .40
3.	Hints on Sketching from Nature. Part III. By N. E. Green. Illustrated by the Author. 27th Edition	“ .40
4.	Guide to Landscape Animal Drawing. By N. F. Green With numerous Illustrations by the Author. 4th Edition	“ .40
5.	Guide to Portrait Painting from Life in Oil Colors. By F. Haynes. 4th Edition	“ .40
6.	Guide to Figure Painting in Water Colors. By Sidney T. Whiteford. 8th Edition	“ .40
7.	Guide to Sketching from Nature in Water Colors. By L. C. Miles. With numerous illustrations by the Author. 7th Edition	“ .40
8.	Principles of Perspective. By Henry Lewis, B. A. 19th Edition	“ .40
9.	Guide to Water Color Painting. By R. P. Noble. With an Illustration in Colors. 28th Edition	“ .40
10.	Hints for Sketching Trees from Nature in Water Colors. By Thomas Hatton. 13th Ed. Illustrated	“ .40
11.	Guide to Oil Painting. Part I. By J. S. Templeton. 53d Edition	“ .40
12.	Guide to Oil Painting. Part II. (Landscape from Nature. By A. Clint. 29th Edition	“ .40
13.	Guide to Light and Shade Drawing. By Mrs. M. Merrifield. With Illustrations. 14th Edition	“ .40
14.	Guide to Pencil and Chalk Drawing. By G. Harley. With Illustrations. 15th Edition	“ .40
16.	Guide to Pictorial Perspective. By B. R. Green. With Illustrations. 12th Edition	“ .40
17.	Guide to Figure Drawing. By G. E. Hicks. With Illustrations. 12th Edition	“ .40
18.	Guide to Flower Painting in Water Colors. By G. Rosenberg. With Illustrations. 17th Edition	“ .40
19.	Guide to Painting on Glass. By H. Bielfeld. 6th Edition	“ .40
20.	Guide to Miniature Painting and Coloring Photographs. By J. S. Templeton. 15th Edition	“ .40
21.	Guide to Animal Drawing. By C. H. Weigall. With numerous Illustrations. 12th Edition	“ .40
23.	Theory of Coloring. By J. Bacon. With Illustrations in Colors. 12th Edition	“ .40
24.	Guide to Porcelain Painting. By S. T. Whiteford. With Illustrations by the Author. 6th Edition	“ .40
	Guide to Porcelain Painting. By S. T. Whiteford. With additional Illustrations, bound in Cloth	“ .40

Geo. Rowney & Co's Treatises on the Fine Arts — continued

Per Dozen, \$4.20

- | | | |
|-----|---|-----------|
| 25. | Guide to Modeling, and the Principles and Practice of Sculpture. By George Halse. With Illustrations. 5th Edition | each, .40 |
| 26. | On the Materials used in Painting, with remarks on Varnishing and Cleaning Pictures. By Charles Martel. 6th Edition, Revised | " .40 |
| 27. | Manual of Colors, showing the Composition and Properties of Artists' Colors, with Experiments on their Permanence. By H. Seward, F. C. S. 4th Edition | " .40 |
| 28. | Guide to Etching. Its Principles and Practice. By W. D. Shrubsole. With Illustrations. 2d Edition | " .40 |
| 29. | Guide to Pastel Painting. By J. L. Sprinck. With Illustrations in Colors. 3d Edition | " .40 |
| 30. | Guide to Landscape Figure Drawing. By N. E. Green. With Illustrations by the Author. 3d Edition | " .40 |
| 31. | Practical Manual of Painting in Oil Colors. By Ernest Hareux. Part I. Still Life, Flowers, Fruit and Interiors. Illustrated. 4th Edition | " .40 |
| 32. | Practical Manual of Painting in Oil Colors. By Ernest Hareux. Part II. Landscape and Marine. Illustrated. 3d Edition | " .40 |
| 33. | Practical Manual of Painting in Oil Colors. By Ernest Hareux. Part III. Figures and Animals. Illustrated. 2d Edition | " .40 |
| 34. | Practical Manual of Painting in Oil Colors. By Ernest Hareux. Part IV. The Art of Making: Picture. Illustrated. 2d Edition | " .40 |

PRANG'S OUTLINE PICTURES

With Directions for Coloring

Attractive portfolio, 7×9½ inches, each containing nine pictures, including one colored as an example, and directions for coloring each, .25

- | | |
|----------------------------------|------------------------------|
| No. 1. Children (Single Figures) | No. 6. Children at work |
| 2. Children (Groups) | 7. Children at play |
| 3. Flowers | 8. Kind Children |
| 4. Children | 9. Figures from Mother Goose |
| 5. Farm Scenes | 10. Our Pilgrim Forefathers |

CHILDREN'S DRAWING AND PAINTING BOOKS



No. 80.	Drawing, 6 kinds	each, .10	No. 129.	New Palette Painting,	
81.	"	" .10		2 kinds	each, .20
82.	"	" .15	85.	Story Painting, 3	
83.	Easy Painting, 6	" .10		kinds	" .20
83½.	Object Painting, 4	" .15	180.	Floral Painting,	
	kinds	" .15		3 kinds	" .20
84.	Easy Painting, 4	" .15	181.	Easy Painting, 3	
	kinds	" .15		kinds	" .20
84½.	Object Painting, 4	" .15	189.	Postcard Painting	" .25
	kinds	" .15	192.	Flowers	" .25
			194.	Fruit	" .25

The handling of brush and color is one of the greatest pastimes with children, and as this furnishes instructive amusement, it should be made available in the best form

Instruction which the child enjoys is entered into eagerly, going far to make accomplishment easy and rapid. Therefore instruction in the form of amusement is one of the best methods with children, since by it the child is drawn of its own volition

Our aim is to assist parents and teachers to extract education from this pastime, for, with proper guidance, this simple amusement may be made fruitful in benefit for life

If wisely directed, two ends may be attained

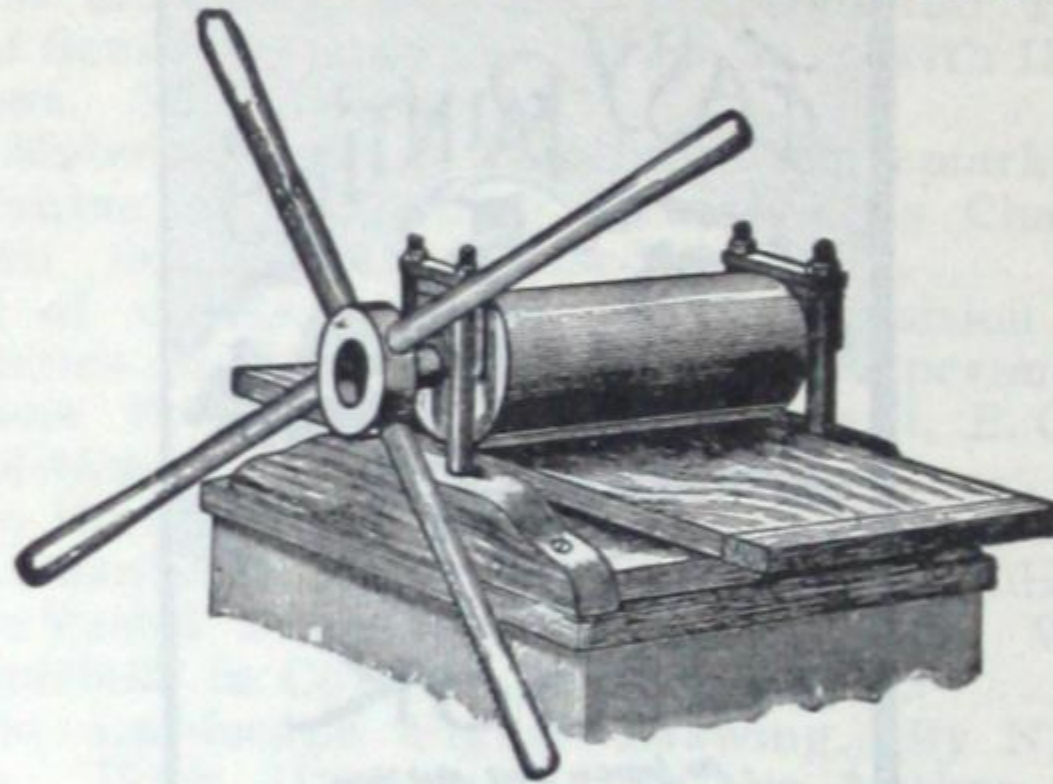
First: A knowledge of the right use and combination of colors

Second: The cultivation of artistic taste

Our Outline Pictures for Painting, by leading artists, will place in the hands of parents really artistic designs, with simple arrangements of color, by means of which, from the first step, the child may lay the foundation of a true artistic perception

It is intended to include in these issues a variety of figures, animals, landscapes, flower pieces and decorative work

FROST & ADAMS CO'S
ETCHERS' AND ENGRAVERS' MATERIALS



ETCHING PRESS

Etching Presses, strongly built to answer all requirements, with Roller 10 inches long	each, \$17.50
Tracing Points, in Wood, Nos. 1 to 6	per dozen, \$2.00 each, .20
Etching Points or Engravers' Markers, Dbl. Points	" 3.00 " .30
Gravers, Square and Lozenge, various shapes, Seller's make	per dozen, 1.50 each, .15
Gravers, Tint Tools, various, Seller's make	" 2.00 " .20
Graver Handles, Plain	" .80 " .08
" Rosewood	" 1.25 " .12
" Long, with two German Silver Ferrules	" .50
" Long, with two German Silver Ferrules; Seller's make	" 1.75
Scrapers, Plain, Nos. 3 and 4	" .40
" Concave	" .60
" " in Handles, Seller's make	" 1.75
Burnishers, Oyal, Ebony Handles, 2½ inches	" .50
" " " Broad	" 1.25
" " " Large, 3 inches, Polished Handles, Seller's make	" 1.75
Hand Vises, with Wooden Handles	" 1.00
Arkansas Oil Stones, in Mahogany Cases	" 1.00
Emery Paper, No. 000 finest to No. 4	per dozen, .50 " .05
Gelatine, White, Medium Thick, 17×21	per sheet, .45
Nitric Acid, Chemically Pure	per bottle, .50
Chloroform	" .50
Etching Ground, best for Summer or Winter use	per ball, .50
Liquid Ground	per bottle, .25
Stopping-out-Varnish	" .25
Wax for Walling	per roll, .25
Dabbers, for Ground Laying, covered with Finest Silk	each, .40
Dabbers for Charging the Plate with the Ink	" .25

Etchers' and Engravers' Materials—continued

Rubber Rollers for Ground Laying in Rebiting, 1½ inch	each, \$2.00
" " " " 2¾ "	" 2.50
" " " " 4 "	" 3.00
Roulettes, Assorted, from 3 to 6 rows of teeth	" 1.75
Dotting Wheels, Assorted	" 2.00
Rockers, 2½ inches wide, of 56, 64, 72, 90, 105 and 120 teeth	
to the inch	per inch, 4.00

Agate Ware Pans for Biting the Plates

Size, 5×7	7×9	8×10	10×12	11×14	14×17	15×19
Each, .44	.66	.82	1.32	2.16	5.10	6.28

English Porcelain Plates

Size, 7×9	8×10	10×12	11×14	14×17	15×19
Each, .60	.75	1.20	1.95	4.50	5.60

Pads for Engravers, Filled, 5, 6, 7 and 8 inch	each, .50, .60, .70, .80
Printing Ink, Black, in ½ and 1 pound cans	per pound, 2.00
Printing Ink for Tinting, Burnt Sienna, Burnt Umber, Van-dyke Brown	per pound, 2.00
Printer's Varnish or Plate Oil, No. 0, thin	" .50
" " " 1, medium	" .60
" " " 3, strong	" .70
Fast Dryer	per bottle, .25
Holland Plate Paper, Demy, 15½ × 20	per quire, 1.20 per sheet, .07
" " Medium, 17 × 21½	" 1.40 " .08
" " Royal, 19 × 24	" 2.00 " .12
" " Imperial, 21 × 28½	" 3.25 " .16
" " Columbian, 24½ × 36	" 6.00 " .30
" " Dbl. Elephant, 27½ × 41	" 10.25 " .45
Ross Stippled Board	" 9.50 " .40

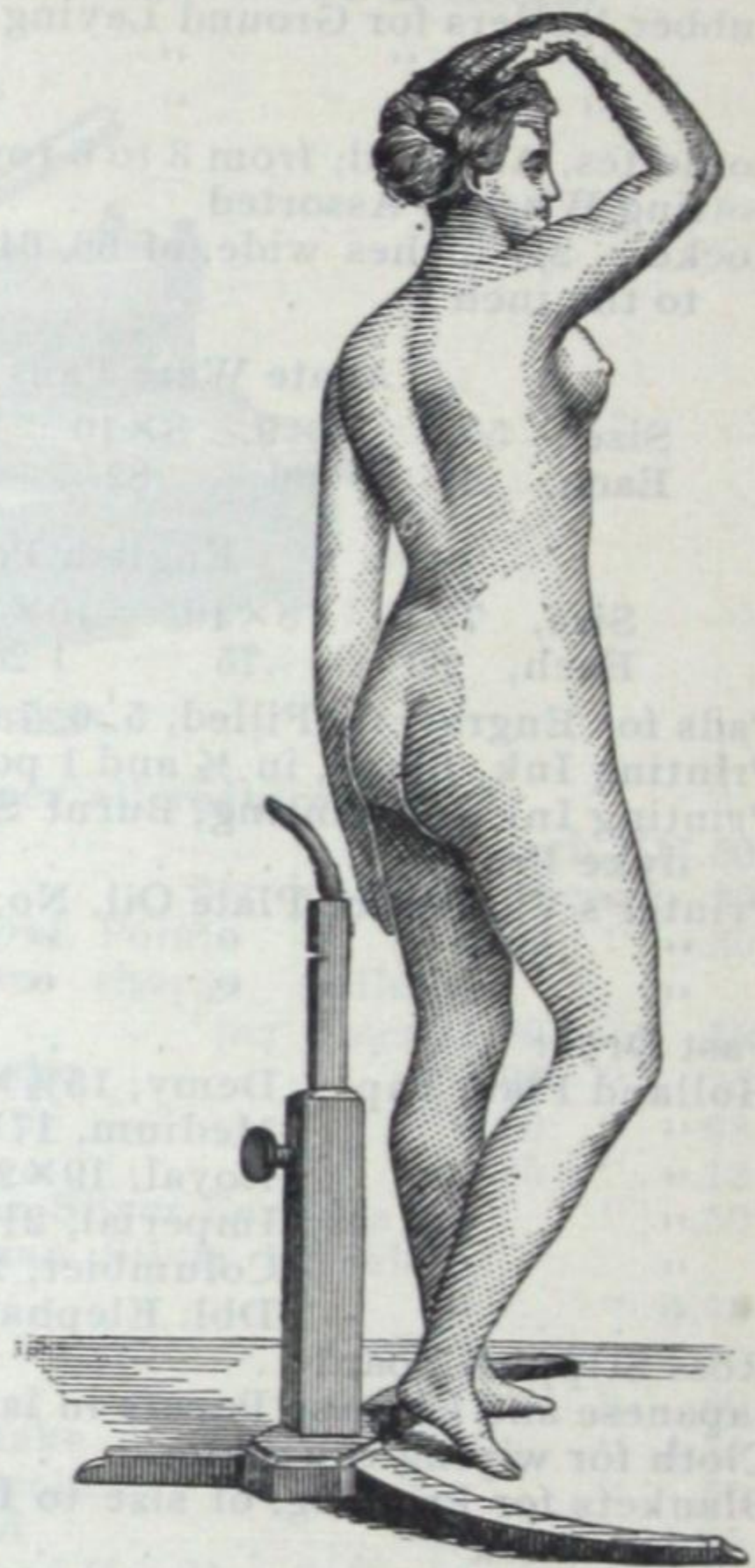
Japanese and Chinese Papers in large variety
 Cloth for wiping the plates per yard, .10
 Blankets for Printing, of size to fit the Press, two thin and one thick per set, 3.50

Copper Plates, 2¾ × 3¾ in. each, .15	Copper Plates, 3¼ × 5 in. each, .35
" 2¾ × 4¼ " .25	" 3¾ × 5¼ " .40
" 3 × 4 " .25	" 4¼ × 5¼ " .45
" 3 × 4½ " .30	

Copper Plates, larger sizes: 3×6, 4×6, 4½×8, 4×6, 5×6, 5×6½, 5×7, 5×7½, 5½×7, 6×8, 6×9, 5×10, 7×9, 7½×10, and all sizes between per square inch, .02½
 Copper Plates, above 7½×10, are made to order of thicker plates per square inch, .03¼
 Zinc Plates, made to order, 1/8 in. thick, up to 7×10 in. per sq. in., .02½
 " " 1/8 in. thick, up to 12×15 in. " .03¼
 " " 1/8 in. thick, larger than 12×15 in. " .04

Steel Plates, all sizes, made to order

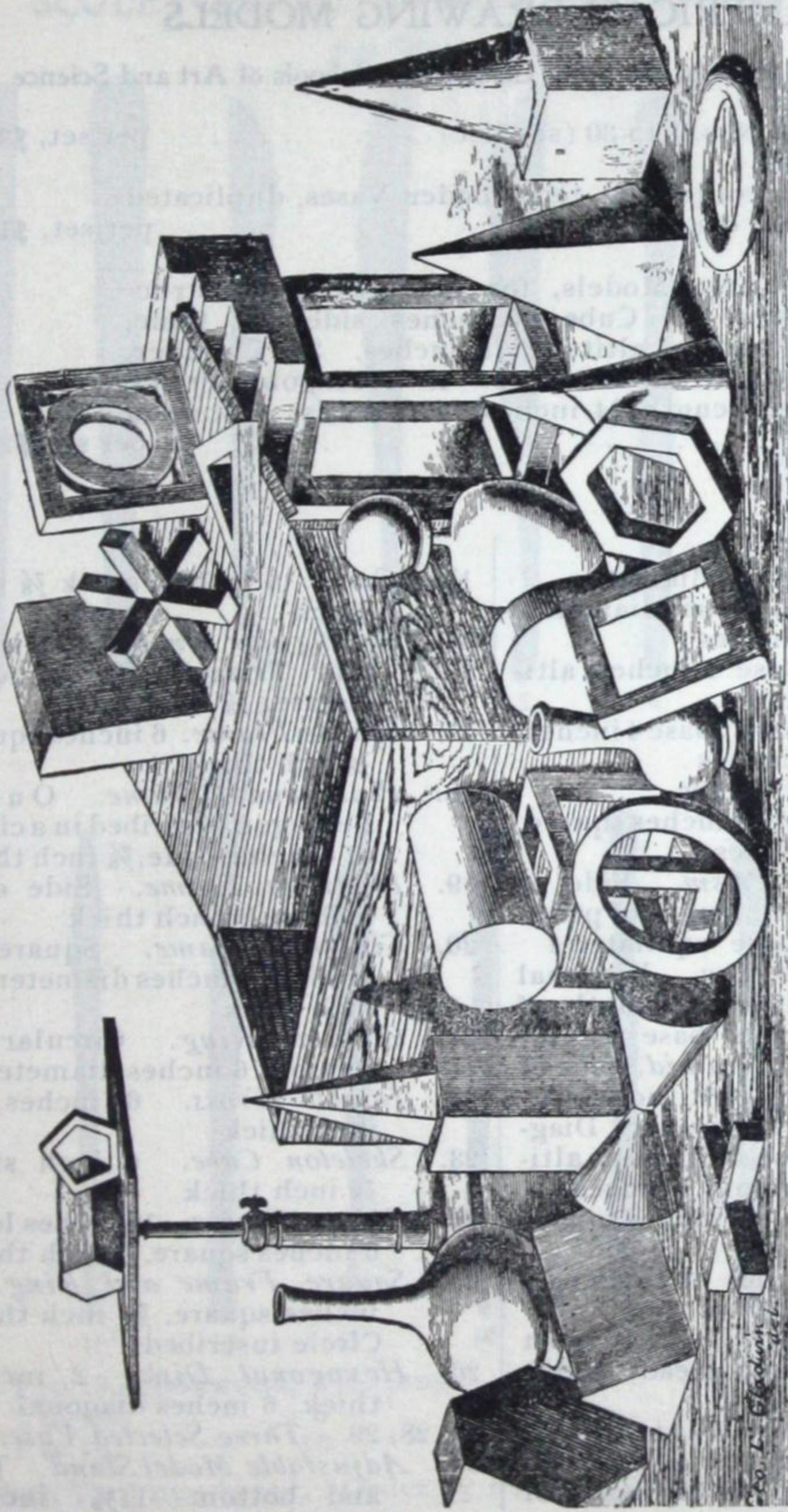
ARTISTS' MANIKINS AND LAY FIGURES



6 inch, Hard Wood	each, \$1.50
9 " " "	" 2.00
12 " Pine Wood	" 2.00
18 " " "	" 4.00
24 " " "	" 6.00
30 " " "	" 9.00
36 " " "	" 15.00
42 " " " Fingers Movable	" 28.00

Larger sizes imported to order

AMERICAN DRAWING MODELS



For description see page 442

PRICES OF SEPARATE MODELS

No. 1.	each, \$1.20	No. 7.	each, .70	No. 13.	each, \$1.00	No. 19.	each, .90	No. 25.	each, \$1.65
2.	.70	8.	.75	14.	.75	20.	.75	26.	.70
3.	.60	9.	.75	15.	.55	21.	1.20	27.	1.90
4.	1.50	10.	.80	16.	.75	22.	.90	28.	1.80
5.	.45	11.	.70	17.	.75	23.	1.45	29.	2.00
6.	.60	12.	.60	18.	.90	24.	1.60	30.	2.55

AMERICAN DRAWING MODELS

For Common Schools, Drawing Classes and Schools of Art and Science

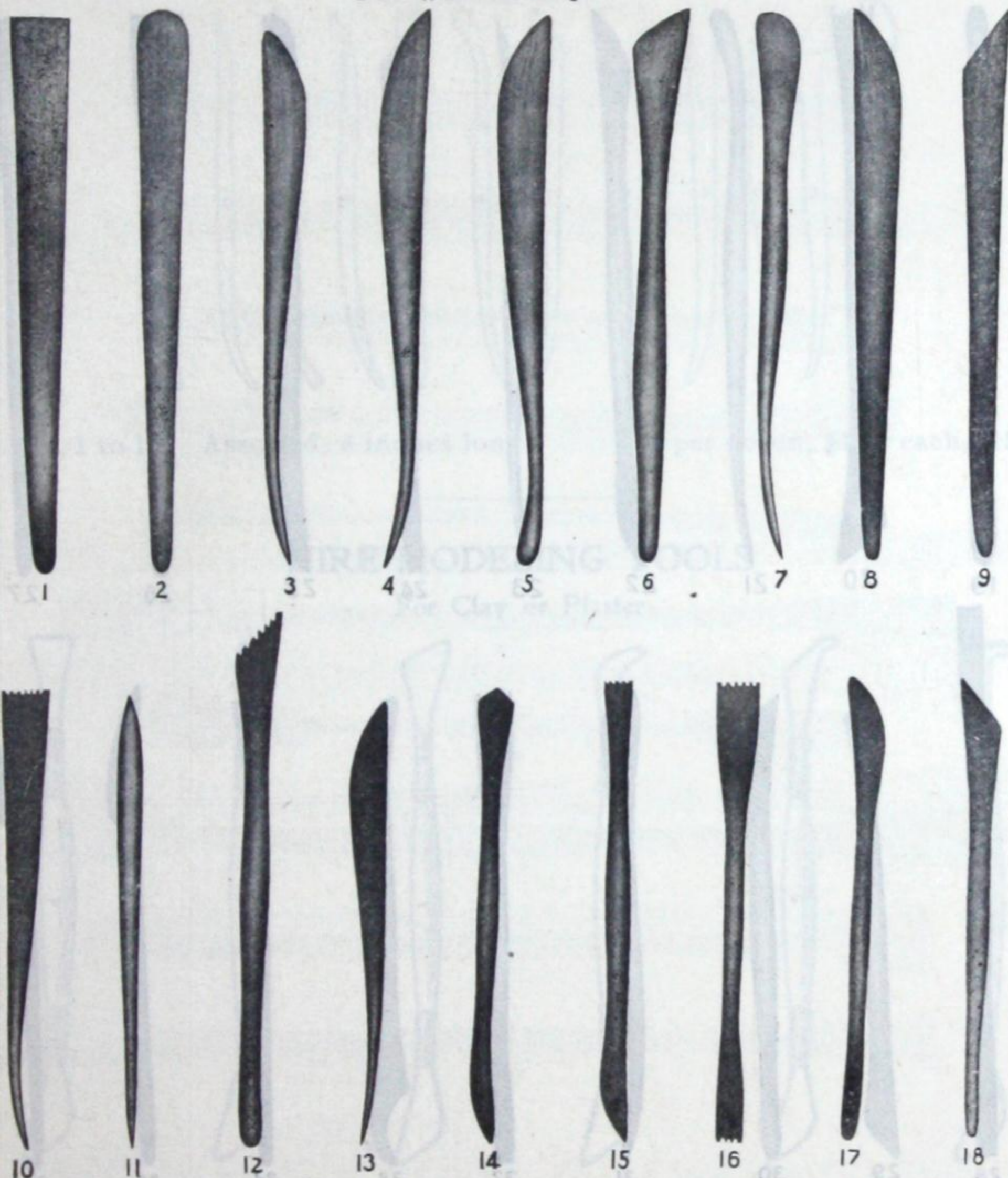
- Set No. 1 contains Nos. 1 to 30 (see list) per set, \$30.00
- Set No. 2. A box containing ten Wooden Vases, duplicated from the Greek originals per set, \$15.00
- Set No. 3. Four Large Models, for Lectures and Instructions to Classes. 1. Cube, 15 inches side. 2. Cone, with base 12 inches, altitude 18 inches. 3. Cylinder, base 12 inches, altitude 18 inches. 4. Hexagonal Prism, base 12 inches, length 24 inches. Price List sent upon application per set, \$25.00

- | | |
|---|--|
| <p>1. <i>Sphere.</i> 4 inches diameter</p> <p>2. <i>Cone.</i> Base 4 inches diameter, altitude 8 inches</p> <p>3. <i>Cylinder.</i> Base 4 inches, altitude 8 inches</p> <p>4. <i>Cone in Sections.</i> Base 4 inches, altitude 8 inches</p> <p>5. <i>Cube</i> Side 4 inches</p> <p>6. <i>Oblong Block.</i> 4 inches square, length 8 inches</p> <p>7. <i>Triangular Prism.</i> Side of base 4 inches, length of prism 8 inches, base equilateral</p> <p>8. <i>Hexagonal Prism.</i> Diagonal of base 4 inches, length of prism 8 inches, base regular</p> <p>9. <i>Rectangular Pyramid.</i> Side of base 4 inches, altitude 8 in.</p> <p>10. <i>Hexagonal Pyramid.</i> Diagonal of base 4 inches, altitude of pyramid 8 inches</p> <p>11. <i>Square Block.</i> 6 inches square 2 inches thick</p> <p>12. <i>Disk.</i> 6 inches diameter, 2 inches thick</p> <p>13. <i>Flight of four steps.</i> 1 inch rise, 1½ inch tread, width 6 inches</p> <p>14. <i>Double Cone.</i> Altitude 8 inches, diameter at junction of cones 1 inch, bases of cones 4 inches</p> | <p>15. <i>Cross.</i> 6 inches, stock ⅞ inch thick</p> <p>16. <i>Triangular Frame.</i> Equilateral Triangle of 6 inches square, ⅞ inch thick</p> <p>17. <i>Square Frame.</i> 6 inches square ⅞ inch thick</p> <p>18. <i>Pentagonal Frame.</i> Outer Pentagon inscribed in a circle of 6 inches side, ⅞ inch thick</p> <p>19. <i>Hexagon Frame.</i> Side of 3 inches, ⅞ inch thick</p> <p>20. <i>Circular Frame.</i> Square in section, 6 inches diameter, ⅞ inch thick</p> <p>21. <i>Circular Ring.</i> Circular in section, 6 inches diameter</p> <p>22. <i>Double Cross.</i> 6 inches, ⅞ inch thick</p> <p>23. <i>Skeleton Cube.</i> 6 inch side, ⅞ inch thick</p> <p>24. <i>Oblong Frame.</i> 12 inches long 6 inches square, ⅞ inch thick</p> <p>25. <i>Square Frame and Ring.</i> 6 inches square, ⅞ inch thick Circle inscribed</p> <p>26. <i>Hexagonal Disk.</i> 2 inches thick, 6 inches diagonal</p> <p>27, 28, 29. <i>Three Selected Vases</i></p> <p>30. <i>Adjustable Model Stand.</i> Top and bottom 11½ inches square</p> |
|---|--|

For prices see Page No. 441

SCULPTORS' BOXWOOD MODELING TOOLS

For Wax or Clay

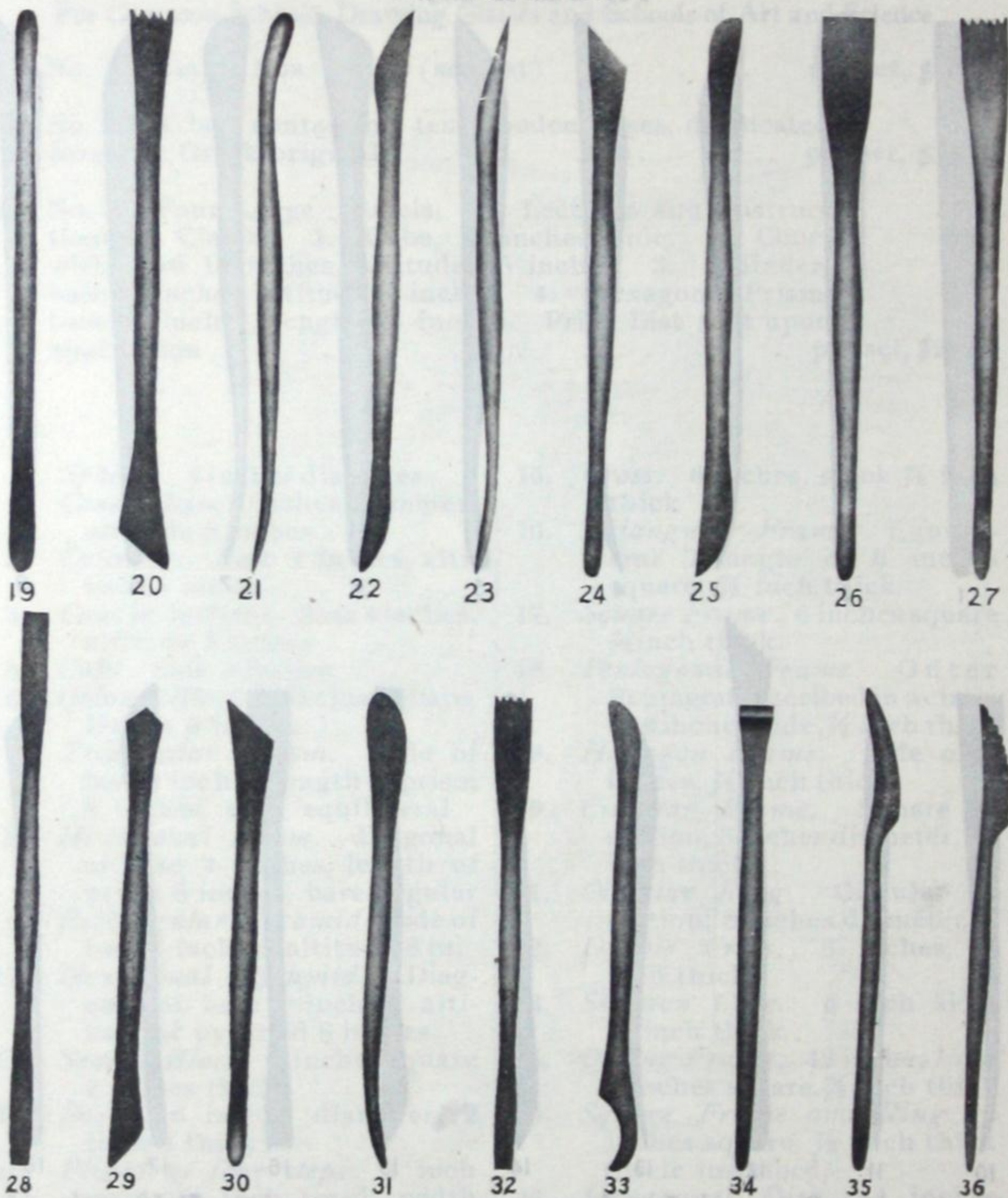


No. 1 to 18.	Boxwood, 7 in. long	doz., \$1.50	each, .15
1 to 18.	" 8 "	" 1.80	" .20
1 to 18.	" 10 "	" 2.25	" .25

Each Tool numbered. Order by number, giving length wanted

SCULPTORS' BOXWOOD MODELING TOOLS

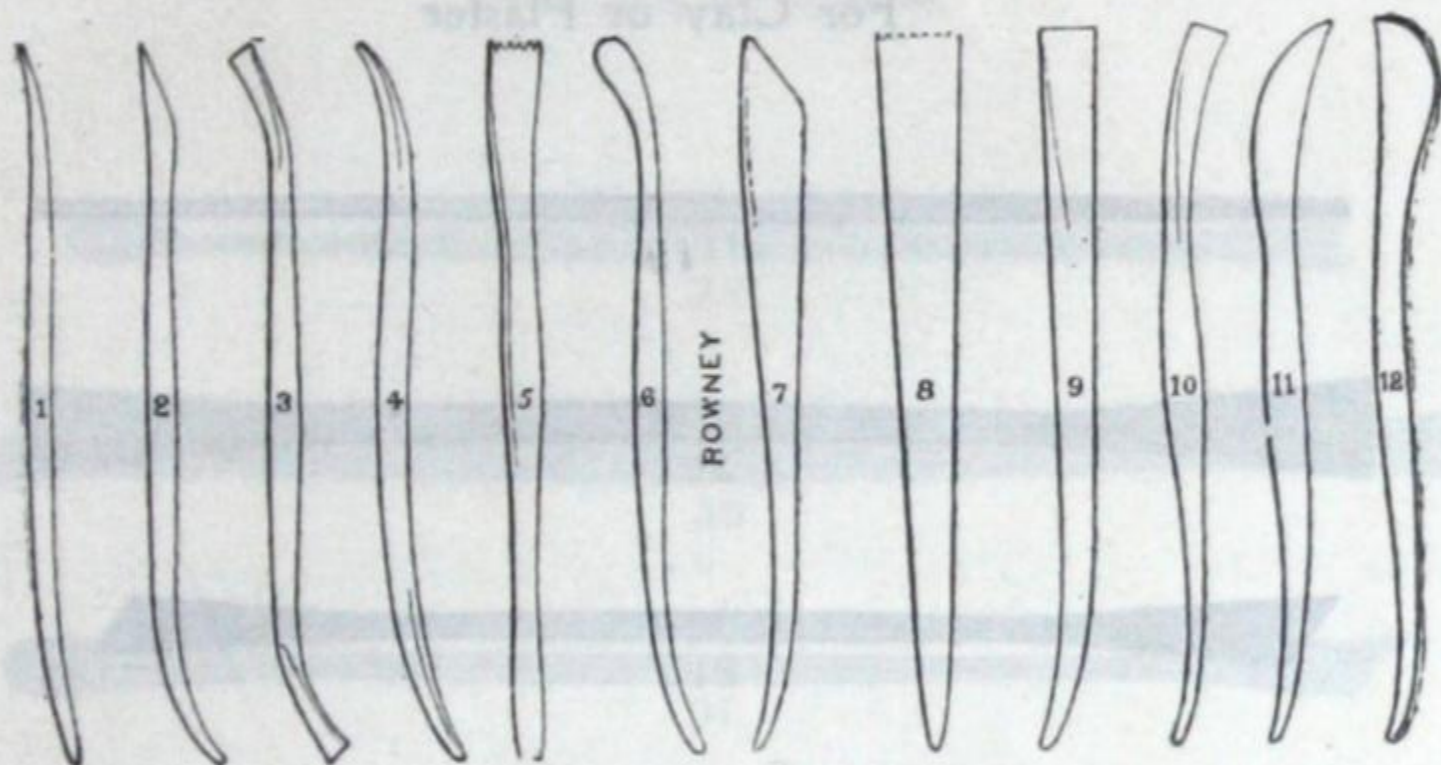
For Wax or Clay



No. 19 to 36.	Boxwood, 7 in. long	.	.	.	doz., \$1.50	each, .15
19 to 36.	" 8 "	.	.	.	" 1.80	" .20
19 to 36.	" 10 "	.	.	.	" 2.25	" .25

Each tool numbered. Order by number, giving length wanted

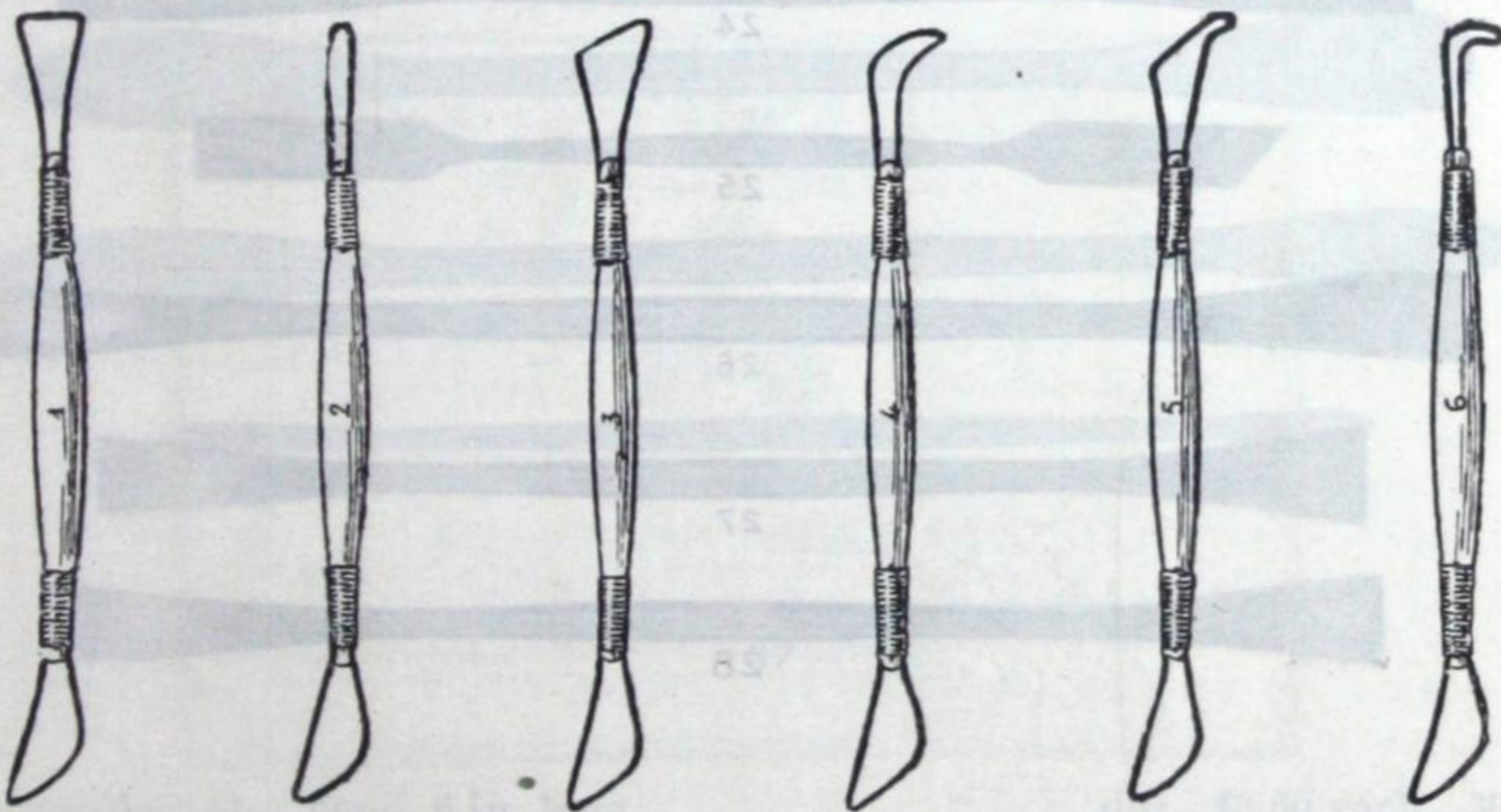
STUDENTS' BOXWOOD MODELING TOOLS



No. 1 to 12. Assorted, 6 inches long per dozen, \$1.50 each, .15

WIRE MODELING TOOLS

For Clay or Plaster

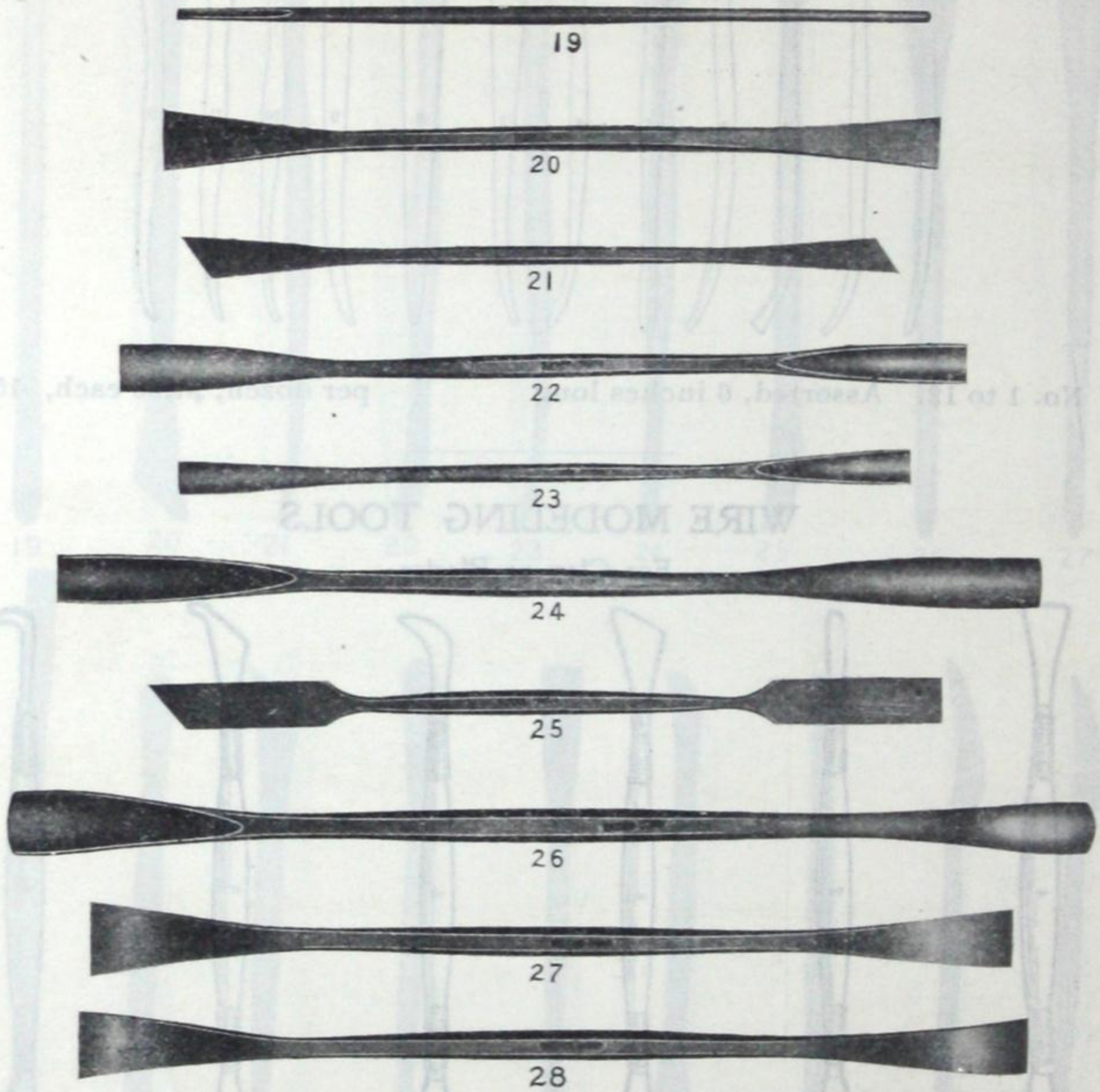


No. 1 to 6.	Wire Tools, 6 in.	.	.	.	per doz., \$3.75	each, .35
1 to 6.	" 8 "	.	.	.	" 4.50	" .40
1 to 6.	" 10 "	.	.	.	" 6.00	" .50

Order by Number, giving length wanted

SCULPTORS' STEEL MODELING TOOLS

For Clay or Plaster

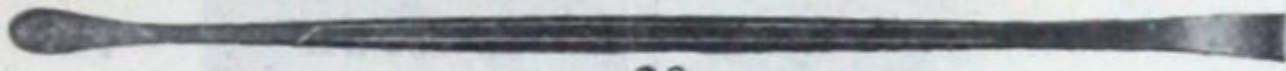


No. 19 to 28.	Steel, 6 in. long	. . . . .	doz., \$3.60	each, .30
19 to 28.	" 7 "	. . . . .	" 4 80	" .40
19 to 28.	" 9 "	. . . . .	" 6.00	" .50

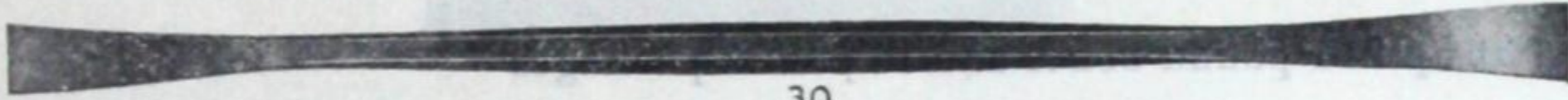
Order by number, giving length wanted

SCULPTORS' STEEL MODELING TOOLS

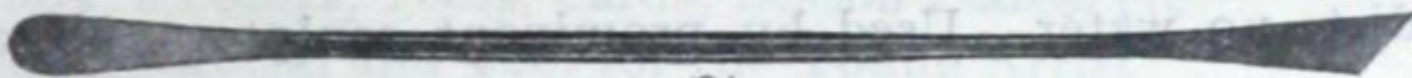
For Clay or Plaster



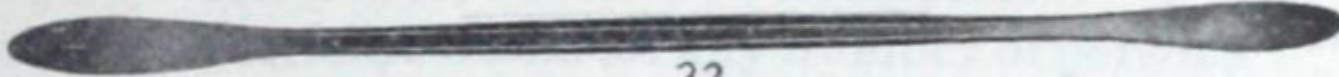
29



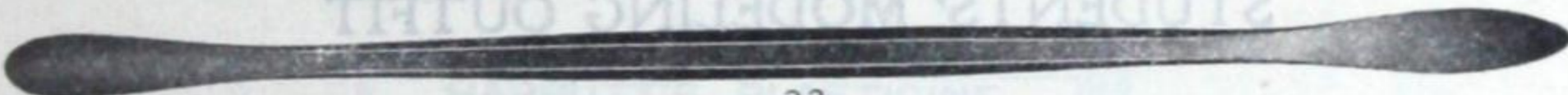
30



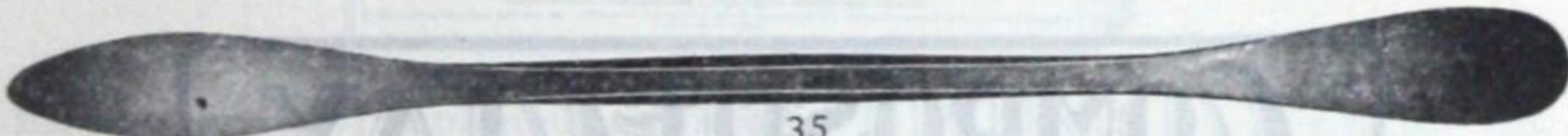
31



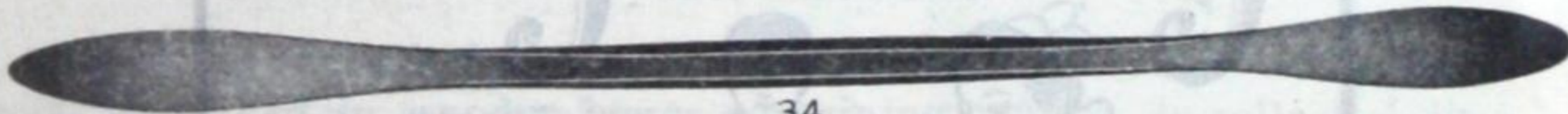
32



33



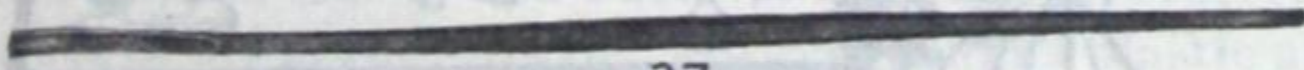
35



34



36



37

No. 29 to 37.	Steel, 6 in. long	. . . . .	doz., \$3.60 each, .30
29 to 37.	" 7 "	. . . . .	" 4.80 " .40
29 to 37.	" 9 "	. . . . .	" 6.00 " .50

Order by number, giving length wanted

COMPOSITE MODELING CLAY

(Plasteline)

Gray	.	.	.	per lb., .35	Light Brown	.	.	per lb., .35
Green	.	.	.	" .35	Dark Brown	.	.	" .35
Red	.	.	.	" .35	Clay Color	.	.	" .35

Put up in 1 pound boxes and 10 pound packages

The Ideal Modeling Material. It remains soft and plastic forever, no dust, no dirt, no water. Used by prominent sculptors all over the world

STUDENTS' MODELING OUTFIT



Outfit contains an assortment of Composite Modeling Clay
and Tools, with Instruction Pamphlet . doz., \$7.50 each, .75

HARBUTT'S PLASTICINE



Queen Modeler Box, 5 Colors, and Modeling Tool	. per box,	.25
Beginners' Box, 5 Colors, Tools, Cards, Lesson Plates, etc.	"	.50
Universal Box, Material and Tool for the Young Artist	"	.50
Complete Modeler Box, like Beginners', but larger	"	1.00
Designer Box, 5 Colors, Tools, Plates and Accessories	"	1.50
Add-a-Bit Box, The Plasticine Game for any number of persons	"	1.50
Builder Box, complete, for the Young Architect and Builder	"	2.50



Re-fill Packages for replenishing boxes	. . . . .	per pkg.,	.25
Re-fill Packages for replenishing boxes, 1 lb.	. . . . .	"	.50

Plasticine in bulk for Artists, Sculptors, Schools and other large users, is packed in wooden boxes containing 100 lbs., in rolls of 1 lb., for easy handling

Plasticine entirely overcomes the expense, difficulties and discomforts of wet clay or wax, superceeding the greasy foreign modeling pastes made with animal fats of bad odor; it is clean, absolutely antiseptic and destructive of all germ growth; always remains plastic and ready for instant use; is unaffected by extremes of climate; retains modeled shape without drooping or shrinking. Invaluable for Sculptors, Artists and Architects. Makes Modeling a joy and inspiration for Schools, Kindergartens and Home Amusement; awakens ingenuity and wonderfully develops artistic sense and accurate observation. It has not the mussiness and general unsuitableness of clay. No water required

For further description see page 448b

Harbutt's Plasticine — continued

THE BUILDER



By this, the newest and most delightful box, models of real houses, castles, churches, etc., can be built in just the same way as the workman builds, brick by brick, in a realistic manner. Bricks made by the little brick making machine and roofing tiles stamped with apparatus in the box. Complete with all requisities and full instructions. Several can play with this box at once. Unlike wood bricks that tumble about, the model is permanent

THE ADD-A-BIT

A wonderfully interesting game which provides an unending source of real fun and enjoyment for Home and Social Gatherings. Young and old are interested and amused, something for all to do, and the fun and fascination of the game centres round its "unexpectedness." A constant succession of surprises



etc. The metal cutters start the young designer right away on practical work

THE COMPLETE MODELER

The oldest and most universally useful of the series for general work; a good supply of Plasticine and Tools

THE DESIGNER

The Designer is the box pre-eminently for the young art student. It assists in the production of original patterns and is helpful in Home Arts and Crafts, wood-carving, repousse work, stencil and inlay decoration, embroidery,



For Prices see page 448a

SHEET WAX

White	per pkg., .15	Purple	per pkg., .15
Green	" .15	Varigated	" .15
Pink	" .15	Red, Plain or Varigated " .25	
Yellow	" .15	Scarlet, Plain or Varigated " .25	
Blue	" .15	Pond Lily, White & Green " .25	
Sea Rose	" .15	Double Thick White " .25	

Our Wax is warranted the best in the market. Each Package contains 12 sheets, excepting the Pond Lily

The Pond Lily is double the size and thickness of Single Wax, and is suitable for making Wax Crosses, Pond Lilies, etc. Each package contains 6 sheets

PLASTELINA

Is now used and recommended by the most renowned sculptors of the United States as the best modeling material, and has been adopted in many schools of art and sculpture. It does not contain any clay or wax, does not stick, requires no sprinkling, and will retain its plastic qualities in all weathers and any length of time

Light Brown, Dark Brown, Terra Cotta, Grayish Green, Bronze
 Green per lb., .35

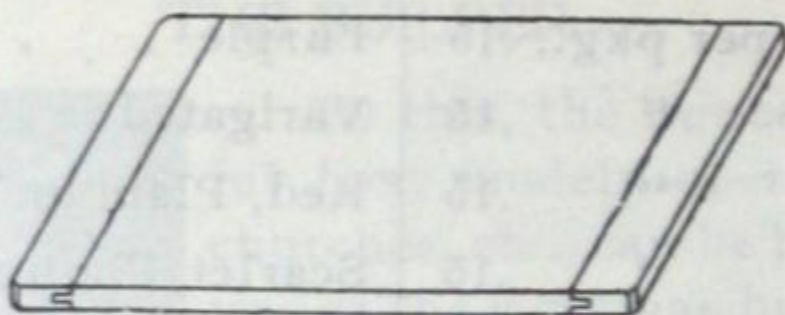
MODELING CLAY

Bricks, 5 or 10 pounds per lb., .06

FROST & ADAMS CO.'S MODELING WAX

Red, Green, Light Gray, Dark Gray, Maroon, Brown, Buff,
 Scarlet, in half-pound blocks per lb., \$1.00

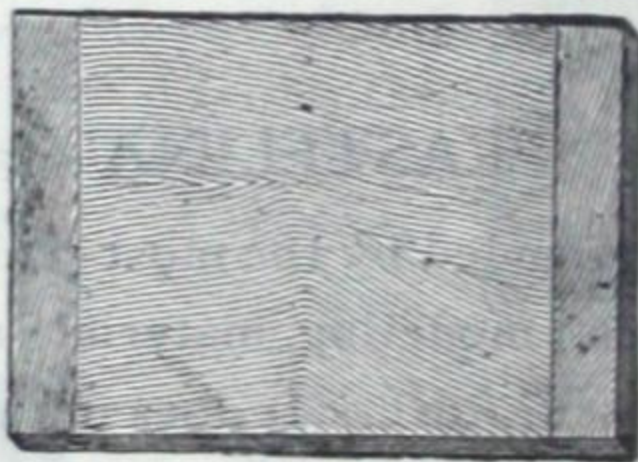
FROST & ADAMS CO.'S DRAWING BOARDS



12×16 in.,	Quarter Imperial,	$\frac{5}{8}$ in. thick,	First Quality	.	.	each,	.75
14×18 "	Half Royal,	$\frac{5}{8}$ " "	"	.	.	"	.95
17×23 "	Half Imperial,	$\frac{5}{8}$ " "	"	.	.	"	1.10
19×25 "	Royal,	$\frac{5}{8}$ " "	"	.	.	"	1.20
23×31 "	Imperial,	$\frac{7}{8}$ " "	"	.	.	"	1.50
28×41 "	Double Elephant,	$\frac{7}{8}$ " "	"	.	.	"	2.50

Pinewood Drawing Boards, with hardwood end cleats tongued and grooved, both sides flat, Shellac finished for use

FROST & ADAMS CO.'S DRAWING BOARDS



12×16 in.,	Quarter Imperial,	$\frac{5}{8}$ in. thick,	Second Quality	.	.	each,	.60
14×18 "	Half Royal,	$\frac{5}{8}$ " "	"	.	.	"	.80
17×23 "	Half Imperial,	$\frac{5}{8}$ " "	"	.	.	"	.90
19×25 "	Royal,	$\frac{5}{8}$ " "	"	.	.	"	1.00
23×31 "	Imperial,	$\frac{7}{8}$ " "	"	.	.	"	1.25
28×41 "	Double Elephant,	$\frac{7}{8}$ " "	"	.	.	"	2.00

Pinewood Drawing Boards have end cleats tongued and grooved, both sides flat, finished for use

F. & A. Co.'s Drawing Boards are the best that can be produced. They are of thoroughly seasoned, selected, narrow strips of pinewood. Boards can be made for much less money, if other than thoroughly seasoned woods are employed, the strips less carefully selected and matched and less attention paid to the finish

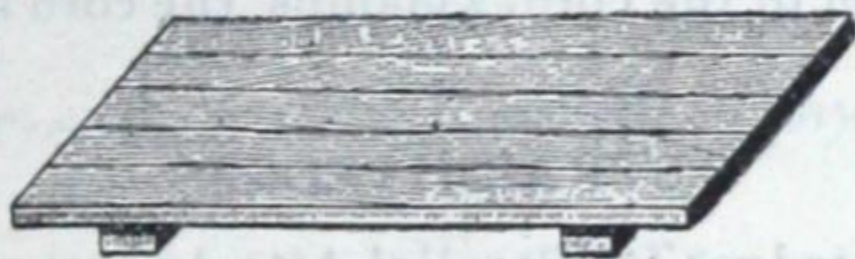
We shall be pleased to answer inquiries relating to Larger Drawing Boards

FROST & ADAMS CO.'S
SPECIAL LARGE PLAIN DRAWING BOARDS

1×42 in.,	3/4 in. thick,	First Quality	.	.	.	.	each, \$3.00
6×48 "	3/4 "	" "	"	"	"	"	" 6.00
0×60 "	3/4 "	" "	"	"	"	"	" 15.00
2×72 "	1 "	" "	"	"	"	"	" 18.00

Pinewood Drawing Boards with hardwood end cleats, flush both sides.
All Boards shellac finished

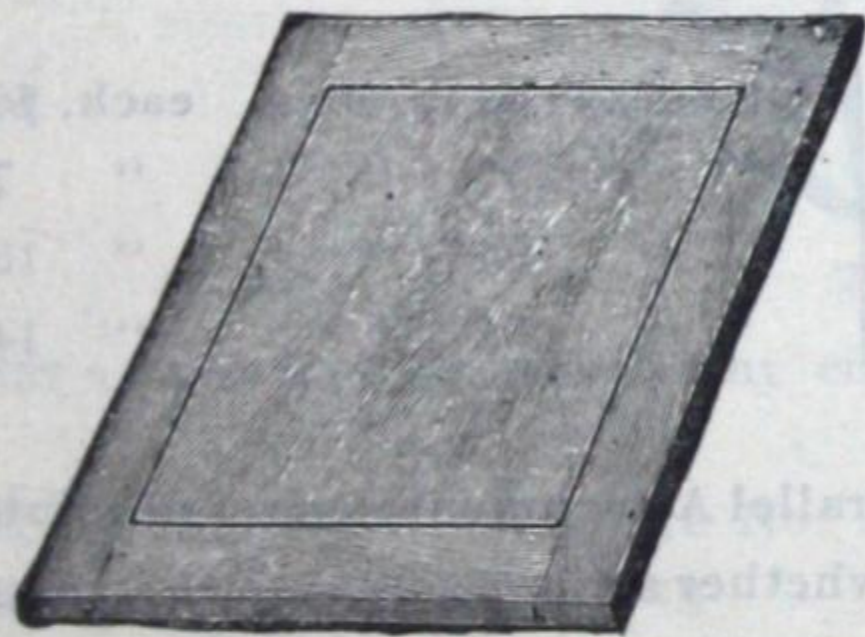
FROST & ADAMS CO.'S
SPECIAL LARGE DRAWING BOARDS



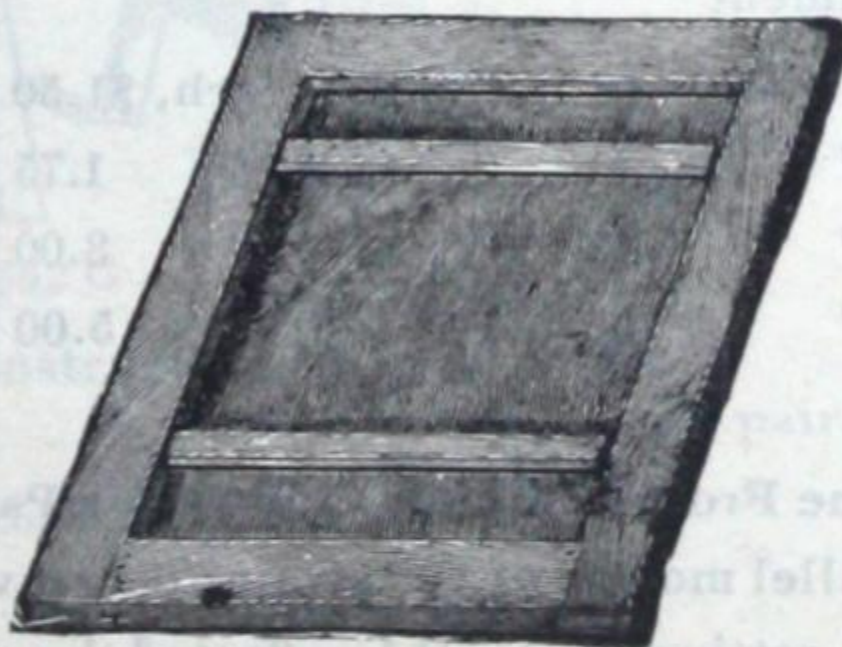
1×42 in.,	3/4 in. thick,	First Quality	.	.	.	.	each, \$ 4.50
6×48 "	3/4 "	" "	"	"	"	"	" 11.50
0×60 "	3/4 "	" "	"	"	"	"	" 16.50
2×72 "	1 1/4 "	" "	"	"	"	"	" 22.00

Pinewood Drawing Boards, hardwood cleats attached by screws sunk in slots bushed with metal, to allow contraction or expansion, We shall be pleased to answer inquiries relating to Larger Drawing Boards

FROST & ADAMS CO.'S FRAME DRAWING BOARDS



FRONT VIEW



BACK VIEW

12 × 17 inches	.	.	.	.	.	each, \$3.00
18 × 22 1/2 "	"	"	"	"	"	" 4.00
20 1/2 × 28 1/2 "	"	"	"	"	"	" 5.00

The frames of the above Boards are made of hard wood, the panels of pine, all from thoroughly seasoned stock

FROST & ADAMS CO.'S
PARALLEL ATTACHMENT

For Drawing Boards and Tables

Fixtures for Parallel Attachment (except straightedge)

For Boards $\frac{3}{4}$ in. thick per set, \$3.00	For Boards $1\frac{1}{4}$ in. thick per set, \$3.50
For Boards 1 in. thick " 3.25	For Boards $1\frac{5}{8}$ in. thick " 3.75

The fixtures consist of 2 double and 2 single pulleys, one of which is adjustable for tension of the cord, 2 clamps, the cord and the straightedge

STRAIGHTEDGES

Hardwood Straightedges for Parallel Attachment

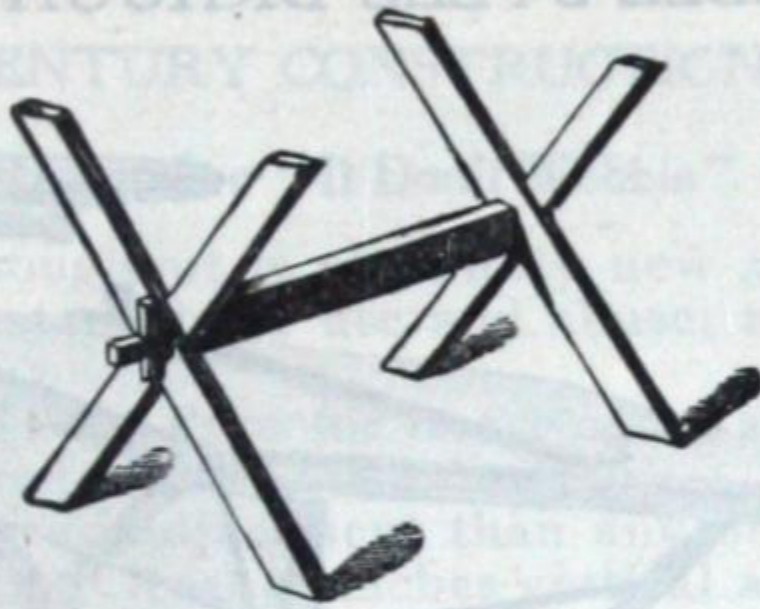
For Boards 26 in. long each, .60	For Boards 72 in. long each, \$2.75
" 31 " " .75	" 84 " " 3.75
" 42 " " 1.25	" 96 " " 4.50
" 55 " " 2.00	" 108 " " 5.00
" 60 " " 2.25	" 120 " " 6.50

Maple Straightedges, celluloid lined, (transparent) for Parallel Attachment

For Boards 26 in. long each, \$1.50	For Boards 60 in. long each, \$6.25
" 31 " " 1.75	" 72 " " 7.50
" 42 " " 3.00	" 84 " " 10.00
" 55 " " 5.00	" 96 " " 14.00

The Frost & Adams Company's Parallel Attachment insures absolutely parallel motion of the straightedge, whether set horizontal or at an angle. The setting is quickly effected by releasing and tightening the clamps which hold the straightedge to the board. In the same way the straightedge can readily be removed when a T square is to be used on the board. The attachment can be applied without other directions to any board having ledges or available space underneath.

TRESTLES FOR DRAWING BOARDS



2550

2550. Pinewood Trestles, 37 in. high, 38 in. long, 30 1/2 in. spread each, \$5.60

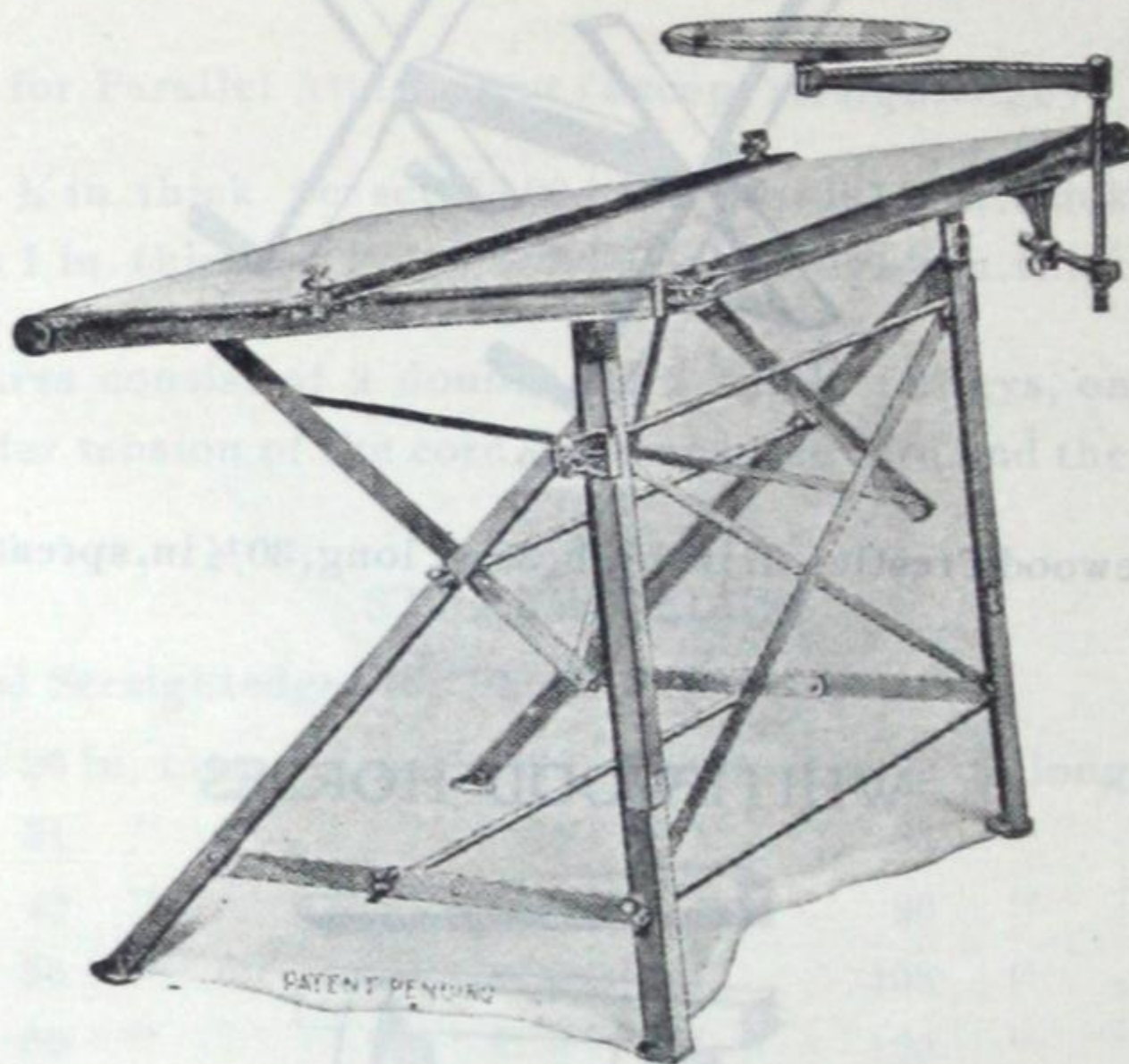
WHITEWOOD HORSES



2552 C

- 2552 A. Wooden Horses, light construction, 37 in. high, 35 in. long per pair, \$3.40
- 2552 B. Wooden Horses like No. 2552 A, fine quality, 37 in. high, 35 in. long " 5.80
- 2552 C. Wooden Horses, fine quality, with removable Sloping Ledges, 37 in. high, 35 in. long " 6.30
- 2552 D. Adjustable Wooden Horses, best workmanship, 36 in. long, adjustable for height from 37 to 47 in. on level or slope " 8.00

THE "CENTURY"
ADJUSTABLE STEEL DRAUGHTING TABLE



THE "CENTURY" OPEN

No.	Name	Size of Board Inches	Stand Including Board	Stand Without Board	Parallel St. Edge Complete	Adjustable Tray	Roller Curtain Covers
+O	Student Special		\$6.50	\$6.00		\$2.50	
*A	Century Leader	27×27	7.50	6.00	\$4.50	2.50	\$2.75
B	Century Leader	27×27	7.50	6.00	4.50	2.50	2.75
1	Century Standard	28×32	9.00	7.00	4.50	2.50	3.00
2	" "	30×36	10.00	7.00	4.75	2.50	3.50
3	" "	32×42	15.00	10.00	5.00	2.50	4.00
4	" "	37×48	18.00	11.00	5.50	2.50	4.50
5	" "	37×60	25.00	14.00	6.00	2.50	5.50
6	" "	42×60	28.00	16.00	6.00	2.50	5.75
7	" "	42×72	32.00	18.00	6.75	2.50	6.50
8	" "	48×72	36.00	20.00	6.75	2.50	7.00
9	" "	48×96	44.00	24.00	7.50	2.50	9.00
10	" "	48×120	54.00	30.00	10.00	2.50	12.00

The "Century" Adjustable Steel Draughting Table—continued

CENTURY CONSTRUCTION

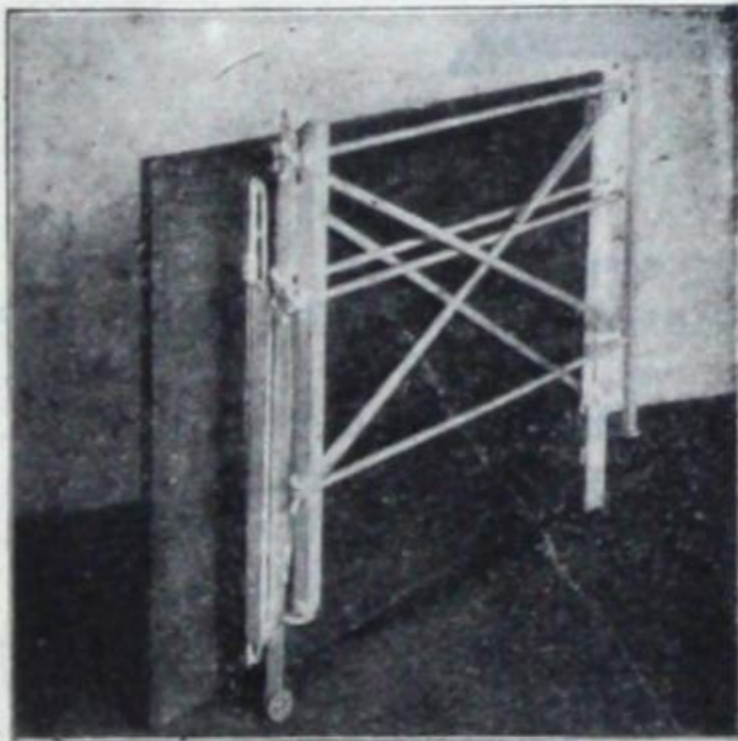
Remember "It Don't Wobble"

Our construction throughout is of strictly new and approved design, manufactured to withstand both use and abuse, mechanically perfect. Absolutely rigid.

We use Michigan White Pine for our No. 3 Table and larger sizes. The smaller tables have bass wood boards

It has a wider range of adjustment than any other table made. All tables are provided with at least 20 inches vertical adjustment, for either sitting or standing position. The top may be placed at any desired angle from horizontal to vertical

All adjustments made instantly by the simple action of thumbnuts, which when clamped hold the board perfectly tight



THE "CENTURY" FOLDED

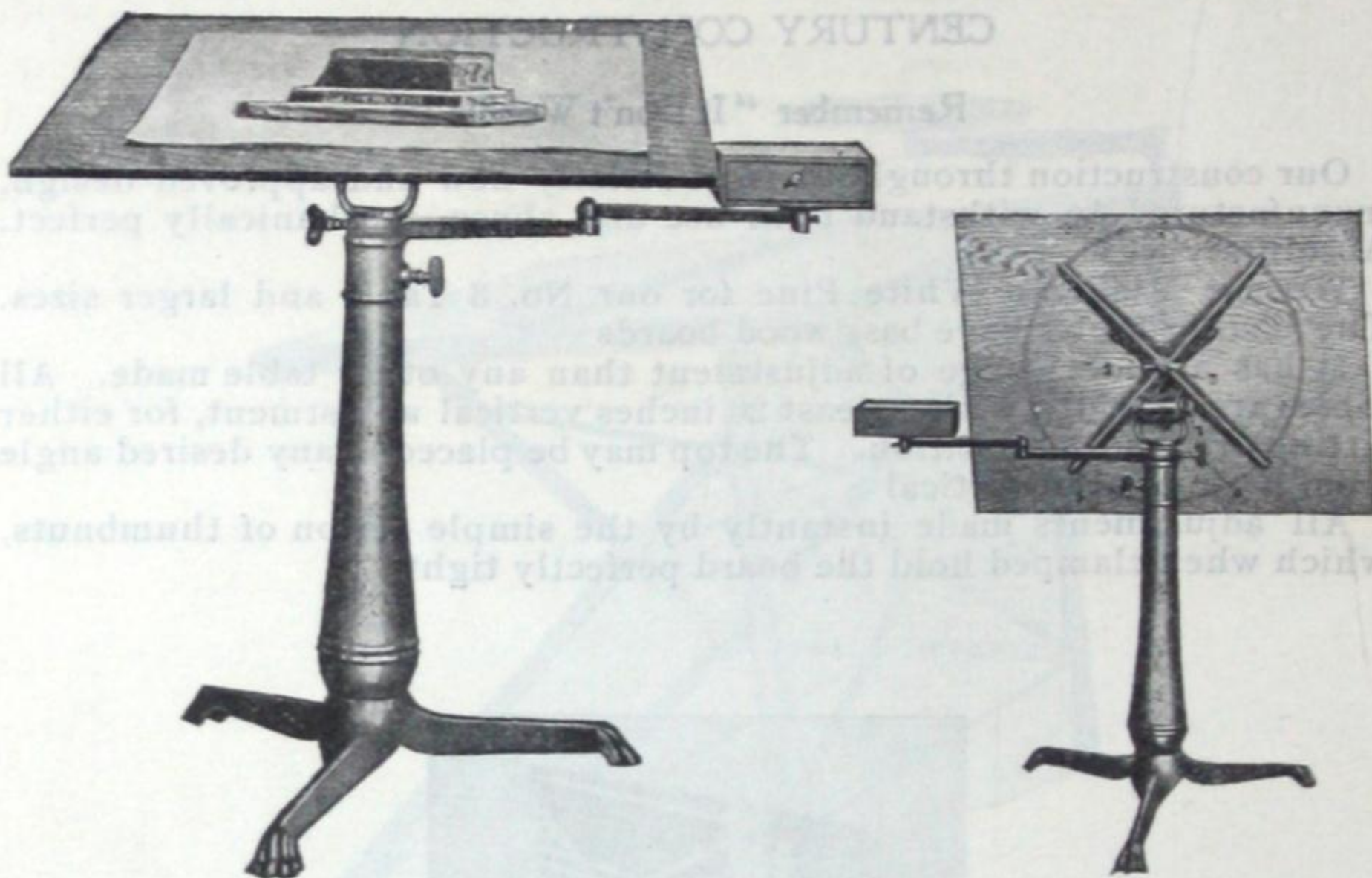
When desired, any of these tables can be quickly and easily folded up, as illustrated, for transporting from place to place or storing away. It is shipped in this condition and being received in one complete piece, requires only to be opened up for erection. The base is unbreakable and is good for a hundred years

GUARANTEE

We guarantee all articles to be as herein represented. Workmanship and material the best possible to obtain

If not as represented, return the table to us at our expense and your money will be refunded

NEW IMPROVED
PAASCHE EASEL AND DRAWING TABLE



FRONT VIEW

REAR VIEW

New Improved Paasche Easel and Drawing Table, 23×31 inches

with revolving top	each, \$10.00
The same, 23×31 inches, without revolving top	7.50
Material Drawer, with swinging arm, extra	3.50

Prices quoted for larger tops on application

Drawing Table without revolving top (otherwise the same), is not convertible to easel and vice versa. By unscrewing the top it can be changed for either easel or drawing table

The only Easel and Drawing Table with revolving, tilting, raising lowering and turning top and all movements working friction tight, permitting the top to be placed in any position whatsoever without getting up from the chair or loosening and tightening any bolts or nuts. It is a model of simplicity, and the most ideal Easel and Drawing Table for artists, photographers, designers, draftsmen, illustrators, architects, sign painters, letterers, card writers, etc., indispensable and the most practical for their requirements. Positively rigid in any position

The entire stand, except the top, is of metal, with four adjustments, as follows: 1. For tilting top in any angle from horizontal to beyond vertical; 2. Wing nut and (No. 3 lock nut) for obtaining any desired tension of revolving top; 4. For turning top around without moving stand; 5. For raising or lowering the top for sitting or standing position

The top is of well seasoned soft pine, with hard wood ends, perfectly true and square and cannot warp, making it very suitable for the use of thumb tacks. Different size tops can be attached very quickly.

FROST & ADAMS CO.'S CHAMPION DRAWING TABLE



No. 1.	Top 32 x 42 inches	each, \$12.00
2.	" 37 x 48 "	" 16.00
3.	" 37 x 60 "	" 20.00
4.	" 40 x 72 "	" 24.00
5.	" 40 x 84 "	" 28.50
6.	" 42 x 96 "	" 35.00
7.	" 48 x 120 "	" 40.00

EXTRA PIECES FOR THE CHAMPION TABLE

Foot Rest	each, \$1.50
Swing Tray	" 2.00
Drawer and Swing Tray	" 3.00

This Table is a new design, and we consider it perfect in every particular. It can be raised and lowered from 32 to 40 inches. The raising, lowering and tilting is done by means of hand wheels on the right side, and when tightened the table is very rigid. This is accomplished by rods running the full length of the frame. It has a soft wood top, and is well manufactured

ALEXANDER DRAWING TABLES

		STYLE A	STYLE B	STYLE C
No. 1.	32 × 42 inches	each, \$15.00	\$25.00	\$33.00
2.	37 × 48 "	" 20.00	30.00	38.00
3.	37 × 60 "	" 25.00	35.00	43.00
4.	40 × 72 "	" 30.00	40.00	48.00
5.	40 × 84 "	" 35.00	45.00	53.00
6.	42 × 96 "	" 40.00	50.00	58.00
7.	48 × 120 "	" 45.00	55.00	63.00

By adding to or deducting from the above styles the several conveniences, a table may be made to suit all requirements, as follows :

Foot Rest	each, \$1.50	Cabinet, 12 × 16 × 20, 3	
Circular Swing Tray	" 2.00	drawers	each, \$8.00
Drawer and Swing Tray	" 3.00		



STYLE A. SIZE 1

Style A Tables are suitable for work requiring the draughtsman to work from one side only, are adjustable for height and can be placed at any incline. They make a satisfactory table at a low price. We recommend these for schools and colleges

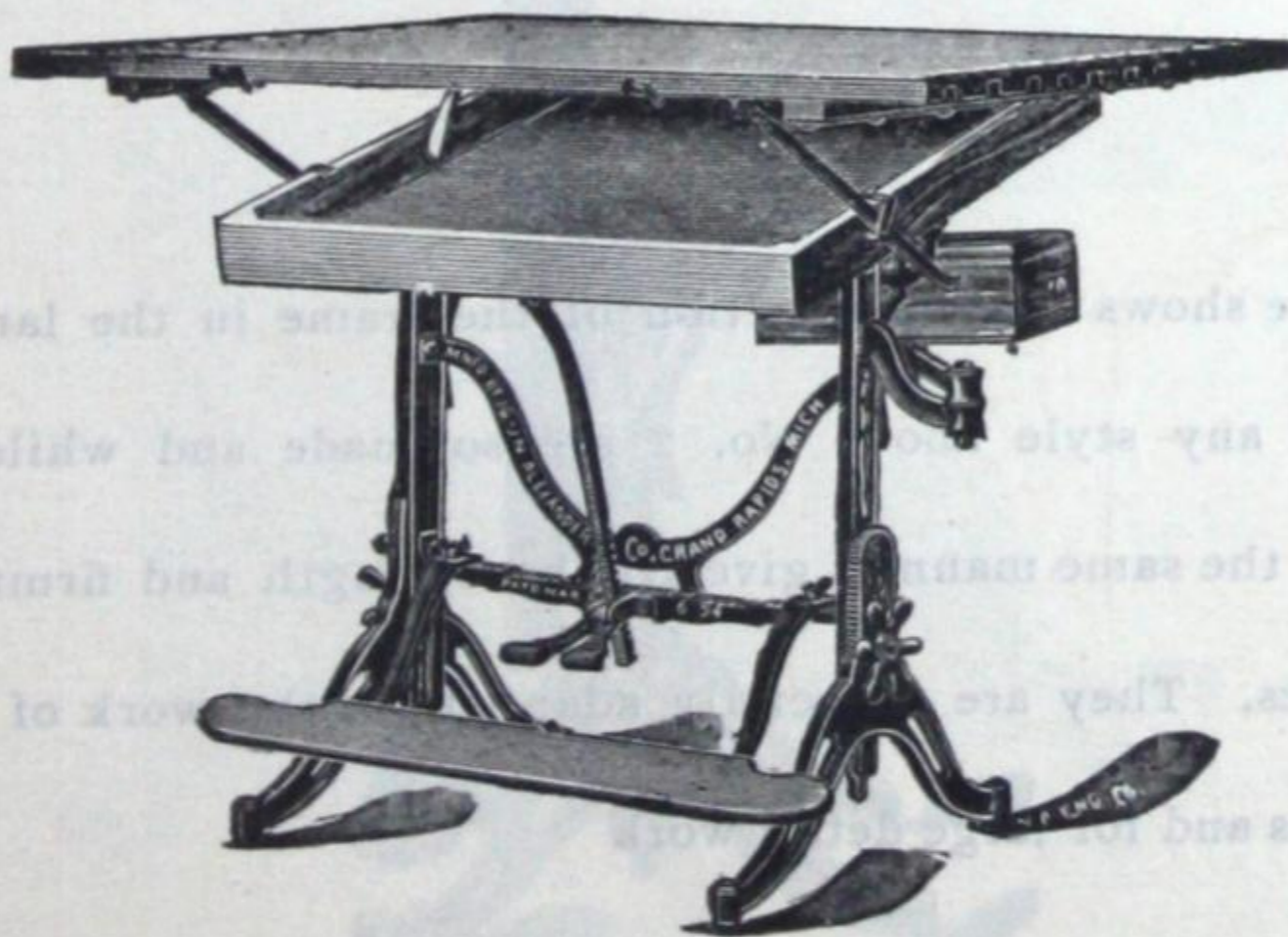
These Tables are rigid and firm in all positions and the adjustments are simply and quickly made. The tops are finished drawing boards and constructed in the best possible manner, allowance being made for contraction and expansion. Balance of the wood work is of oak and nicely finished. The frames are black enameled with bronze trimmings

Alexander Drawing Tables — Continued



STYLE B. SIZE 2

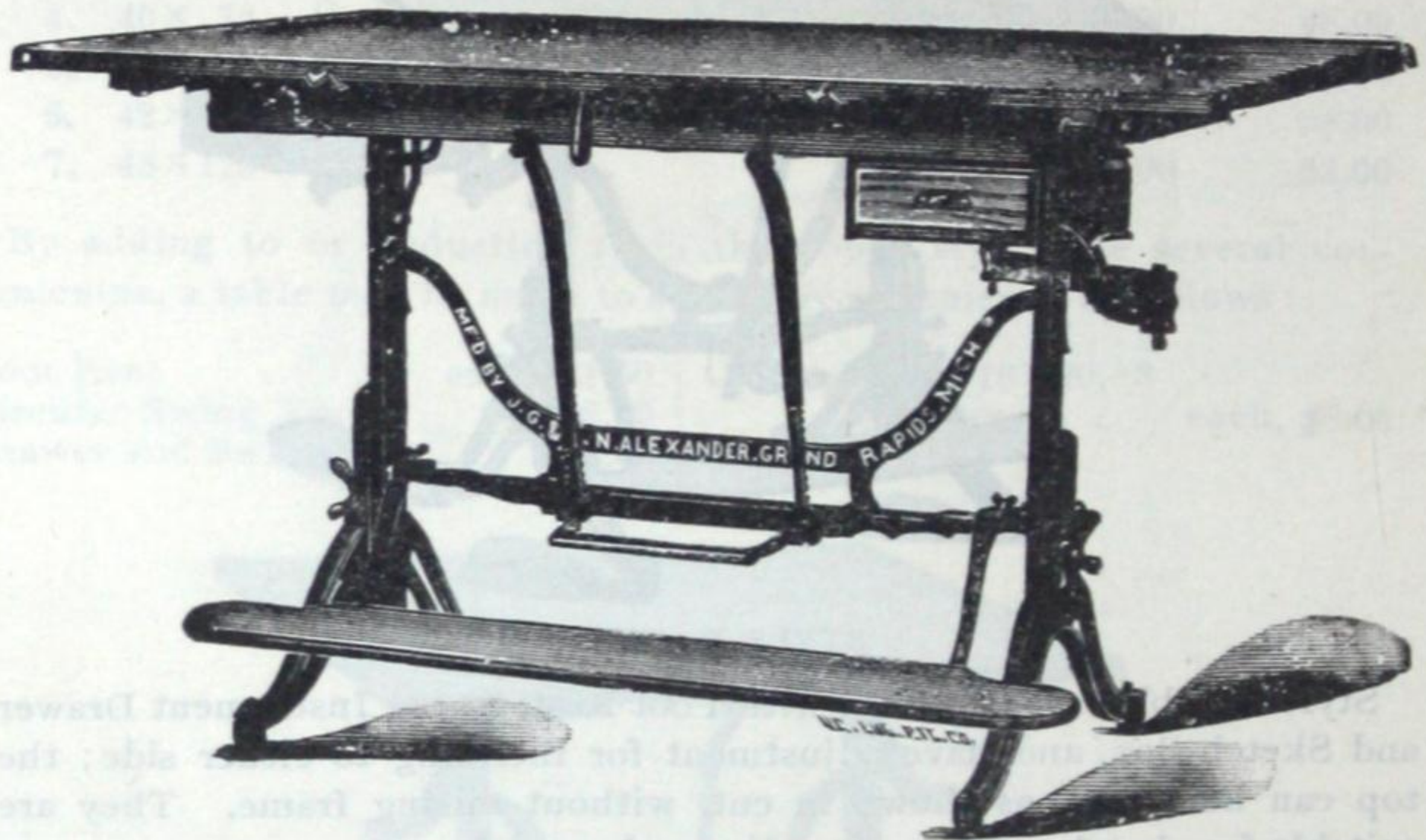
Style B Tables are complete with Foot Rest, Swing Instrument Drawer and Sketch Box, and have adjustment for inclining to either side; the top can be raised, as shown in cut, without raising frame. They are suitable for sketch work, perspective and careful work.



STYLE B. SIZE 2

For prices see page 454

Alexander Drawing Tables — continued



STYLE B. SIZE 4

The above shows the construction of the frame in the larger tables. All sizes in any style above No. 2 are so made and while they are adjusted in the same manner, give all the strength and firmness of the smaller sizes. They are especially adapted for the work of engineers, map makers and for large detail work

For prices see page 454

Alexander Drawing Tables—continued



STYLE C. SIZE 1

Style C Table, combining as it does all the advantages of the B Table, with a cabinet or case in the rear of the frame, makes a most complete office or home fixture. The cabinet may be varied in size and shape to suit the individual; Drawers to pull from either or both ends or the rear



This cut represents the tables folded, to set one side when not in use, which is a great convenience. For prices see page 454

Alexander Drawing Tables—continued



STYLE C

Cabinet of 4 Drawers $8\frac{1}{2} \times 19$, $3\frac{1}{2}$ inches deep

STYLE E. FOUR DRAWERS, 19×28

For prices see page 454

FRY'S PATENT DRAUGHTING TABLE

For Architects, Engineers and Draughtsmen

FROST & ADAMS CO., NEW ENGLAND AGENTS



TABLE FOLDED

FOLDING DRAWING TABLE

No. 1.	24 × 32 inches,	30 inches high	.	.	.	.	.	each, \$4.50
2.	32 × 42	" 38	"	.	.	.	.	" 6.00
3.	37 × 48	" 38	"	.	.	.	.	" 8.00

All Tables have Hardwood Base and Pine Top. Special size made to order

Finding call for a light, adjustable Table, we are prepared to furnish the above Tables of any size, for use either as a drawing or reference Table; well braced and substantially made. Can be folded and moved without inconvenience

Fry's Patent Draughting Table—continued



STYLE A

24×30 inches	each, \$12.00
“ with Drawer 4×10 inches	“ 13.50
“ with Cabinet of 4 Drawers, 4×10 inches and Tray	“ 17.00



STYLE B

24×30 inches, Drawer 4×10 inches	each, \$20.00
--	---------------

PATENT ADJUSTABLE DRAWING TABLE



242

- 239. Drawing Table, Plain, Soft Wood Top, 21×24 inches, Iron Stand, no Instrument Shelf, suitable for schools, shops, etc. each, \$10.00
- 240. Drawing Table same as No. 239, with Instrument Shelf 7×24 inches, Iron Stand, no Drawers " 11.50
- 241. Drawing Table, Black Walnut Top, 22×26 inches, Instrument Shelf 7×26 inches, Iron Stand, no Drawers " 12.50
- 242. Drawing Table, Black Walnut Top, 22×26 inches, Instrument Shelf 7×26 inches, 2 Instrument Drawers, Ornamented Stand Mounted on Casters " 15.00
- 243. Same as No. 242, with extended Lever for adjusting inclination of Top " 16.25
- 244. Same as No. 242, Top of Selected, Polished Walnut Iron Stand, Bronzed and tastefully ornamented " 18.75

NOTE.—This Table is designed for Draughtsmen and Artisans generally. It can be raised to any convenient height, either for sitting or standing; and can be readily fixed at any desired inclination, while the Instrument Shelf and Drawers will always remain level. The top can be allowed to rotate, if desired, or be firmly fastened

THE "SELDIS" DRAWING TABLE

For Mechanical Draughtsmen, Architects and Artists



Seldis Drawing Table each, \$15.00
 Drawing Board separate price, according to size

ADVANTAGES

1. The Draughtsman can work in a natural position at all times, no matter the size of drawing or part of Board he desires to work
 2. Table and Board being separate, any number of Boards can be used
 3. No matter the position of the draughtsman, the Swing Frame always holds the centre of gravity within the base, therefore, no tipping of the table could occur
 4. The harder the strain the more securely locked and, therefore, the more stable
 5. Every motion self-locking
 6. If not in use can be folded into very small compass
 7. By drawing out the eight wooden wedges it can be packed directly on the Drawing Board, as no part exceeds the length of the board
 8. Each Table has a Drawer
 9. Being adjustable to any angle adapts it for either technical or free-hand drawing
 10. Being adjustable in height, adapts it for any size men or women
- In its lowest position, with the board, it is an excellent writing desk

FROM THOMPSON-HOUSTON ELECTRIC CO.

MR. OSCAR SELDIS:

DEAR SIR:— I have been using a number of your Drawing Tables in my department now for more than a year, and they give satisfaction; in fact, I have at present more than ninety of them in use, and I do not remember a single complaint concerning them. I have no hesitation in saying I think them the best Drawing Tables I ever saw

Yours Respectfully

M. O. WAKEFIELD

Chief Draughtsman, T.-H. Electric Co.

Since the above was written, the number in use in the T.-H. Electric Co. has been increased to the vicinity of 150 Tables

THE NORMAL ADJUSTABLE DRAWING TABLE



23×31 inches,	$\frac{7}{8}$ inch pine wood	.	.	.	.	.	each, \$ 8.75
27×34	" $\frac{7}{8}$ "	"	"	"	"	"	" 10.00
31×42	" $\frac{7}{8}$ "	"	"	"	"	"	" 11.25
33×55	" $\frac{7}{8}$ "	"	"	"	"	"	" 17.50
36×48	" $\frac{7}{8}$ "	"	"	"	"	"	" 16.50
42×60	" $1\frac{1}{8}$ "	"	"	"	"	"	" 20.00

The Normal Adjustable Drawing Table can be raised, lowered or set at an inclination instantly by loosening the nut of the central rod, which moves in slots of the legs, as readily seen from the illustration

The Drawing Board can be detached and the trestle folded up, occupying little more space than an ordinary Drawing Board, a great advantage if the table is not used constantly, as it can be put out of the way or set up in a few minutes. Trestles are made of ash wood, fine shellac finish; Drawing Boards are made of clear, well seasoned pine

DRAUGHTING TABLE TOPS

32×42 inches	.	each, \$8.00	|	37×60 inches	.	each, \$10.00
37×48	"	" 9.00	|	Larger Sizes made to order		

Our Table Tops are finished with cherry edge put on by our improved method, and hardwood ledges on the back, allowance being made for all contraction and expansion, finished, ready to put on frame

PATENTED ADJUSTABLE FOLDING TABLES

For the Use of Architects and Artists. Also Drawing, Sewing and Card Tables



22 X 36 inches . . . each, \$5.00

These Tables are firm in any position and are specially designed for artist's use, for oil, water color and china work. Finely finished in oak, oil rubbed, with nickel plated trimmings. The adjustments are made easily and quickly by means of the thumb screw at the side of the frame. The tray can be swung under the top or detached at will; the sliding shelf may be placed at any height or out of the way at the top of the table. These tables are carefully constructed and finished and make a fine piece of furniture for studio or home



The above cuts represent our Easel Tables, adjusted for use, and folded

MORSE DRAWING TABLES

STYLE A



STYLE A

Regular	each, \$15.00
With Attachment No. 1	" 17.00
" " No. 2	" 20.00
" " No. 5	" 18.00
" " No. 6	" 18.00

Size of Top, Hardwood, 24x26 inches
 " " Pine, 24x32 inches
 Drawer, 7½x10 inches, 3 inches deep
 Vertical Adjustment from 32 to 42 inches
 Weight, boxed, 100 pounds, Compensating Spring, Polished Brass Upright, Enameled Iron Work, Nickel Plated Trimmings

DESCRIPTION OF SPECIAL ATTACHMENTS

No. 1 is a Tray, as used on Style A, 6x26 inches; as used on Style B, 3x36 inches each, \$2.00

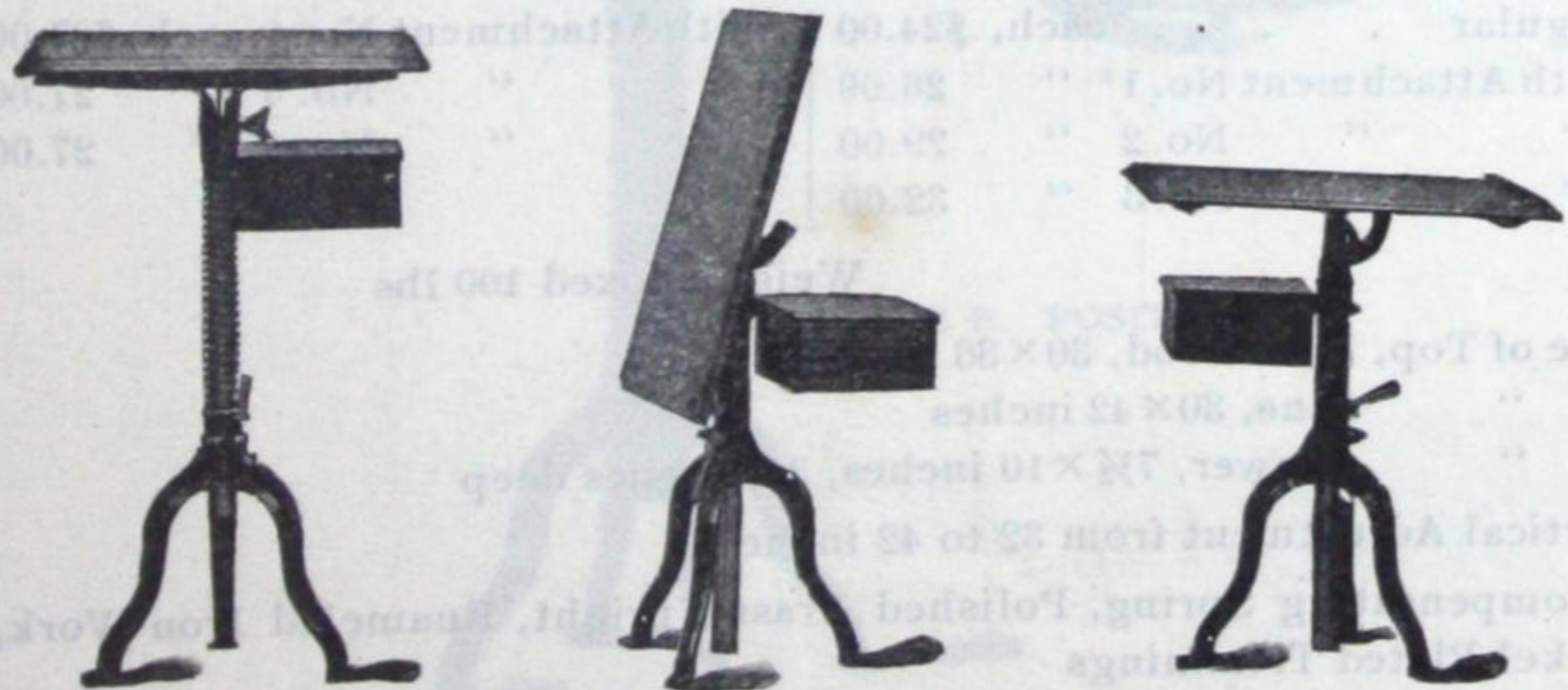
No. 2 is a Tray, 12x14 inches, which swivels from top of drawers with flexible band for glass of water; will swing in front of board when top is inclined each, \$3.00

No. 3 is a Two-drawer Cabinet. Drawers measure 13x26 in., inside. Top drawer 1¼ in., bottom drawer, 2½ in. deep each, \$4.00

No. 4 has Drawer 7½x10 inches, 3½ inches deep, with tray top swinging on an iron arm each, \$3.00

No. 5 is a Tray swinging on an iron arm

No. 6 is an Instrument Shelf at top of board, always remaining horizontal



SHOWING DIFFERENT POSITIONS OF STYLE A

Morse Drawing Tables — continued



STYLE B. POSITION 3

Regular	each, \$24.00	With Attachment No. 4	each, \$27.00
With Attachment No. 1*	“ 26.00	“ “ No. 5	“ 27.00
“ “ No. 2	“ 29.00	“ “ No. 6	“ 27.00
“ “ No. 3	“ 32.00		

Weight Boxed 100 lbs

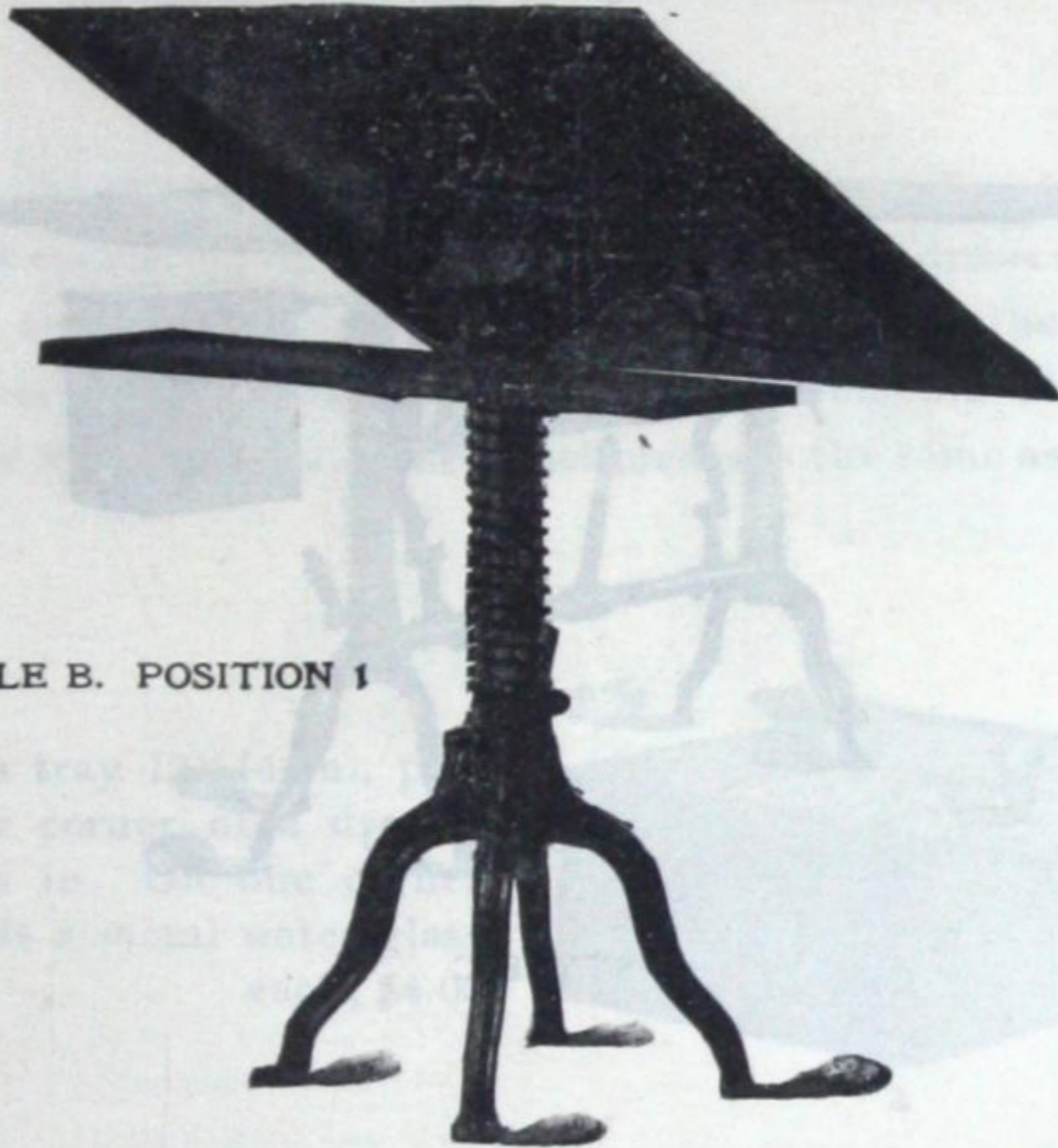
- Size of Top, Hardwood, 30×36 inches
- “ Pine, 30×42 inches
- “ Drawer, 7½×10 inches, 3½ inches deep

Vertical Adjustment from 32 to 42 inches

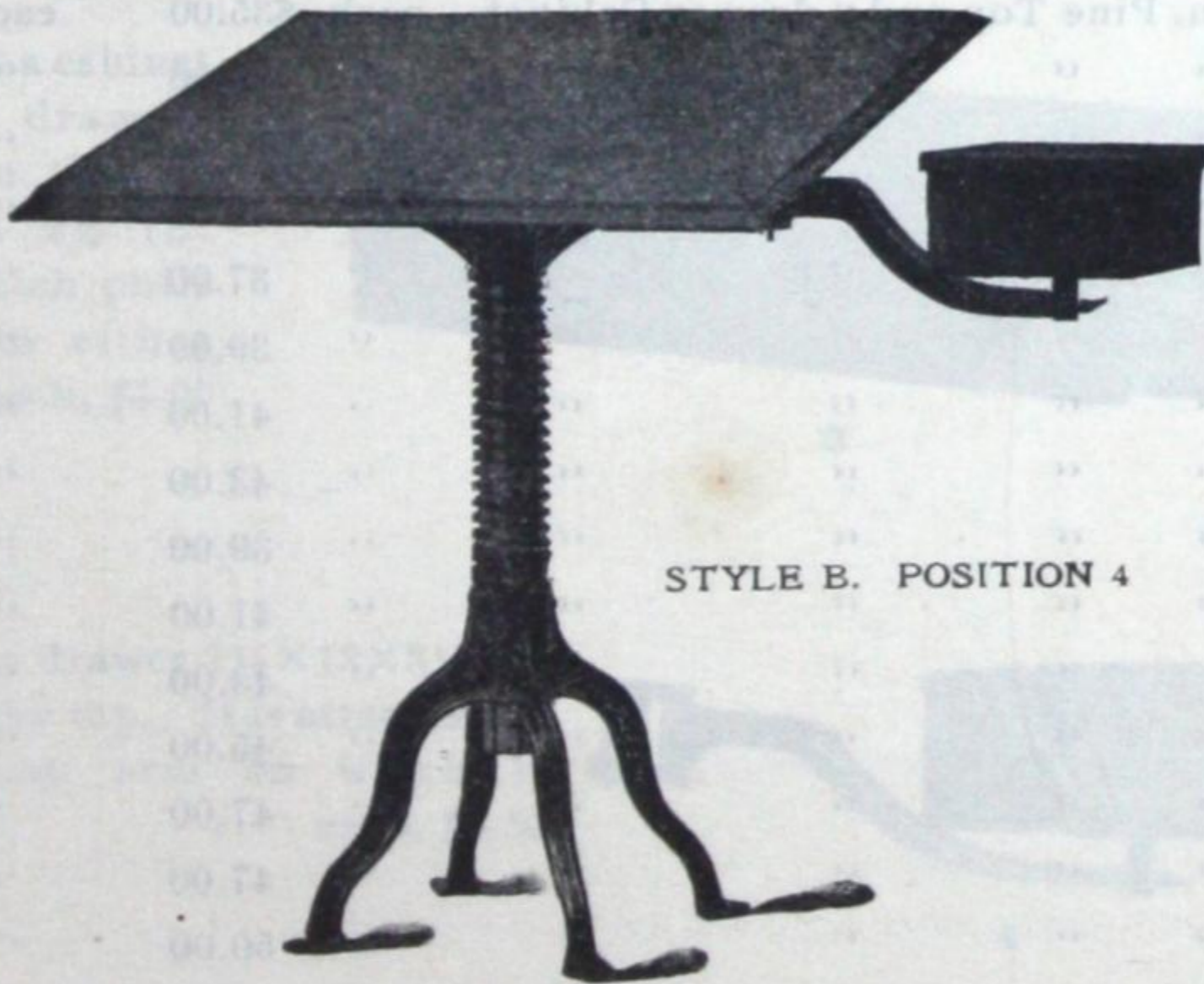
Compensating Spring, Polished Brass Upright, Enameled Iron Work, Nickel Plated Trimmings

For Description of Attachments see page 465

Morse Drawing Tables — continued

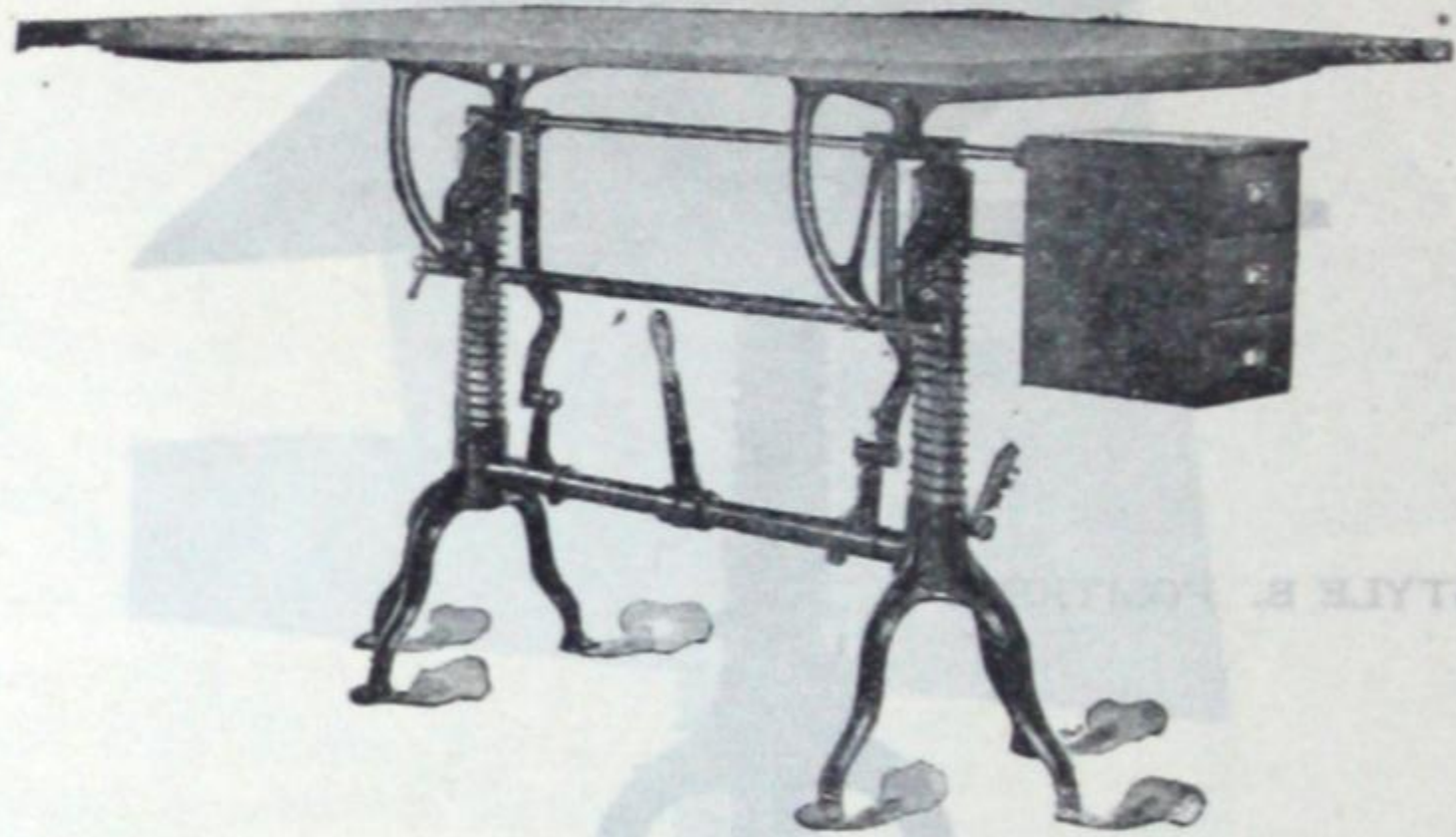


STYLE B. POSITION 1



STYLE B. POSITION 4

Morse Drawing Tables — continued



STYLE C

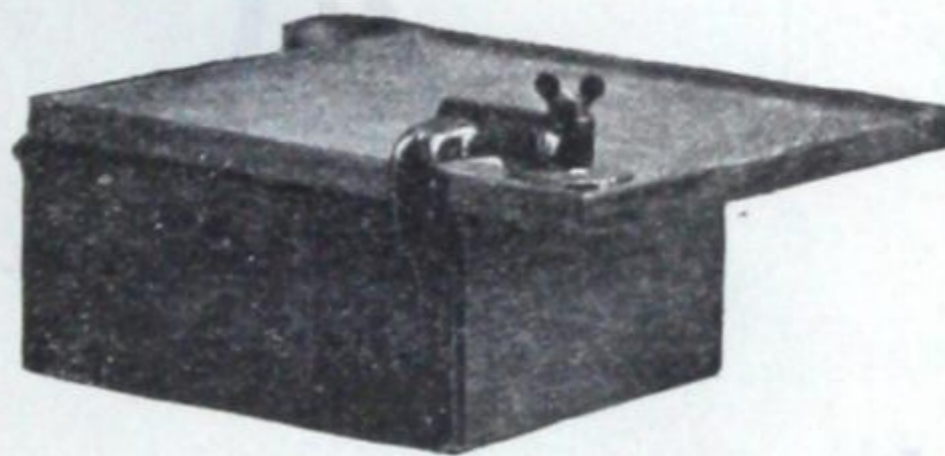
			Stand only	With Top
36 × 48 in. Pine Top and 2-drawer Cabinet			each, \$35.00	each, \$43.00
36 × 54 " " " "	"	"	" 36.00	" 45.00
36 × 60 " " " "	"	"	" 37.00	" 48.00
36 × 72 " " " "	"	"	" 39.00	" 53.00
42 × 60 " " " "	"	"	" 37.00	" 51.00
42 × 72 " " " "	"	"	" 39.00	" 55.00
42 × 84 " " " "	"	"	" 41.00	" 61.00
42 × 96 " " " "	"	"	" 43.00	" 65.00
48 × 72 " " " "	"	"	" 39.00	" 59.00
48 × 84 " " " "	"	"	" 41.00	" 63.00
48 × 96 " " " "	"	"	" 43.00	" 69.00
48 × 108 " " " "	"	"	" 45.00	" 77.00
48 × 120 " " " "	"	"	" 47.00	" 85.00
54 × 120 " " " "	"	"	" 47.00	" 89.00
54 × 144 " " " "	"	"	" 50.00	" 100.00

Morse Drawing Tables—continued

ATTACHMENTS

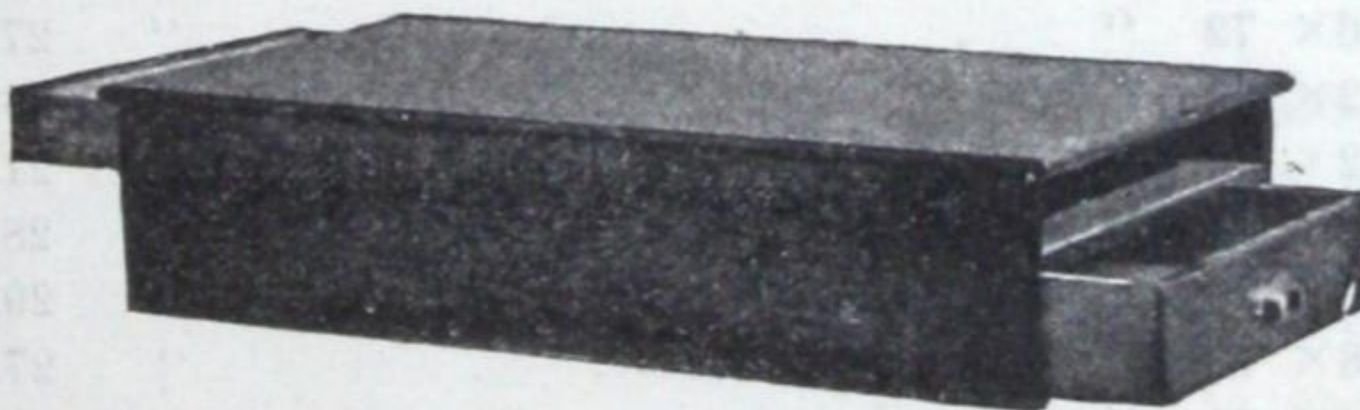
To add to the efficiency of our Drawing Tables we make a line of special attachments consisting of various styles of trays and drawers. In many cases these attachments can be used in combination, the one chosen depending on the style of table and the requirements of work. The construction and finish of these attachments is the same as those of the tables.

No. 2 is a tray 12×14 in., pivoted on the corner of a drawer 7½×13×3½ in. On one corner of the tray is a metal water-glass holder . . . each, \$4.00



2

No. 3 is a cabinet with 2 drawers 13×25 in. inside, 1¼ and 2½ in. deep, which pulls out from either end . . . each, \$7.00



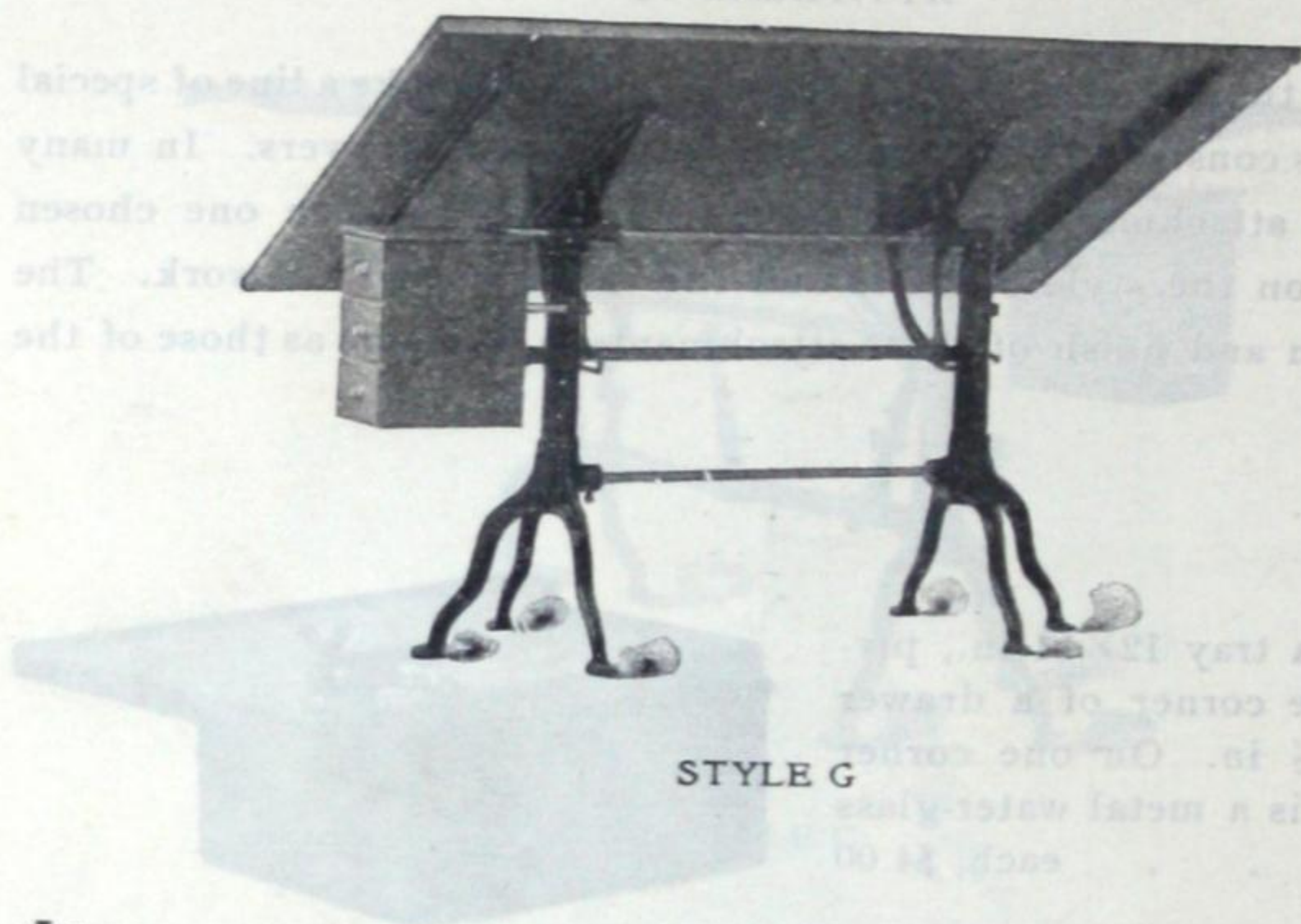
3

No. 4 is a drawer 7½×13×3½ in. with a tray top. It is attached by a swinging arm on which it revolves . . . each, \$3.50



4

ROCHESTER DOUBLE COLUMN TABLE, STYLE G

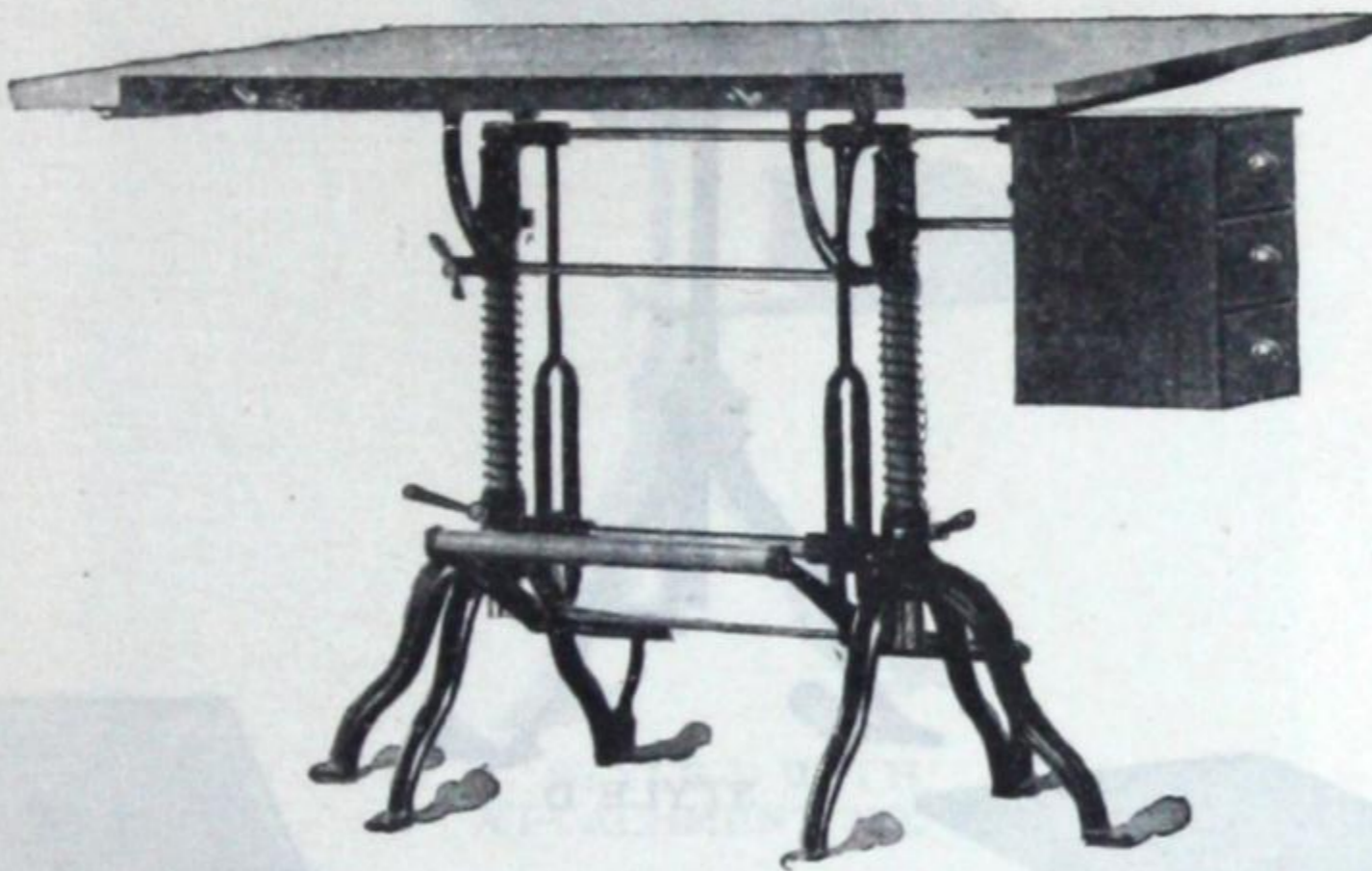


STYLE G

Top	Stand only	With Top
36 × 48 inches	each, \$25.00	each, \$33.00
36 × 54 "	" 25.50	" 34.50
36 × 60 "	" 26.00	" 37.00
36 × 72 "	" 27.00	" 41.00
42 × 60 "	" 26.00	" 40.00
42 × 72 "	" 27.00	" 43.00
42 × 84 "	" 28.00	" 48.00
42 × 96 "	" 29.00	" 51.00
48 × 72 "	" 27.00	" 47.00
48 × 84 "	" 28.00	" 50.00
48 × 96 "	" 29.00	" 55.00
48 × 108 "	" 30.00	" 62.00
48 × 120 "	" 31.00	" 69.00
54 × 120 "	" 31.00	" 73.00
54 × 144 "	" 33.00	" 83.00
Cabinet with 3 Instrument Drawers, 7½ × 13 × 3½ inches		each, \$6.00

Style G will accommodate Tops from 36 × 48 in. to 60 × 144 in. Has Tilting Movement only; otherwise like style C

ROCHESTER DOUBLE COLUMN TABLE, STYLE A.C.



STYLE A. C.

No. A.C. Vertical and Tilting Adjustment

Top	Stand Only	With Top
31 x 42 inches	each, \$30.00	each, \$33.50
36 x 48 "	" 30.50	" 38.50
36 x 54 "	" 31.00	" 40.00
36 x 60 "	" 31.50	" 42.50
36 x 72 "	" 32.00	" 46.00
42 x 60 "	" 31.50	" 45.50
42 x 72 "	" 32.00	" 48.00
48 x 72 "	" 32.00	" 52.00

F. W. EMERSON'S DRAWING TABLES



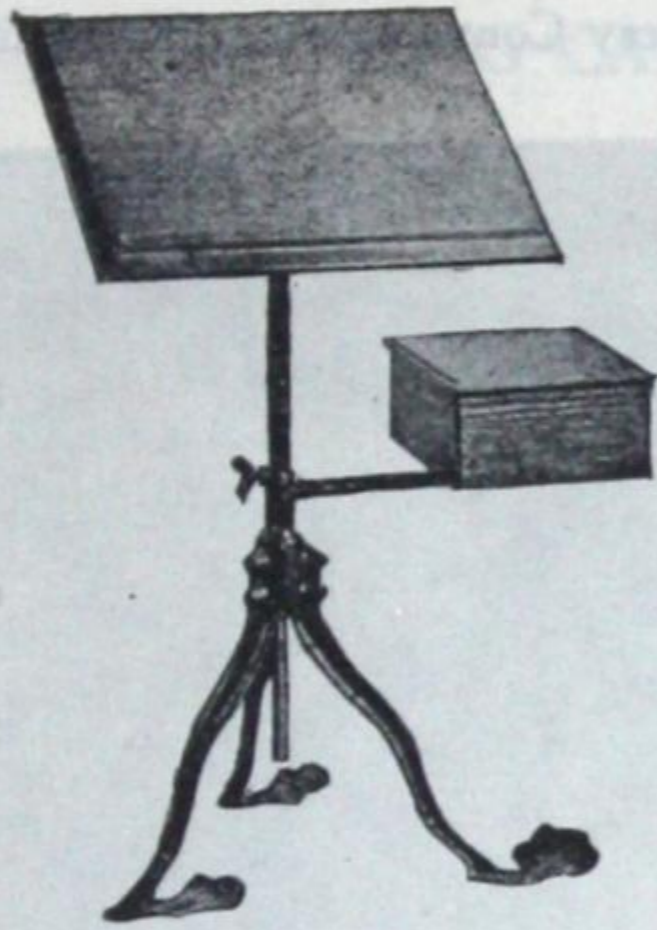
STYLE D

STYLE D
WITH ATTACHMENT NO. 1STYLE D
WITH DRAWER

Style D	each, \$7.50
Style D with Tray 12×14 inches	" 9.50
Style D with Drawer 4×13×3½ inches	" 9.75

Oak or Pine Top 18×20 inches is furnished. Weight, boxed, 60 pounds. Our Style D Table is well finished for light work, has a Vertical Adjustment of 32 to 40 inches, a Tilting Top and the legs well spread. The smallest adjustable table we make. Has all desirable features—tilting, revolving, raising and lowering, is strongly made and nicely finished in black enamel, with tempered steel springs and steel sliding standard

F. W. Emerson's Drawing Tables — continued



STYLE D WITH ATTACHMENT NO. 4



STYLE D WITH ATTACHMENT NO. 6



STYLE D WITH CABINET

Style D with either attachment No. 4, No. 5 or No. 6	each, \$9.75
Style D with Cabinet	" 11.25

Style D is the cheapest adjustable table made — not cheap in quality, but lowest priced. The illustrations show the wide application and adaptability of our attachments, any or all of which may be employed

Our Draughting Tables are unapproached in utility, convenience, and arrangement

REVERSIBLE AND ADJUSTABLE BLACKBOARD

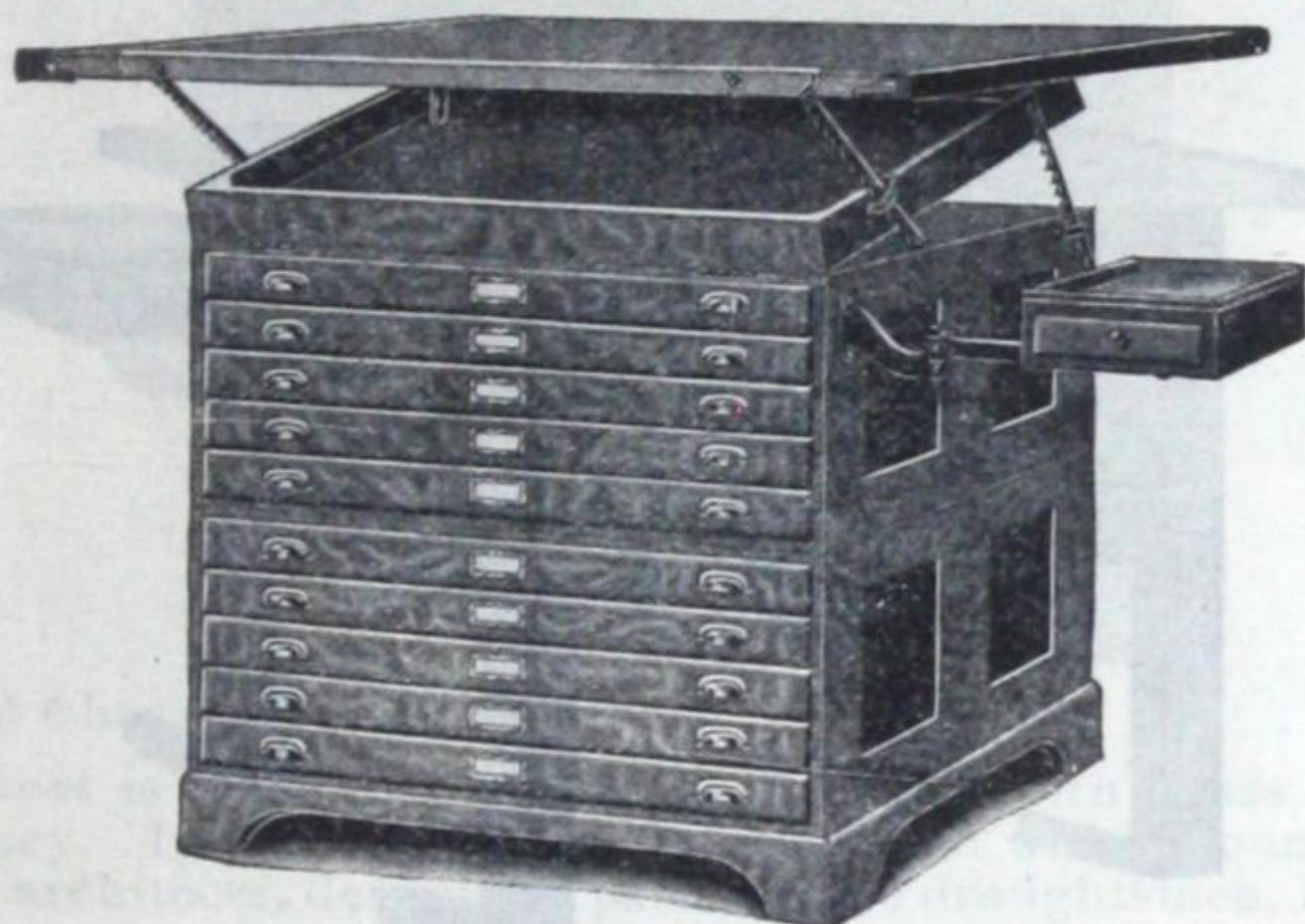
Very Convenient and Attractive



Size of Board 36 × 48 inches each, \$20.00

Particularly well adapted to the Lecture-Room and the Designing-Room. The Board can be quickly adjusted in height; can be used on either side, and can be easily revolved about its supporting spindle without danger of changing its height, or if so desired it can be made perfectly rigid

FROST & ADAMS CO.'S
COMBINATION FILING CABINETS



NO. 25 A

No. 25A.	With Top 37×54 in.	. . . . .	each, \$73.00
25B.	“ 37×60 “	. . . . .	“ 74.50
25C.	“ 40×72 “	. . . . .	“ 78.50

We can also furnish them with a Flat Top, same as cut No. 26 A

With Flat Top, 37×50 in.	. . . . .	each, \$65.00
“ “ 37×60 “	. . . . .	“ 66.50
“ “ 40×72 “	. . . . .	“ 70.50

This combination is composed of two Filing Sections and a base of sufficient height, so as to give foot space to stand up close. The top is so arranged that it can be made to project over the front 6 to 8 inches, can be raised and lowered from 35 to 43 inches on the level, and can be tilted to any angle

These parts are securely fastened together so as to make a very rigid outfit

This Cabinet has ten drawers, 32×42½×2 inches deep, inside measurement

FROST & ADAMS CO.'S
COMBINATION FILING CABINETS



NO. 26A

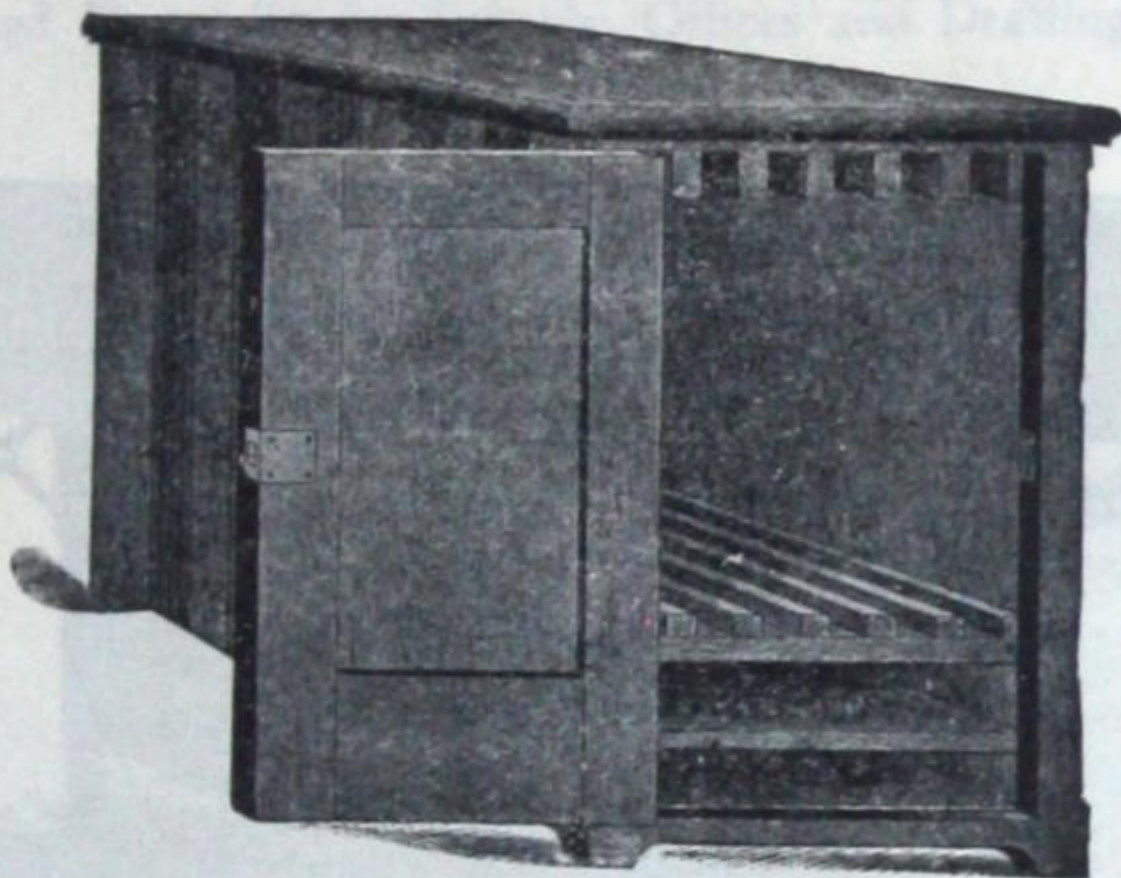
No. 26A.	With Top, 37×50 in.	. . . . .	each, \$49.00
26B.	" 37×60 "	. . . . .	" 50.50
21C.	" 40×72 "	. . . . .	" 54.50

We can also furnish the above Table, with a large drawer underneath, 6 inches deep, which will be very convenient for storing rolls of paper. Price \$6.50 extra

Two of the Tables can be set together if an extremely large top is desired

This cut makes a combination of one Drawer Section, with flat top or Drawing Board, which is put on with slides, so it can be drawn forward, and gives five drawers for filing purposes, 32 × 42½ × 2 inches. This makes a very neat as well as durable outfit, which can be used for two purposes, and is very reasonable in price

MORSE DRAWING BOARD CABINET

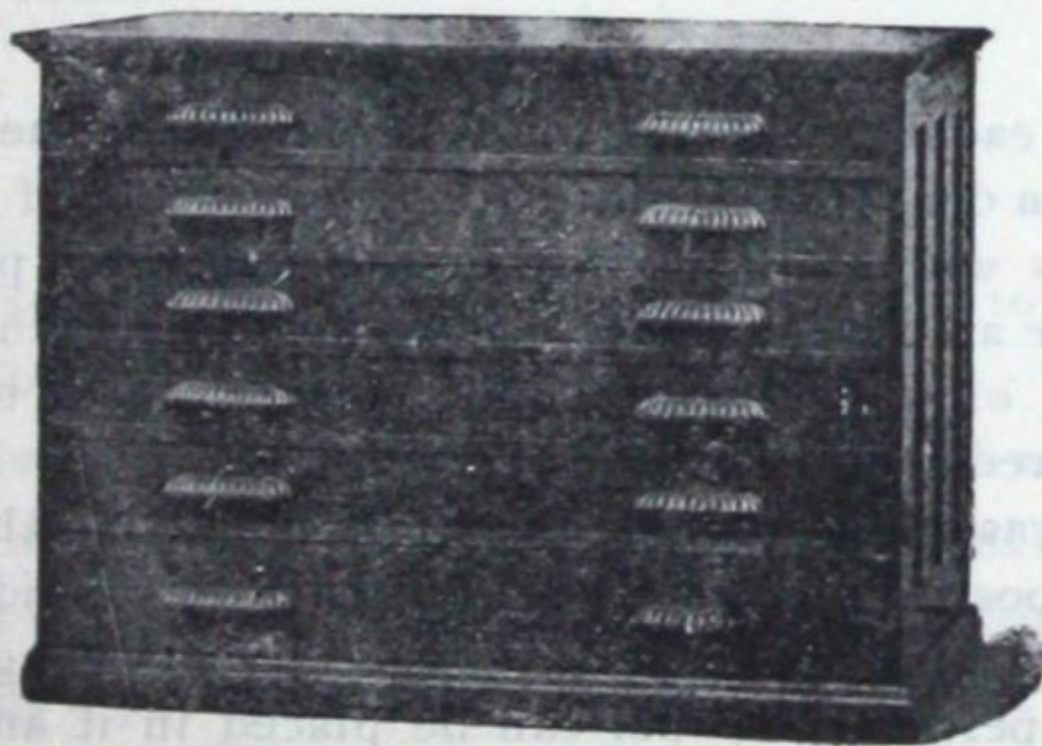


Cabinet and 6 boards, 12×18 each, \$15.00

This Cabinet is made of oak, highly finished with brass trimmings, lock and key. It is made in several sizes, and will be found very convenient for architects, designers, patent office draughtsmen, and also for school use

Prices for other sizes furnished on application

DRAWER CABINET FOR FILING DRAWINGS



Drawer Cabinet, quartered oak, polished finish	each, \$50.00
“ “ plain oak, polished finish	“ 40.00
“ “ ash, plain finish	“ 37.00

The above Cabinet is one that we keep in stock, and we generally have them on hand in plain and quartered oak. This Cabinet has six drawers; inside measurement, 28×43 inches; five are 3½ inches deep and the bottom drawer is 5½ inches deep

PAPER CABINET AND CUTTER



No. 1. Length over all, 62 inches; height 36 inches; depth,
inside measurement, 37 inches each, \$75.00

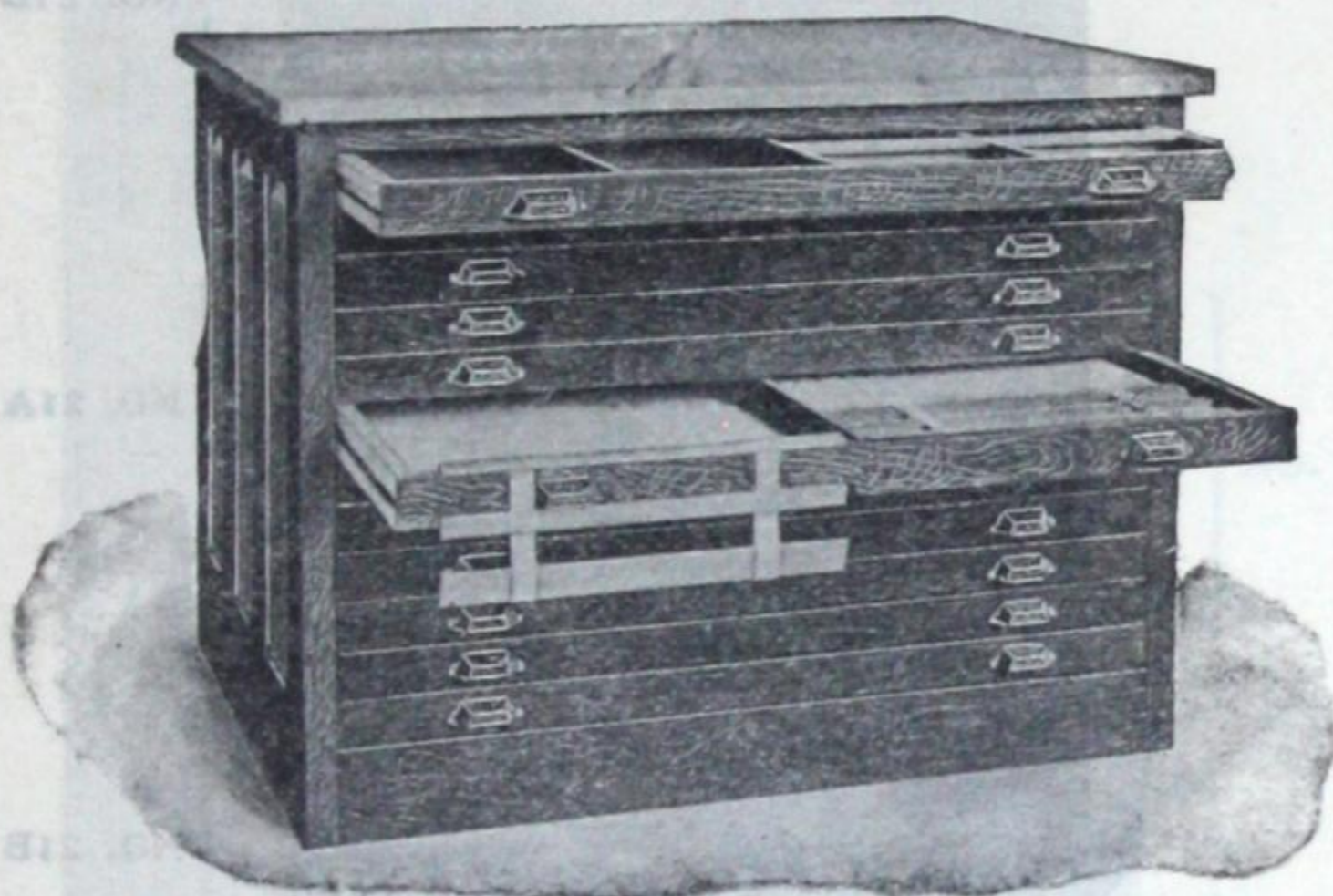
The boxes at each end are arranged to facilitate the work of cutting and to provide a convenient place for a large roll of paper. They are made with lids which lift up out of the way when putting the roll in place. The one at the left contains a series of compensating rollers, on which the roll of paper rests, making it very easy to draw the paper out to any desired length

There is a brass slot to guide the knife in cutting the paper, which is held firmly in position by a steel bar fastened to the lid at the left. The receptacle at the right is very convenient when cutting up quantities of blue process paper, as the paper can be placed in it and the lid closed, excluding all light, thus keeping the paper in perfect condition and facilitating the work of printing

This Cabinet has five drawers and four large pigeon holes, one of which is intended for blue process paper and has an extra door. This Cabinet is made of oak, highly finished, and accommodates paper from 36 to 42 inches in width

FILING CABINET OR CASE OF DRAWERS

Designed Especially for Schools, Offices and Drafting-Rooms



Filing Cabinet . . . each, \$85.00

Length, 51 inches

Width, 40 "

Thickness, $1\frac{1}{4}$ "

Height, 38 "

It is carefully squared and left in its natural color, to serve as a Drafting Board, or Table if so desired

There are twelve drawers divided into compartments varying from $10\frac{1}{2}$ inches long and $8\frac{1}{4}$ inches wide to $43\frac{1}{2}$ inches long and $34\frac{1}{2}$ inches wide. Each drawer is 2 inches deep on the inside, and each compartment has a shelf which forms a pocket to keep down the back edge of drawings. It also has three graded wooden slats hung on tapes to keep down the front edge of drawings or other papers. (See illustration)

The sides and also the back of this Cabinet are nicely paneled. The finish is in cherry stain and varnish. Aside from its convenience and great storage capacity, this Cabinet is a handsome piece of furniture

IMPERIAL SECTIONAL FILING CABINETS

For Filing Blue Prints and Drawings Flat



NO. 21, SHOWING THREE SECTIONS, DRAWER BASE AND TOP

No. 21. Complete as shown	each, \$73.75
21A. Single Section, 5 drawers, 23×31×2	" 18.50
21B. Base with drawer 5¼ in. deep	" 11.25
21C. Base without drawer	" 4.00
21D. Top	" 7.00

Outside dimensions, per section: width, 34 in.; depth, 25¼ in.; height, 14½ in.

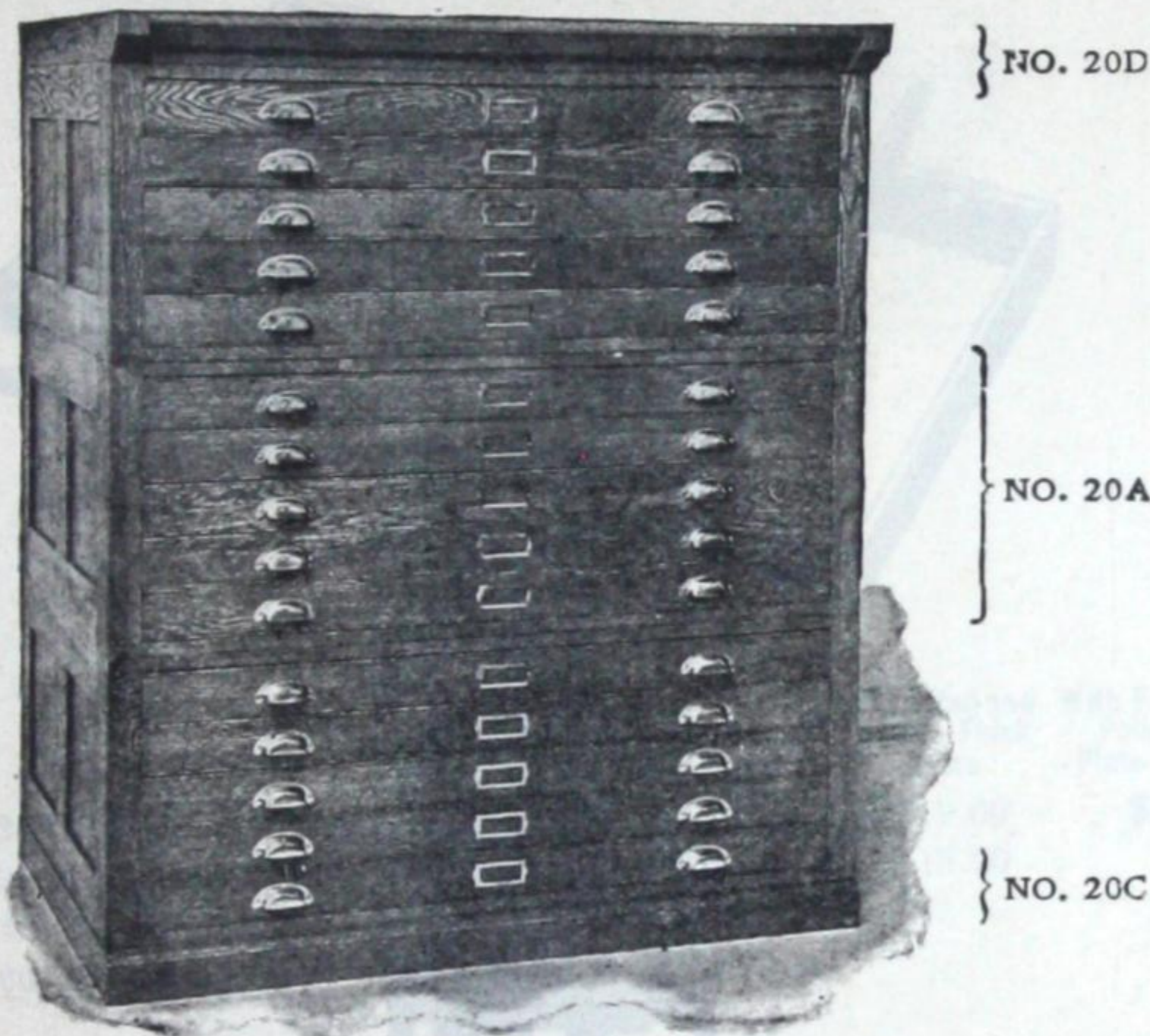
These Cabinets are made in sections holding five drawers, each 2 inches deep, inside measurement 23×31 inches. The sections are so constructed that they will fit properly over each other, and have a top and base, so Cabinet may be built up to any number of sections

These Cabinets are made of plain oak and golden oak, rubbed finish. We also make them of quartered oak, to order

All the drawers are fitted with holders in rear to prevent sheets from curling up. All our goods are put up in good workmanship

DOUBLE ELEPHANT SECTIONAL PLAN CASES

For Filing Drawings Flat



NO. 20, SHOWING THREE SECTIONS, BASE AND TOP

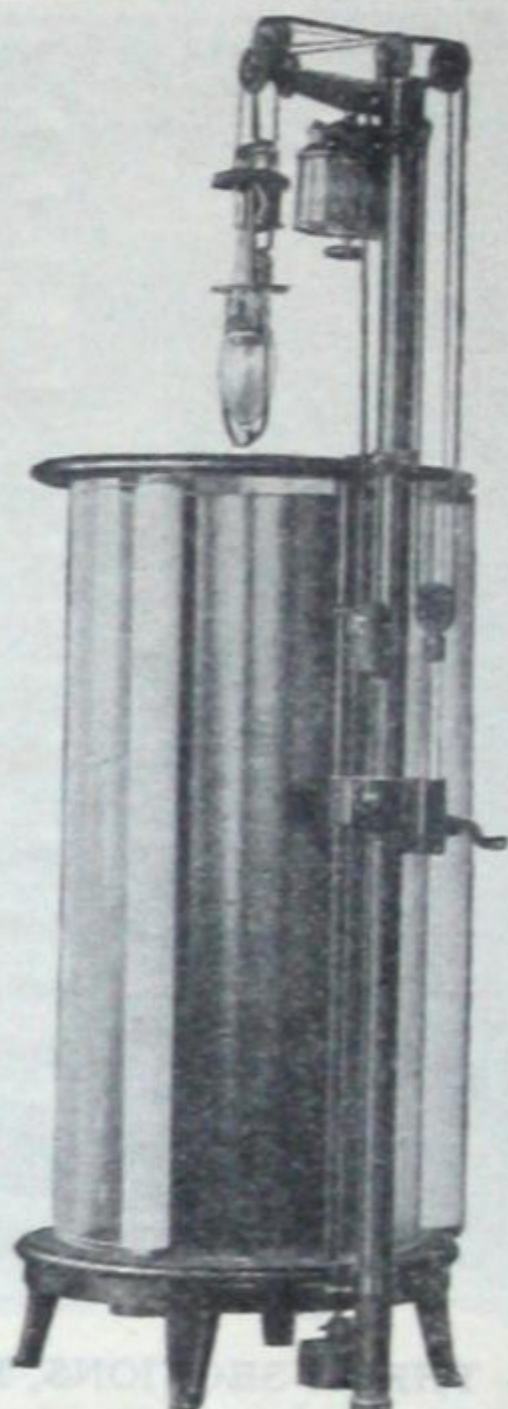
No. 20.	Complete as shown	each, \$80.00
20A.	Single Section, 5 drawers, 32 x 42 1/2 x 2	" 22.50
20B.	Base with drawer 5 1/4 in. deep	" 11.00
20C.	Base without drawer	" 5.00
20D.	Top	" 7.50

Outside dimensions, per section: width, 45 3/8 in.; depth, 34 1/4 in.; height, 14 1/2 in.

They are uniform in size, and our regular Double Elephant Cabinet will be found always the same, so that any number of Sections procured at different times will fit perfectly; this can also be said of the finish. We have used on all our work, for years, our special formulæ, prepared carefully, so that our work will be always finished the same

The Top and Base make a neat finish. The Bases are made in two styles, one a plain moulded base 3 1/2 in. high, the other containing a drawer 5 1/4 in. deep and 42 1/2 in. long by 32 in. wide, inside measurement. The Top fits any section, is closed at the top, made in one style, and corresponds to either base. Height of top, 3 1/2 in.

THE BUCKEYE ELECTRIC BLUE PRINTING MACHINE



- | | | |
|----------|--|----------------|
| Style A. | Height over all 7 feet, 11 inches
(Makes two prints 42×44 inches) | each, \$225.00 |
| Style B. | Height over all 9 feet, 5 inches
(Makes two prints 42×60 inches) | each, \$250.00 |
| Style C. | Height over all 10 feet, 5 inches
(Makes two prints 42×72 inches) | each, \$300.00 |

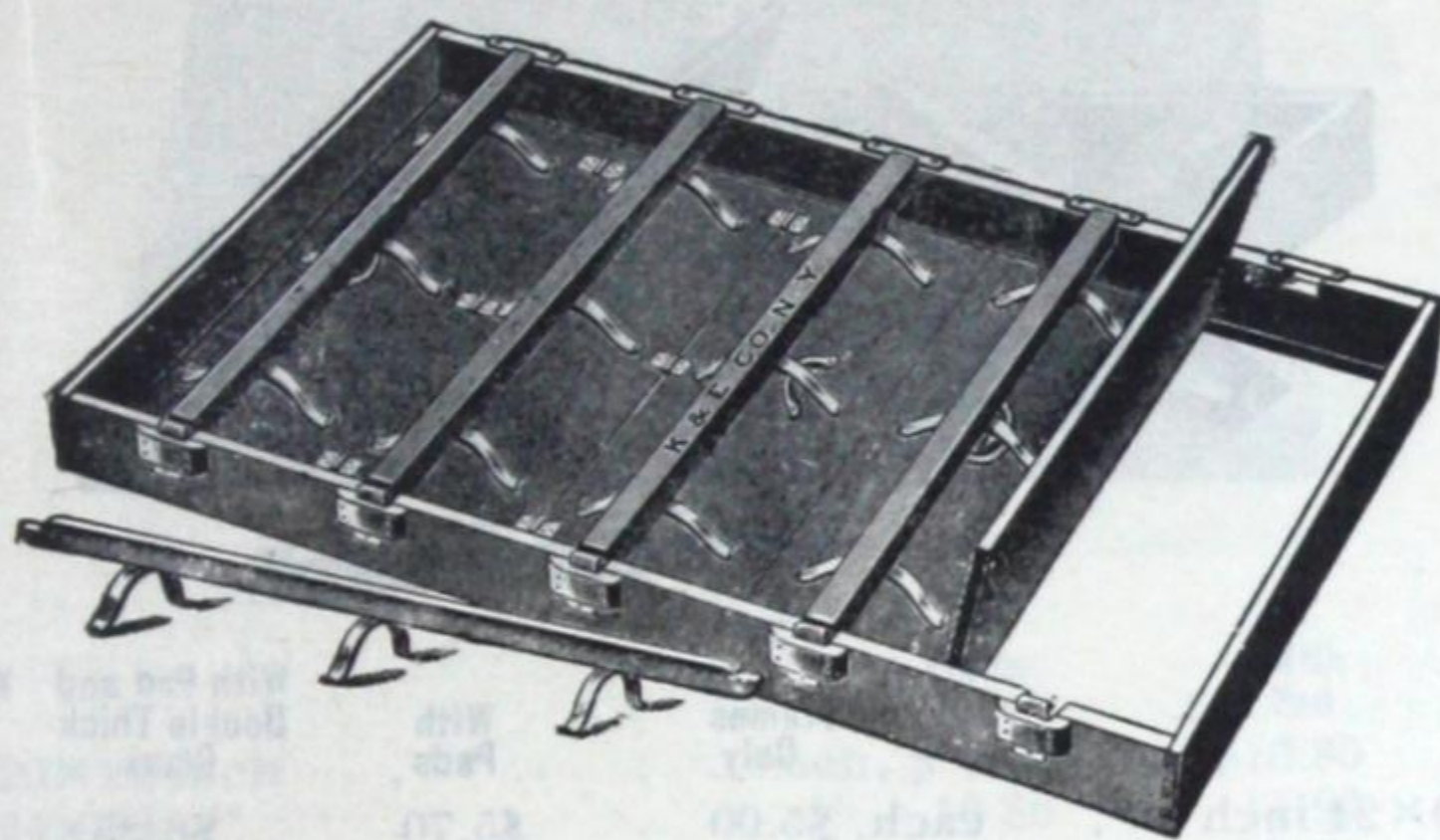
The Buckeye Electric Blue Printing Machine is of the vertical cylindrical type, composed of two half cylinders of polished plate glass held in position by a frame

Each half of this cylinder is provided with a curtain to hold the tracing and sensitized paper tight against the glass during exposure

The lamp is supported by a crane and travels down centrally through the cylinder while making the exposure. The speed of its travel, determining the length of exposure, is regulated by a suitable governor

When ordering always state the number of volts and whether current is direct or alternating, if alternating give frequency of cycles. This information can be obtained from the electrical company furnishing the current. Catalogues furnished giving full information

PRINT FRAMES, FIRST QUALITY, HARDWOOD



245

		Frames Only	With Pads	With Pad and Double Thick Glass	With Pad and Polished Plate Glass
242.	20 × 24 inch .	each, \$ 7.20	\$ 7.95	\$ 9.60	\$10.75
243.	24 × 30 " .	" 9.50	10.60	13.20	16.00
244.	30 × 42 " .	" 14.75	16.75		25.75
245.	36 × 60 " .	" 20.00	22.60		86.90

Other sizes, also larger, made to order

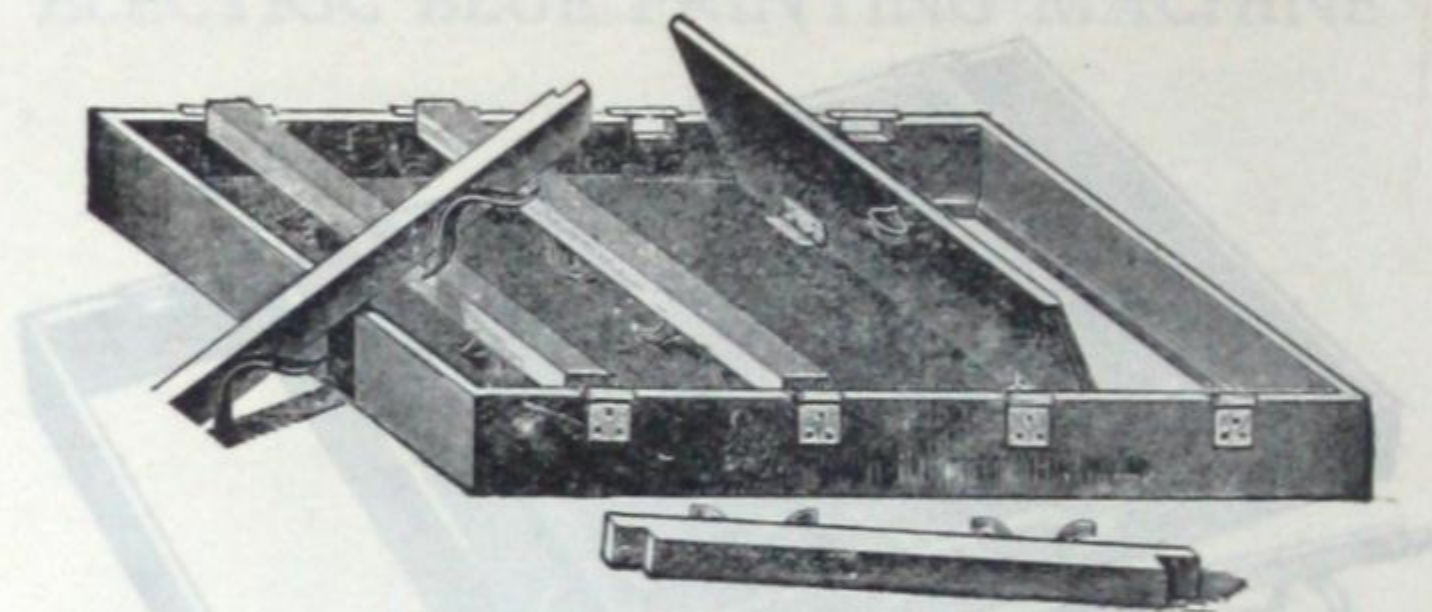
The above Print Frames are made of carefully selected, thoroughly seasoned hardwood, are of perfect workmanship and have brass trimmings. The springs are as heavy and as numerous as the glass will allow, and insure perfect contact. The spring catches for the bars are protected by wooden casings, as shown in the cut. The frames are made to stand the exposure to the weather incidental to their use. The chief advantage in getting hardwood frames of best quality and workmanship instead of the cheaper kind, is their lesser liability to warp and shrink and thereby break the glass

For sizes larger than 24 × 30 only Plate Glass should be used, on account of its greater strength. It will be found more economical for the smaller sizes also

Packing of Print Frames will be charged at cost, but we are not responsible for breakage of glass

NOTE. — In ordering Print Frames please state whether pad is wanted and whether double thick or polished plate glass, or none

PRINT FRAMES, SECOND QUALITY, PINWOOD



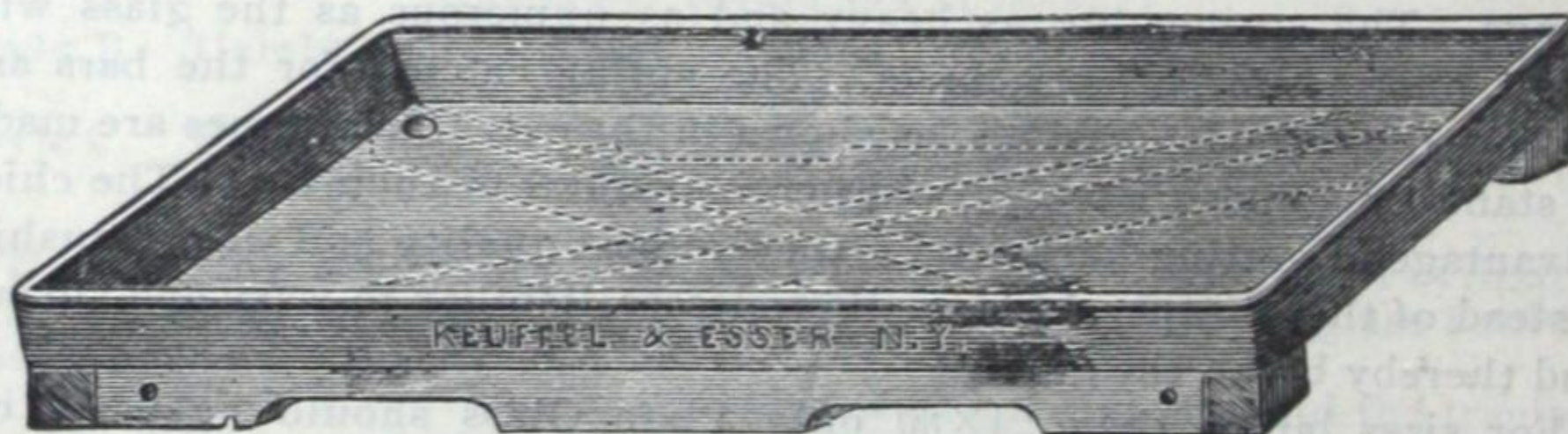
		243 1/4			
		Frames Only	With Pads	With Pad and Double Thick Glass	With Pad and Polished Plate Glass
242 1/4.	20 x 24 inch	each, \$5.00	\$5.70	\$6.25	\$9.00
243 1/4.	24 x 30 "	" 6.40	7.50	8.90	10.90
244 1/4.	30 x 42 "	" 10.00	12.00		20.25
245 1/4.	36 x 60 "	" 16.00	19.25		39.00

PRINT FRAMES FOR PATENT OFFICE DRAWINGS, Etc.

242 1/2.	11 x 16 in., Pinewood, with Dbl. Thick Glass and Pad	each, \$4.00
243 1/2.	16 x 21 " " " " " " " " " "	" 6.00

ZINC BATH TRAYS

First Quality, with Drain Pipe, Strong Wire Rim and Hardwood Braces



248 AND 248D

Plain. for Blue Prints		Asphalt Coated, for Nigrosine and Umbra Prints	
20 x 24 inch	each, \$ 5.00	20 x 24 inch	each, \$ 5.00
24 x 30 "	" 6.25	24 x 30 "	" 6.25
30 x 42 "	" 8.95	30 x 42 "	" 8.75
36 x 48 "	" 11.00	36 x 48 "	" 11.00
36 x 60 "	" 12.50	36 x 60 "	" 12.50

PRINT FRAMES, QUALITY A



No.	Dimensions	Frame Only	With Pad	With Pad and Polished Plate Glass
1.	20×26 inch	each, \$ 9.50	\$10.80	\$11.80
2.	24×30 "	" 10.80	11.90	13.00
3.	25×37 "	" 12.60	13.90	18.25
4.	30×42 "	" 15.70	17.50	21.75
5.	36×42 "	" 18.00	20.25	27.25
6.	36×48 "	" 19.80	22.50	29.50
7.	36×54 "	" 23.40	26.50	35.25

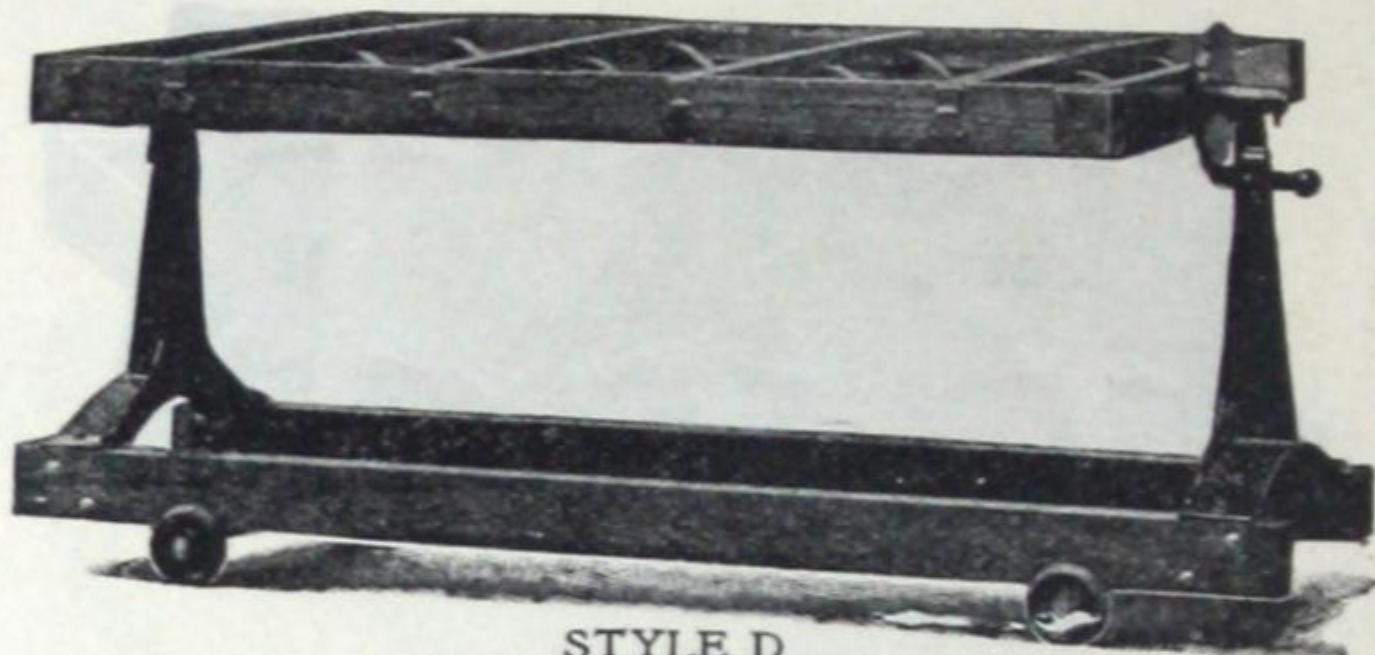
BLUE PRINT CARS



Style	Dimensions	Car Only	Track Only
Style A	for frames up to and including 30×42 inch each,	\$21.50	\$10.00
"	" " " " " " " 36×60 "	25.00	15.00

Style A is a very convenient apparatus which can be run on iron tracks. Made to revolve and tilt at any angle to receive the direct rays of the sun; can clamp in any position; may be turned over to receive work. The iron work is enameled, and the wood work of highly finished oak. We recommend this style for frames Nos. 1, 2, 3, 4, 5 and 6

Blue Print Cars — continued

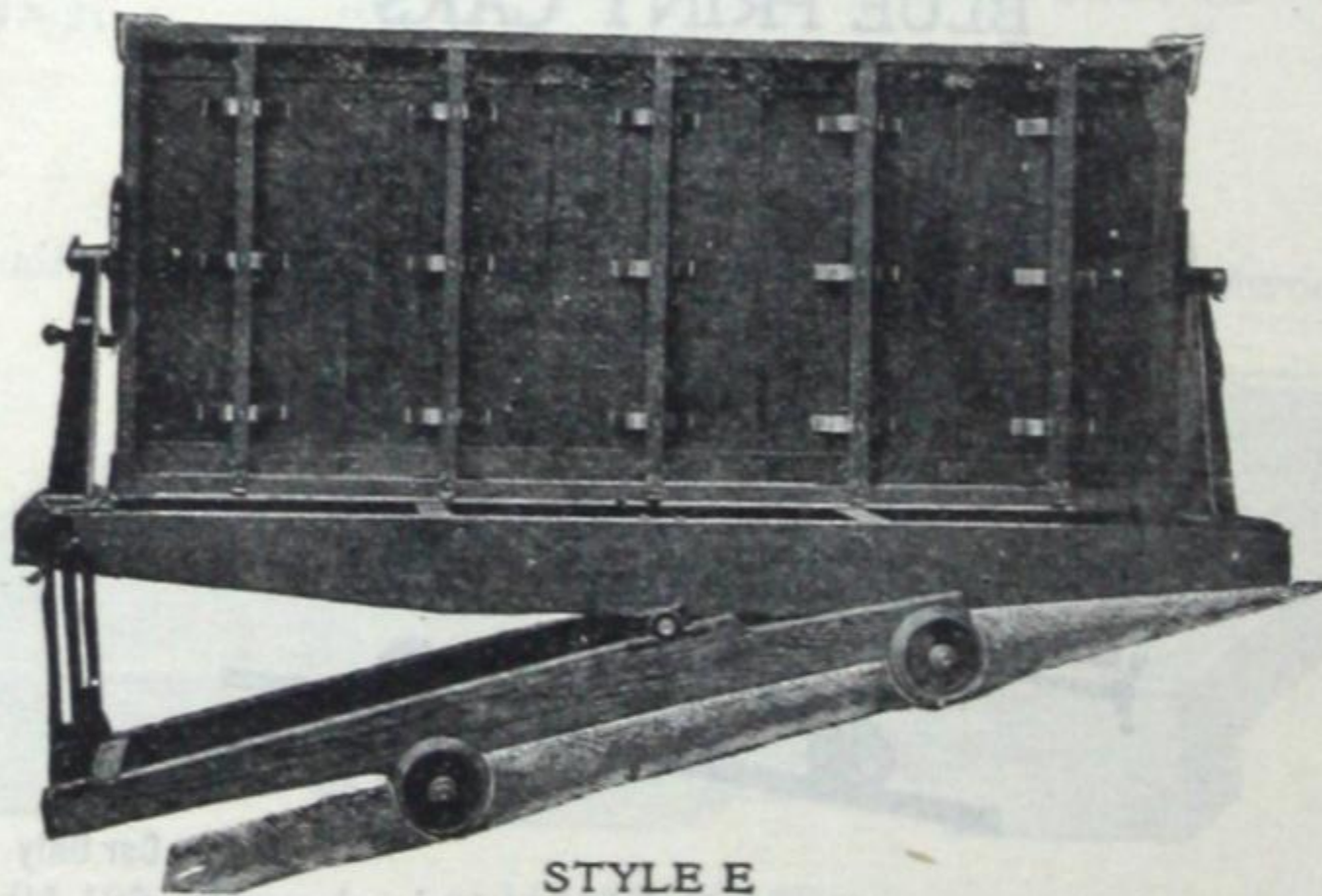


STYLE D

			Car Only	Truck Only
For frames up to and including	30 × 42 inch	each,	\$26.00	\$10.00
" " " "	48 inch wide	"	31.00	18.00
" " " "	60 " "	"	44.00	20.00

These prices do not include blue print frames

The tilting of the frame is controlled by a notched wheel which permits the frame to be fixed at any angle. A frame which is much wider than the window can be swung through and afterwards adjusted to the desired angle. The frame can be turned over for the insertion of blue print paper, etc. The iron work is handsomely enameled, the woodwork is of oak, highly finished



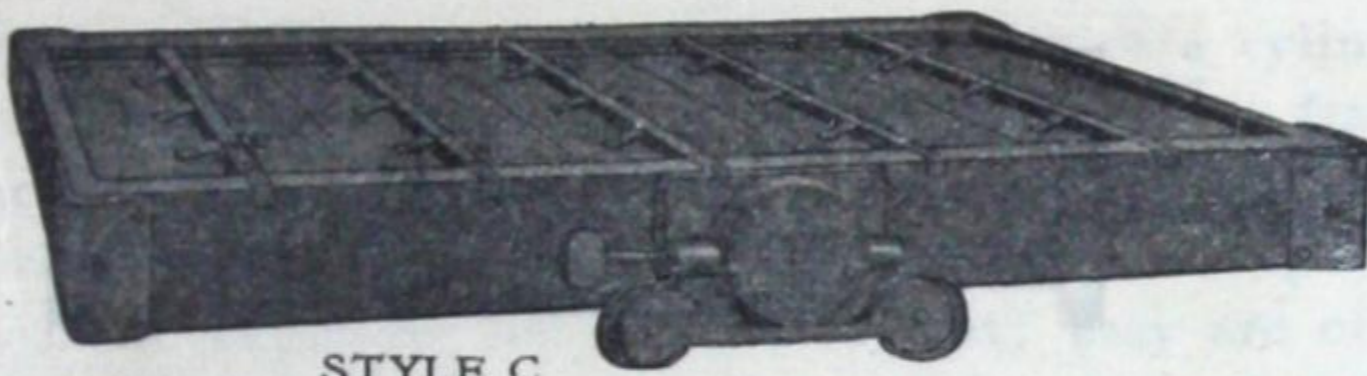
STYLE E

			Car Only	Truck Only
For frames up to and including	30 × 42 inch	each,	\$32.00	\$12.00
" " " "	48 inch wide	"	40.00	18.00

These prices do not include blue print frames

Style E is larger and heavier than Style D, and has in addition the forward tilt. We have made this car for the very largest size frames. In all other particulars it is the same as Style D and has the same high finish that we give to all our goods

Blue Print Cars — continued



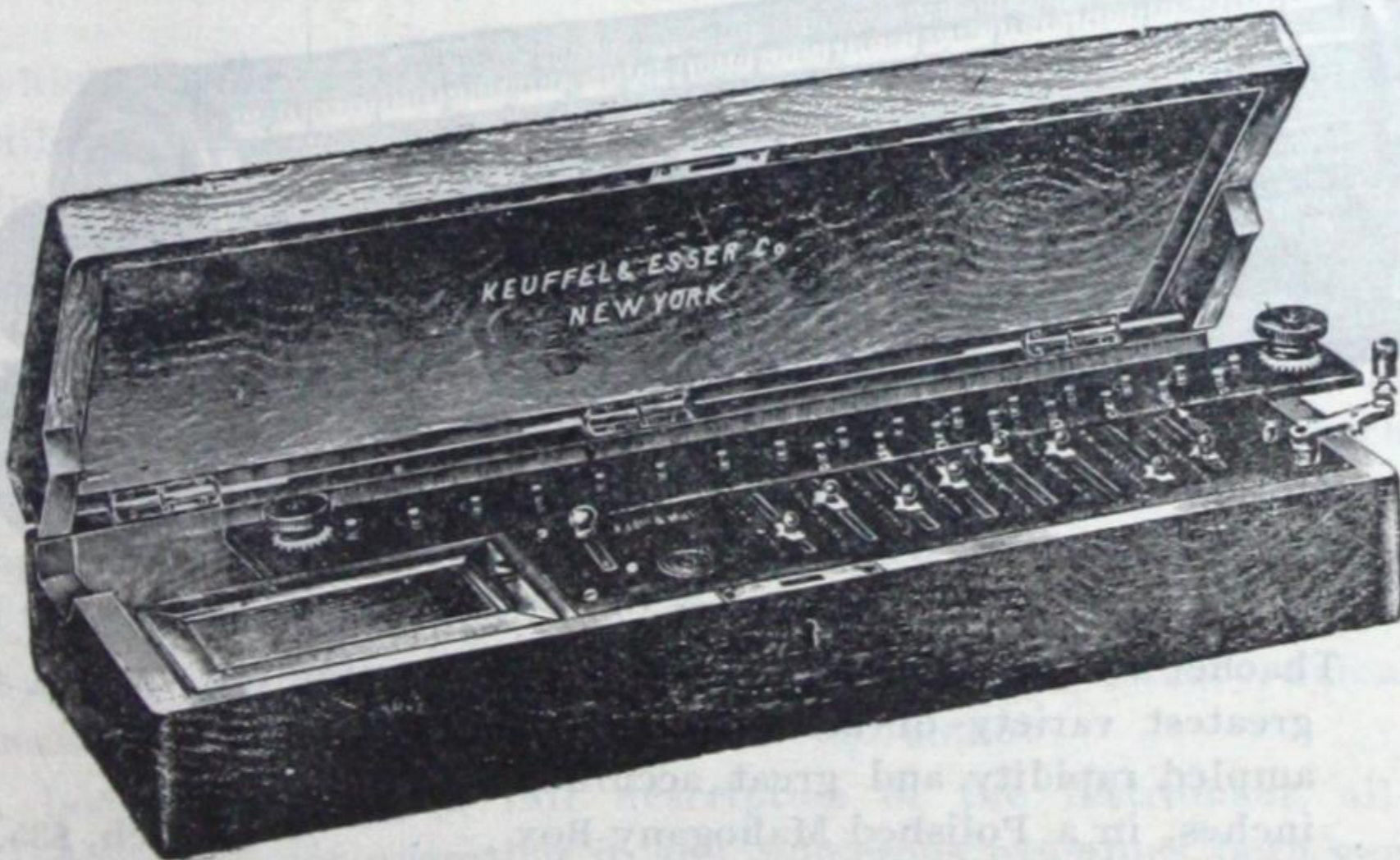
STYLE C

			Car Only	Track Only
For frames up to and including	36 × 42 inch	.	each, \$13.50	\$ 9.00
" " " " " "	42 × 72 "	.	" 18.00	15.00
" all frames over	42 × 72 "	.	" 26.00	16.00

Style C is a very convenient apparatus or car running on a track out of the window. It is all iron, handsomely enameled, and is fastened to a permanent blue print frame, allowing the frame to tilt to any angle for proper exposure, and can be turned completely over to allow for the insertion of tracings and blue print paper. A very fine frame, many of which are in use

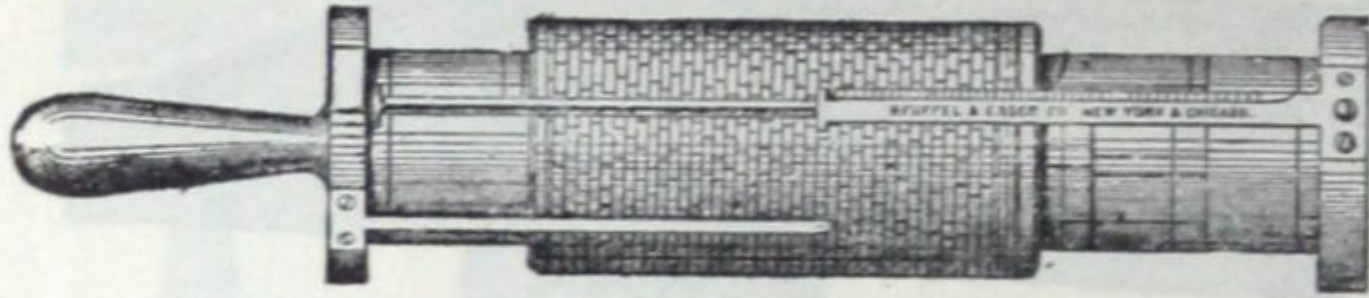
Style D is a most convenient car for handling very large frames. It is so well balanced that the largest frame can be very easily manipulated. The blue print frame is swung between two upright iron standards provided with wheels which are arranged to run out of the window on a track

RECKONING MACHINES



4005.	Reckoning Machines,	6	grooves,	12	holes in upper row	each,	\$193.25
4006.	"	8	"	16	" " "	"	241.50
4007.	"	10	"	20	" " "	"	338.25

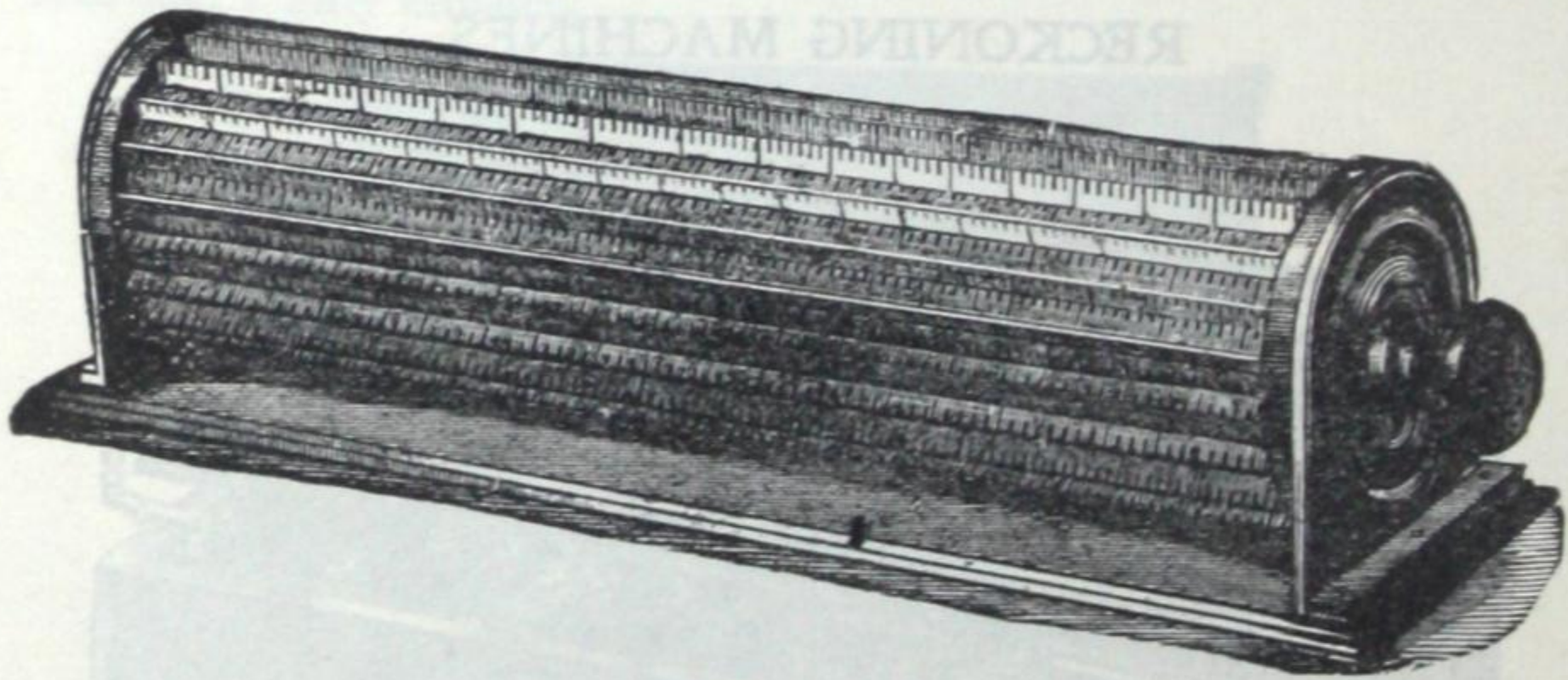
FULLER'S SPIRAL SLIDE RULE



Fuller's Spiral Slide Rule, in Mahogany Box each, \$30.00

Fuller's Spiral Slide Rule consists of a cylinder which can be moved up or down and turned round a sleeve which is attached to the handle. A single logarithmic scale, 42 feet long, is wound round the cylinder spirally, and ratios established by means of two pointers or indices, one attached to the handle and the other to an axis which slides in the sleeves

THACHER'S CALCULATING INSTRUMENT



- No. 1. Thacher's Calculating Instrument for performing the greatest variety of useful calculations with unexampled rapidity and great accuracy. Cylinder 18 inches, in a Polished Mahogany Box each, \$35.00
2. Thacher's Calculating Instrument, with the addition of a 3 inch Reading Glass, sliding on a brass bar, adjustable to any part of the instrument for focus " 45.00

Thacher's Calculating Instrument — continued

The Thacher's Calculating Instrument consists of a cylinder 4 inches in diameter and 18 inches long, working within a framework of triangular bars. The scales, the longest ever made, contain upwards of 33,000 divisions and 17,000 engraved figures executed upon a dividing machine, made expressly for this instrument; they are of such great length, viz.: 30 and 60 feet each, that results can be obtained to the fourth and usually to the fifth place of the figures, sufficient to satisfy nearly every requirement of the professional or business man

By the use of this instrument the drudgery of calculation is overcome, the mind is greatly relieved, and the results obtained are more reliable than when worked out in the usual way. Examples in multiplication, division, proportion, powers or roots, involving not more than three quantities, are solved by one operation, and any number of values of a single variable are found by one setting of the instrument, for example, any of the formula

$$\frac{ax}{b}, \frac{ax^2}{b}, \frac{ax}{b^2}, \frac{ax^2}{b^2}, \sqrt{\frac{ax}{b}}, \sqrt{\frac{a^2x}{b}}$$

in which a and b may have any values and x any number of values are readily solved by one setting. Squares, square roots, cube roots and reciprocals are also readily worked

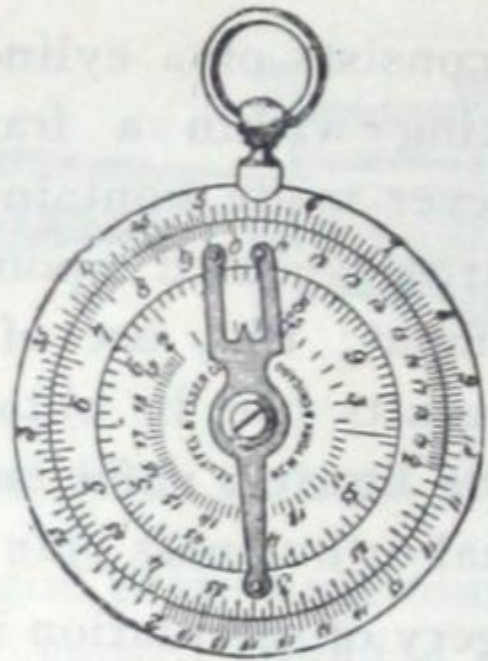
The useful applications of the instrument are almost unlimited; among these may be mentioned, finding the stresses and sections in trusses and girders, mensuration, estimates of work and material, solving trigonometrical formulas, making and applying tables, problems in the mechanical powers, better machinery and hydraulics, problems of simple and compound interest, discount and fellowship, pro-rating, gauging, exchange and the conversion of weights and measures

It will be found useful to the Engineer, Architect, Actuary, Scientist, Manufacturer, Mechanic, Navigator and Accountant

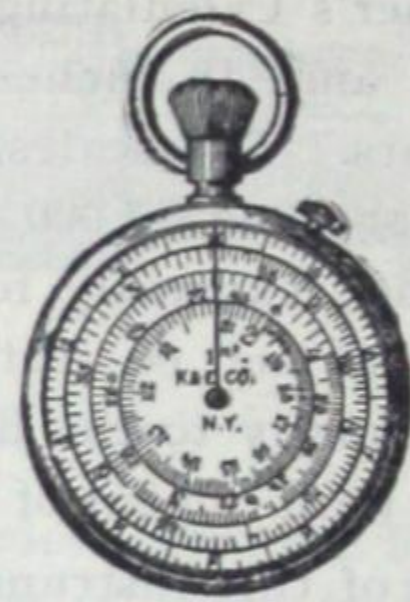
A book containing a full description of the instrument, all the necessary rules for operating it, and numerous examples, both general and special, will accompany each instrument

Testimonials will be furnished on application

CHARPENTIER AND BOUCHER CALCULATORS



4020



4024

4020. Charpentier's Calculator each, \$5.00

This is a circular slide rule, $2\frac{3}{8}$ in. diameter, with a circular slide revolved and set by the handle. This instrument being made of metal is but slightly affected by atmospheric variations. On the face of the calculator (shown in cut) there is a logarithmic scale on the slide corresponding to another such, external to it on the body of the rule. On the surface within the slide are the square roots in two circles, one from 0 to 3162, the other from 3162 to 10, made to coincide with the outermost scale by an index. On the other side of the rule are three scales, an outer one of equal parts and two inner ones of angles from 0 to 90 and 0 to 45 respectively; the latter two give the sines of the first and tangents of the second on the scale of equal parts, by an index. The indexes on the two faces correspond, so that the logarithms of the numbers on the logarithmic scale can be read on the scale of equal parts

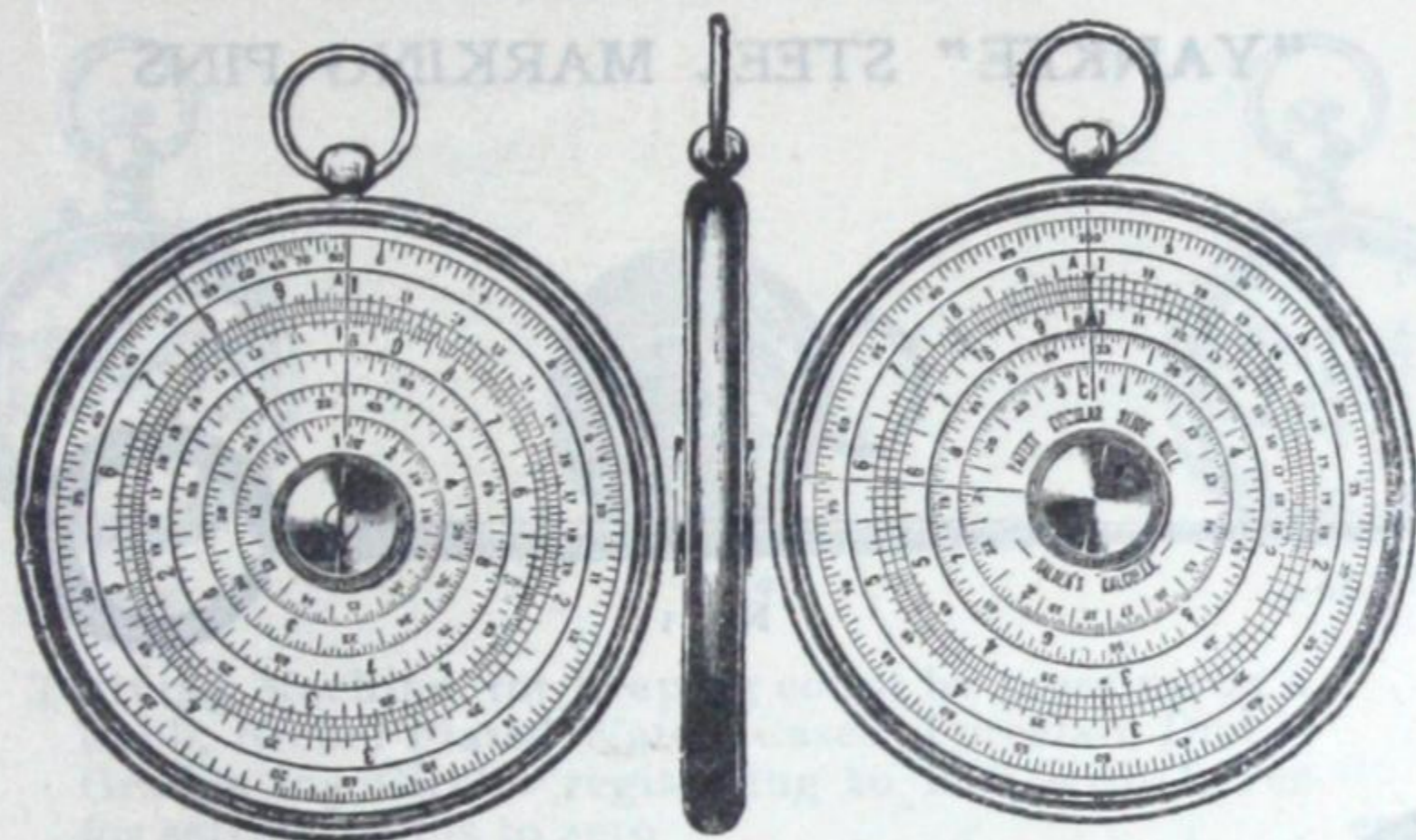
4022. Boucher Calculator, Silvered Metal Dials each, \$14.00

This resembles an ordinary stem-winding watch with glass covered dials back and front. It is about $2\frac{1}{8}$ in. diameter by $\frac{1}{2}$ in. thick; convenient size for the pocket. One dial can be revolved by means of the milled-head key at the stem; the other is fixed. Each dial is provided with a pointer. These pointers are fixed on a common axle and moved together and alike by a milled-head key on edge of the case. A third pointer is attached to the rim over the movable dial. The fixed dial has an outer scale of equal parts and the three inner circles are the cube roots of the numbers on the logarithmic scale from 1 to 2154, from 2154 to 4657 and from 4657 to 10, respectively. The movable dial has an outer circle of angles from $5^{\circ} 44' 39''$ to 90° , the sines on which are found on the next inner circle, which is the logarithmic scale. Ratios are set off in a similar manner as on the Fuller Slide Rule

4024. Boucher Calculator, Enameled Cardboard Dials each, \$8.50

No. 4024 is similar to No. 4022, but about $\frac{5}{8}$ in. thick. There is no second milled-head key for the pointers, which are operated by the key at the stem when pressing the button on the edge

THE IMPROVED HALDEN CALCULEX



Calculex Slide Rule, $2\frac{3}{8}$ inches diameter by $\frac{1}{4}$ inch thick, in extra fine Leather Case, with Book of Rules, complete . . . each \$5.00

The Improved Halden Calculex is a metal dial duplex slide rule, with metal packing and lock-nut, which makes it impossible for the instrument to get out of order. It can neither warp nor shrink owing to its being entirely of metal

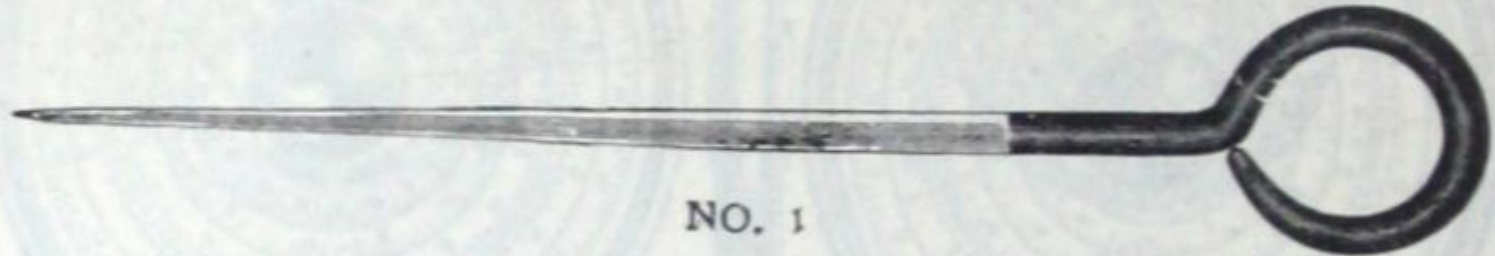
It is the most perfect acting and durable of all circular slide rules, and represents an important advance in the theoretical and mechanical principles upon which the Calculex is based and is acknowledged the most compact, convenient and simple slide rule, as well as the most accurate circular rule, ever known to the engineering profession

The Book of Rules is the most complete manual ever published and has been compiled and arranged to fit in the separate compartment of the leather case, so that the Calculator and Book of Rules can be carried in the vest pocket without the least inconvenience

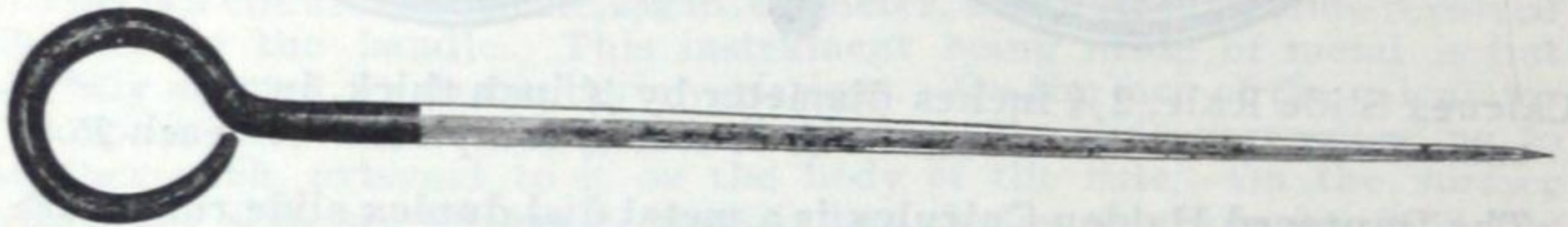
The Calculex, briefly described, consists of a disc within a ring, which together form a dial surrounded by a rim, protected on both sides by glass discs on which the hairline is marked radially. It is revolved by the two thumbs. The centre of the dial is turned by holding the nut on each side between the finger and the thumb, the outside of the dial being fixed to the rim. The log of a number, squares, square roots, cubes, cube roots, angles, etc., can be found by reading direct from the hairline without moving the dials. It is capable of solving more problems than other Slide Rules and needs about one quarter of the movements

The front face contains five circles of scales. The outer scale, or No. 1 is a scale of logarithms; Nos. 2 and 3 are calculating scales A and B; Nos. 4 and 5 are square roots of scale B. The back face contains six circles of scales. The outer scale, or No. 6, is a scale of angles; Nos. 7 and 8 are calculating scales for inverse propositions; Nos. 9, 10 and 11 are cube roots of scale B

FROST & ADAMS CO.'S
 "YANKEE" STEEL MARKING PINS



NO. 1



NO. 2

- | | | |
|--------|-------------------------------|-----------------|
| No. 1. | Set of 11 Pins 11 inches long | per set, \$1.25 |
| 2. | Set of 11 Pins 14 inches long | " 2.00 |

The "Yankee" Marking Pins are made in two sizes, 11 in. and 14 in. long and come packed in a neat box, 11 Pins in each set. They are the strongest and best marking pins; have good sharp points of hardened steel. They are made of heavy stock and will stand any amount of hard usage. We thoroughly recommend them to Surveyors and Engineers

TALLYING MACHINES



6456



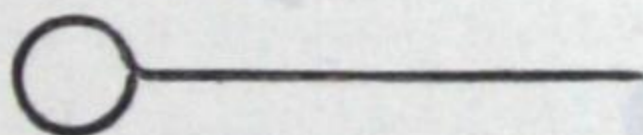
6459



6457

- 6456. Tallying Machine, for keeping count by pressing on a knob, Nickel Plated Watch Cased, Porcelain Dial, 3 Graduating Circles registering to 1000, with Lever for setting hands to zero each, \$4.00
- 6457. Tallying Machine, for keeping count by pressing on a knob, Nickel Plated Watch Case, Porcelain Dial, 4 Graduated Circles, registering to 10,000 " 5.50
- 6459. Tallying Machine, for keeping count by pressing on a knob, Nickel Plated, registers to 999 " 2.50

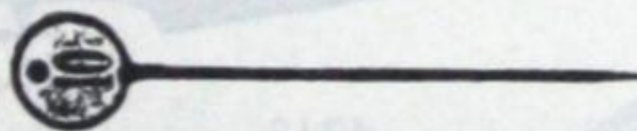
ARROWS



6460



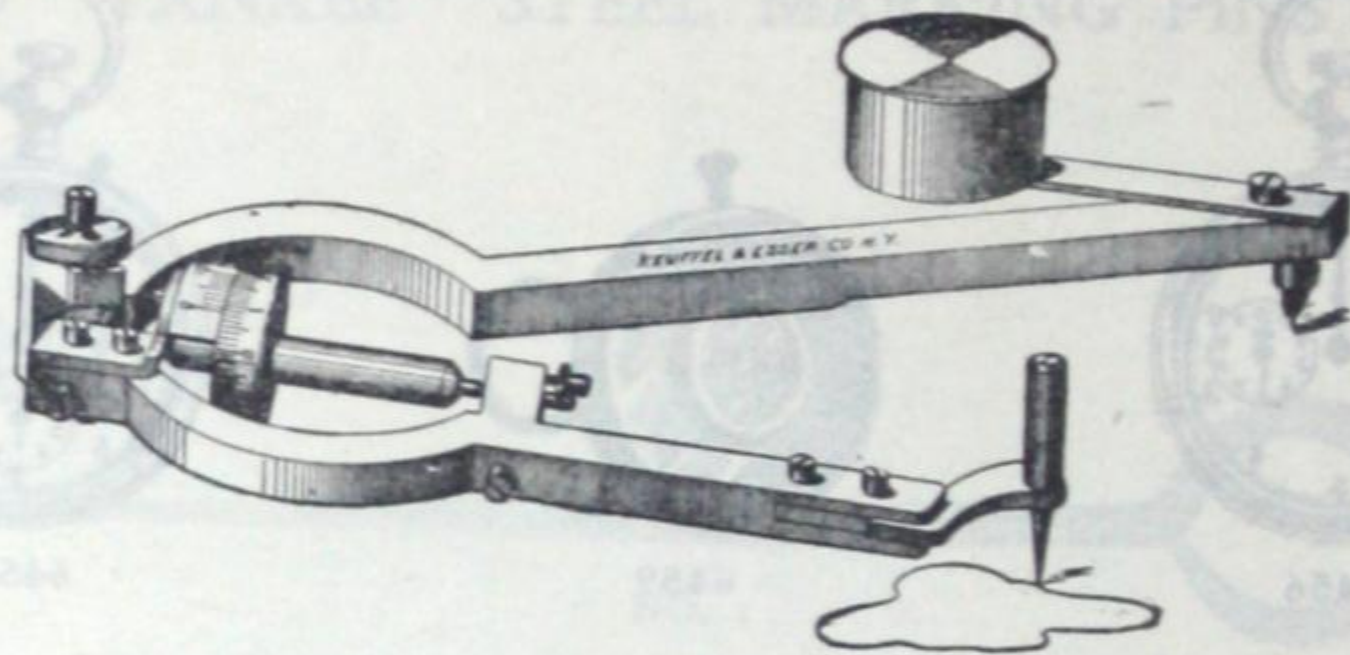
6474



6476

- 6460. Steel Arrows, W.G. 6. Bright, 14 inch, set of 11 \$1.50
- 6461. Steel Arrows, " 9, " 14 " " 1.00
- 6462. Steel Arrows, " 9, Japanned 12 " " 1.20
- 6463. Steel Arrows, " 11, Bright, 12 " " .90
- 6464. Brass Arrows, " 6, " 12 " " 2.00
- 6470. Iron Arrows, " 9, " 14 " " .60
- 6474. Steel Arrows, " 10, Weighted, 14 " " 3.00
- 6475. Steel Arrows, " 8, " 14 " " 3.00
- 6476. Steel Arrows, " 6, Bright, 14 " with White Enameled Disc, 2½ inches diameter, with red figures 1 to 11, set of 11 5.00
- 6478. Canvas Carrying Case for No. 6476, with shoulder strap each, 2.50

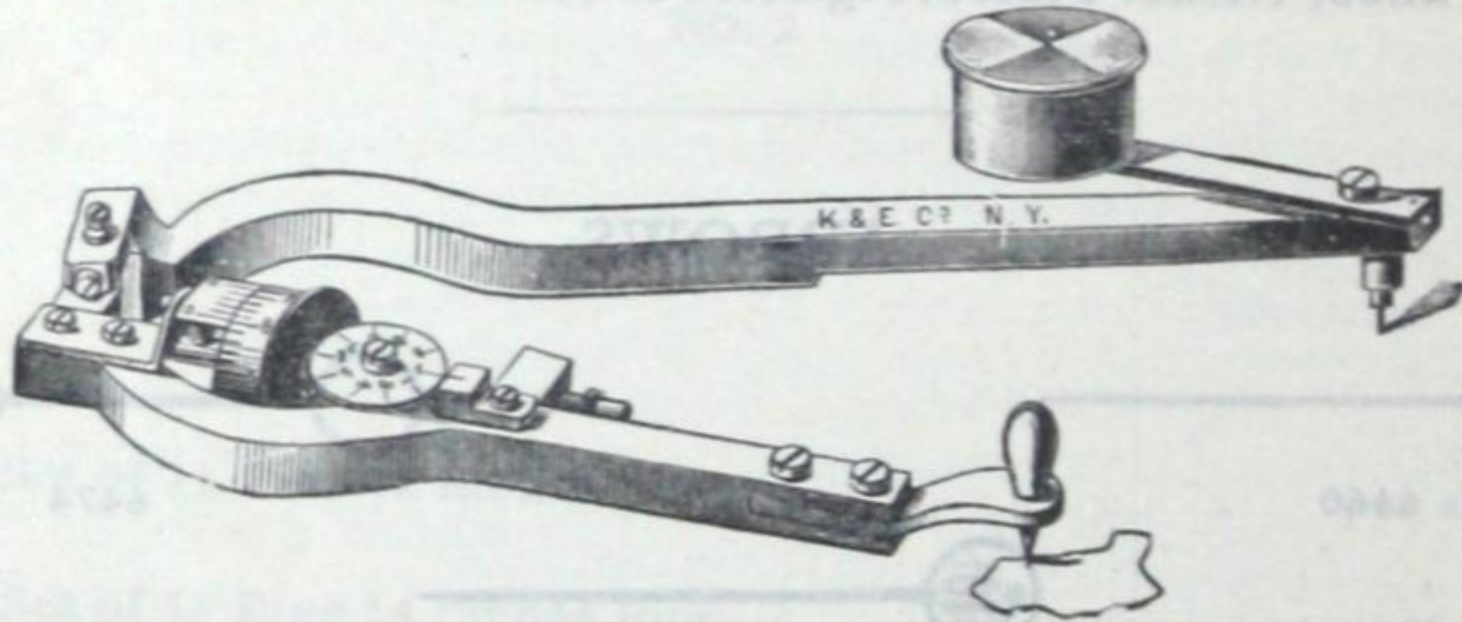
POLAR PLANIMETERS



4210

4210. Polar Planimeter, German Silver, Fixed Tracer Arm, Improved Needle Pole*; in Polished Mahogany Case, with Directions each, \$15.00

No. 4210 represents the Polar Planimeter in its simplest form. It measures up to 10 square inches in tenths and hundredths of a square inch



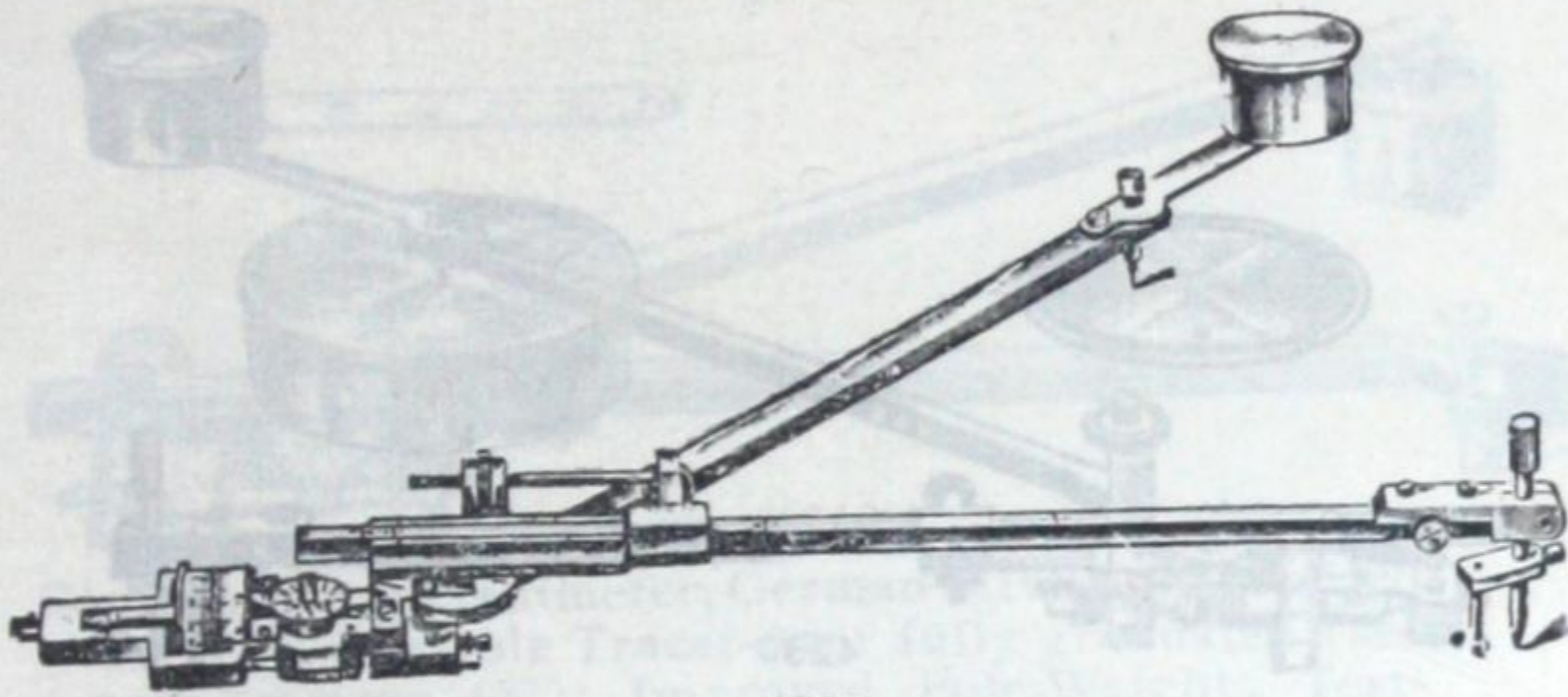
4212

4212. Polar Planimeter, German Silver, Fixed Tracer Arm, Improved Needle Pole*; with Horizontal Recording Wheel, engaging with the Measuring Wheel and registering its revolutions; in Polished Mahogany Case, with Directions each, \$16.50

The Horizontal Registering Wheel registers 10 revolutions of the Measuring Wheel, so that areas of figures up to 100 square inches can be measured. The areas of small drawings made to scale may be obtained by reduction

*The improvement of the Needle Point consists in having a weight attached to a bar revolving around the pole, which can be directed to counterbalance the weight of the instrument proper in any position

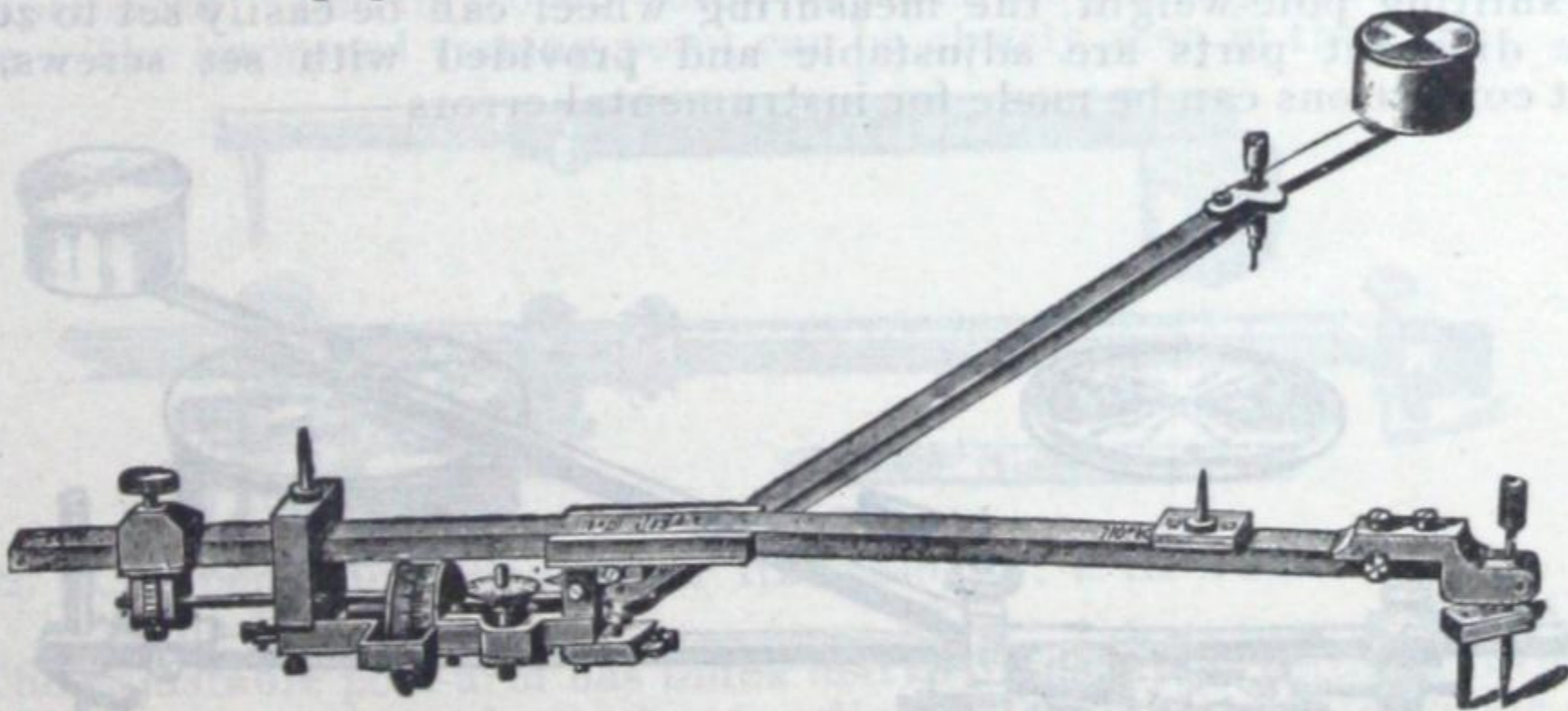
Polar Planimeter — continued



4220

4220. Polar Planimeter (Amsler's pattern) German Silver, Adjustable Tracer-Arm with Index Marks for 4 Ratios, and with Clamp and Slow-Motion Screw. Improved Needle-Pole, in Polished Mahogany Case, with Directions each, \$28.00

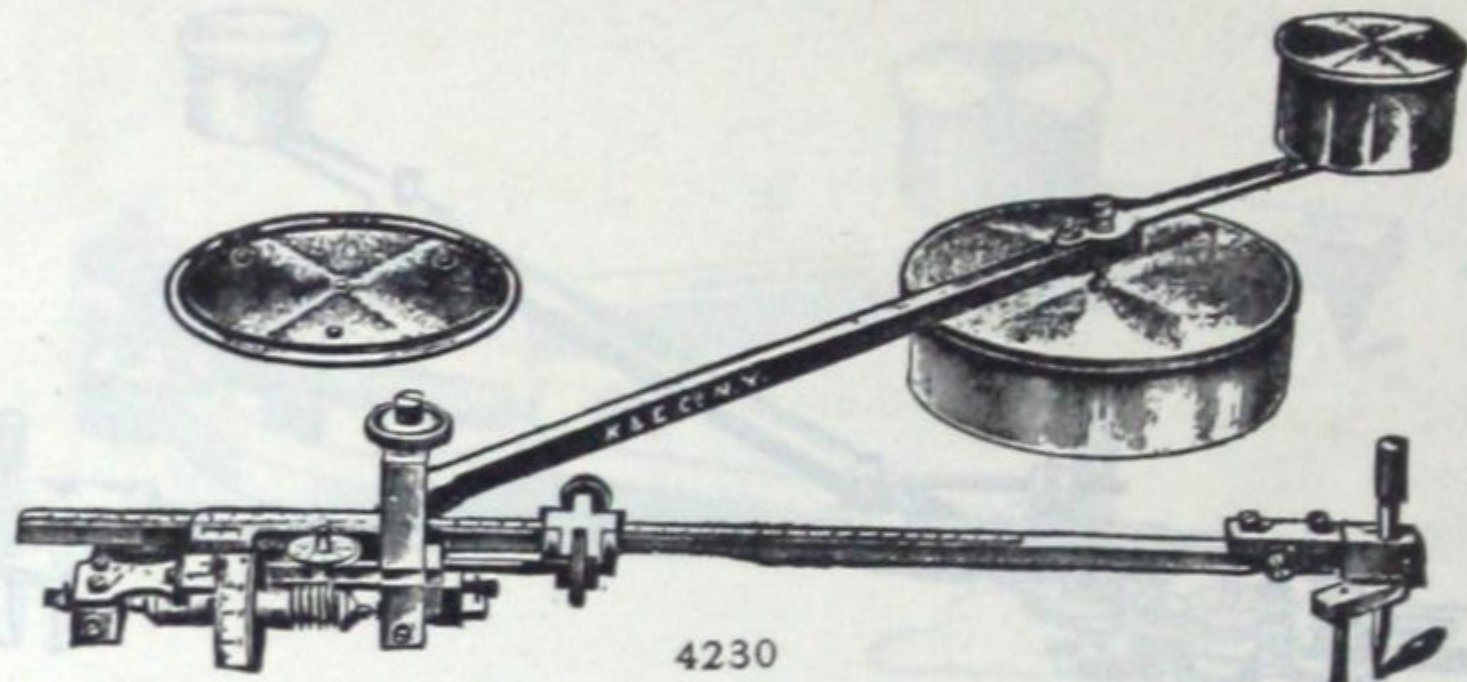
This instrument has improvement over the regular Amsler Planimeter. The flange of the roller wheel is at the centre of wheel axis, thus distributing the wear. The horizontal disc is so placed that it is always visible. The tracer-arm is adjustable, and marks for setting to several scales are indicated on it. The adjustable tracing point can be brought into alignment with axis of roller-wheel. A support, keeps the point just clear of the paper



4225

4225. Polar Planimeter (Amsler's pattern) German Silver like 4220, but with special device for rapidly finding the mean height of Indicator Diagrams (see page 403) in Mahogany Case, with Directions each, \$30.00
 Directions (the Polar Planimeter, by Wm. Cox) " .25

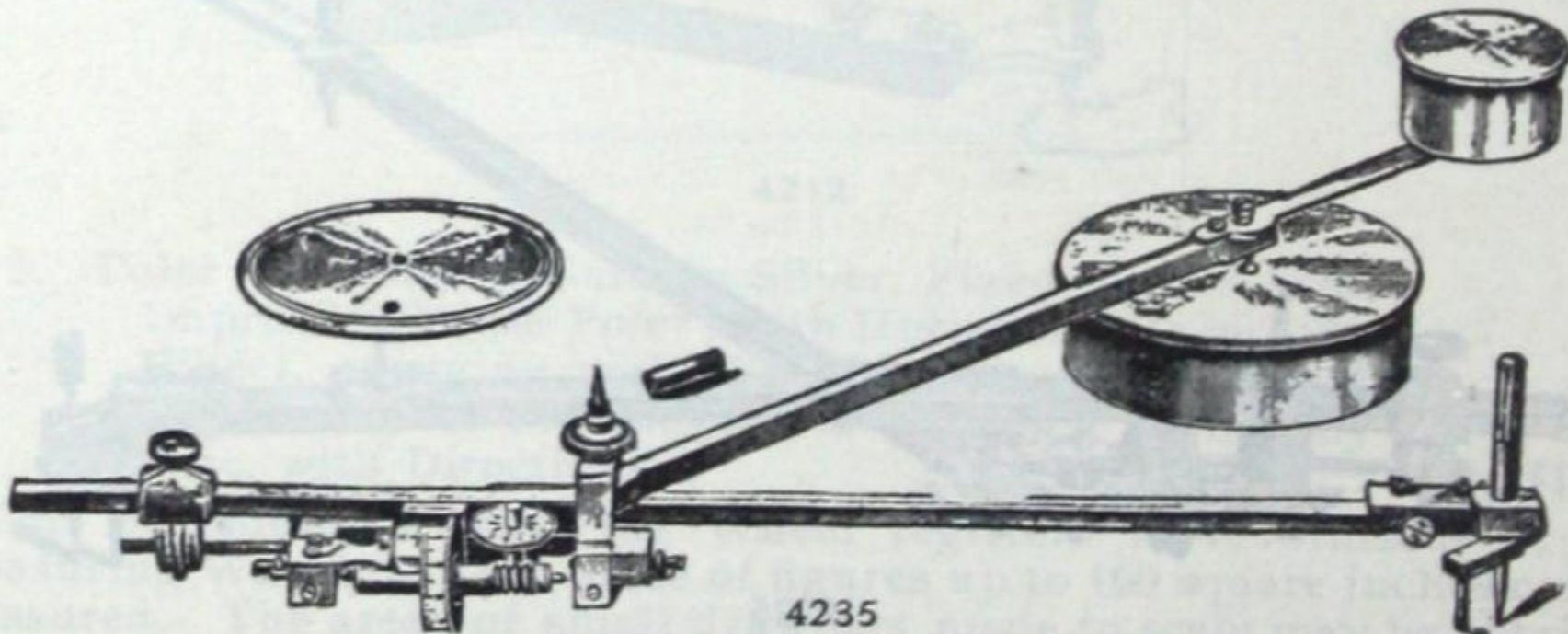
Polar Planimeters—continued



4230

4230. Improved Polar Planimeter, German Silver, Adjustable Tracer-Arm fully graduated, with Vernier, Clamp and Slow-Motion Screws, Ball-Pole, Pole-Weight, Balancing Weight, Testing Disc and Table of Settings for U.S. Standard and Metric Measures, in Polished Mahogany Case, to hold instrument when set to any scale, with Directions each, \$33.35

As the tracer-arm is fully graduated, very fine settings can be effected with great accuracy for any scale in U.S. Standard or foreign measurement, and allowance made for the shrinkage of drawings. It is also provided with index marks for a number of scales for U.S. Standard and Metric measurements. The Testing Disk greatly facilitates the rapid finding of settings, proves instrument's accuracy and aids in adjusting it. By shifting pole-weight, the measuring wheel can be easily set to zero. The different parts are adjustable and provided with set screws, so that corrections can be made for instrumental errors

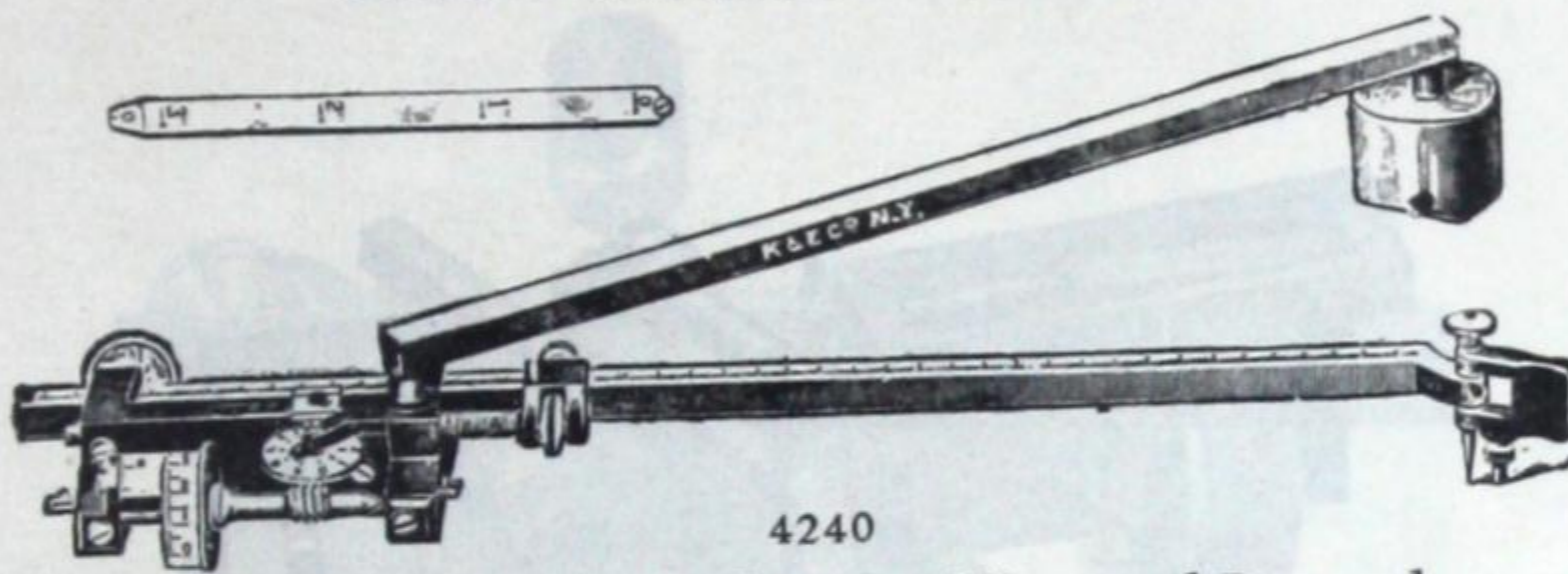


4235

4235. Improved Polar Planimeter, German Silver, like 4230 but with special device for finding the Mean Height of Indicator Diagrams (explained on page 402) each, \$35.50

The Steel Points of this instrument when not in use, are protected by German Silver Caps so not to interfere when measuring areas

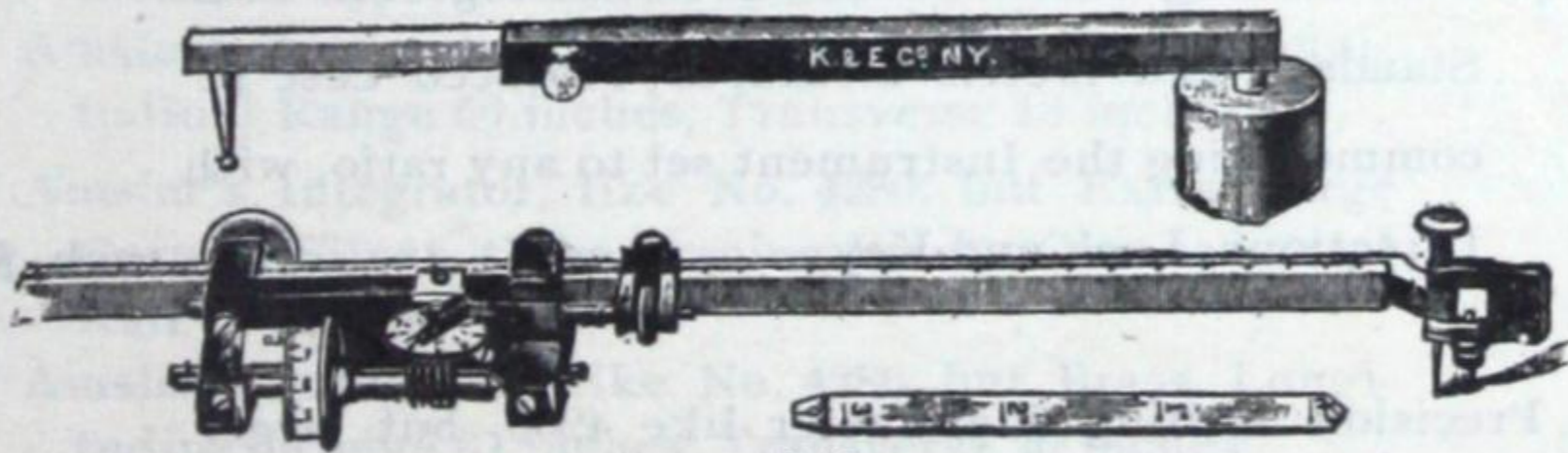
Polar Planimeters — continued



4240

4240. Compensating Planimeter, German Silver and Bronzed Brass; Adjustable Tracer-Arm fully graduated (see note on page 403); Improved Pole-Weight; Testing Rule and Table of Settings for U.S. Standard measure, in Morocco Case, accommodating the instrument when set at any scale, with Directions each, \$36.00

The construction of this Planimeter is novel. It consists of two parts; one the tracer-arm and carriage with measuring and recording wheels, the other the pole-arm having at one end the pole-weight and at the other a steel ball, forming a ball-joint with the wheel carriage, which cannot become shaky, nor is it liable to injury when adjusting the tracer-arm as each part can be handled and stored separately (see cut below). This gives the tracer-arm a motion of 180° right and left; much greater than the usual Planimeters having a motion of only about 90°. By measuring a diagram with the pole on the left and again on the right side of tracer-arm and taking the mean reading, all instrumental errors are compensated. The improved pole combines the pole-weight and needle-pole. The improved tracing point can be clearly seen in the cut

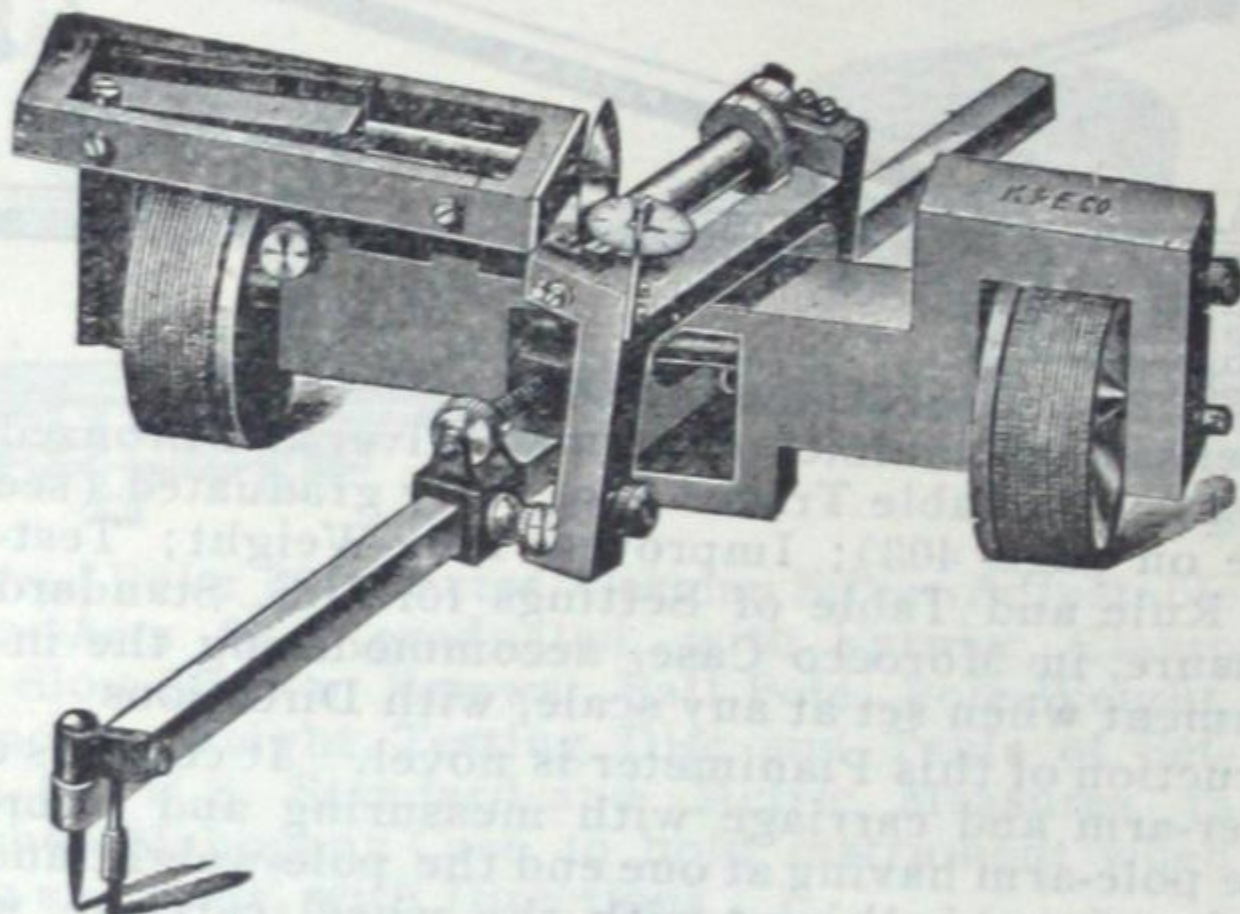


4242

4242. Compensating Planimeter like 4240, but with Adjustable Pole Arm each, \$47.50

The adjustable pole-arm has index marks for different settings furnished with instrument, and can be so adjusted that with pole inside of a figure the constant is a round number, 20,000, for any setting. It is used in the same way with pole inside as outside, and by tracing the figure with pole on the right and on the left of tracer-arm and taking the mean reading, very large areas can be measured very accurately. The extensibility of pole-arm and great range of tracer-arm permit measuring very large figures with pole outside. By reducing length of pole and tracer-arms, it can be used on a very small space

ROLLING PLANIMETERS

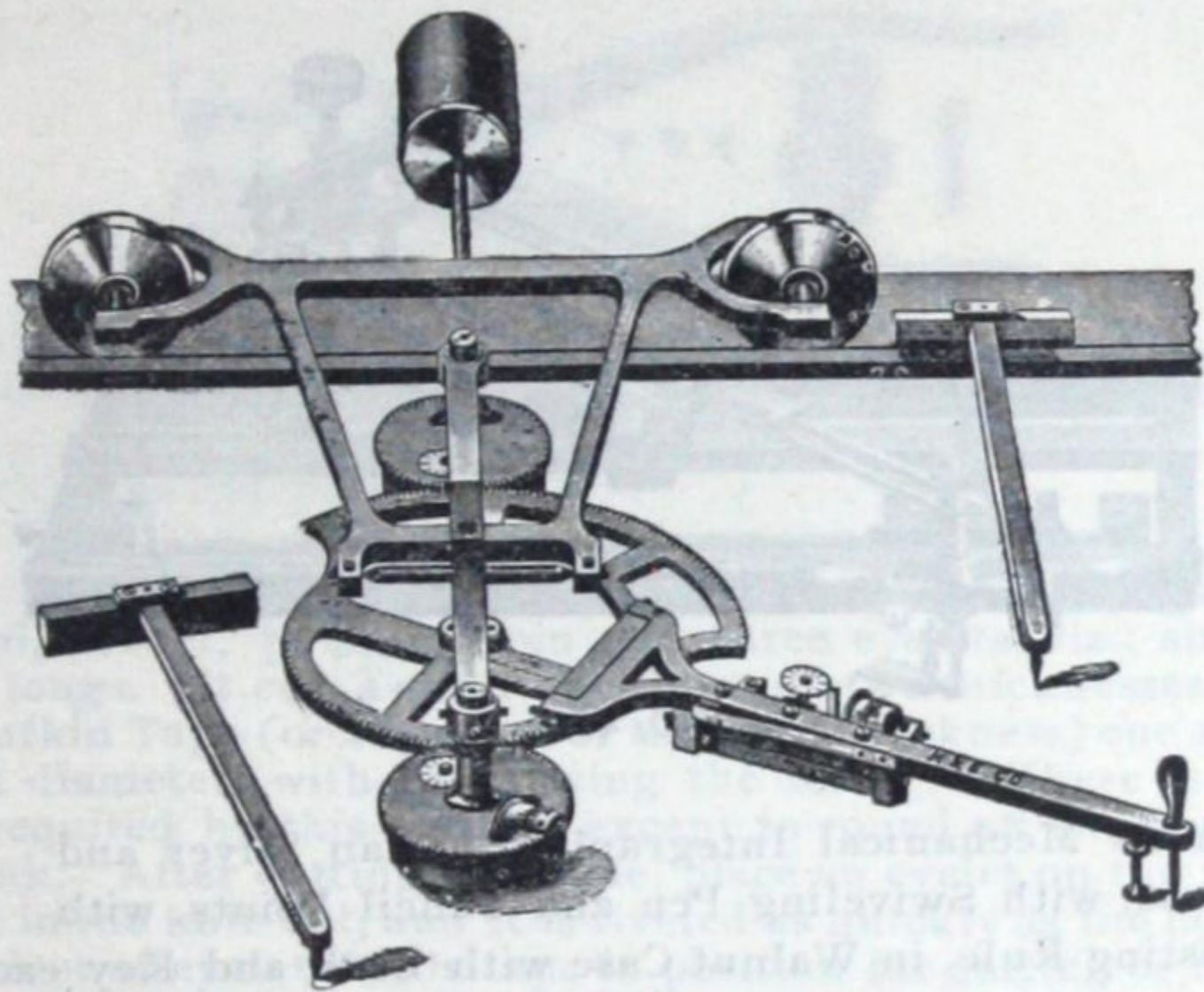


4262

4260. Precision Rolling Planimeters of German Silver and Brass; adjustable Tracer-Arm, fully graduated, 8 inches long with 8 inch Telescoping Extension Piece with Testing Rule and Table of Settings for U. S. Standard and Metric measures; Morocco Case accommodating the Instrument set to any ratio, with Directions, Lock and Key each, \$82.50
4262. Precision Rolling Planimeter like 4260, but larger, Tracer-Arm 12 inches long, Telescoping Extension Piece 10 inches each, 95.00

The Rolling Planimeter moves on two broad rollers, from one of which motion is imparted to the recording mechanism. The area of a figure of any length and the width of which does not exceed the length of the extended tracer-arm can be measured in one operation

Rolling Planimeters — continued



4280

- 4280 Amsler's Integrator, with three Recording Mechanisms giving the Area, Moment, and Moment of Inertia of any figure; German Silver, two Tracing Points; two Gauges for adjusting instruments to axis of moment; instrument in Walnut Case; Grooved Steel Rail, 59 inches in separate Hardwood Case; with Directions each, \$175.00
- 4282.* Amsler's Integrator, like No. 4280, but Brass, Longitudinal Range 56 inches, Transverse 13 inches . . . " 150.00
- 4286.* Amsler's Integrator, like No. 4280, but Extra Large German Silver, three Tracing Points, Grooved Steel Rail 78 inches . . . " 280.00
- 4288.* Amsler's Integrator, like No. 4286, but Brass, Longitudinal Range 67 inches, Transverse 26 inches . . . " 230.00

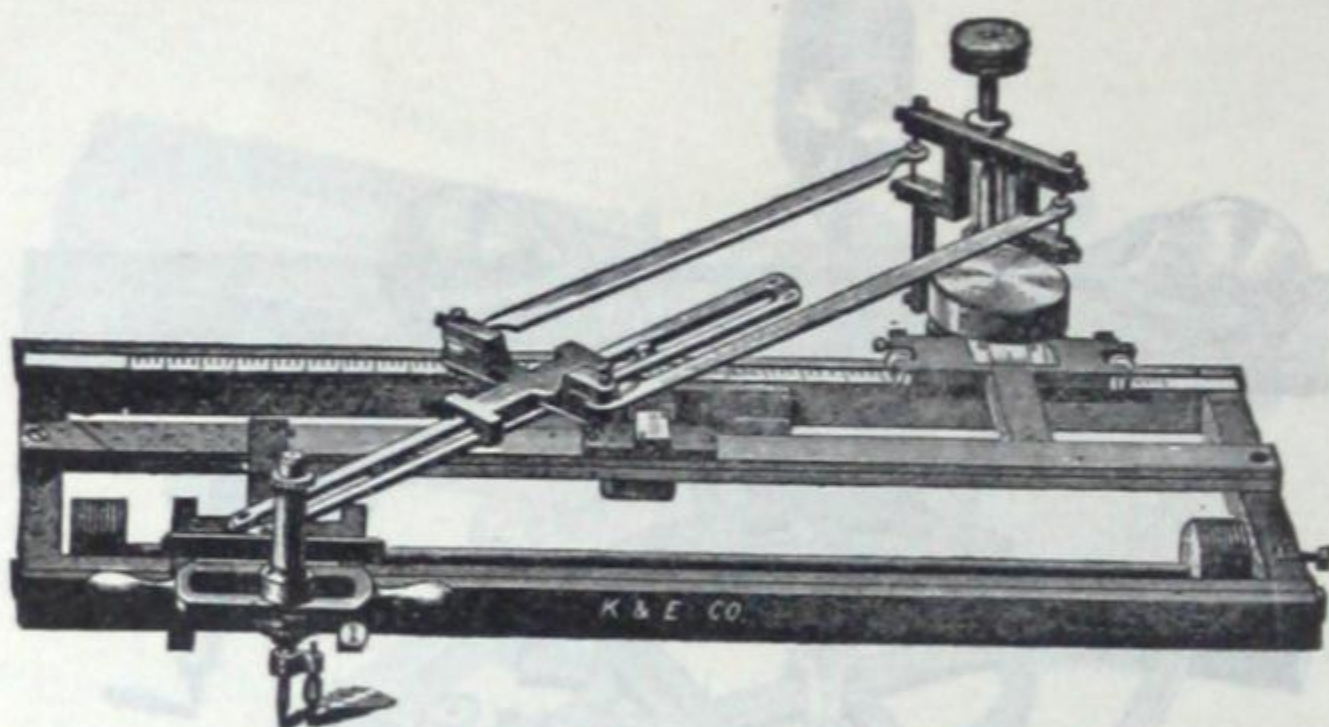
Integrators No. 4280 and 4282 are provided with a third train of recording wheels which renders the moment of inertia of the figure measured

Integrators Nos. 4286 and 4288 are practically the same instruments as Nos. 4280 and 4282, but built on a larger scale so that they measure proportionately larger figures by one operation

Rails of other lengths furnished to order at short notice

*Integrators marked * are not carried in stock but are imported to order only

CORADI'S MECHANICAL INTEGRAPH

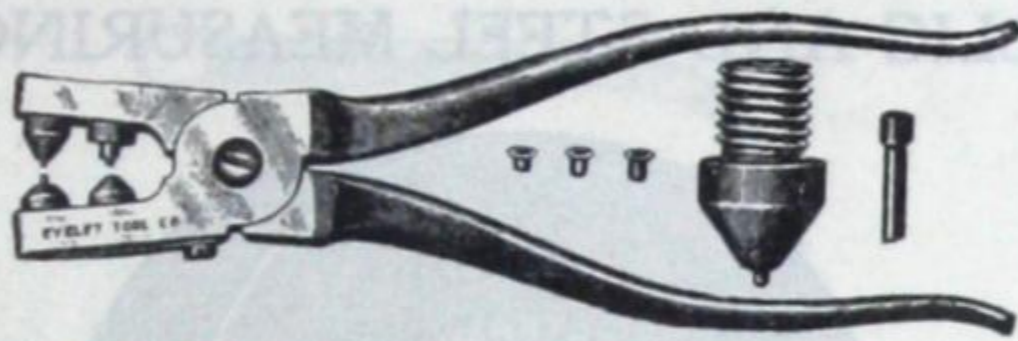


NO. 4295

4295. Coradi's Mechanical Integrator, German Silver and Brass, with Swiveling Pen and Pencil Points, with Testing Rule, in Walnut Case with Lock and Key each, \$157.50

Like the Mechanical Integrators, the Integrator has proved in a comparatively very short time to be an aid of no small consideration to Civil and Mechanical Engineers and especially Naval Architects. The instrument enables them to compute the different moments, curves of stability, etc., as with the Integrator, but in one way it is superior to the latter. While it is necessary with the Integrator to compute the several curves point by point and to construct them by means of the computed points, the Integrator directly draws the curves on the paper, thus giving a graphical representation of the integration. The operator traces the outline of the figure, i. e., the differential curve, and the pen or pencil point automatically draws the integral curve. The value of the ordinate of this integral curve can be measured off on the paper or read on a finely graduated bar. This value multiplied by the constant furnished with the instrument, gives the area of the figure. By regarding the new curve as the differential curve and tracing it in the same manner in which the first one was traced, the integral curve of the next higher order is drawn, the ordinate of which multiplied by the constant gives the moment of the original diagram. By repeating this operation, the moment of inertia, moments of the 4th, 5th, etc. order can be readily found. By this means practically all problems of stability, etc., may be solved almost entirely by mechanical operations, and much labor and brain work saved.

FROST & ADAMS CO'S TAPE MENDERS



Punch and Set combined, including 500 large and 500 small Eyelets per set, \$4.00

Punch only, without Eyelets each, 2.75

500 Eyelets, separate, large " 1.25

500 " " small " 1.25

The cut shows the new Punch and Set combined, for repairing steel tapes: tool, socket, punching pin and three eyelets, viz.: shorts, longs and extra longs. It cuts a clean hole through two thicknesses of Chesterman or Lufkin Tape (or any other of the same thickness) one sixteenth of an inch in diameter, without drawing the temper. There is absolutely no filing required by this method except to round off the rough corners of the break. After cutting first hole, place an eyelet on the pivot for it, and insert in the hole cut, and it is riveted as quickly as the hole was cut. The first rivet or eyelet holds tape in position for cutting or riveting the rest. Five minutes is average time to make a repair without any danger of splitting the tape, thus avoiding any chance of dirt collecting under the splice or cutting the fingers when drawing the tape through the hands, or catching in rags, etc., when cleaning

THE EUREKA TAPE REPAIRER

Specially adapted for Light Pocket Tapes

The Eureka Tape Repairer Sleeves, . . . per dozen, .50 each, .05

Directions. Clean the broken ends of the tape with a knife or sand paper; insert the broken ends in the sleeve; hammer the sleeve slightly so it closes well down on the tape; then hold a lighted match under the sleeve while it burns itself out; then if you can pull it apart we will refund double the money it cost you

State width of your tape and whether heavy or light

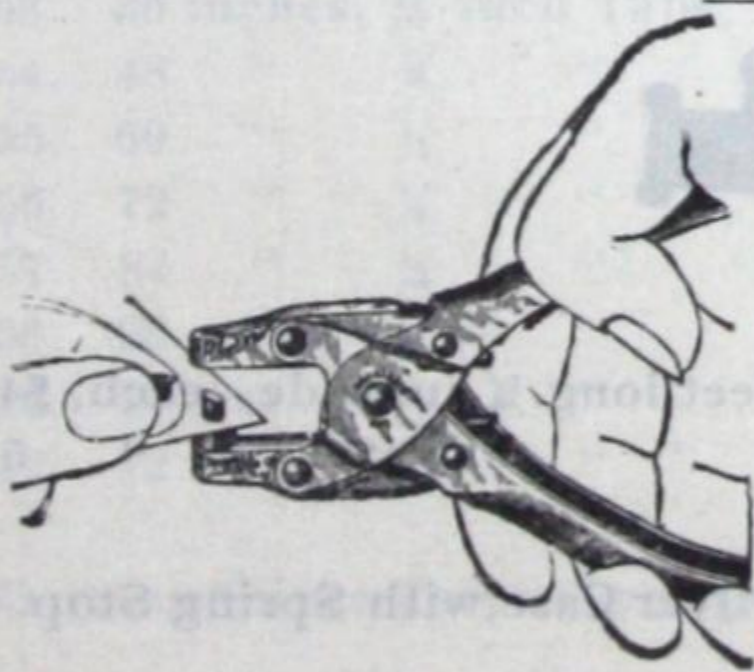
SOLIDHED EYELET PLIERS

Solidhed Eyelet Pliers . . each, \$1.00

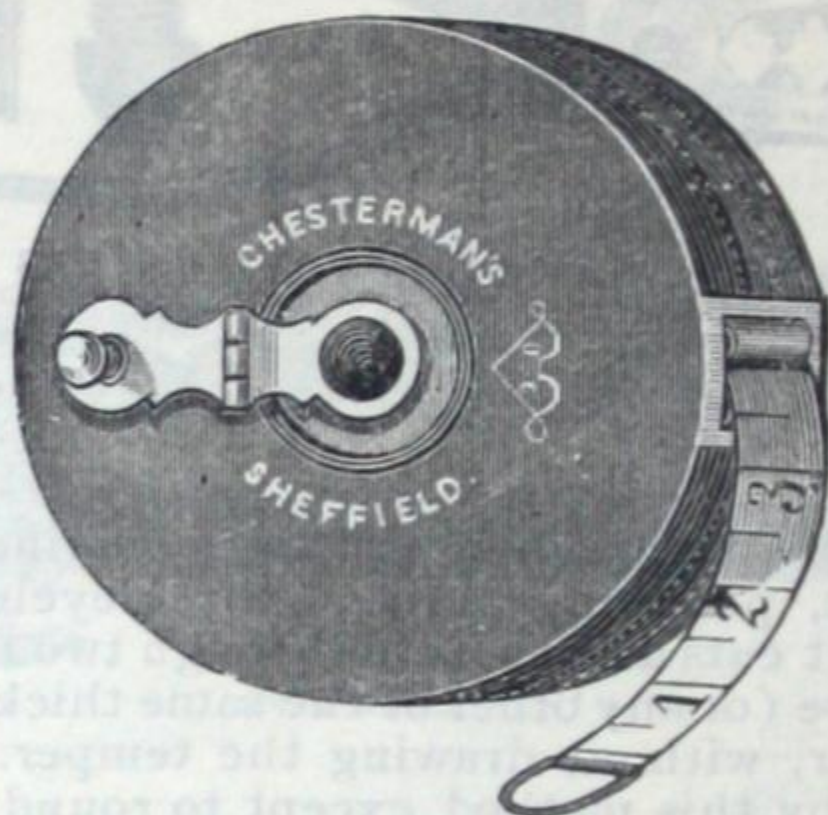
Solidhed Eyelets per thousand, .40

The simplest, easiest and quickest Punch and Eyelet Set for fastening papers, eyeletting cards, samples, etc.

To operate, punch a hole, allow the Pliers to open without removing punch, place an Eyelet with the small end down on top of the punch and close



CHESTERMAN'S
METALLIC AND STEEL MEASURING TAPES



	25 ft.	33 ft.	50 ft.	66 ft.	75 ft.	100 ft.
33L. All Linen, 5/8 inch wide each,	\$1.40	\$1.60	\$2.10	\$2.40	\$2.60	\$3.20
34L. Metallic, 5/8 inch wide "	1.80	2.10	2.60	3.00	3.30	4.20
38L. Steel, 3/8 inch wide "	4.50	5.20	7.20	9.20	10.40	12.80

Metallic Tape, in strong, Bent Leather Case, divided 10ths or 12ths

	50 ft.	66 ft.	75 ft.	100 ft.
126. Metallic Tapes only, without Case each,	\$1.50	\$1.80	\$2.20	\$2.90

Please specify in ordering whether 10ths or 12ths is desired

CHESTERMAN'S POCKET MEASURING TAPES

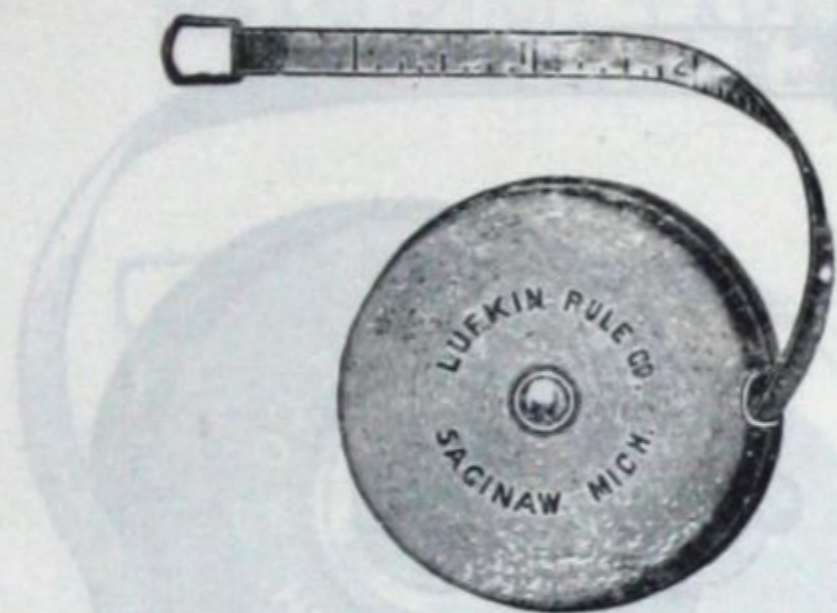


24SS

3 feet long, 1/4 in. wide	each,	\$2.00	9 feet long, 1/4 in. wide	each,	\$4.00
5 " " " "	"	2.50	12 " " " "	"	5.50
6 " " " "	"	2.75			

Steel Tape, for the pocket, in German Silver Case, with Spring Stop

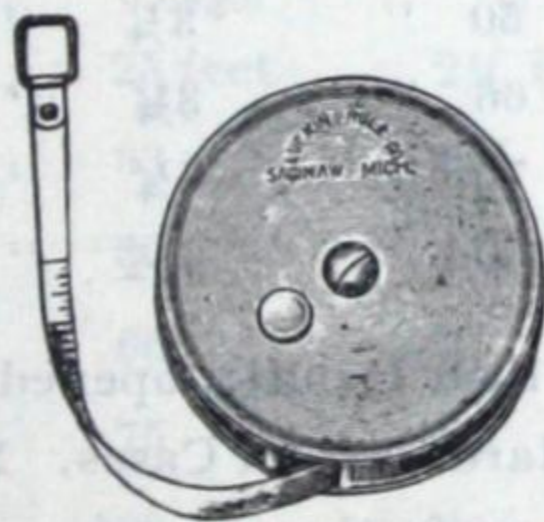
LUFKIN POCKET LINEN MEASURING TAPES



173.	36 inches,	marked one side in inches and eighths	.	each, .35
175.	60 "	" " " "	.	" .45
176.	72 "	" " " "	.	" .50

Nickel Plated Brass Cases, Spring Wind with Centre Stop. With 1/4 inch Enameled Linen Tape

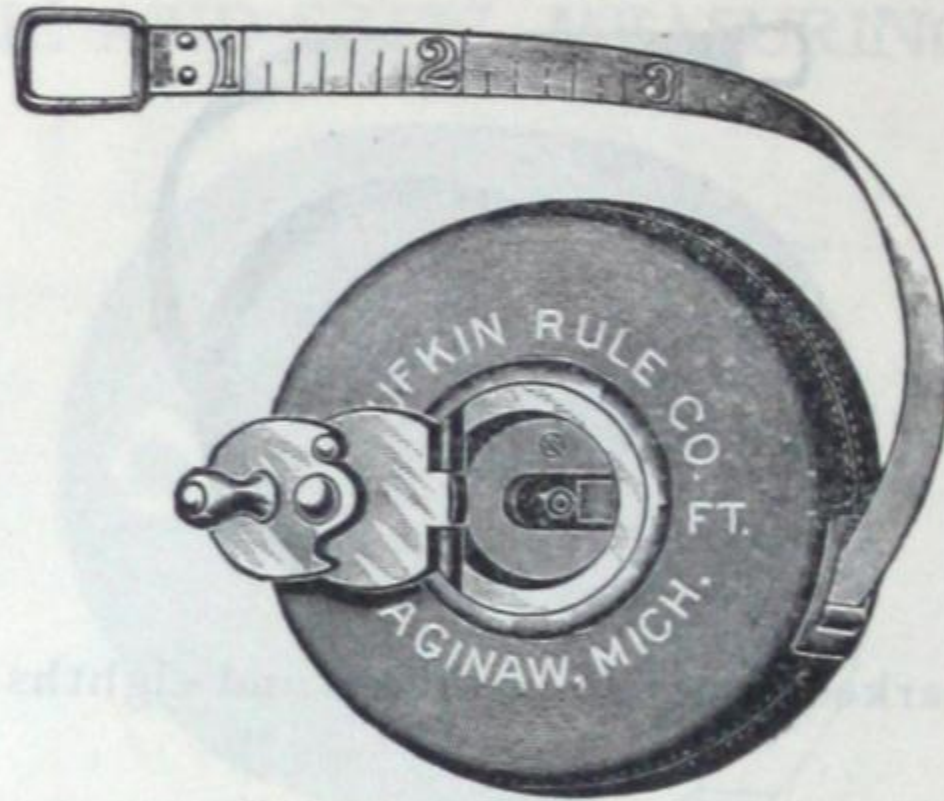
LUFKIN POCKET STEEL MEASURING TAPES



153.	36 inches,	1/4 inch Tape,	marked inches and 1/8ths	.	each, \$1.40
154.	48 "	1/4 "	" " " "	.	" 1.60
155.	60 "	1/4 "	" " " "	.	" 1.80
156.	72 "	1/4 "	" " " "	.	" 2.00
157.	84 "	1/4 "	" " " "	.	" 2.30
158.	96 "	1/4 "	" " " "	.	" 2.50
1510.	10 feet,	5/16 "	" " feet, inches and 1/8ths	.	" 3.20
1512.	12 "	5/16 "	" " " "	.	" 3.60

German Silver Cases, Spring Wind, with Stop. Marked one side only

LUFKIN "RELIABLE" STEEL MEASURING TAPES



Marked feet and 12ths (inches and eighths)	Marked feet 10ths and 100ths of feet for Surveyor's use	Length	Diameter of Case		Nickel Plated Tapes Extra
200.	200D.	25 feet	2 $\frac{3}{4}$ inches	each, \$4.50	\$1.00
201.	201D.	33 "	2 $\frac{3}{4}$ "	" 5.20	1.00
202.	202D.	40 "	3 $\frac{1}{4}$ "	" 6.00	1.50
203.	203D.	50 "	3 $\frac{1}{4}$ "	" 7.20	1.50
204.	204D.	66 "	3 $\frac{3}{4}$ "	" 9.20	1.75
205.	205D.	75 "	4 $\frac{1}{4}$ "	" 10.40	1.75
206.	206D.	100 "	4 $\frac{1}{2}$ "	" 12.80	2.00

With Double Folding Flush Handle, opened by pressing small pin or button on opposite side. Hard Leather Cases. Nickel Plated Trimmings. Measurements guaranteed perfectly accurate. With $\frac{3}{8}$ inch Tapes

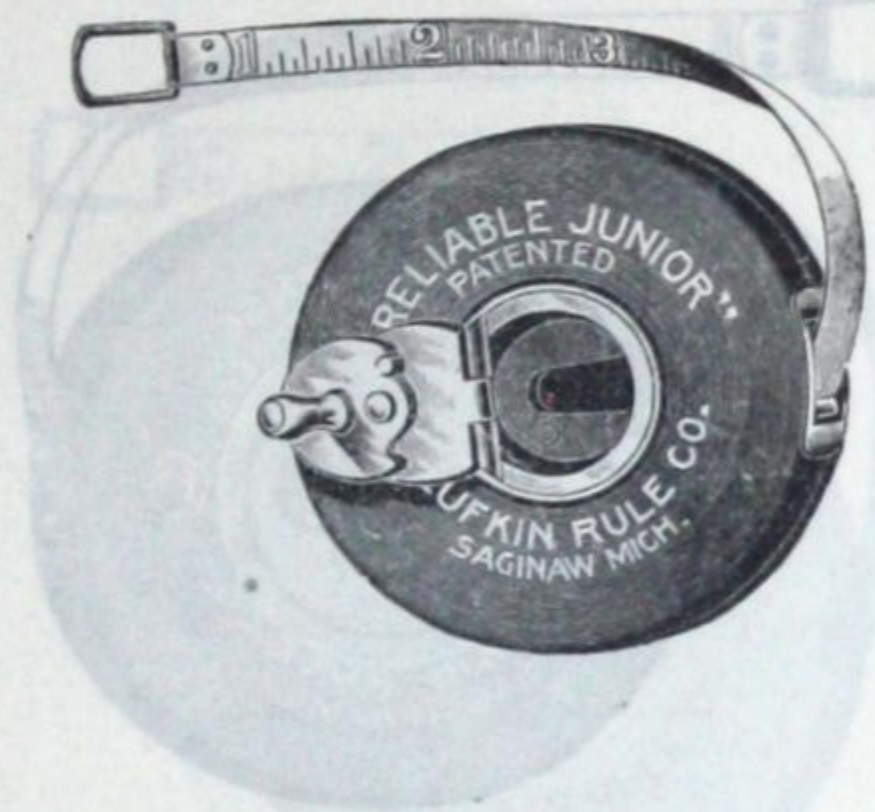
The above Tapes are marked on the backs with links and poles. When links are not wanted they will be supplied marked at every foot instead, at same price

Tapes marked metric measure, one side only, at same price as corresponding lengths in feet

Tapes marked feet on one side, metric measure on the other, add 2 $\frac{1}{2}$ cents per foot to list price

Tapes marked feet and 12ths one side feet and 10ths on the other, add 2 $\frac{1}{2}$ cents per foot to list price

LUFKIN "RELIABLE JUNIOR" STEEL MEASURING TAPES



WITH ONE QUARTER INCH TAPES

Marked feet and 12ths (inches and sixteenths)	Marked feet 10ths and 100ths of feet, for Surveyor's use	Length	Diameter of Case	Price
100.	100D.	25 feet	2¼ inches	each, \$3.75
101.	101D.	33 "	2½ "	" 4.00
103.	103D.	50 "	2¾ "	" 4.60
104.	104D.	66 "	3 "	" 5.25
105.	105D.	75 "	3¼ "	" 5.75
106.	106D.	100 "	3¾ "	" 7.00

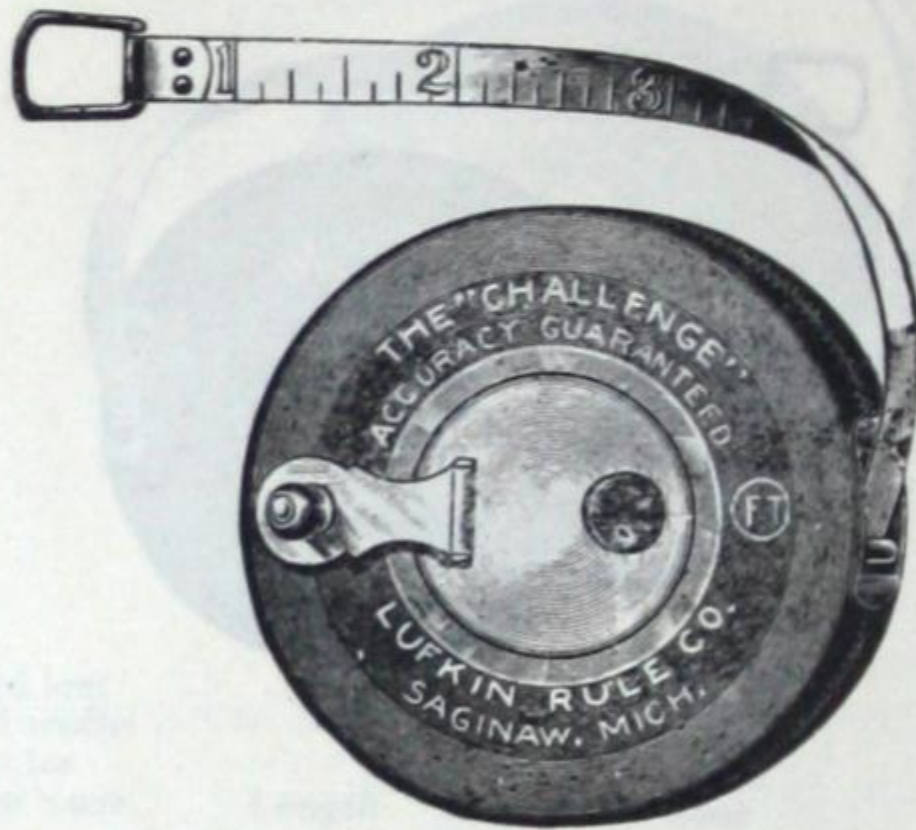
With double folding flush handle, opened by pressing on opposite side. Hard leather cases. Nickel plated trimmings. Measurements guaranteed perfectly accurate

Tapes marked metric measure, one side only, at same price

Tapes marked feet one side, metric measure on the other, add 2 cents per foot to list price

Tapes marked feet and 12ths one side, feet and 10ths on the other, add 2 cents per foot to list price

LUFKIN "CHALLENGE" STEEL MEASURING TAPES

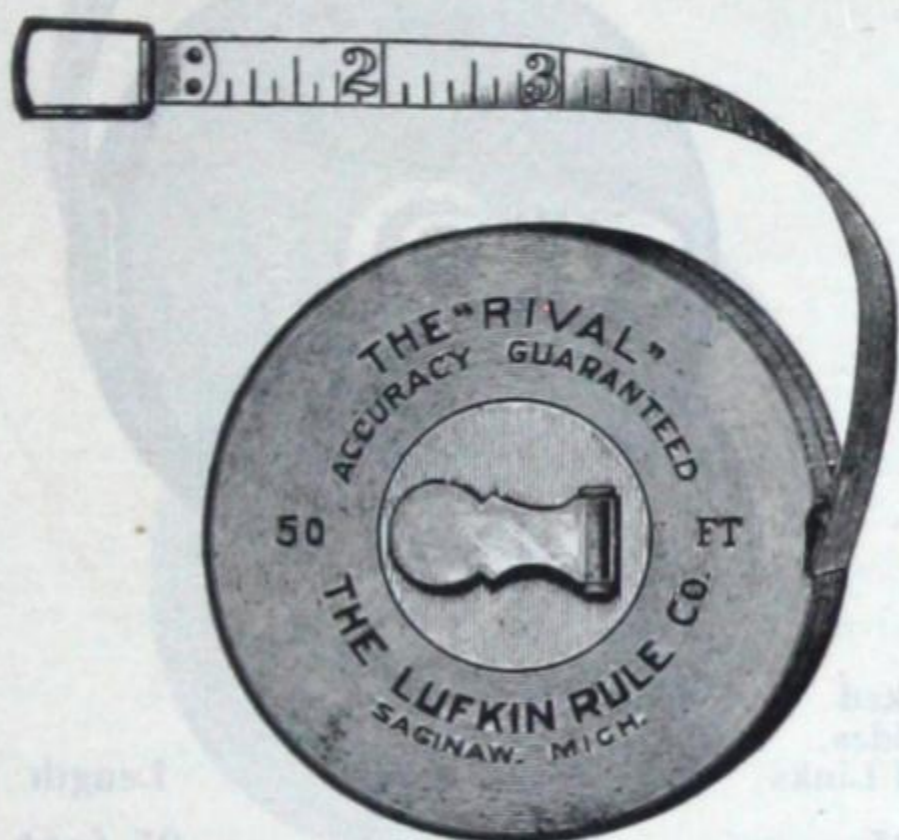


Marked feet and 12ths, (inches and eighths)	Marked feet, 10ths and 100ths of feet, for Surveyor's use	Length	Diameter of Case	
260.	260D.	25 feet	2 $\frac{3}{4}$ inches	each, \$3.25
263.	262D.	50 "	3 $\frac{1}{4}$ "	" 4.00
265.	265D.	75 "	4 $\frac{1}{4}$ "	" 5.25
266.	266D.	100 "	4 $\frac{1}{2}$ "	" 6.75

Hard Leather Cases, Nickel Plated Trimmings, Flush Handle $\frac{3}{8}$ inch
Tape, marked one side only, in tenths or twelfths

Marked inches one side, metric measure other side, add 2 $\frac{1}{2}$ cents per
foot to list price

LUFKIN "RIVAL" STEEL MEASURING TAPES

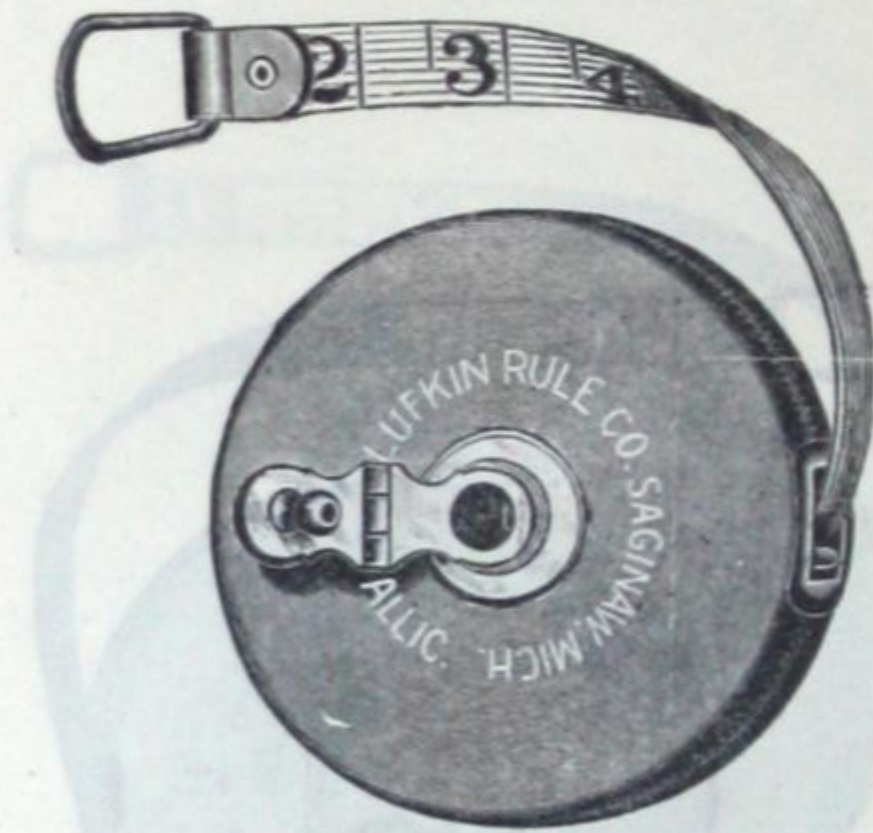


Marked feet and 12ths (inches and eighths)	Marked feet, 10ths and 100ths of feet for Surveyor's use	Length	Diameter of Case	Price
240.	240D.	25 ft.	2 3/4 in.	each, \$2.75
243.	243D.	50 ft.	3 3/8 in.	" 3.40
245.	245D.	75 ft.	3 3/4 in.	" 4.50
246.	246D.	100 ft.	4 1/4 in.	" 5.75

Nickel Plated Steel Cases, Flush Handle, 3/8 inch Tapes, marked one side only in tenths or twelfths

Marked inches one side, metric measure the other side, add 2 1/2 cents per foot to list price

LUFKIN METALLIC MEASURING TAPES



Marked one side only, 12ths	Marked both sides, 12ths and Links	Marked both sides, 10ths and Links	Length	
500	500L	500DL	25 feet	each, \$1.80
501	501L	501DL	33 "	" 2.10
502	502L	502DL	40 "	" 2.25
503	503L	503DL	50 "	" 2.60
504	504L	504DL	66 "	" 3.00
505	505L	505DL	75 "	" 3.30
506	506L	506DL	100 "	" 4.20

Tape $\frac{5}{8}$ inch wide, made of Best Woven Linen with Metallic Warp. Hard Leather Cases, Brass Folding Handles and Brass Trimmings

Tapes marked in meters and centimeters on back instead of links, price same as tapes marked both sides

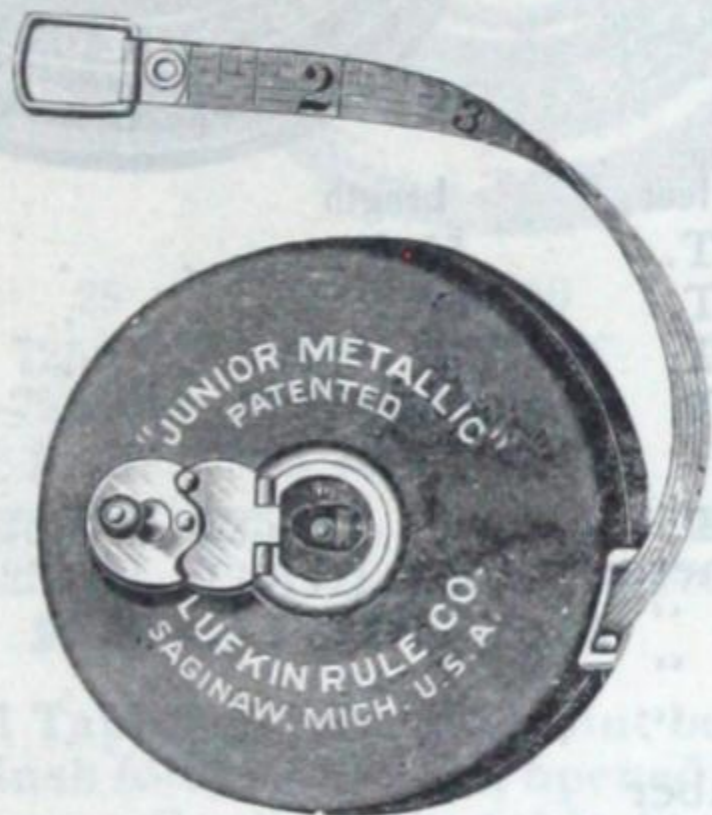
Tapes marked in feet on back instead of links, price same as tapes marked both sides

METALLIC TAPES ONLY, NO CASES

	25 ft.	33 ft.	40 ft.	50 ft.	66 ft.	75 ft.	100 ft.
Marked one side each,	.80	\$1.00	\$1.20	\$1.40	\$1.60	\$1.80	\$2.60
" both sides "	.90	1.10	1.30	1.50	1.80	2.00	2.00

LUFKIN "JUNIOR METALLIC" MEASURING TAPES

FLUSH HANDLE



WITH THREE EIGHTH INCH TAPES

Marked feet and 12ths (inches and eighths)	Marked feet 10ths and 100ths of feet, for Surveyor's use	Length	Diameter of Case	
660.	660D.	25 feet	2 $\frac{3}{4}$ inches	each, \$1.80
661.	661D.	33 "	3 "	" 2.00
663.	663D.	50 "	3 $\frac{1}{2}$ "	" 2.25
664.	664D.	66 "	3 $\frac{3}{4}$ "	" 2.75

With our patent double folding flush handle, same as we use on our "Reliable" Tapes, opened by pressing pin on opposite side. Tape is made of best woven linen, with metallic warp, hard leather cases, nickel plated trimmings. Marked one side only in tenths or twelfths

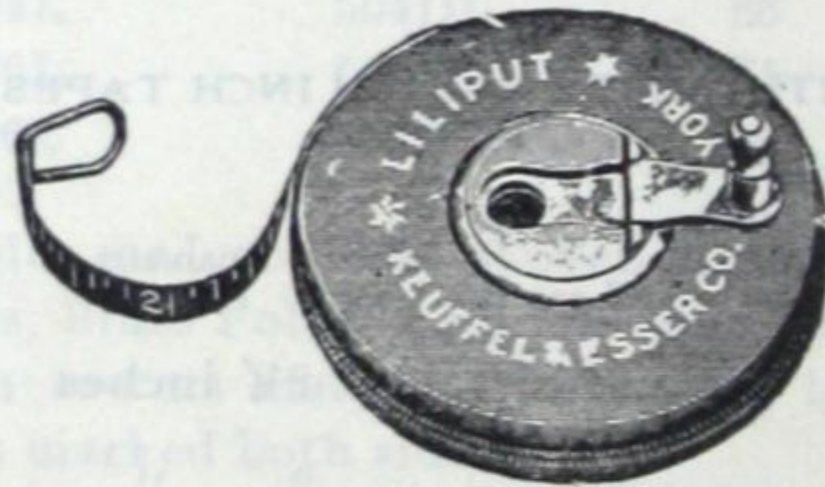
K. & E. RENSSELAER STEEL TAPES



Marked 10ths of feet	No.	Marked 12ths of feet	No.	Length					
	7292D.		7292T.	50 feet	.	.	.	.	each, \$ 7.50
	7293D.		7293T.	66 "	.	.	.	.	" 9.55
	7294D.		7294T.	75 "	.	.	.	.	" 10.80
	7295D.		7295T.	100 "	.	.	.	.	" 13.40
Metric (one side only)	No.	Length							
	7292M.	15 meters		.	.	.	.	.	each, \$ 7.50
	7293M.	20 "		.	.	.	.	.	" 9.55
	7294M.	25 "		.	.	.	.	.	" 11.80
	7295M.	30 "		.	.	.	.	.	" 13.40

Please order by number

K. & E. LILIPUT STEEL TAPES



	No.	Dimensions	Weight	Length	
12ths of feet	7274D	3 1/4 x 1/2	8 1/2 oz.	75 ft.	each, \$5.60
10ths of feet	7274T	3 1/4 x 1/2	"	"	" 5.60
12ths of feet	7275D	3 3/4 x 1/2	10 1/2 oz.	100 ft.	" 6.80
10ths of feet	7275T	3 3/4 x 1/2	"	"	" 6.80

Stout bent leather case, patent centre, long swiveling flush folding handle, opened by pushing handle pin from opposite side of case. Nickel plated mountings. Graduations begin at outside end of ring

Please order by number

K. & E. CORNELL STEEL TAPES

KECO FINISH



Length in feet	25	33	50	66	75	100
12ths of feet . . .	7250T	7251T	7252T	7253T	7254T	7255T
10ths " . . .	7250D	7251D	7252D	7253D	7254D	7255D
Each,	\$4.15	\$4.75	\$6.65	\$8.45	\$9.60	\$11.85
12ths of ft. and Links	7250TL	7251TL	7252TL	7253TL	7254TL	7255TL
10ths " " " "	7250DL	7251DL	7252DL	7253DL	7254DL	7255DL
Each,	\$4.30	\$4.95	\$6.85	\$8.75	\$9.90	\$12.15

K. & E. Cornell Steel Tapes, $\frac{3}{8}$ in. wide, stout bent leather case, patent centre, long swiveling flush folding handle, opened by pushing handle pin from opposite side of case. Centre adjustable for wear. Nickel plated mountings. Graduations begin at outside end of ring

K. & E. HOME STEEL TAPES

KECO FINISH

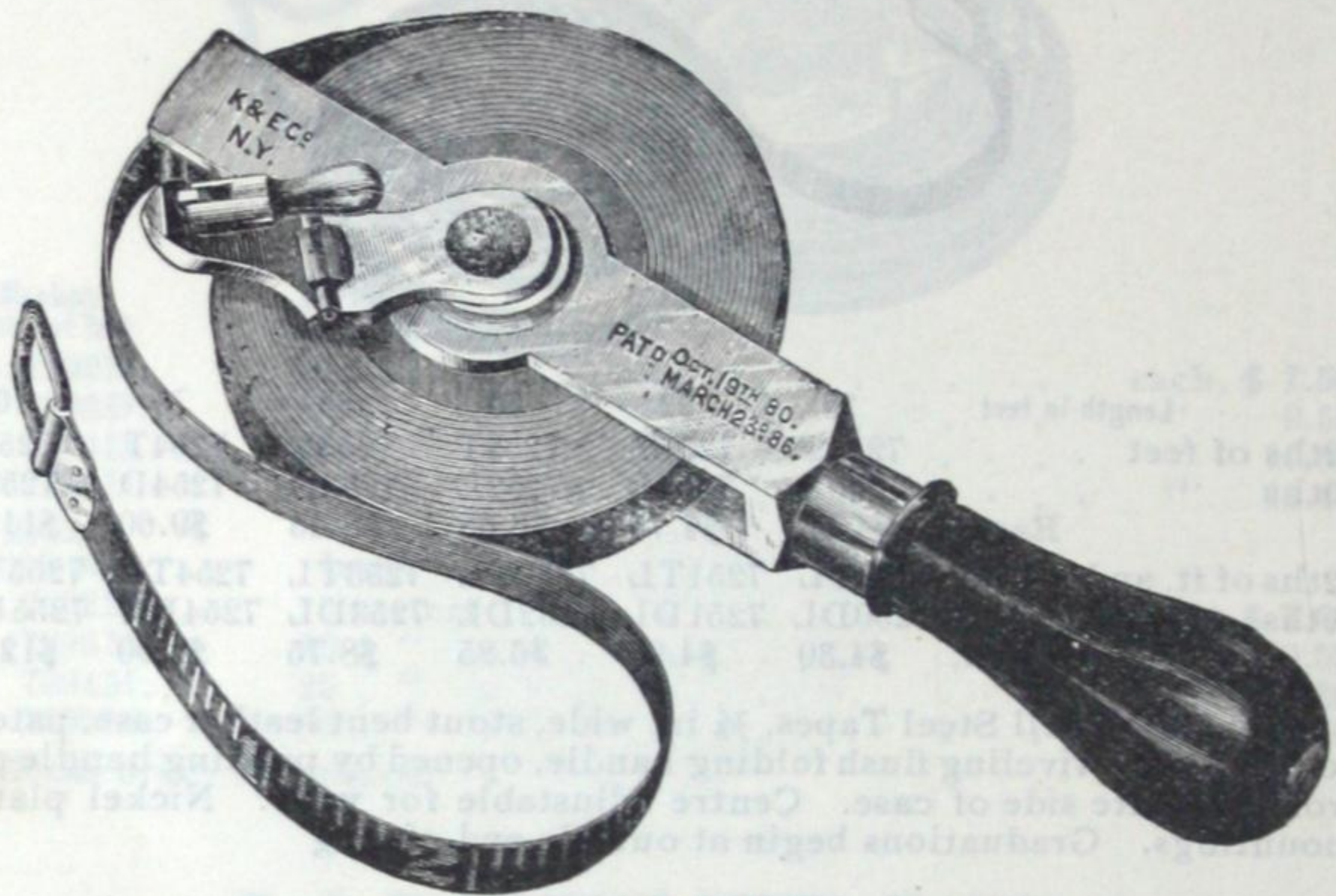


Length in feet	25	33	50	66	75	100
12ths of feet . . .	7350T	7351T	7352T	7353T	7354T	7355T
10ths " . . .	7350D	7351D	7352D	7353D	7354D	7355D
Each,	\$3.20	\$3.40	\$3.90	\$4.85	\$5.10	\$6.60

K. & E. Home Steel Tapes, $\frac{3}{8}$ in. wide, stout bent leather case, large centre, long folding handle. Centre adjustable for wear. Nickel plated mountings. Graduations begin at outside end of ring.

K. & E. STEVENS' STEEL MEASURING TAPES

KECO FINISH



	Length in feet	50	100
12ths of feet		7102T	7105T
10ths "		7102D	7105D
Each,		\$7.15	\$12.85
12ths of feet and Links		7102TL	7105TL
10ths " " "		7102DL	7105DL
Each,		\$7.35	\$13.15
	Length in Meters	15	30
Metric (one side only)		7102M	7105M
Each,		\$7.15	\$12.85
Metric, other side 12ths of feet		7102TM	7105TM
Each,		\$8.40	\$15.30

K. & E. Stevens' Steel Tapes, $\frac{1}{2}$ inch wide, patent brass frame, patent centre, long swiveling flush folding handle, opened by pushing handle pin from opposite side of frame. Frame and all mountings nickel plated. Graduations begin on the line

K. & E. PICCOLO METALLIC TAPES



12ths of feet In. in eighths	10ths of feet to 100ths ft.	Size	Weight	Length	
7480T	7480D	2 3/4 x 5/8 in.	4 1/2 oz.	25 ft.	each, \$1.55
7480T	7480D	3 5/8 x 5/8 in.	8 1/2 oz.	50 ft.	" 2.00
Metric (one side only)				Length	
7481M				10 meters	each, \$1.70
7472M				15 "	" 2.00

K. & E. Piccolo Metallic Tapes, 3/8 in. wide, stout bent leather case, large centre, long folding handle, centre adjustable for wear, all mountings nickel plated, line interwoven with metal, end re-enforced with leather. Graduations begin at outside end of ring

K. & E. ARMOR STEEL TAPES



Marked 10ths of feet	Marked 12ths of feet	Length	
No. 7370D.	7370T.	25 ft.	each, \$2.70
7372D.	7372T.	50 "	" 3.30
7374D.	7374T.	75 "	" 4.35
7375D.	7375T.	100 "	" 5.60
Metric (one side only)		Length	
No. 7372M.	15 meters	each, \$3.30	
7374M.	25 "	" 5.00	
7375M.	30 "	" 5.60	
		Metric (other side 12ths of feet)	Length
No. 7372TM.		15 meters	each, \$4.50
7374TM.		25 "	" 7.00
7375TM.		30 "	" 8.05

Tape 3/8 in. wide, strong steel case, large centre with long folding handle. Case and mountings nickel plated. Graduations begin at outside end of ring. Please order by number

K. & E. DARTMOUTH METALLIC TAPES



Length in feet	25	33	50	60	75	100
12ths of feet	7440T	7441T	7442T	7443T	7444T	7445T
10ths "	7440D	7441D	7442D	7443D	7444D	7445D
Each,	\$1.65	\$1.95	\$2.45	\$2.75	\$3.05	\$3.80
12ths of ft. and Links	7440TL	7441TL	7442TL	7443TL	7444TL	7445TL
10ths " " "	7440DL	7441DL	7442DL	7443DL	7444DL	7445DL
Each,	\$1.75	\$2.05	\$2.55	\$2.95	\$3.25	\$4.10

K. & E. Dartmouth Metallic Tapes, $\frac{5}{8}$ in. wide, stout bent leather case, long folding handle. Centre adjustable for wear, all mountings nickel plated. Line interwoven with metal, leather re-enforced end. Graduations begin at outside end of ring

EXCELSIOR ENGINEERS' TAPES

WARD'S PATENT

	Length in feet	50
Excelsior Engineer's Tapes, Ward's Patent		7410
Each,		\$3.25

Same quality as No. 7442, in bent leather case, long folding handle. Centre adjustable for wear. Graduations begin at outside end of ring. All mountings nickle plated, graduated for single-track road-bed, with Directions

	Length in feet	50
Excelsior Engineer's Tapes		7411
Each,		\$3.25

Like No, 7410, but Graduated for double-track road-bed

K. & E. MIDGET STEEL TAPES

KECO FINISH

12ths of feet In. in 16ths	10th of feet to 100ths feet	Dimensions	Weight (about)	Length	
No. 7360T.	7360D	2 $\frac{3}{8}$ × $\frac{3}{4}$ in.	4 $\frac{1}{2}$ oz.	25 ft.	each, \$2.90
7362T.	7362D	2 $\frac{7}{8}$ × $\frac{3}{4}$ in.	6 $\frac{1}{2}$ oz.	50 ft.	" 3.40
7364T.	7364D	3 $\frac{1}{4}$ × $\frac{3}{4}$ in.	8 $\frac{1}{2}$ oz.	75 ft.	" 4.40
7365T.	7365D	3 $\frac{3}{4}$ × $\frac{3}{4}$ in.	10 $\frac{1}{2}$ oz.	100 ft.	" 5.60

K. & E. Midget Steel Tapes, $\frac{1}{4}$ in. wide, stout bent leather case, large centre, long folding handle, centre adjustable for wear. Nickel plated mountings. Graduations begin at outside end of ring



MIDGET



ILLINOIS

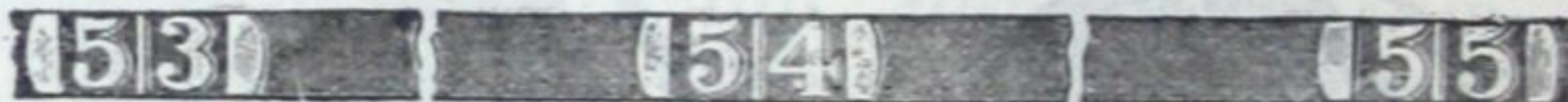
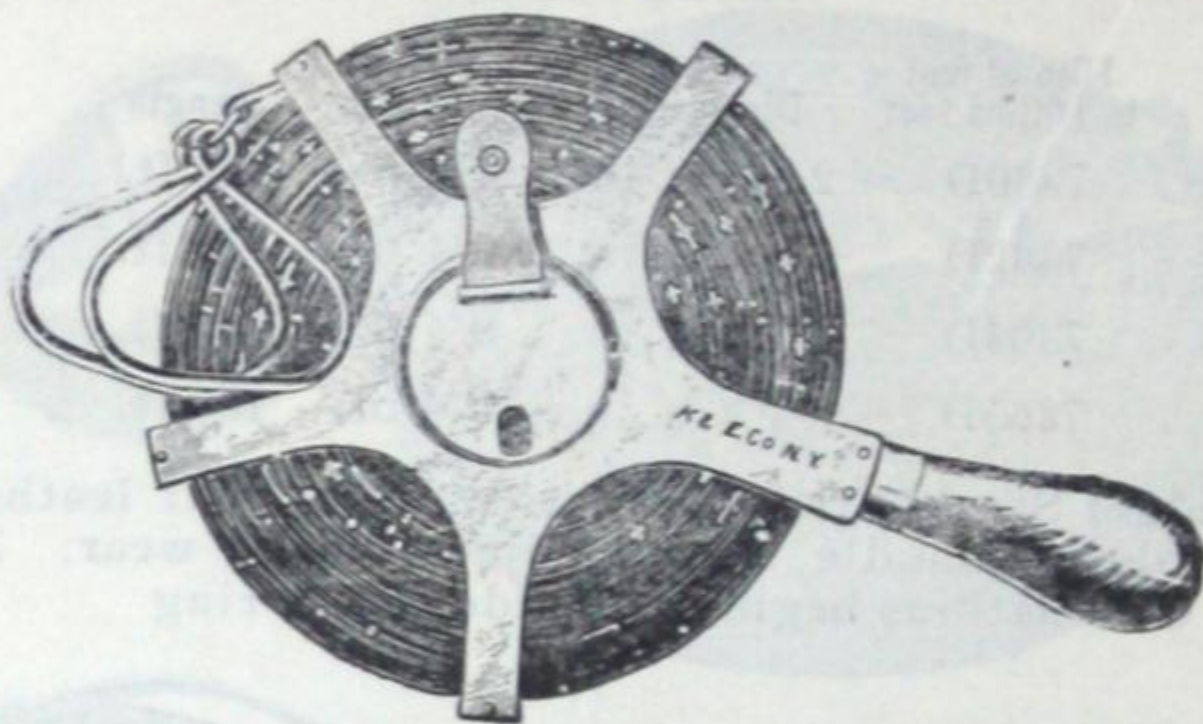
K. & E. ILLINOIS STEEL TAPES

KECO FINISH

	Length in feet	50	66	75	100
12ths of feet		7302T	7303T	7304T	7305T
10ths "		7302D	7303D	7304D	7305D
	Each,	\$5.80	\$7.75	\$9.25	\$11.65
	Length in Meters	15	20	25	30
Metric (one side only)		7302M	7303M	7304M	7305M
	Each,	\$5.80	\$7.75	\$10.00	\$11.65

K. & E. Illinois Steel Tapes, $\frac{5}{16}$ in. wide, Paine's pattern, stout bent leather case, large centre with long folding handle. Centre adjustable for wear. Two handles for tape line. Nickel plated mountings. Graduations begin at end of line

CHAMPION BAND CHAINS



HEAVY BLUED STEEL RIBBON

7670B.	Superior quality, $\frac{1}{4}$ in. wide, 100 feet	each, \$6.75
7670C.	" " " " 200 "	" 10.25
7670D.	" " " " 300 "	" 12.50
7670L.	" " " " 66 " (100 links)	" 6.00
7670BM.	Like 7670 25 Meters	" 6.75
7670CM.	" 7670 50 "	" 10.25



PLATED WITH WHITE METAL TO RESIST RUST

7671B.	Like 7670 100 feet	each, \$6.75
7671C.	" " 200 "	" 10.25
7671D.	" " 300 "	" 12.50
7671L.	" " 66 " (100 links)	" 6.00
7671BM.	" 7671 25 Meters	" 6.75
7671CM.	" " 50 "	" 10.25

Above Band Chains with one extra sub-divided foot before zero, furnished to order without extra charge

EDDY'S STANDARD STEEL MEASURING TAPES

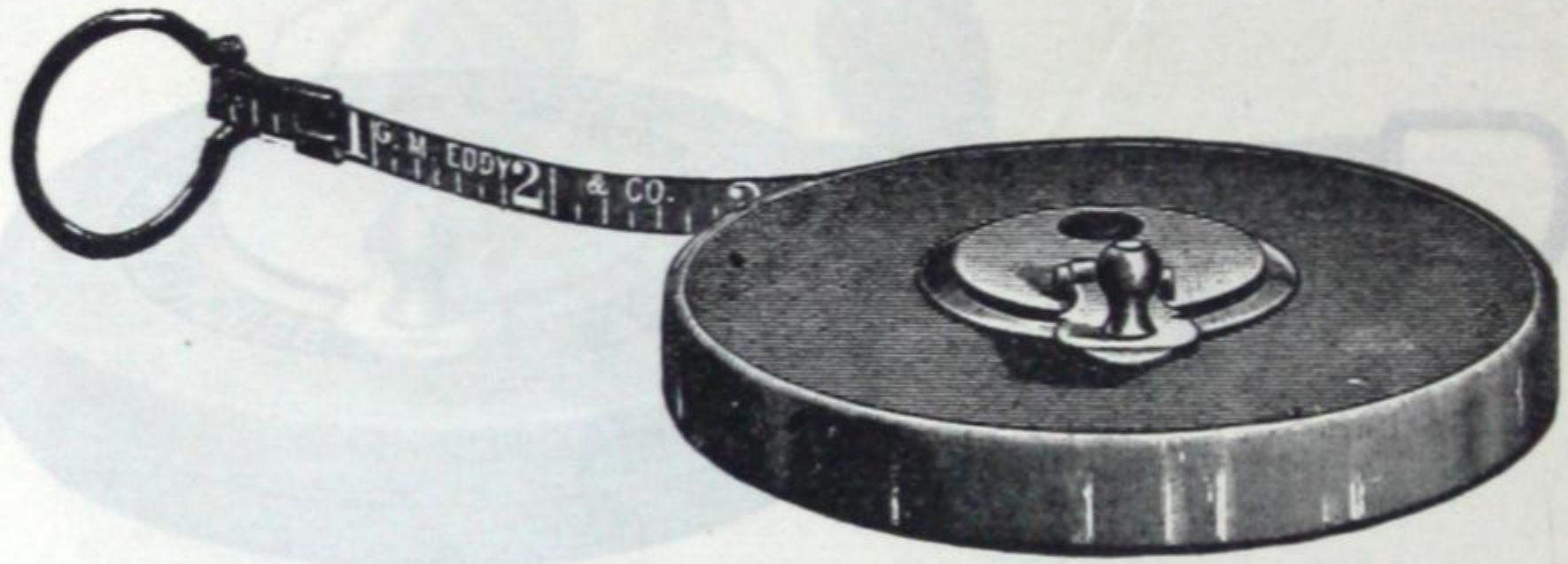
In Leather Covered, Metal Lined Cases, Flush Handle



210.	¼ inch wide,	33 feet	.	.	.	.	.	.	.	each, \$ 5.50
211.	"	50 "	.	.	.	.	.	.	.	" 8.00
212.	"	66 "	.	.	.	.	.	.	.	" 10.00
213.	"	75 "	.	.	.	.	.	.	.	" 12.00
214.	"	100 "	.	.	.	.	.	.	.	" 15.00
300.	⅜ inch wide,	25 "	.	.	.	.	.	.	.	" 5.00
301.	"	33 "	.	.	.	.	.	.	.	" 5.50
302.	"	40 "	.	.	.	.	.	.	.	" 7.00
303.	"	50 "	.	.	.	.	.	.	.	" 8.00
304.	"	66 "	.	.	.	.	.	.	.	" 10.00
305.	"	75 "	.	.	.	.	.	.	.	" 12.00
306.	"	100 "	.	.	.	.	.	.	.	" 15.00

Graduated in 10ths or 12ths of a foot or metric measure

EDDY'S, PAINE'S PATENT, STANDARD STEEL MEASURING TAPES



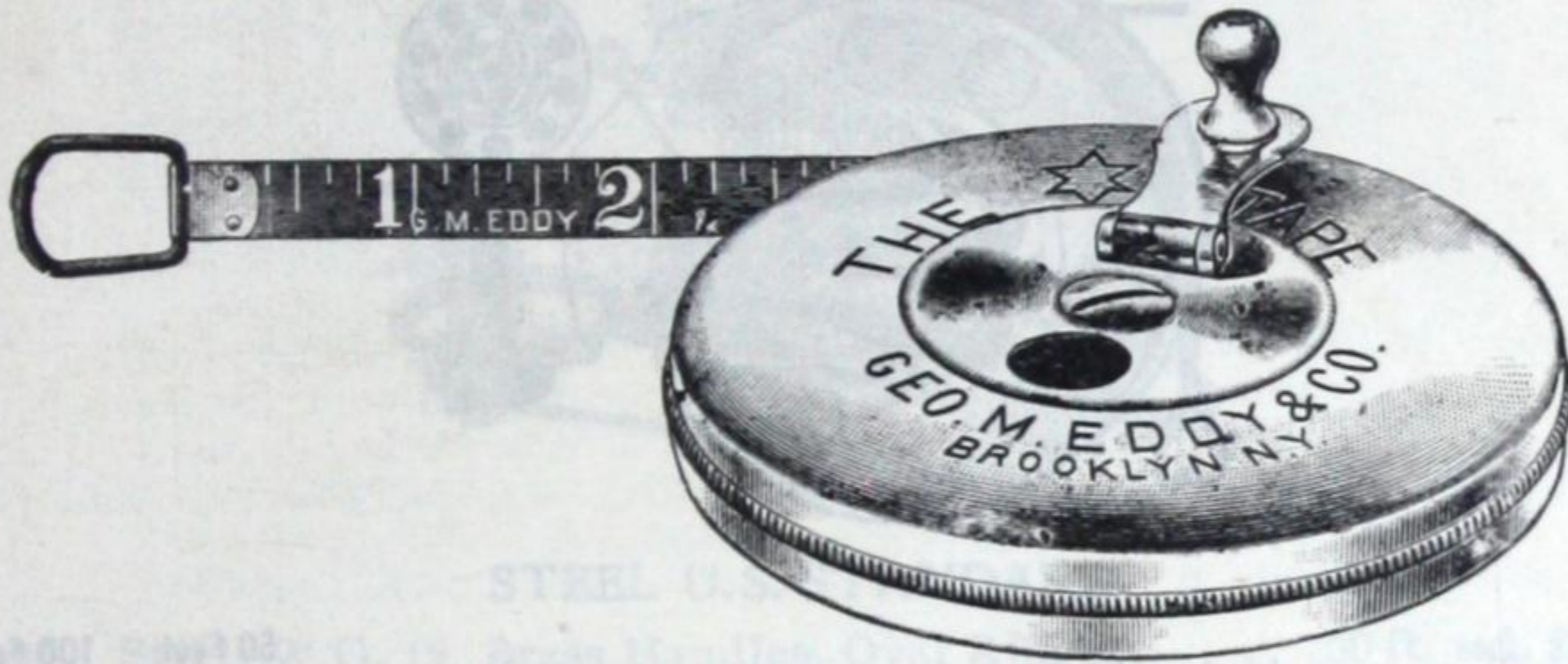
204.	25 feet,	$\frac{1}{4}$ inch wide	.	.	.	.	.	.	.	each, \$3.50
205.	33 "	$\frac{1}{4}$ "	.	.	.	.	.	.	.	" 4.50
206.	50 "	$\frac{1}{4}$ "	.	.	.	.	.	.	.	" 6.00
207.	66 "	$\frac{1}{4}$ "	.	.	.	.	.	.	.	" 8.00
208.	75 "	$\frac{1}{4}$ "	.	.	.	.	.	.	.	" 10.00
209.	100 "	$\frac{1}{4}$ "	.	.	.	.	.	.	.	" 12.00

In Iron Cases, Brass Bound, Morocco Covered, Improved Handle

All orders for Steel Tapes will be marked in 12ths unless otherwise directed. These Tapes are not marked in Links unless specially ordered

These Tapes are graduated in 10ths and 12ths, and are detachable from the case, and are furnished with detachable rings to avoid breakage

EDDY'S STAR STEEL MEASURING TAPES



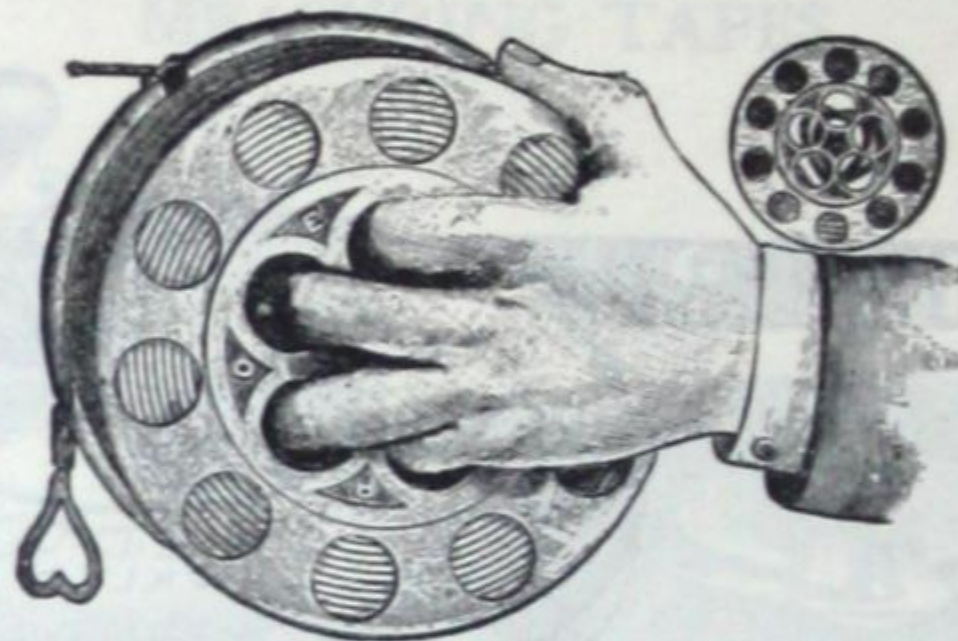
500.	50 feet,	$\frac{3}{8}$ inch wide	each, \$4.50
501.	66 "	" "	" 5.50
502.	75 "	" "	" 6.50
503.	100 "	" "	" 8.00

EDDY'S STANDARD IMPROVED STEEL MEASURING TAPES

210.	33 feet,	$\frac{1}{4}$ inch wide	each, \$5.50
211.	50 "	" "	" 8.00
212.	66 "	" "	" 10.00
213.	75 "	" "	" 12.00
214.	100 "	" "	" 15.00

In Leather Covered Cases, Flush Handle

ROE'S HEAVY TAPE CHAINS



550

		50 Feet	100 Feet
550.	Tape one inch wide, every foot. End feet in 10ths or 12ths, Plain	each, \$8.50	\$12.50
550.	Tape one inch wide, every foot. End feet in 10ths or 12ths, Nickel Plated	" 9.25	14.00
550.	Tape one inch wide, every foot. End feet in 10ths or 12ths, Aluminum Plated	" 10.00	15.00
551.	Tape $\frac{3}{4}$ ths inch wide, every foot. End feet in 10ths or 12ths, Plain	" 7.50	11.00
551.	Tape $\frac{3}{4}$ ths inch wide, every foot. End feet in 10ths or 12ths, Nickel Plated	" 8.75	12.50
551.	Tape $\frac{3}{4}$ ths inch wide, every foot. End feet in 10ths or 12ths, Aluminum Plated	" 9.50	13.50
552.	Tape $\frac{5}{8}$ ths inch wide, every foot. End feet in 10ths or 12ths, Plain	" 6.50	9.50
552.	Tape $\frac{5}{8}$ ths inch wide, every foot. End feet in 10ths or 12ths, Nickel Plated	" 7.75	11.00
552.	Tape $\frac{5}{8}$ ths inch wide, every foot. End feet in 10ths or 12ths, Aluminum Plated	" 8.50	12.00

Roe's Extra Strong and Heavy Tape Chains. These are Extra Wide, Thick and Strong, with Heavy Swivel Handles, on our Patent Long Island Reel. They are used extensively where Tapes receive the hardest and roughest kind of usage, especially in the mines and mountains. It is almost impossible to break these tapes without you use a hammer. They are graduated by Brass Rivets and Figures; exactly the same as our Tape Chains on our Patent Electric Reel.

MEASURING CHAINS



6451

STEEL U.S. STANDARD

6400.	Steel, W.G. 12,	Brass Handles, Oval Rings,	50 ft.	each,	\$4.50
6401.	"	"	100 ft.	"	8.00
6402.	"	"	33 ft.	"	3.50
6403.	"	"	66 ft.	"	6.50
6410.	"	Brazed Links and Rings,	50 ft.	"	6.00
6411.	"	"	100 ft.	"	11.00
6412.	"	"	33 ft.	"	5.50
6413.	"	"	66 ft.	"	10.00

Chain 6411 has a spring hook (snap) at 50 feet, so that it can be separated there and the handle attached for using it as a 50 foot chain

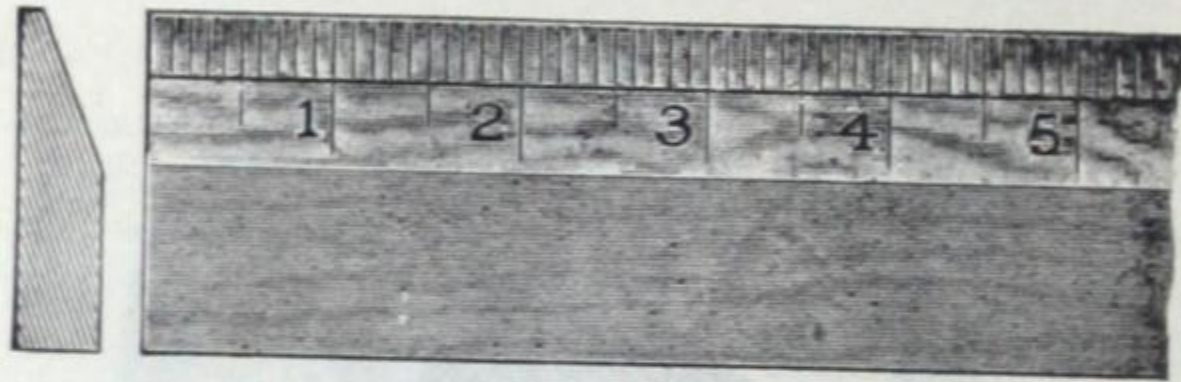
STEEL, METER AND VARA

6420.	Steel, W.G. 12,	Brass Handles, Oval Rings,	10 Meter	each,	\$3.50
6421.	"	"	15 "	"	5.00
6422.	"	"	20 "	"	6.20
6424.	"	Brazed Links and Rings,	10 "	"	5.50
6425.	"	"	15 "	"	7.50
6426.	"	"	20 "	"	10.00
6427.	"	"	25 "	"	12.50
6430.	"	Oval Rings, 10 Varas		"	3.50
6431.	"	" 20 "		"	6.50
6434.	"	Brazed Links and Rings,	10 Varas	"	5.50
6435.	"	"	20 "	"	10.00

IRON, U.S. STANDARD

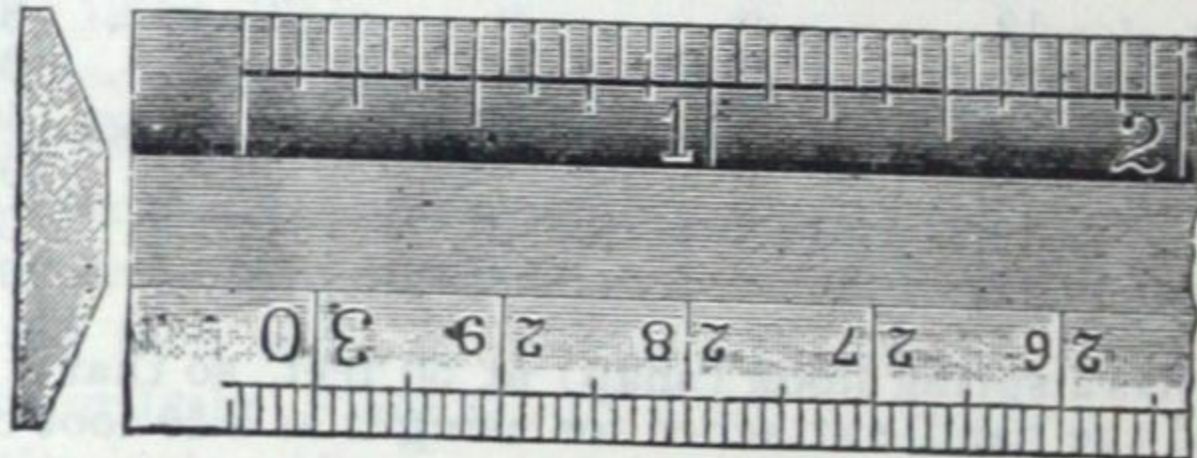
6440.	Iron, W.G. 8,	Brass Handles, 2 Round Rings,	50 feet	each,	\$2.50
6441.	"	"	100 "	"	3.50
6442.	"	"	33 "	"	2.00
6443.	"	"	66 "	"	3.20
6450.	"	3 Sawed Oval Rings	50 "	"	3.50
6451.	"	"	100 "	"	5.50
6452.	"	"	33 "	"	2.70
6453.	"	"	66 "	"	4.25

MAPLE SCHOOL RULES



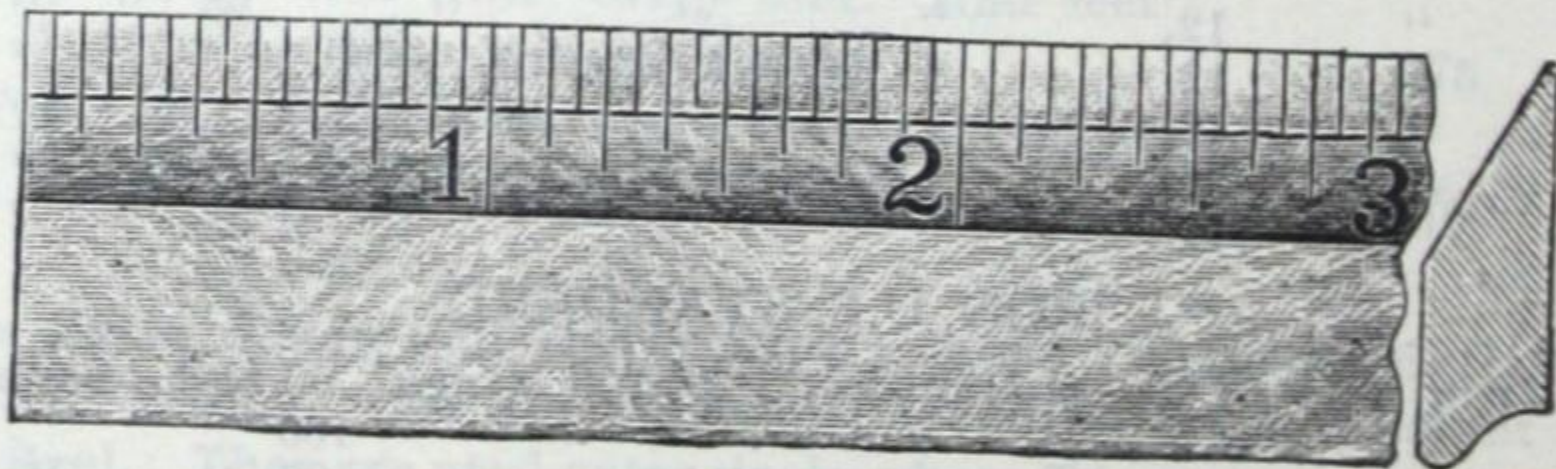
NO. 84

- No. 84. 12 in. Maple, $\frac{3}{4}$ in. wide, $\frac{3}{16}$ in. thick, beveled, plain edge, varnished, natural wood color. Metric Scale divided into centimeters and millimeters on bevel, inch scale divided into sixteenths on back. 1 doz. box per doz., .30
- 85. 12 in., same as No. 84, with brass edge " .50
- 84XX. Same as No. 84, with hand rubbed finish, boxwood color per doz., .75
- 85XX. 12 in., same as No. 84XX, with brass edge " 1.00



NO. 86XX

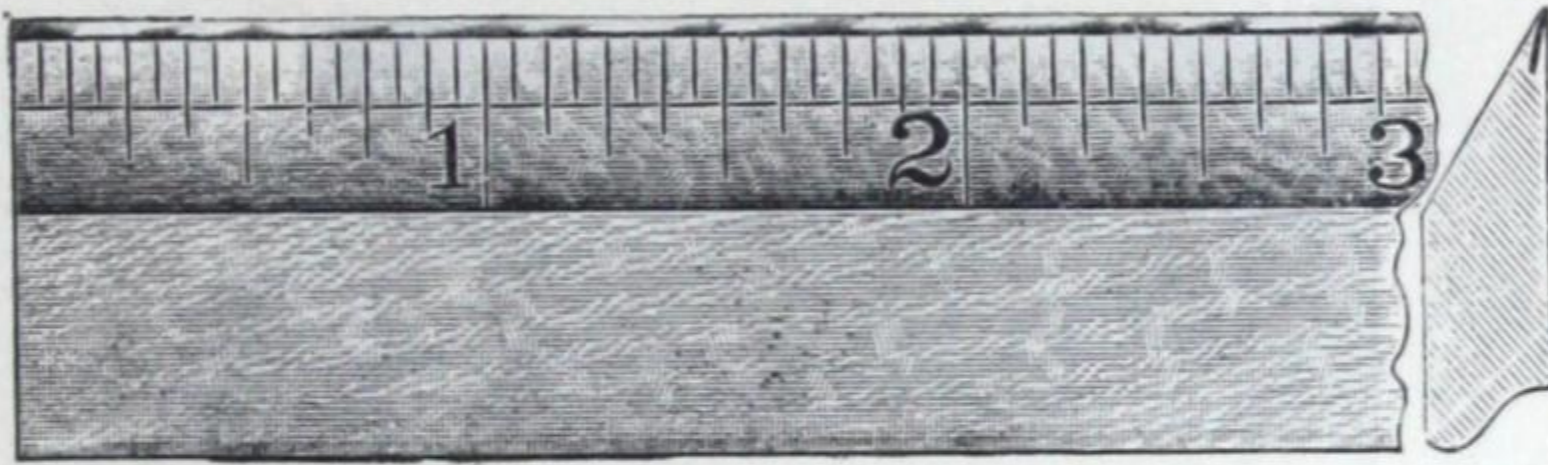
- No. 86XX. $12\frac{1}{2}$ in., Maple, $\frac{7}{8}$ in. wide, $\frac{3}{16}$ thick, double bevel, plain edge, hand rubbed piano finish, boxwood color, Inch Scale divided into sixteenths on one edge, Metric Scale divided into centimeters and millimeters on the other, with $\frac{1}{4}$ inch blank ends. 1 doz. box per doz., .75
- 87XX. $12\frac{1}{2}$ in., same as 86XX, with brass edge " 1.00



NO. 75

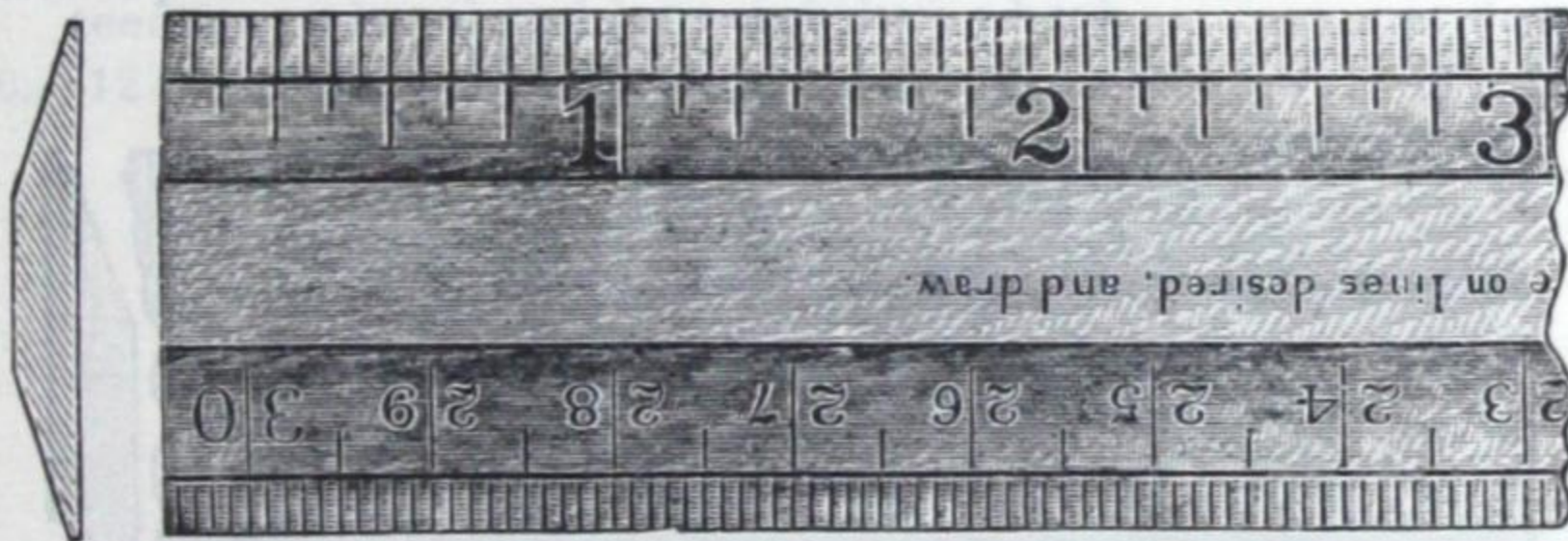
- No. 75. 12 in., Maple, $\frac{15}{16}$ in. wide $\frac{9}{32}$ in. thick, beveled, plain edge, varnished, natural wood color, Inch Scale divided into sixteenths. 2 doz. box per doz., .40
- 15 in., same as above " .60

Maple School Rules — continued



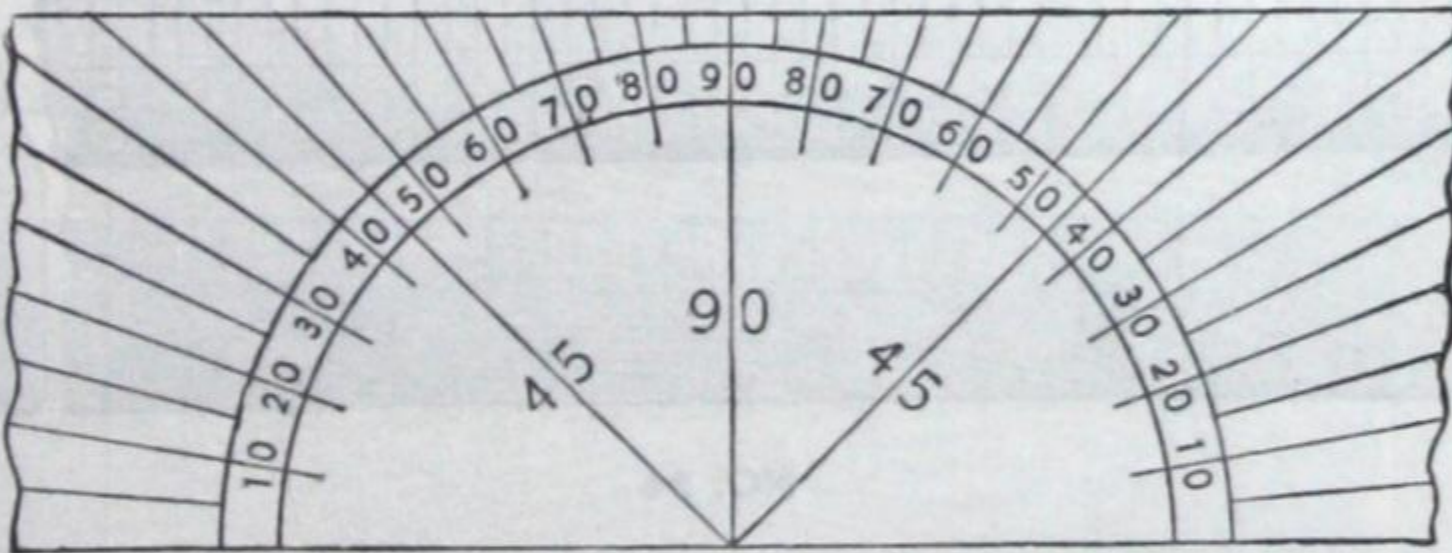
NO. 76

- No. 76. 12 in., Maple, $1\frac{5}{8}$ in. wide, $\frac{9}{32}$ in. thick, beveled, brass edge, varnished, natural wood color, Inch Scale, divided into sixteenths. 2 doz. box per doz., .50
 15 in., same as above " 1.00



NO. 61, FRONT

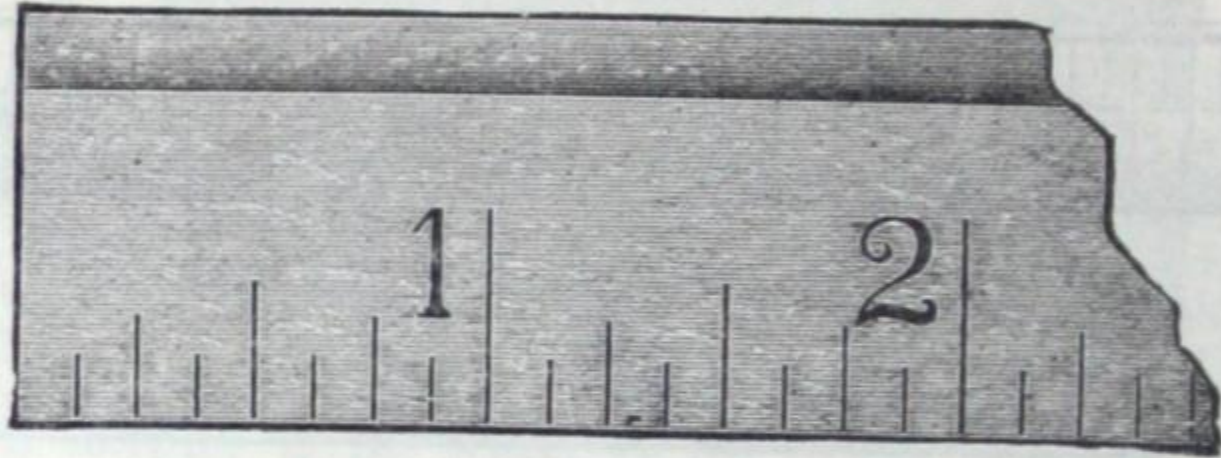
- No. 61. 12 in., Maple, $1\frac{1}{8}$ in. wide, $\frac{3}{8}$ in. thick, double bevel, plain edge, varnished, natural wood color, Inch Scale, divided into sixteenths on one edge, Metric Scale divided into centimeters and millimeters on the other, and Protractor Scale on back. 2 doz. box per doz., .40



NO. 61, BACK

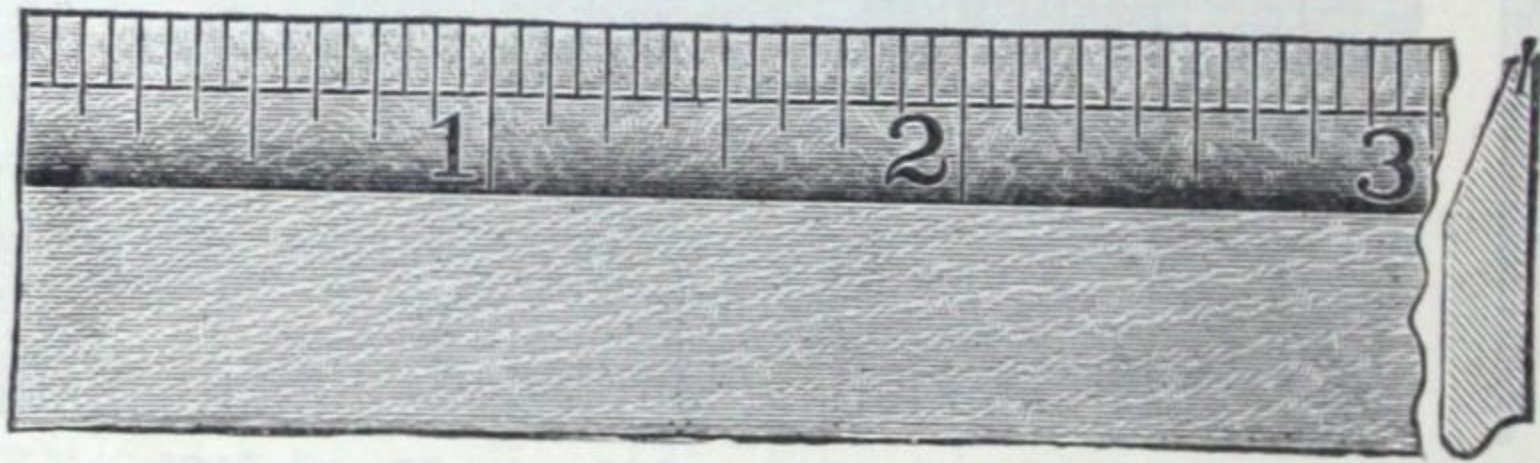
- No. 616. 12 in., same as No. 61, with brass edge per doz., .55

Maple School Rules — continued



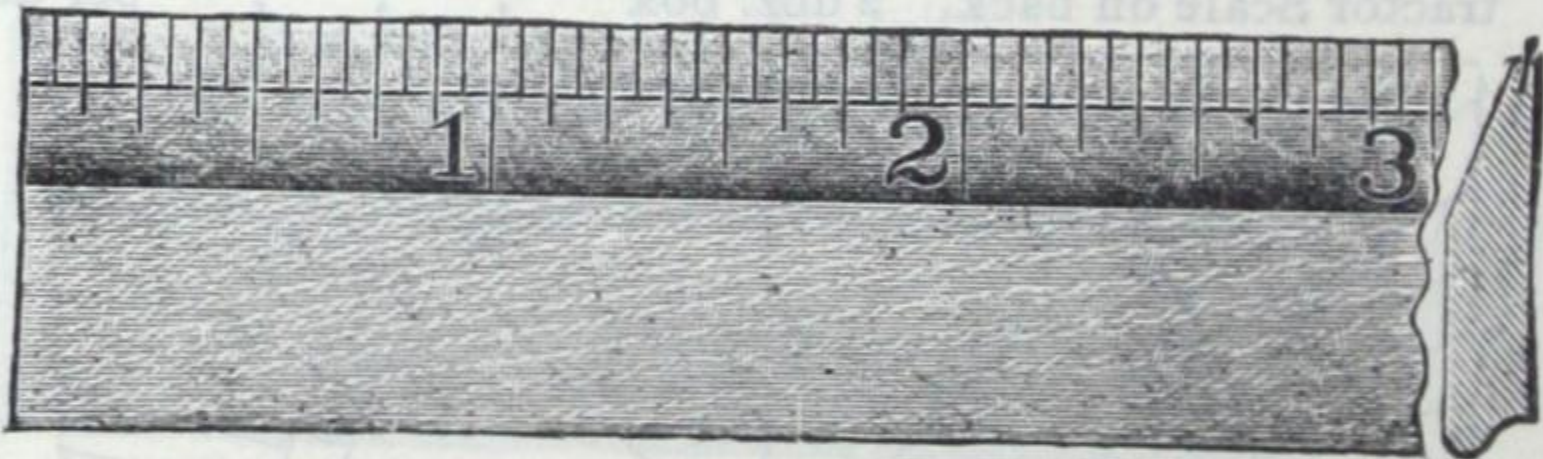
NO. 25XX AND NO. 256, BACK

No. 25XX. 12 in., Maple, $\frac{7}{8}$ in. wide, $\frac{3}{16}$ in. thick, beveled, plain edge, hand rubbed finish, boxwood color, Inch Scale divided into sixteenths on bevel and eighths on back. 1 doz. box per doz., .45



NO. 256

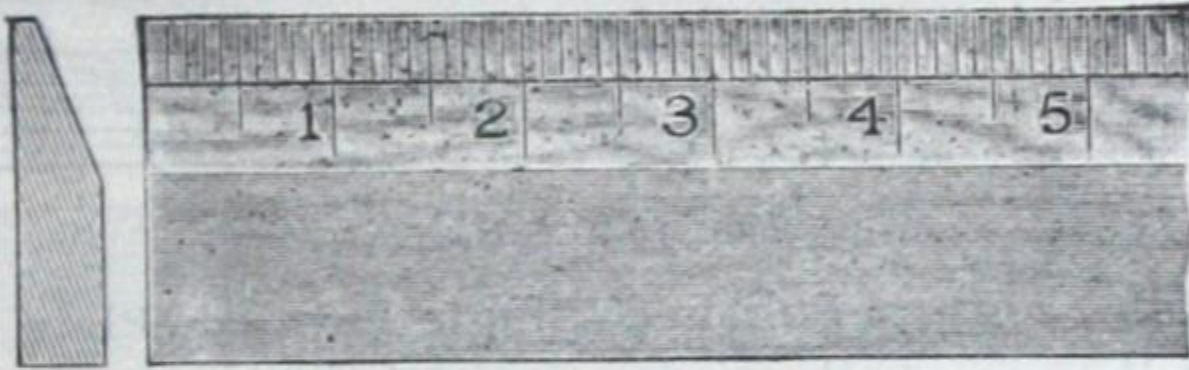
No. 256. 12 in., same as No. 25XX, brass edge, 1 doz. box per doz., .00



NO. 24

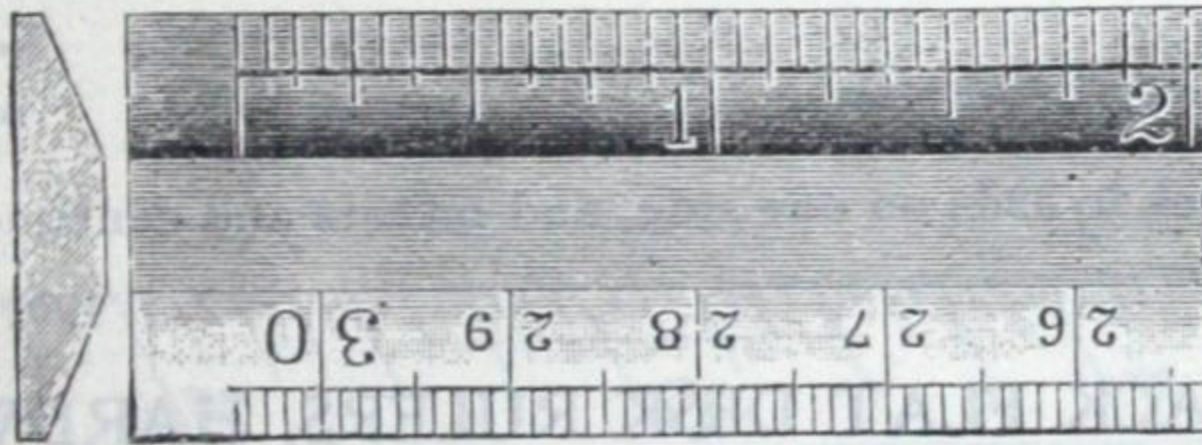
No. 24. 12 in., Maple, $\frac{7}{8}$ in. wide, $\frac{3}{16}$ in. thick, beveled, brass edge, varnished, Inch Scale divided into sixteenths. 1 doz. box per doz., .50

BOXWOOD SCHOOL RULES



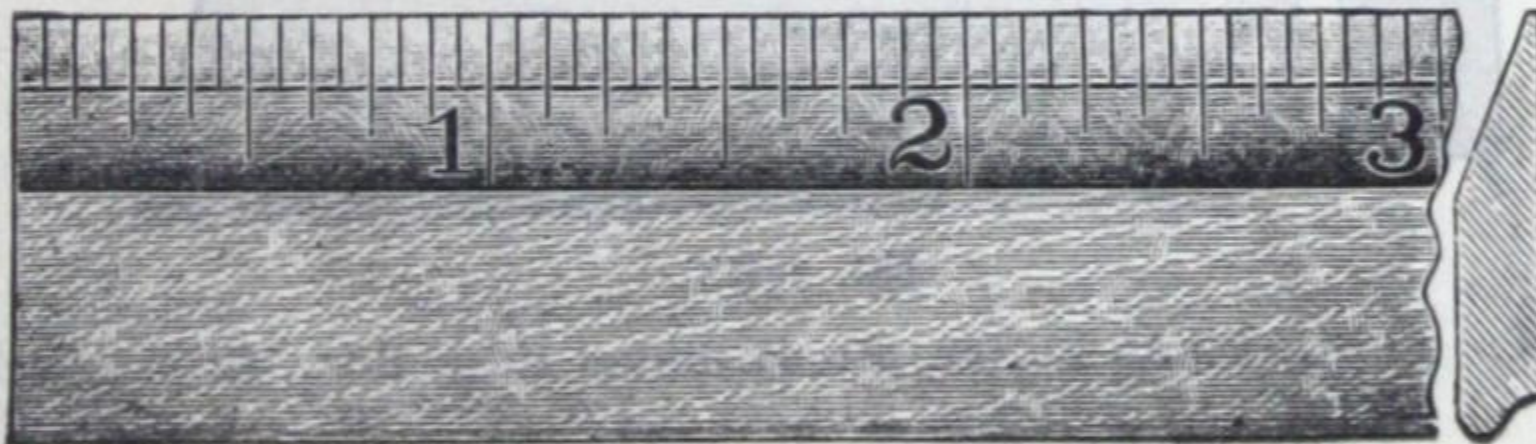
NO. 94

- No. 94. 12 in., Boxwood, $\frac{3}{4}$ in. wide, $\frac{3}{16}$ in. thick, beveled, plain edge, hand rubbed finish, Metric Scale divided into centimeters and millimeters on bevel, Inch Scale divided into sixteenths on back. 1 doz. in box . . . per doz., .75
- 946. 12 in., same as No. 94, with brass edge . . . " 1.00
- 26. 12 in., same as No. 94, with Inch Scale divided into sixteenths on bevel and into eighths on back . . . per doz., .75
- 266. 12 in., same as No. 26, with brass edge . . . " 1.00



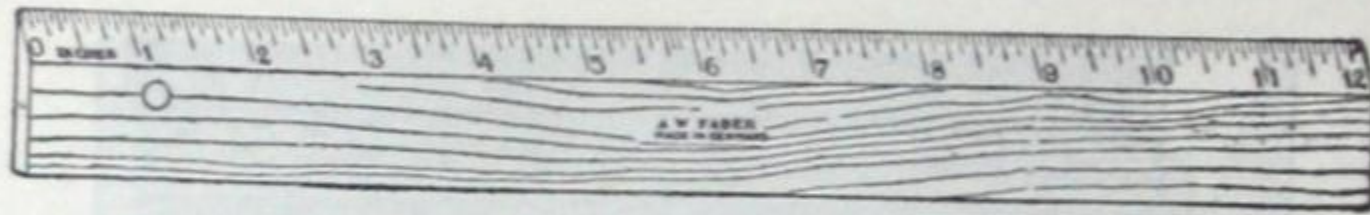
NO. 96

- No. 96. $12\frac{1}{2}$ in., Boxwood, $\frac{7}{8}$ in. wide, $\frac{3}{16}$ in. thick, double bevel, plain edge, hand rubbed finish, Inch Scale divided into sixteenths on one edge, Metric Scale divided into centimeters and millimeters on the other, $\frac{1}{4}$ in. blank ends. 1 doz. in box . . . per doz., \$1.25
- 966. $12\frac{1}{2}$ in., same as No. 96, with brass edge . . . " 1.75



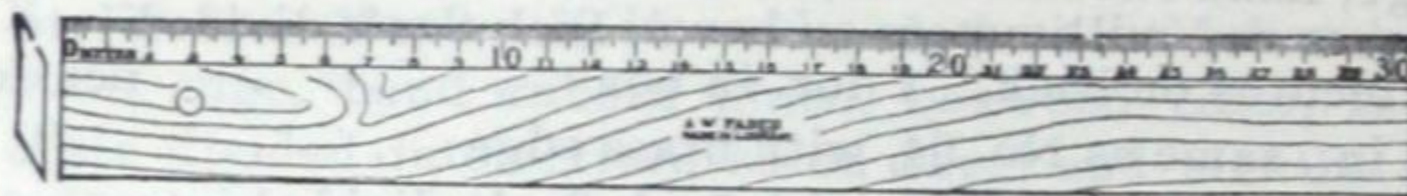
NO. 25XX, FRONT

A. W. FABER'S FLAT RULERS



NO. 1640 S.B.

No. 1640S B.	12 in., Natural Polished, Single Beveled, Plain Edge	each, .30
15 "	" " " " " "	" .40
18 "	" " " " " "	" .45
21 "	" " " " " "	" .55

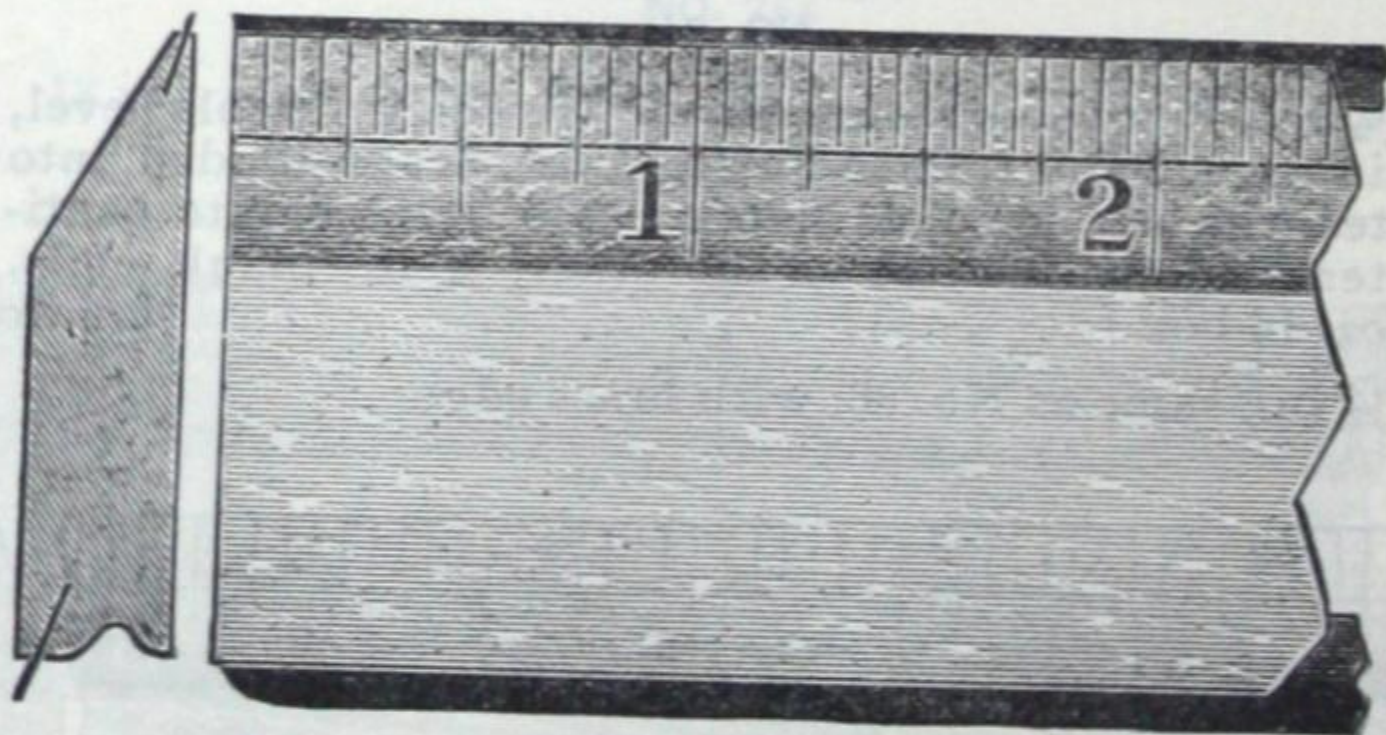


NO. 1640 D.B.

No. 1640D.B.	12 in., Natural Polished, Double Beveled, Plain Edge	each, .40
15 "	" " " " " "	" .50
18 "	" " " " " "	" .60
21 "	" " " " " "	" .70

Divided inches to 32ds on one side, and meters and centimeters on the other

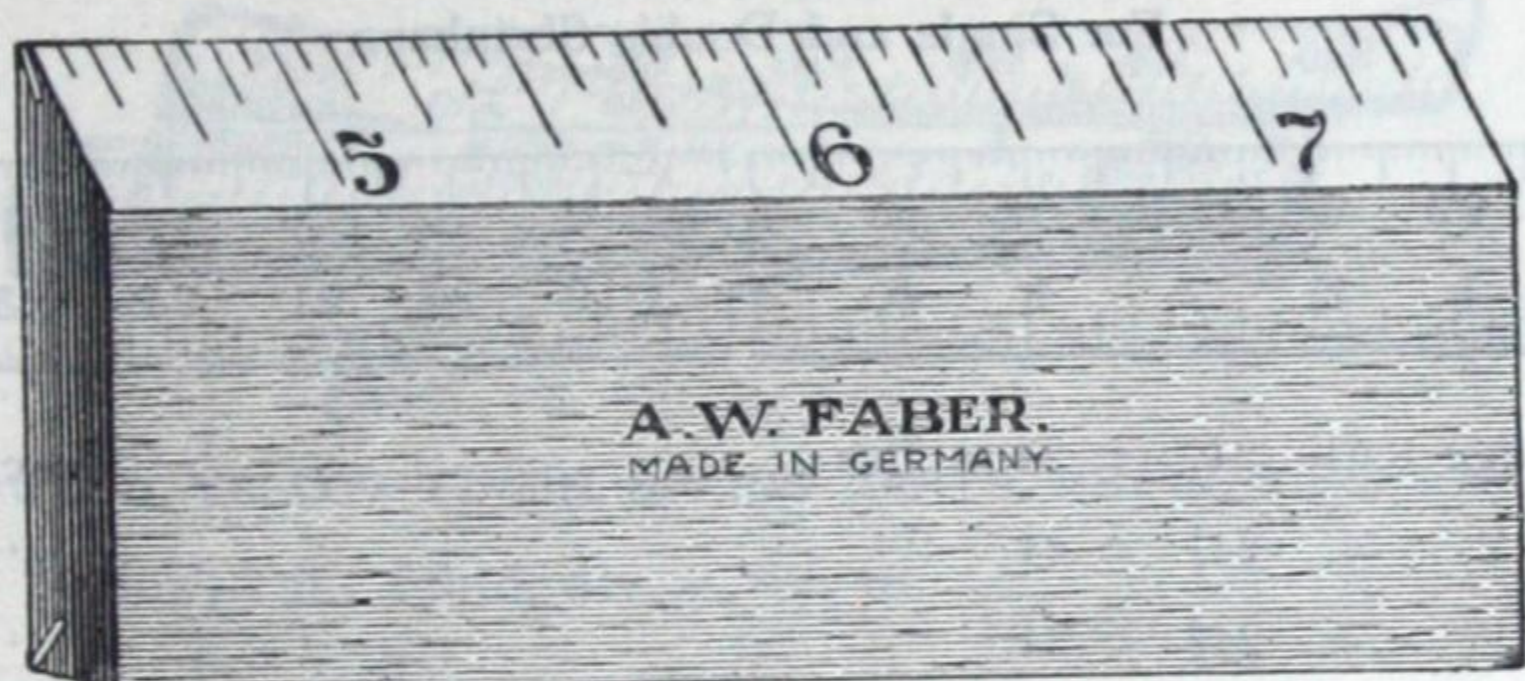
STEEL BACK FLAT DESK RULERS, HARDWOOD



NO. 36XX

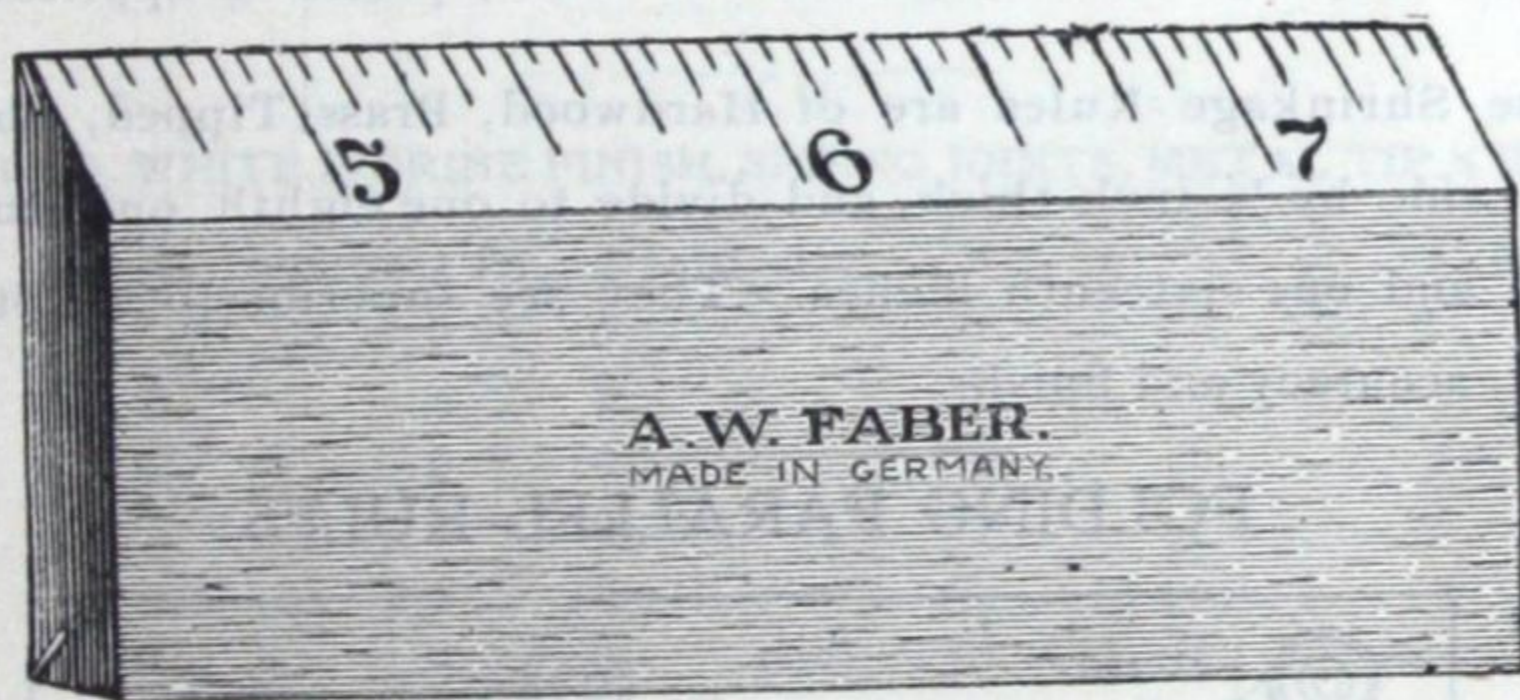
No. 36XX.	12 in., Piano Polish, Brass, Bevel Edge	doz., \$2.25	each, .20
15 "	" " " " " "	" 2.75	" .25
18 "	" " " " " "	" 3.25	" .80

A. W. FABER'S FLAT BRASS EDGE RULERS



1610 S.B.

1610.	12 inch,	Natural Polished,	White Enameled Beveled Edge	each,	.30
15	"	"	"	"	.35
18	"	"	"	"	.45
21	"	"	"	"	.55



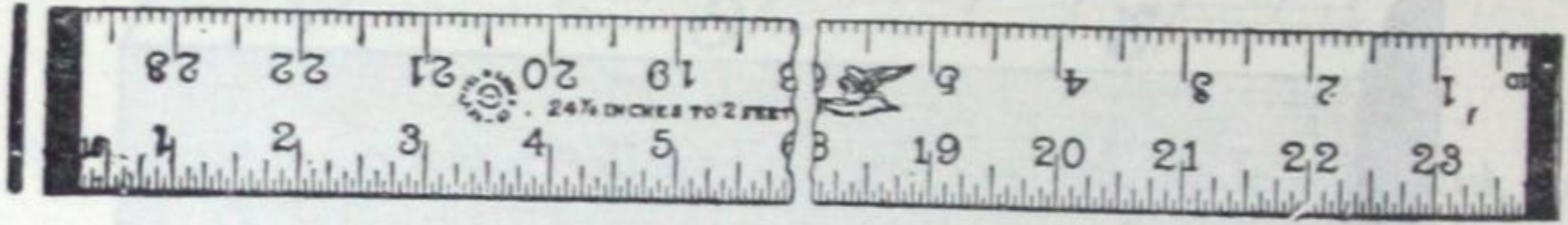
1690 S.B.

1690.	12 inch,	Natural Polished,	White Enameled Beveled Edge	each,	.40
15	"	"	"	"	.50
18	"	"	"	"	.60
21	"	"	"	"	.70

No. 1690 has a better finish than 1610

SHRINKAGE RULES

For Single and Double Shrinkage

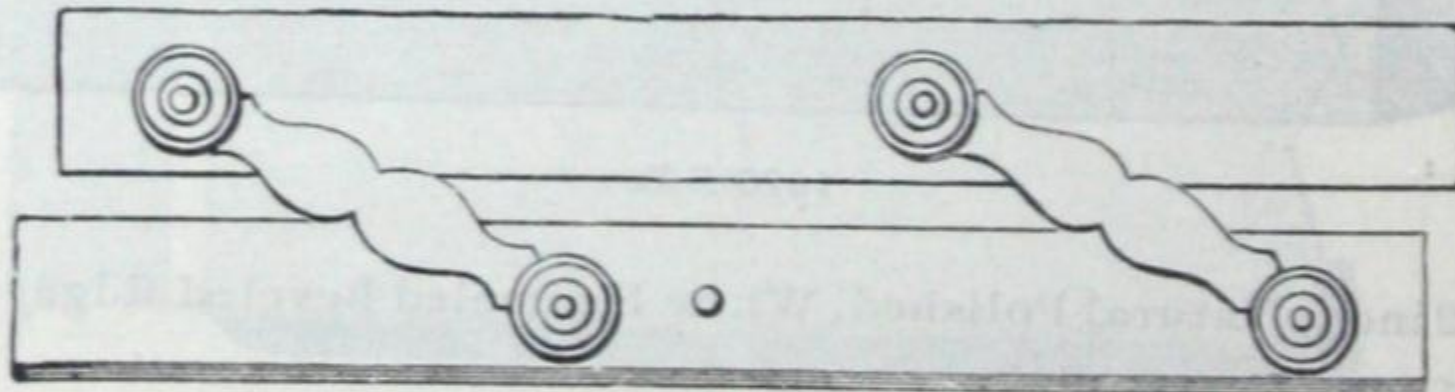


Shrinkage Rule, $24\frac{2}{10}$ = 24 inches	.	.	.	.	.	each, \$1.20
" $24\frac{1}{4}$ = 24 "	.	.	.	.	.	" 1.20
" $24\frac{3}{8}$ = 24 "	.	.	.	.	.	" 1.20
" $24\frac{1}{2}$ = 24 "	.	.	.	.	.	" 1.20
" 25 = 24 "	.	.	.	.	.	" 1.20
" $25\frac{1}{2}$ = 24 "	.	.	.	.	.	" 1.20
" 26 = 24 "	.	.	.	.	.	" 1.20
" $26\frac{1}{4}$ = 24 "	.	.	.	.	.	" 1.20

Rules to any other shrinkage made to order; prices on application

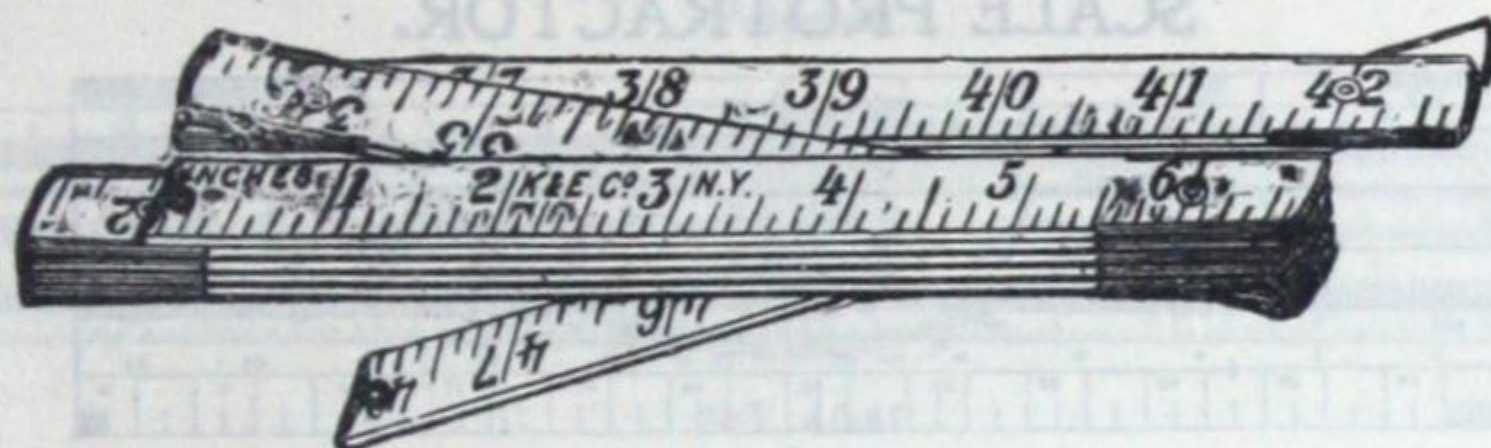
These Shrinkage Rules are of Hardwood, Brass Tipped, about $1\frac{1}{2}$ inches wide by $\frac{1}{8}$ inch thick, and divide to one eighth, one tenth, one twelfth and one sixteenth inches. They are superior to all others in quality, accuracy and finish

FOLDING PARALLEL RULES



6 inches long, Ebony, Brass Mounted	.	.	.	.	.	each, .50
9 " " " "	.	.	.	.	.	" .70
12 " " " "	.	.	.	.	.	" .90
15 " " " "	.	.	.	.	.	" 1.10
18 " " " "	.	.	.	.	.	" 1.50
24 " " " "	.	.	.	.	.	" 2.25

ENGINEERS' AND CONTRACTORS' POCKET RULES



HARDWOOD, YELLOW FINISH, SPRING JOINTS, METAL TIPS, 3/16 IN. WIDE

No. 1.	Yellow, 2 ft., 4 fold, div. $\frac{1}{16} \times \frac{1}{16}$ in.	each, .25
2.	" 3 " 6 " " "	" .35
3.	" 4 " 8 " " "	" .50
4.	" 5 " 10 " " "	" .60
5.	" 6 " 12 " " "	" .75
6.	" 8 " 16 " " "	" 1.00
7.	" 4 " 8 " div. $\frac{1}{16} \times \frac{1}{20}$ in.	" .50
8.	" 4 " 8 " div. $\frac{1}{16} \times$ meter	" .50
9.	" 4 " 8 " div. $\frac{1}{16} \times \frac{1}{16}$ in. Scales and Tables	" .75
10.	" 2 " 6 " " "	" .30
11.	" 3 " 9 " " "	" .45

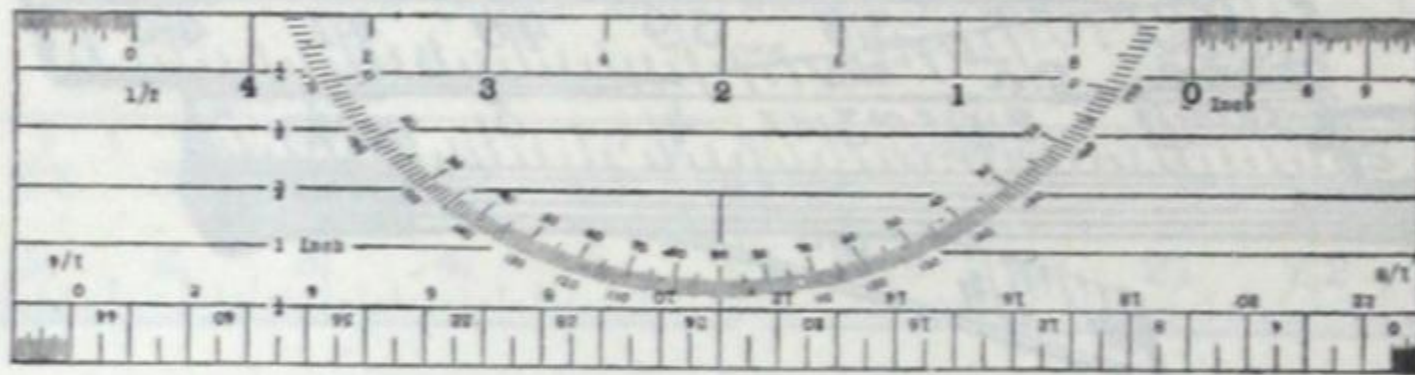
HARDWOOD, WHITE IVORINE FINISH, SPRING JOINTS, METAL TIP 3/16 IN. WIDE

No. 12.	White Ivorine 2 ft., 4 fold, div. $\frac{1}{16} \times \frac{1}{16}$ in.	each, .40
13.	" 3 " 6 " " "	" .50
14.	" 4 " 8 " " "	" .60
15.	" 5 " 10 " " "	" .75
16.	" 6 " 12 " " "	" .90
17.	" 8 " 16 " " "	" 1.20
18.	" 4 " 8 " div. $\frac{1}{16}$ in. $\times \frac{1}{100}$ ft.	" .75
19.	" 6 " 12 " " "	" 1.15
20.	" 4 " 8 " div. $\frac{1}{16}$ in. \times mm.	" .60

All Rules are divided on both sides, and read from right and left

These Rules are made of a flexible and light hard wood, prepared in a manner to prevent shrinkage, hence they are absolutely accurate. They are constructed much thinner than the old style Rules and without the sharp metal edges, therefore they are more convenient to carry in the pocket.

TRANSPARENT PARALLEL FLEXIBLE RULER AND SCALE PROTRACTOR.

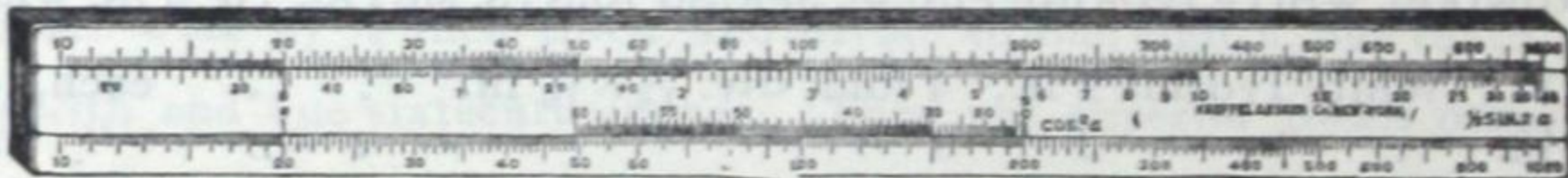


4

- No. 1. For Civil Engineers and Surveyors. Divided 10 and 20 parts to the inch each, .20
- No. 4. For Architects and Mechanical Engineers. Divided $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, 1, each, .20
- No. 5. For Students of Mathematics, Schools, etc. Divided 8ths, 16ths, 32ds, Centimeters, each, .20

For use by Students of Mathematics, in schools and for drawing and sketching purposes generally. It is $1\frac{1}{2} \times 6$ inches, made of celluloid, transparent as glass and flexible as rubber. With it lines can be drawn parallel with, or at any angle to each other without measuring. Just fits the note book or pocket. Convenient for Civil and Mechanical Engineers, Architects, etc., for recording field notes and making sketches.

K. & E. STADIA SLIDE RULES



4100

4100. Stadia Slide Rule, engine divided, 10 in. divisions on white facings, in Case with Directions each, \$ 4.50
4101. Stadia Slide Rule, engine divided, 20 in., divisions on white facings, in Case with Directions " 12.50

The Stadia Slide Rule is especially designed to solve the two equations generally used in stadia measurements, viz. :

$$\text{Height} = \frac{\text{Stadia Distance}}{2} \times \sin 2a$$

and $\text{Distance} = \text{Stadia Distance} \times \cos. ^2 a$

These two equations can be read off on the face of the rule with one setting. It is finely graduated and will be found of great use to the Topographer, as it enables him to compute quickly the results of his labors in the field

K. & E. MANNHEIM ADJUSTABLE SLIDE RULES

Patented



NO. 4041

- 4031. K. & E. Patent Adjustable Mannheim Slide Rule, 5 inches, engine divided, divisions on white facings, with Glass Indicator, in Sewed Leather Case, with Directions each, \$4.50

This rule is sub-divided as closely as the 10-inch rule, No. 4041

- 4035. K. & E. Patent Adjustable Mannheim Slide Rule, 8 inches, engine divided, divisions on white facings, with Glass Indicator, in Sewed Leather Case, with Directions each, \$4.50

This rule is sub-divided as closely as the 10-inch rule, No. 4041

- 4041. K. & E. Patent Adjustable Mannheim Slide Rule, 10 inches, engine divided, divisions on white facings, with Glass Indicator, in Morocco Covered Case, with Directions each, \$4.50

- 4041F. K. & E. Patent Adjustable Mannheim Slide Rule, like 4041, but sub-divided as closely as the 20-inch rule each, \$8.00

- 4045. K. & E. Patent Adjustable Mannheim Slide Rule, 16 inches, engine divided, divisions on white facings, with Glass Indicator, in Morocco Covered Case, with Directions each, \$10.00

- 4051. K. & E. Patent Adjustable Mannheim Slide Rule, 20 inches, engine divided, divisions on white facings, with Glass Indicator, in Morocco Covered Case, with Directions each, \$12.50

- 4052D.L. Glass Indicator, with two Hairlines (instead of one) extra each, .20

The same, but with two Hairlines spaced to a stated ratio, extra " .40

Rules 4041F., 4045 and 4051 are divided more closely than the others. They have from 200 to 20 sub-divisions between the prime numbers, while the other rules have from 100 to 10, so that reading is closer by at least one figure

K. & E. ADJUSTABLE POLYPHASE SLIDE RULES

Mannheim Style

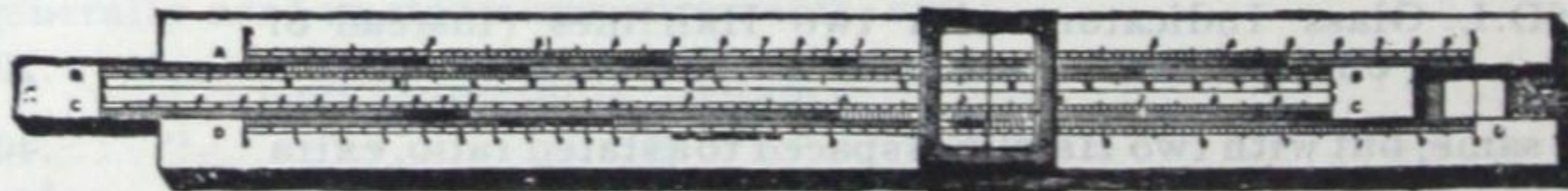
Patented



NO. 4053-3

- 4053-2. Polyphase Mannheim Slide Rule, K. & E. Patent Adjustable, 8 inches, engine divided, divisions on white facings, Glass Indicator, in Sewed Leather Case, with Directions each, \$5.00
- 4053-3. Polyphase Mannheim Slide Rule, K. & E. Patent Adjustable, 10 inches, engine divided, divisions on white facings, Glass Indicator, in Morocco Covered Case, with Directions each, \$5.00
- 4053-3F. Polyphase Mannheim Slide Rule, like No. 4053-3, 10 inches, but sub-divided as closely as the 20-inch rule each, \$8.50
- 4053-5. Polyphase Mannheim Slide Rule, K. & E. Patent Adjustable, 20 inches, engine divided, divisions on white facings, Glass Indicator, in Morocco Covered Case, with Directions each, \$14.00

K. & E. STUDENTS' SLIDE RULE

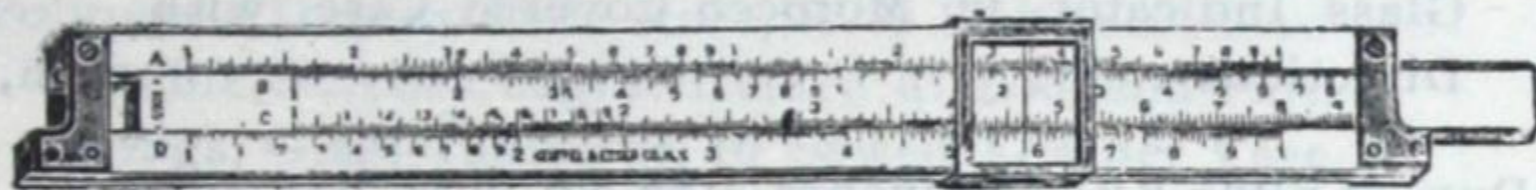


4058

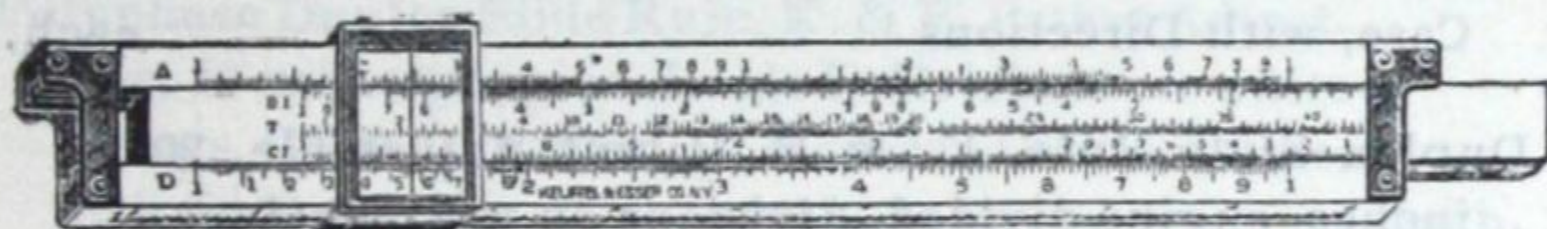
4058. Students' Slide Rule, Mannheim, 10 inches, with Indicator and Directions each, \$1.00

K. & E. ADJUSTABLE DUPLEX SLIDE RULES

Patented



No. 4065 (front)



No. 4065 T (back)

- 4061. Duplex Slide Rule, K. & E. Patent Adjustable, 5 inches, engine divided, divisions on white facings, Glass Indicator, in Sewed Leather case, with Directions each, \$5.00
- 4061T. Duplex Slide Rule, 5 inches, like No. 4061, but with Trig. Scales, Glass Indicator, in Sewed Leather Case, with Directions each, \$8.50
- 4065. Duplex Slide Rule, K. & E. Adjustable, 8 inches, engine divided, divisions on white facings, Glass Indicator, in Sewed Leather Case, with Directions each, \$5.00
- 4065T. Duplex Slide Rule, 8 inches, like No. 4065, but with Trig. Scales, Glass Indicator, in Sewed Leather Case, with Directions each, \$6.00
- 4071. Duplex Slide Rule, K. & E. Patent Adjustable, 10 inches, engine divided, divisions on white facings, Glass Indicator, in Morocco Covered Case, with Directions each, \$5.00
- 4071T. Duplex Slide Rule, 10 inches, like No. 4071, but with Trig. Scales, Glass Indicator, in Morocco Covered Case, with Directions each, \$6.50

K. E. Adjustable Duplex Slide Rules—continued

4083. Duplex Slide Rule, K. & E. Patent Adjustable, 16 inches, engine divided, divisions on white facings, Glass Indicator, in Morocco Covered Case, with Directions each, \$12.00
- 4083T. Duplex Slide Rule, 16 inches, like No. 4083, but with Trig. Scales, Glass Indicator, in Morocco Covered Case, with Directions each, \$15.00
4087. Duplex Slide Rule, K. & E. Patent Adjustable, 20 inches, engine divided, divisions on white facings, Glass Indicator, in Morocco Covered Case, with Directions each, \$15.00
- 4087T. Duplex Slide Rule, 20 inches, like No. 4087 but with Trig. Scales, Glass Indicator, in Morocco Covered Case, with Directions each, \$18.00

In the "Duplex" Slide Rule the slide is of the same thickness as the rule and has its two faces flush with those of the rule. The rule and slide are fully graduated on both sides, scales A and D being alike on both sides of the Rule, whereas scales B and C on the arithmetical slide are graduated on their upper face in the usual way like A and D, but on their under face in reversed order, the initial indexes being on the right hand, and the scales progressing toward the left. The index of the scales of one face are in alignment with those of the other face, and a runner, encircling the whole Rule, enables coinciding points on any scales of either face to be at once found. This improvement greatly simplifies working out many complex calculations, for example

$$a \times b \times c = x; \quad \sqrt[6]{\quad} = x; \quad \frac{a}{b \times c \times d} = x; \quad \sqrt[2]{\frac{a}{5}} = x;$$

may be performed with one setting. Besides, there is on the Duplex Rule an inverted slide always in position, with the numbers right-side up and the corresponding scales contiguous, instead of the numbers inverted and scale C next to A and B next D.

To still further increase the value of the Duplex Rule we furnish it also with Trigonometrical Scales, Sines, Tangents and Scale of equal parts, in addition to the arithmetical scales enumerated in the above description. In this form the Scale of Sines and of Tangents are each on one side (face) of the slide, on the median line, and the scale of equal parts is on the front face of the rule under the D scale. The S and T scales and the scale of equal parts are read by means of the indicator. The rules having these additional scales are designated as "with Trig. Scales" in this list

K. & E. ADJUSTABLE POLYPHASE DUPLEX SLIDE RULES

Patented

- 38-2. Polyphase Duplex Slide Rule, K. & E. Patented Adjustable, 8 inches, engine divided, divisions on white facings, Glass Indicator, in Sewed Leather Case, with Directions each, \$7.00
- 38-3. Polyphase Duplex Slide Rule, K. & E. Patent Adjustable, 10 inches, engine divided, divisions on white facings, Glass Indicator, in Morocco Covered Case, with Directions each, \$7.00

K. & E. ADJUSTABLE LOG LOG DUPLEX SLIDE RULES

Patented

92. Log Log Duplex Rule, K. & E. Patent Adjustable, 10 inches, engine divided, divisions on white facings, Glass Indicator, in Morocco Case, with Directions each, \$8.00

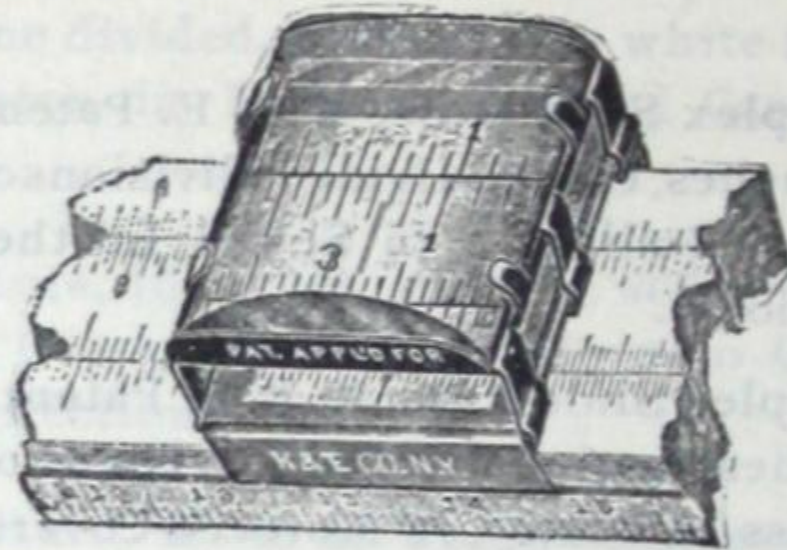
CASES FOR SLIDE RULES

Morocco Covered Case for		10 in.	16 in.	20 in.	
		each, .40	.60	.80	
Sewed Leather Case for	5 in.	8 in.	10 in.	16 in.	20 in.
	each, .70	.80	.90	1.10	1.40
Sewed Leather Case, with space for Magnifier No. 4085,					
for	5 in.	8 in.	10 in.	16 in.	20 in.
each, \$1.20		1.30	1.40	1.80	2.10

BOOKS ON THE SLIDE RULES

- 37B. "The Slide Rule," complete Manual, by Wm. Cox, (furnished with Mannheim Rules) each, .50
- 7E. Directions for Duplex and Mannheim Rules, bound together, (furnished with Duplex Rules) " .50
- 7D. Mannheim Manual (B.), and Directions for Duplex Rule, bound together " .75

MAGNIFIERS FOR SLIDE RULES



No. 4085 B.

- 4085A. Magnifiers for Mannheim Slide Rule, 5 in., 8 in. . . each, \$2.00
- 4085B. Magnifiers for Mannheim 10 in., 16 in., 20 in., Poly-
phase, Favorite, Duplex 5 in., 8 in., 10 in., Stadia
10 in., 20 in. Slide Rules " 2.00
- 4085C. Magnifiers for Duplex 16 in., 20 in., and Log Log,
Slide Rules " 2.50

When ordering please state for which kind of Slide Rule Magnifier is wanted

INDICATOR WITH DECIMAL POINTER



No. 4086

4086. Glass Indicator with Decimal Pointer each, \$1.00
- The same, in place of plain Glass Indicator, add " .50

No. 4086 is furnished for the Mannheim style of Slide Rules only

The Magnifiers No. 4085 do not fit on these Indicators

A. W. FABER'S IMPROVED CALCULATING RULE



350.	A. W. Faber's Calculating Rule, Plain Boxwood, 10½ in.	each,	\$3.45
360.	“ “ “ Celluloid Face, 10½ “	“	3.45
365.	“ “ “ “ 10½ “	“	3.90
367.	“ “ “ “ 10½ “	“	4.20
378.	“ “ “ “ 10½ “	“	4.80
380.	“ “ “ “ 20 “	“	13.50

The Slide Rule has been defined as “an instrument for mechanically effecting calculations by logarithmic computation” (Pickworth, The Slide Rule), and it is said that “by its aid various arithmetical, algebraical and trigonometrical processes may be performed with ease and rapidity, the results obtained being sufficiently accurate for almost all practical requirements”

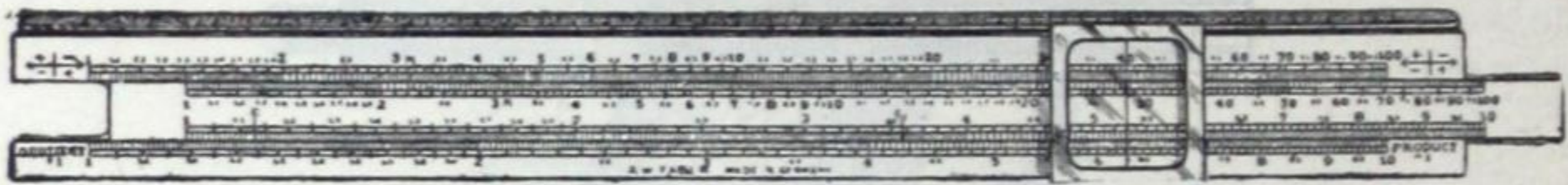
The A. W. Faber Calculating Rule consists of a “stock” or “body” about 10 inches in length, 1¼ inches in width, and ¾ inch in thickness, a movable strip or “slide” inserted into the “body,” surfaces level, and a “runner about an inch square fitted with glass, which, sliding freely the entire length of the instrument, serves to connect the fine graduations of the several scales in the “body” and “slide.” The rule is made of boxwood, with or without celluloid facings

While the plain boxwood rule is the more durable, the rule with celluloid face can be more easily read, and is on that account often preferred

A Manual or Book of Instructions, of 35 printed pages and 12 diagrams accompanies each rule, explaining the general principles which govern the instrument and furnishing practical illustrations of its usefulness

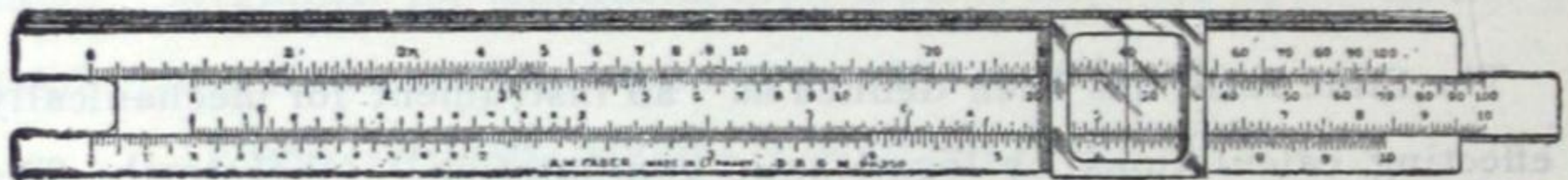
A. W. FABER'S IMPROVED CALCULATING RULE

With Self-Adjusting Slide



NO. 363

- No. 363. Calculating Rule with decimals marked and with Slide Spring and Ordinary Cursor, 11 inches long, celluloid surface each, \$4.50
 363A. Same as 363, without lateral lines " 4.50



NO. 364A

- No. 364. Calculating Rule, with decimals omitted (and with Slide Spring) and Ordinary Cursor, 11 inches long, celluloid surface each, \$4.50
 364A. Same as 364, without lateral lines " 4.50

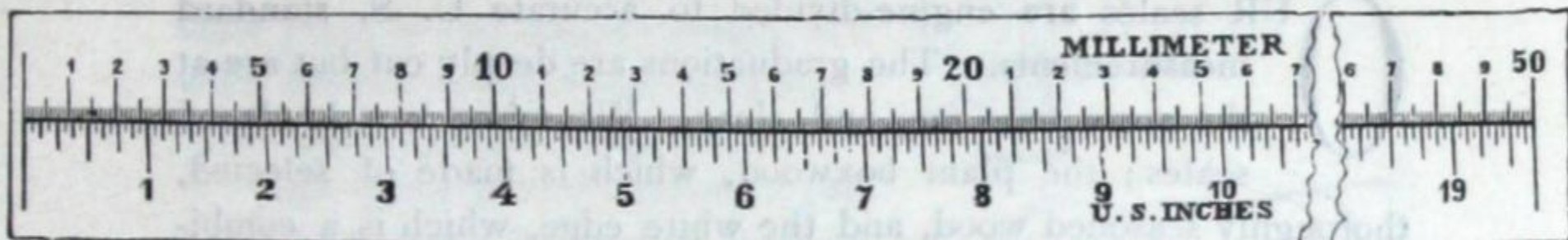
A. W. FABER'S

SUNDRIES FOR IMPROVED CALCULATING RULES

- No. 777. Sole Leather Case for Calculating Rules Nos. 350 to 367 each, \$1.15
 778. Cardboard " " " " 350 to 367 " .35
 779. " " " " 380 " .65
 Books of Instruction separately, for Calculating Rules, English, German, or French Languages " .75
 Metal Runners with glass, for Nos. 350, 360, 363, 364, 365 " .50
 Metal Runners with glass, for Nos. 367, 380 " .65
 Glass for runners " .30
 Wooden Springs for Rules, Nos. 363, 364, 365, 367 " .25
 Wooden Springs for Rules, No. 380 " .35
 Tables of Constant Values **Gratis**

PAPER SCALES

Engine Divided. Printed on Bristol Board, 19x1 3/4 Inches



Paper Scales as in Series A, B, or C	each, .20
Separate Scales, div. 2, 4 inches to the foot, 66 parts per inch, or inches in sixteenths	" .20
Meter and Inch Comparing Scale, 1/2 meter long	" .30
Meter Scale, div. in millimetres, 1/2 meter long	" .20
Scale of Proportional Inches, 1/8, 1/4, 1/2, 1, 12 in. long	" .10
Series A, 6 in Set, div. 1/4, 1/2, 3/4, 1, 1 1/2, 3 inches to the foot	per set, 1.00
Series B, 6 in Set, div. 3/2, 1/8, 3/16, 5/16, 3/8, 7/8 inches to the foot	" 1.00
Series C, 6 in Set, div. 10, 20, 30, 40, 50, 60 parts per inch	" 1.00

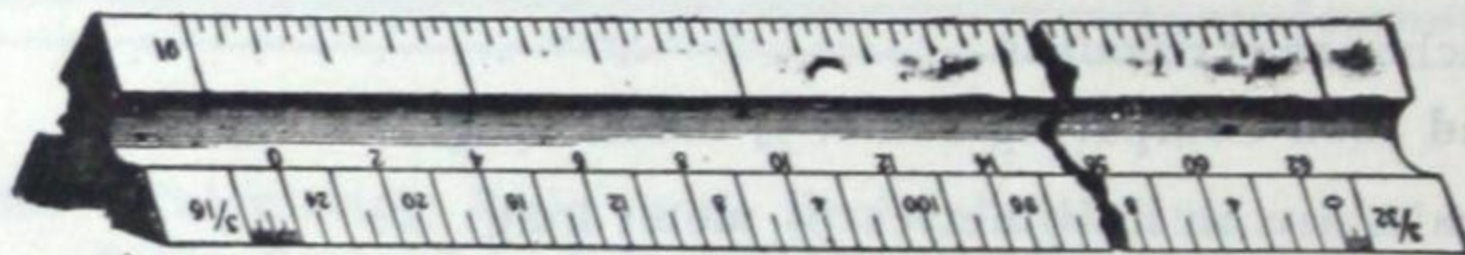
TRIANGULAR SCALE GUARDS



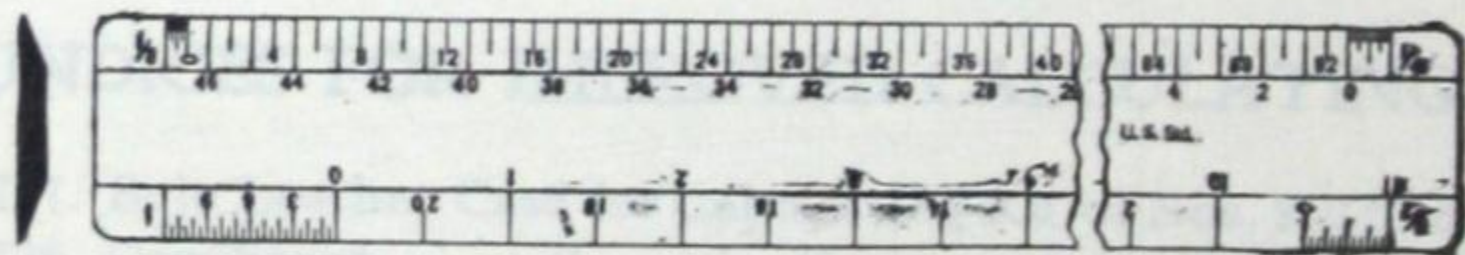
Patent Triangular Scale Guard, German Silver	each, .25
--	-----------

DRAUGHTING SCALES.


OUR scales are engine-divided to accurate U. S. standard measurements. The graduations are deeply cut but are at the same time fine and clear. We make two kinds of scales; the plain boxwood, which is made of selected, thoroughly seasoned wood, and the white edge, which is a combination of boxwood and celluloid. The white edge scales meet with much favor, as they tire the eyes less than either boxwood, ivory or metal scales, the graduations and figures being very distinct,—black on a white ground. Both the boxwood and white edge scales are made in the various shapes here described.



The triangular scale has the merit of possessing six surfaces for graduations, which is an advantage for anyone who desires the greatest range with one piece, but is objected to on account of its obstinate tendency to present the wrong scale, and the annoying trouble of turning it over and over to obtain the one desired.



The regular shape flat scale has two bevels for graduations, and if these are different and the wrong one is presented it requires but one change to bring the desired one. The graduations are more convenient to read than on the triangular scale, and are not subjected to as much wear, as the graduated surfaces do not come in contact with the paper.

 The double bevel scale has four bevels for graduations, but requires to be held up when in use in order to bring the edge to the paper.

The opposite bevel scale is an improvement on the regular flat shape in that it may be more readily picked up, and in presenting but one graduated bevel to the eye when in use. It is furnished at the same price as the regular shape, and when desired should be specified thus: "No. 2411, *opposite bevel*, \$0.75."



The shape here illustrated is preferred by many on account of the handle, which makes it a convenient scale to use. It has two bevels for graduations, and any flat scale in our list will be furnished in this shape at an additional cost of 25 cents. When desired it should be specified thus: "No. 2711, *special shape*, \$1.50."



Special Scales.

We are prepared to graduate special scales to order from customer's specifications, which should include

- Material,
- Length,
- Sectional shape, and
- Sketch showing figured graduation.

Prices will be quoted on receipt of information as above.

If, however, the desired plan of graduation be one of the following four, the necessity of a sketch and price quotation may be avoided, and the order given as follows:

"Flat boxwood (or white edge) scale; 12 inch;
1 1/2 inches to the foot; arranged like Fig. F."

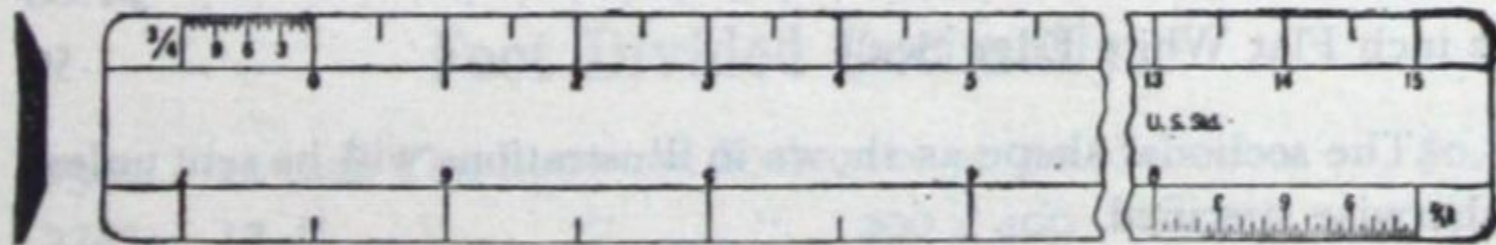


FIG. D. OPEN DIVIDED.

Different scale on each bevel; reading left to right.

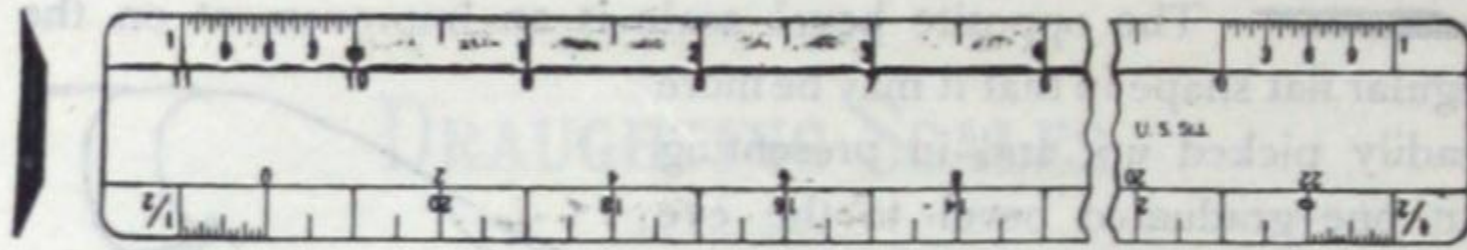


FIG. E. OPEN DIVIDED.

Different scale on each bevel ; reading both ways.

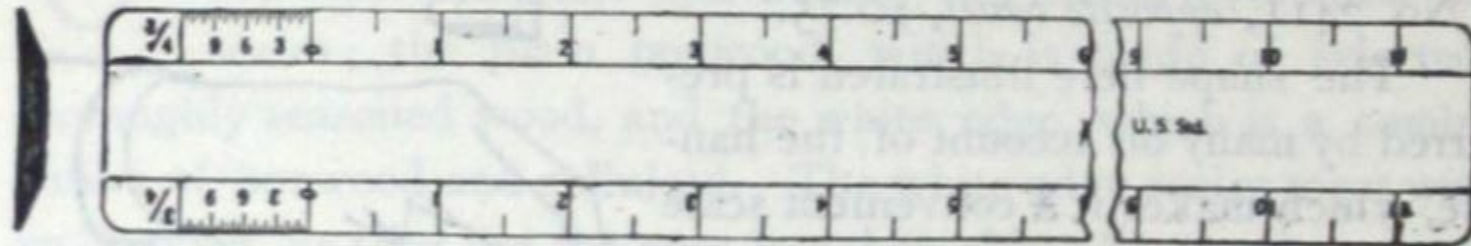


FIG. F. OPEN DIVIDED.

Same scale on both bevels ; one left to right ; other right to left.

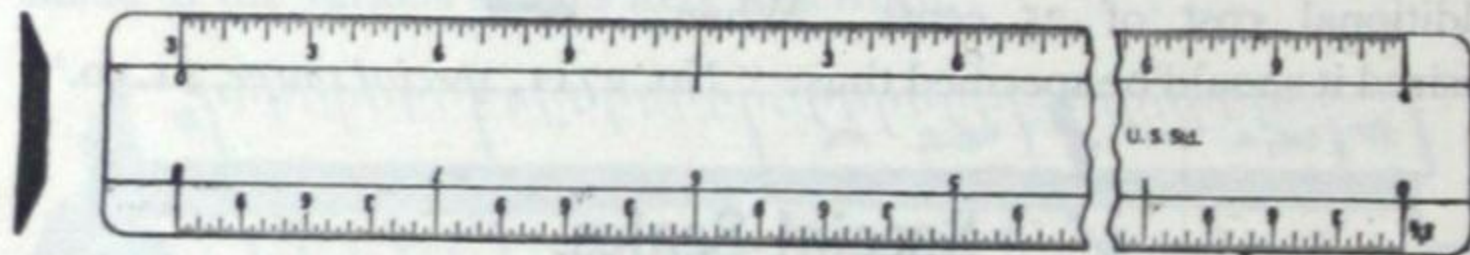


FIG. G. FULL DIVIDED.

Different scale on each bevel ; reading left to right.

The illustrations are merely intended to show four different plans of graduation and figuring, and any scale of graduation may be ordered arranged like either illustration.

Prices.

Arranged like Figs. D., E. or F.

12-inch Flat Boxwood Scale	\$0.85
12-inch Flat White Edge Scale	1.35

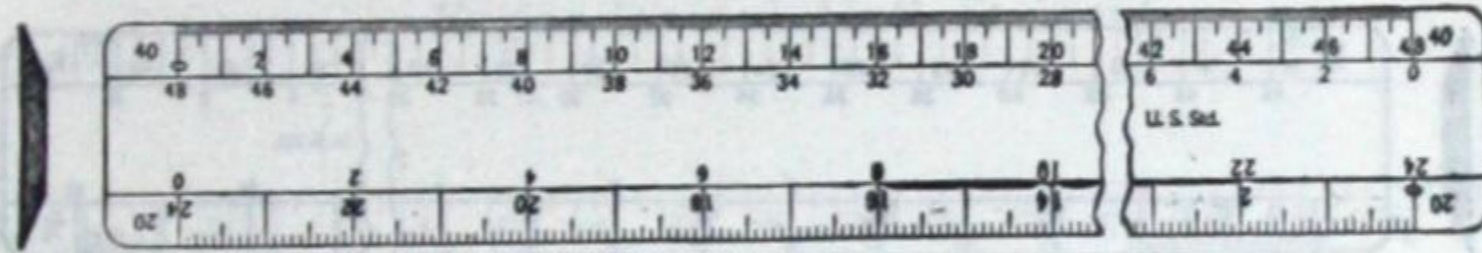
Arranged like Fig. G.

12-inch Flat Boxwood Scale	\$1.00
12-inch Flat White Edge Scale	1.50

The sectional shape as shown in illustrations will be sent unless otherwise specified.

FLAT BOXWOOD SCALES.

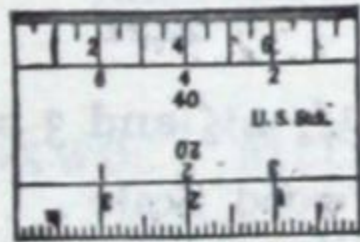
Engine Divided, U. S. Standard.



2321

2310.	6-inch Flat Boxwood Scale, 10 × 50 to the inch . .	\$0.50
2311.	6 " " " " 20 × 40 " " . .	.50
2312.	6 " " " " 30 × 60 " " . .	.50
2313.	6 " " " " 80 × 100 " " . .	.75
2320.	12-inch Flat Boxwood Scale, 10 × 50 to the inch . .	\$0.75
2321.	12 " " " " 20 × 40 " " . .	.75
2322.	12 " " " " 30 × 60 " " . .	.75
2323.	12 " " " " 80 × 100 " " . .	1.20

Offset Scales.



2331

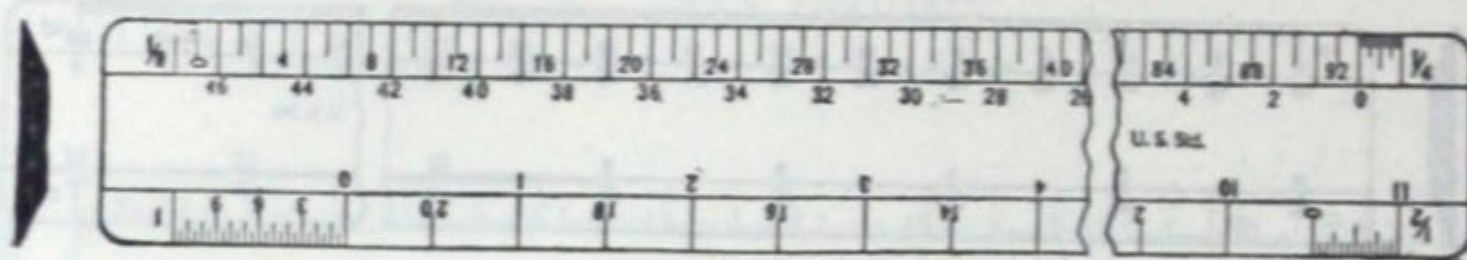
2330.	2-inch Flat Boxwood Offset Scale, 10 × 50 to the inch, \$0.40
2331.	2 " " " " 20 × 40 " " .40
2332.	2 " " " " 30 × 60 " " .40
2333.	2 " " " " 80 × 100 " " .65

Foot Divided Decimally.

2340.	12-inch Flat Boxwood Scale, 100 × 500 to the foot . .	\$0.80
2341.	12 " " " " 200 × 400 " " . .	.80
2342.	12 " " " " 300 × 600 " " . .	.80
2343.	12 " " " " 800 × 1000 " " . .	1.20

FLAT BOXWOOD SCALES.

Engine Divided, U. S. Standard.

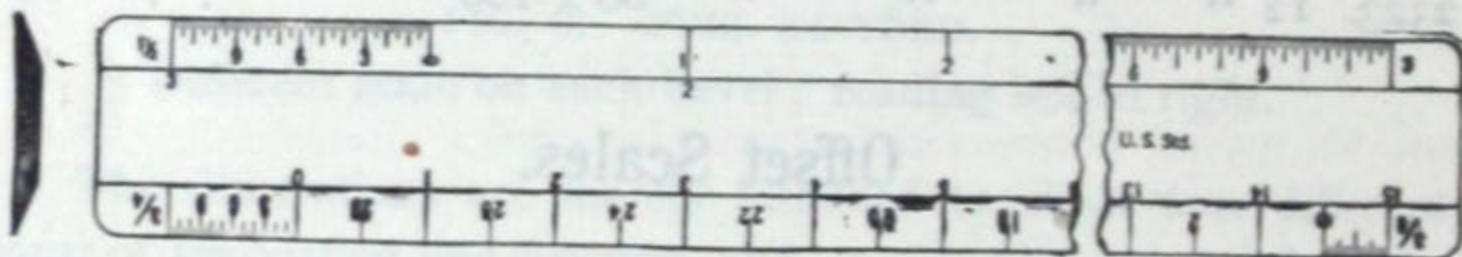


2411

Graduated $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$ and 1 inch to the foot.

2410.	6 - inch Flat Boxwood Scale	\$0.50
2411.	12 " " " " " " . . . . .	.75
2412.	12 $\frac{1}{2}$ " " " " " " . . . . .	.85
2414.	18 " " " " " "	1.50
2415.	24 " " " " " "	2.00

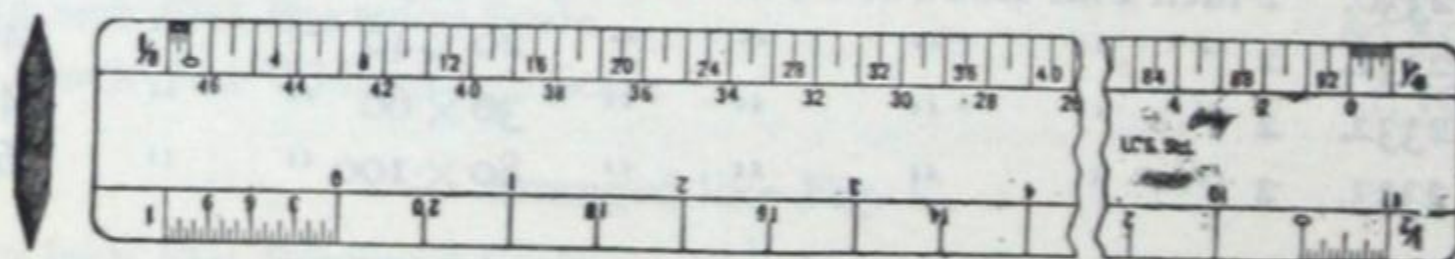
No. 2412 measures 100 feet on $\frac{1}{8}$ -inch scale, 50 feet on $\frac{1}{4}$ -inch scale, 25 feet on $\frac{1}{2}$ -inch scale.



2421

Graduated $\frac{3}{8}$, $\frac{3}{4}$, $1\frac{1}{2}$ and 3 inches to the foot.

2420.	6-inch Flat Boxwood Scale	\$0.50
2421.	12 " " " " " " . . . . .	.75
2422.	18 " " " " " "	1.50
2423.	24 " " " " " "	2.00



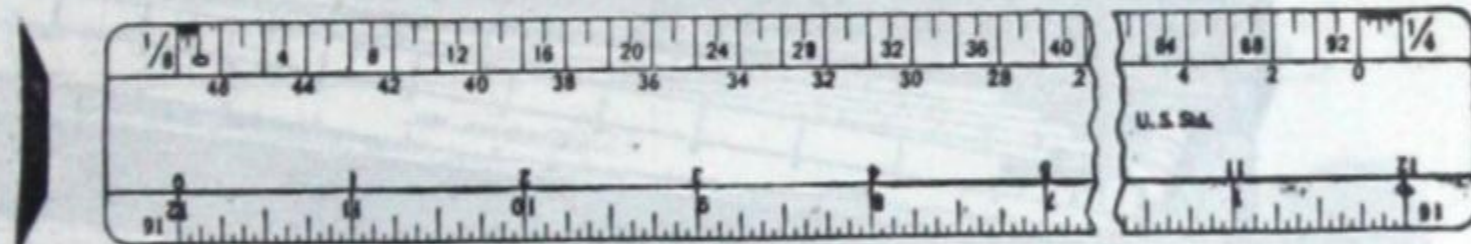
2431

Graduated $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, 1, $\frac{3}{8}$, $\frac{3}{4}$, $1\frac{1}{2}$ and 3 inches to the foot.

2430.	6-inch Double Bevel Boxwood Scale	\$0.80
2431.	12 " " " " " " " "	1.20
2432.	18 " " " " " " " "	2.25
2433.	24 " " " " " " " "	3.00

FLAT BOXWOOD SCALES.

Engine Divided, U. S. Standard.



2442

Miscellaneous Graduations.

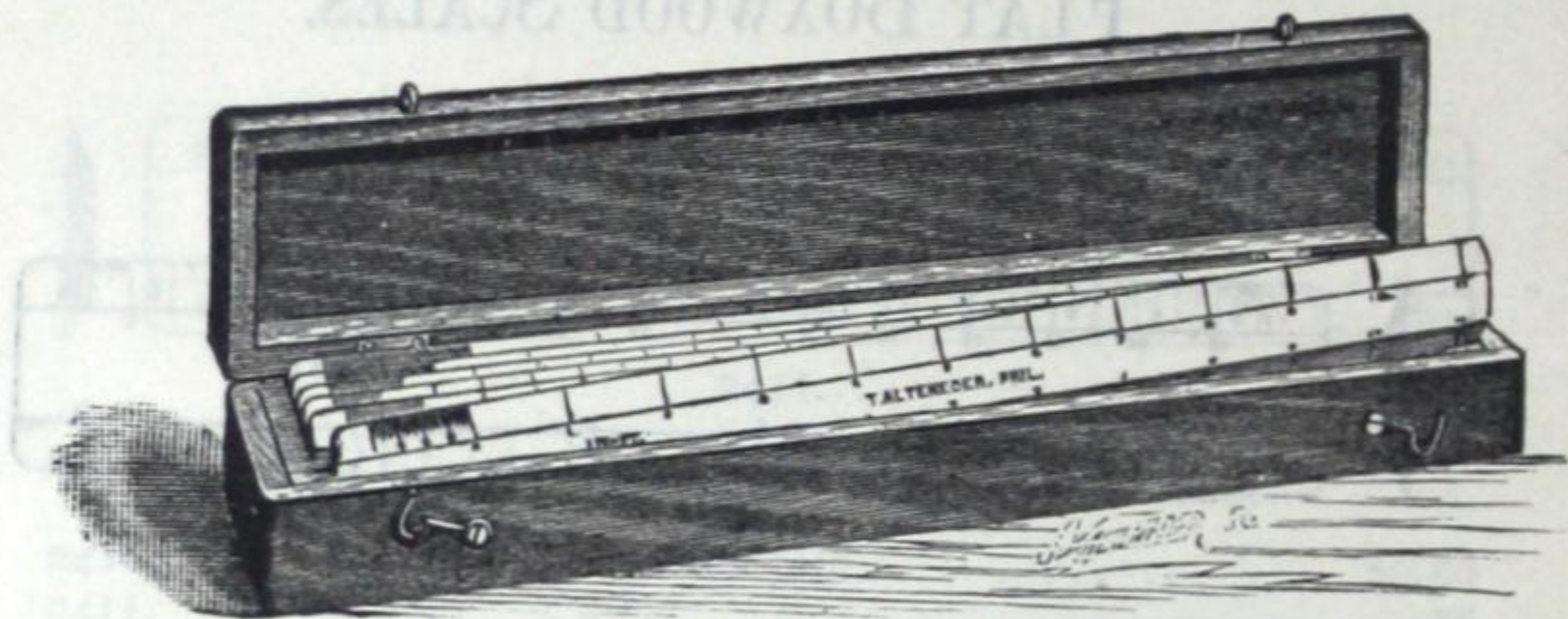
2440.	12-inch,	graduated	$\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$ and $\frac{3}{4}$	. . . . .	\$0.75
2441.	12 "	"	$\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{4}$ and $1\frac{1}{2}$	. . . . .	.75
2442.	12 "	"	$\frac{1}{8}$, $\frac{1}{4}$ and inches Full Size	. . . . .	.75
2443.	12 "	"	$1\frac{1}{2}$, 3 and inches Full Size	. . . . .	.75
2444.	12 "	"	Full Size and Half Size	. . . . .	1.00
2445.	12 "	"	16ths and 32nds Full Size	. . . . .	1.00
2446.	12 "	"	16ths and millimeters	. . . . .	1.00
2447.	12 "	"	10ths and millimeters	. . . . .	1.00

Flat Boxwood Metric Scales.

2450.	10 cm.,	graduated	millimeter and half millimeter	. . . . .	\$0.50
2451.	20 "	"	" " " "	. . . . .	.60
2452.	30 "	"	" " " "	. . . . .	.75
2453.	50 "	"	" " " "	. . . . .	1.50

Nos. 2440 to 2453 are furnished in White Edge Scales at an additional cost of 50 cents, and when desired should be specified thus: "No. 2442, *White Edge*, \$1.25."

FLAT BOXWOOD SCALES IN CASES.



Nos. 2470 and 2471 are arranged like Fig. E, page 84.

- | | | |
|-------|--|--------|
| 2470. | 4 Boxwood Scales, 12-inch. Graduated $\frac{1}{8}$ and $\frac{1}{4}$,
$\frac{3}{8}$ and $\frac{3}{4}$, $\frac{1}{2}$ and 1, $1\frac{1}{2}$ and 3 inches to the foot | \$4.25 |
| 2471. | 6 Boxwood Scales, 12-inch. Graduated $\frac{1}{8}$ and $\frac{1}{4}$,
$\frac{3}{8}$ and $\frac{3}{4}$, $\frac{1}{2}$ and 1, $1\frac{1}{2}$ and 3, 2 and 4, 6 and
12 inches to the foot | 6.00 |

Nos. 2475 and 2476 are graduated like Fig. F, page 84.

- | | | |
|-------|---|-------|
| 2475. | 8 Boxwood Scales, 12-inch. Graduated $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$,
$\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{2}$ and 3 inches to the foot | 7.50 |
| 2476. | 12 Boxwood Scales, 12-inch. Graduated $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$,
$\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{2}$, 2, 3, 4, 6 and 12 inches to the foot | 11.00 |

Nos. 2480 and 2481 have a different scale on each edge, figured to read both ways.

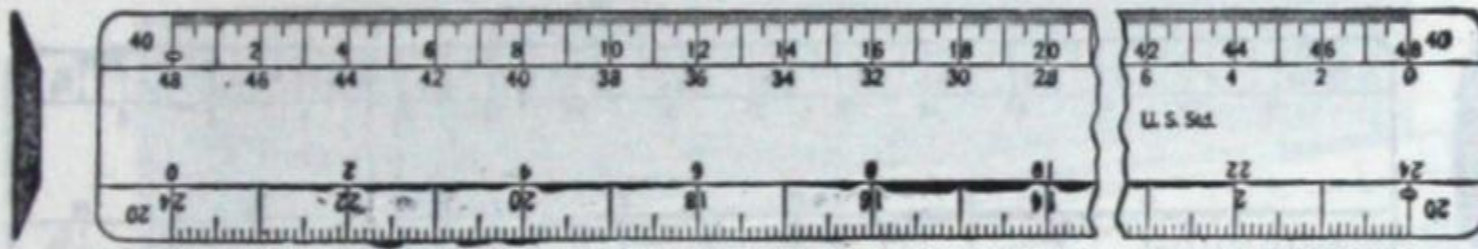
- | | | |
|-------|---|------|
| 2480. | 4 Boxwood Scales, 12-inch. Graduated 10 and 50,
20 and 40, 30 and 60, 80 and 100 parts to the inch | 4.75 |
| 2481. | 8 Boxwood Scales. 4 12-inch, graduated 10 and 50,
20 and 40, 30 and 60, 80 and 100 parts to the inch;
4 2-inch offset scales to match | 7.25 |

Nos. 2485 to 2488 have the same scale on both edges, each edge is figured to read both ways.

- | | | |
|-------|---|-------|
| 2485. | 6 Boxwood Scales, 12-inch. Graduated 10, 20, 30,
40, 50 and 60 parts to the inch | 6.00 |
| 2486. | 12 Boxwood Scales. 6 12-inch, graduated 10, 20,
30, 40, 50 and 60 parts to the inch;
6 2-inch Offset Scales to match | 9.25 |
| 2487. | 8 Boxwood Scales, 12-inch. Graduated 10, 20, 30,
40, 50, 60, 80 and 100 parts to the inch | 8.50 |
| 2488. | 16 Boxwood Scales. 8 12-inch, graduated 10, 20,
30, 40, 50, 60, 80 and 100 parts to the inch;
8 2-inch Offset Scales to match | 13.25 |

FLAT WHITE EDGE SCALES.

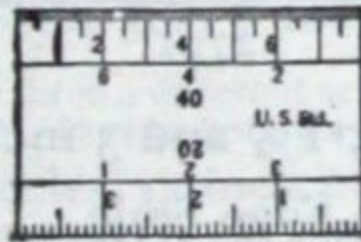
Engine Divided, U. S. Standard.



2621

2610.	6-inch Flat White Edge Scale, 10 × 50 to the inch	\$0.75
2611.	6 " " " " " 20 × 40 " "	.75
2612.	6 " " " " " 30 × 60 " "	.75
2613.	6 " " " " " 80 × 100 " "	1.00
2620.	12-inch Flat White Edge Scale, 10 × 50 to the inch	\$1.25
2621.	12 " " " " " 20 × 40 " "	1.25
2622.	12 " " " " " 30 × 60 " "	1.25
2623.	12 " " " " " 80 × 100 " "	1.75

Offset Scales.



2631

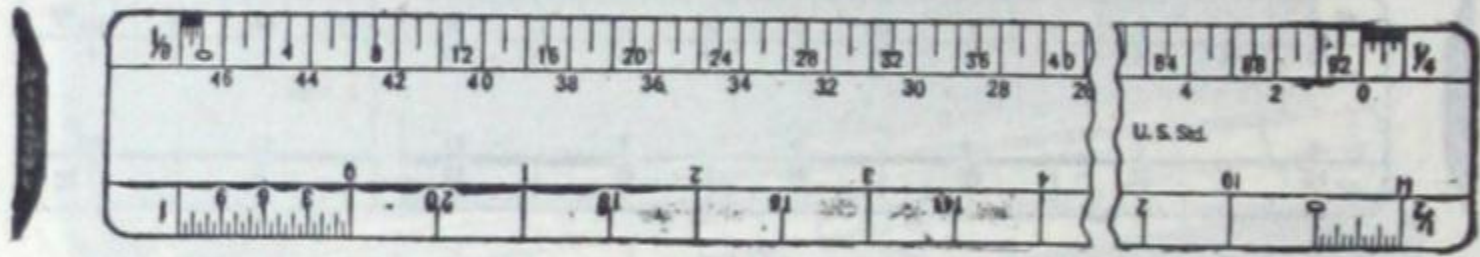
2630.	2-inch Flat White Edge Offset Scale, 10 × 50 to the in.	\$0.70
2631.	2 " " " " " " 20 × 40 " "	.70
2632.	2 " " " " " " 30 × 60 " "	.70
2633.	2 " " " " " " 80 × 100 " "	.90

Foot Divided Decimally.

2640.	12-inch Flat White Edge Scale, 100 × 500 to the foot,	\$1.25
2641.	12 " " " " " 200 × 400 " "	1.25
2642.	12 " " " " " 300 × 600 " "	1.25
2643.	12 " " " " " 800 × 1000 " "	1.75

FLAT WHITE EDGE SCALES.

Engine Divided, U. S. Standard

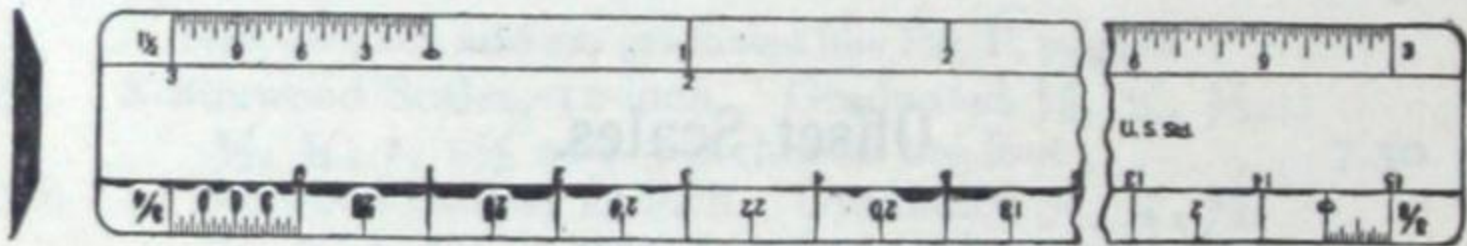


2711

Graduated $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$ and 1 inch to the foot.

2710.	6 - inch Flat White Edge Scale	\$0.75
2711.	12 " " " " " "	1.25
2712.	12 $\frac{1}{2}$ " " " " " "	1.35
2714.	18 " " " " " "	2.25
2715.	24 " " " " " "	3.00

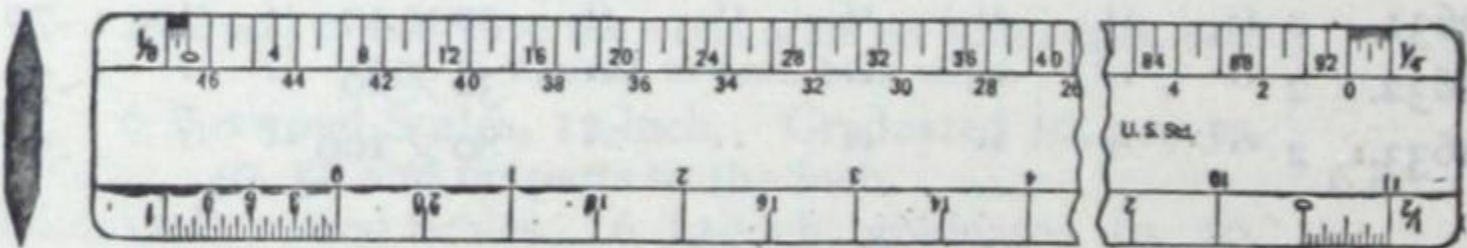
No. 2712 measures 100 feet on $\frac{1}{8}$ -inch scale, 50 feet on $\frac{1}{4}$ -inch scale, 25 feet on $\frac{1}{2}$ -inch scale.



2721

Graduated $\frac{3}{8}$, $\frac{3}{4}$, $1\frac{1}{2}$ and 3 inches to the foot.

2720.	6-inch Flat White Edge Scale	\$0.75
2721.	12 " " " " " "	1.25
2722.	18 " " " " " "	2.25
2723.	24 " " " " " "	3.00

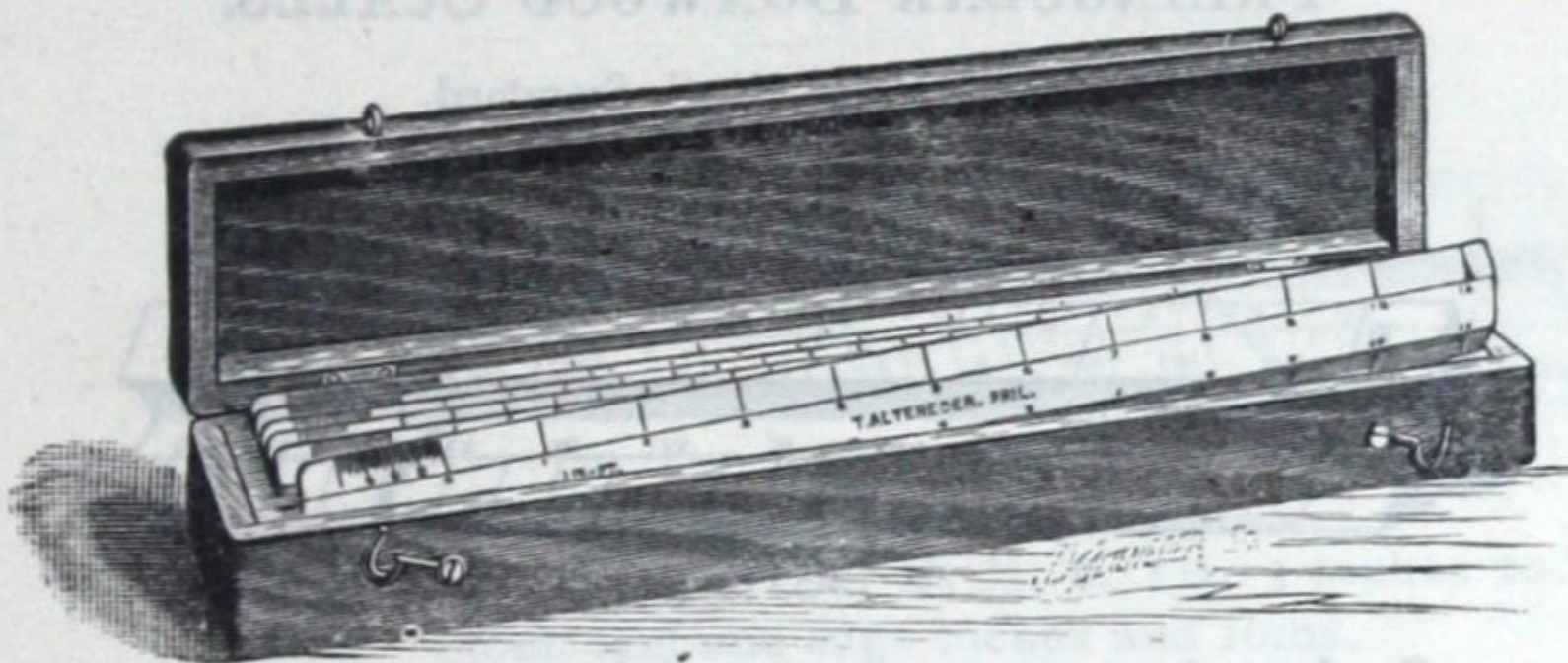


2731

Graduated $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, 1, $\frac{3}{8}$, $\frac{3}{4}$, $1\frac{1}{2}$ and 3 inches to the foot.

2730.	6-inch Double Bevel White Edge Scale	\$1.35
2731.	12 " " " " " "	2.00
2732.	18 " " " " " "	3.50
2733.	24 " " " " " "	4.75

FLAT WHITE EDGE SCALES IN CASES.



Nos. 2770 and 2771 are arranged like Fig. E, page 84.

- 2770. 4 White Edge Scales, 12-inch. Graduated $\frac{1}{8}$ and $\frac{1}{4}$, $\frac{3}{8}$ and $\frac{3}{4}$, $\frac{1}{2}$ and 1, $1\frac{1}{2}$ and 3 inches to the foot \$6.25
- 2771. 6 White Edge Scales, 12-inch. Graduated $\frac{1}{8}$ and $\frac{1}{4}$, $\frac{3}{8}$ and $\frac{3}{4}$, $\frac{1}{2}$ and 1, $1\frac{1}{2}$ and 3, 2 and 4, 6 and 12 inches to the foot 9.00

Nos. 2775 and 2776 are graduated like Fig. F, page 84.

- 2775. 8 White Edge Scales, 12-inch. Graduated $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{2}$ and 3 inches to the foot 11.50
- 2776. 12 White Edge Scales, 12-inch. Graduated $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{2}$, 2, 3, 4, 6 and 12 inches to the foot 17.00

Nos. 2780 and 2781 have a different scale on each edge, figured to read both ways.

- 2780. 4 White Edge Scales, 12-inch. Graduated 10 and 50, 20 and 40, 30 and 60, 80 and 100 parts to the inch 6.75
- 2781. 8 White Edge Scales. 4 12-inch, graduated 10 and 50, 20 and 40, 30 and 60, 80 and 100 parts to the inch; 4 2-inch offset scales to match 10.50

Nos. 2785 to 2788 have the same scale on both edges, each edge is figured to read both ways.

- 2785. 6 White Edge Scales, 12-inch. Graduated 10, 20, 30, 40, 50 and 60 parts to the inch 9.00
- 2786. 12 White Edge Scales. 6 12-inch, graduated 10, 20, 30, 40, 50 and 60 parts to the inch ; 6 2-inch Offset Scales to match 14.00
- 2787. 8 White Edge Scales, 12-inch. Graduated 10, 20, 30, 40, 50, 60, 80 and 100 parts to the inch 12.50
- 2788. 16 White Edge Scales. 8 12-inch, graduated 10, 20, 30, 40, 50, 60, 80 and 100 parts to the inch ; 8 2-inch Offset Scales to match 19.50

TRIANGULAR BOXWOOD SCALES.

Engine Divided, U. S. Standard.



2511

Graduated 10, 20, 30, 40, 50 and 60 parts to the inch.

2510.	6-inch Triangular Boxwood Scale	\$0.75
2511.	12 " " " " " "	1.00
2512.	18 " " " " " "	2.50
2513.	24 " " " " " "	4.25

Graduated 20, 30, 40, 50, 60 and 80 parts to the inch.

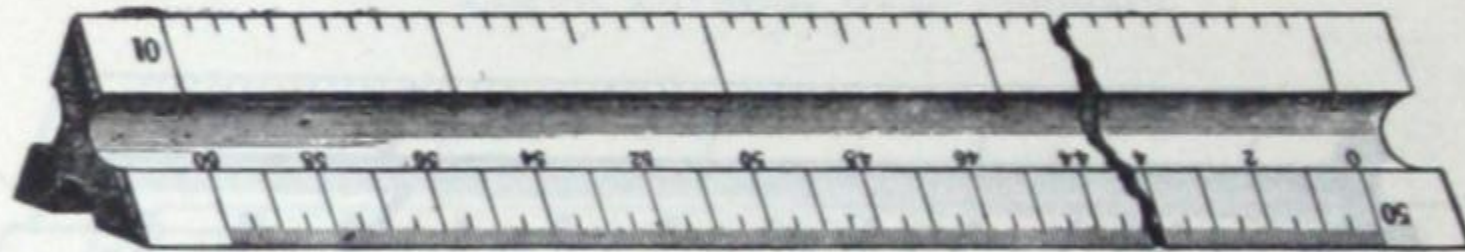
2515.	6-inch Triangular Boxwood Scale	\$0.75
2516.	12 " " " " " "	1.00
2517.	18 " " " " " "	2.50
2518.	24 " " " " " "	4.50
2519.	12-inch Triangular Boxwood Scale, graduated 100, 200, 300, 400, 500 and 600 parts to the foot . .	\$1.50
2523.	2-inch Triangular Boxwood Offset Scale, to match 2510 to 2513	\$0.60

Triangular Boxwood Metric Scales.

2525.	20 cm., graduated to mm. and half mm.	\$1.25
2526.	30 " " " " " "	1.50
2527.	50 " " " " " "	2.75

TRIANGULAR WHITE EDGE SCALES.

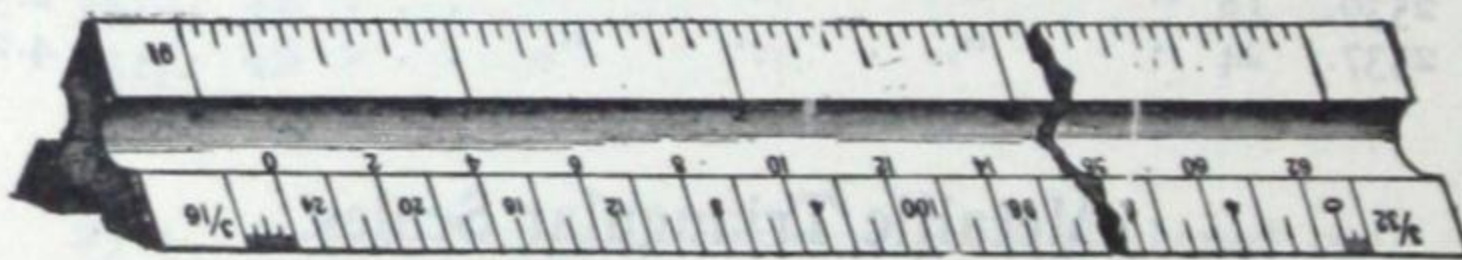
Engine Divided, U. S. Standard.



2811

Graduated 10, 20, 30, 40, 50 and 60 parts to the inch.

2810.	6-inch Triangular White Edge Scale	\$1.50
2811.	12 " " " " " "	2.50
2812.	18 " " " " " "	4.50
2813.	24 " " " " " "	6.50
2816.	12-inch Triangular White Edge Scale. Graduated 20, 30, 40, 50, 60 and 80 parts to the inch . . .	2.50
2819.	12-inch Triangular White Edge Scale. Graduated 100, 200, 300, 400, 500 and 600 parts to the foot	2.50
2823.	2-inch Triangular White Edge Offset Scale, to match Nos. 2810 to 2813	1.20



2831

Graduated $\frac{3}{32}$, $\frac{3}{16}$, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{3}{4}$, $\frac{1}{2}$, 1, $1\frac{1}{2}$ and 3 inches to the foot, and one edge inches and 16ths.

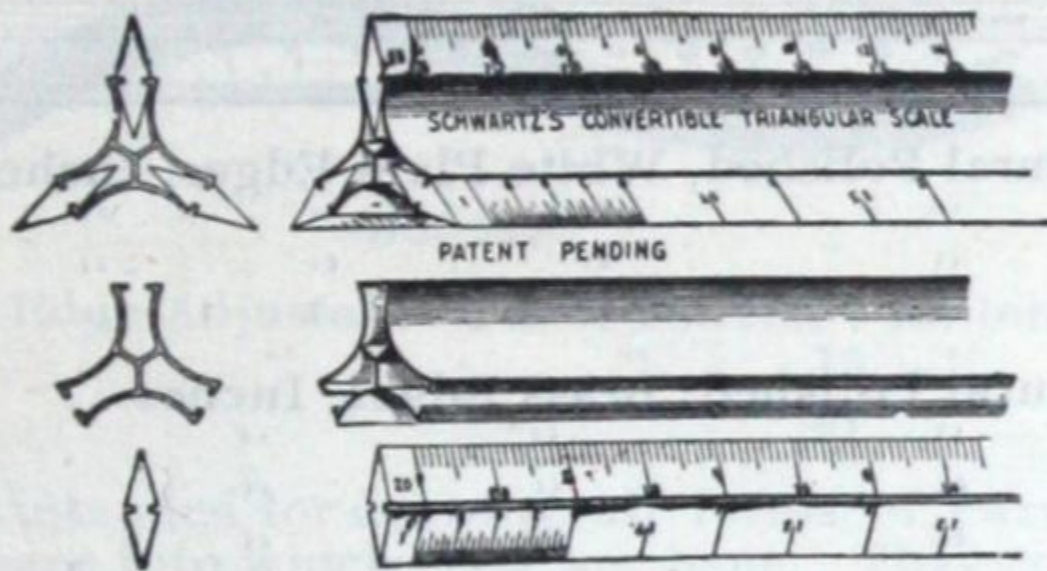
2830.	6-inch Triangular White Edge Scale	\$1.50
2831.	12 " " " " " "	2.50
2832.	18 " " " " " "	4.50
2833.	24 " " " " " "	6.50

Graduated $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{3}{4}$, $\frac{1}{2}$, 1, $1\frac{1}{2}$, 2, 3 and 4 inches to the foot, and one edge inches and 16ths.

2835.	12-inch Triangular White Edge Scale	\$2.50
2836.	18 " " " " " "	4.50
2837.	24 " " " " " "	6.50

SCHWARTZ'S CONVERTIBLE TRIANGULAR SCALE

And Holders



	6 inch	12 inch	18 inch	24 inch
Boxwood Scales, Holder of Brass, Nickel Plated	each, \$1.55	\$1.80	\$4.45	\$7.10
White Edge Scales, Holder of Brass, Nickel Plated	" 4.30	5.80	10.95	14.10
Brass Holder, Nickel Plated	" 1.00	2.00	3.00	4.00
German Silver Holder	" 1.00	2.00	3.00	4.00
Aluminum Holder	" 1.50	2.50	4.00	5.00
Scales with Six White Edges, Six Box- wood Edges, Brass Holder	" 2.95	3.85	7.70	10.60

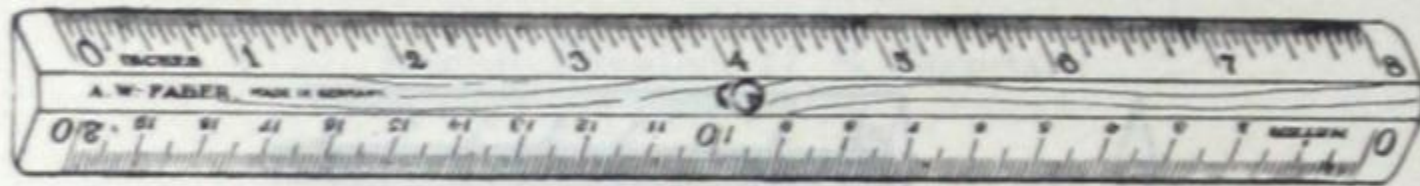
The Architect or Engineer having use for a more diversified number of divisions than ordinary triangular scales afford, will find relief in Schwartz's Convertible Triangular Scale, which can be had:

1. With a combined set of Architect and Engineer divisions
2. All Architect or all Engineer divisions
3. Plain boxwood edges
4. White edges
5. Six boxwood and six white edges; so that a boxwood scale is readily convertible into a white edge scale
6. In all sizes

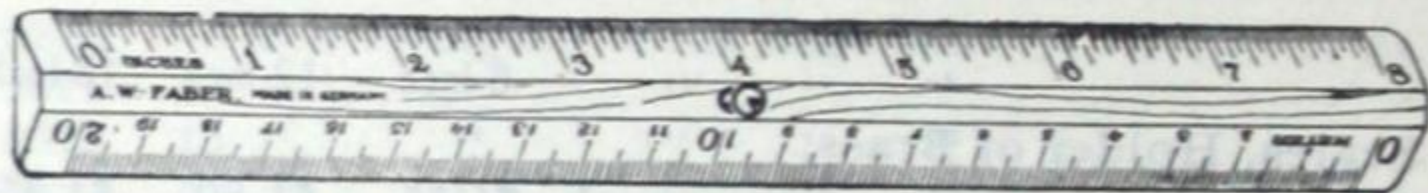
Its construction makes the Architect Scale convertible into an Engineer Scale, and vice versa; gives an excellent angle of vision, perfect contact with the drawing, protects the divided surfaces from wear by friction, avoids the necessity of raising edge from drawing, which causes unsteadiness due to lack of contact, and frequent errors

A. W. FABER'S TRIANGULAR SCALES

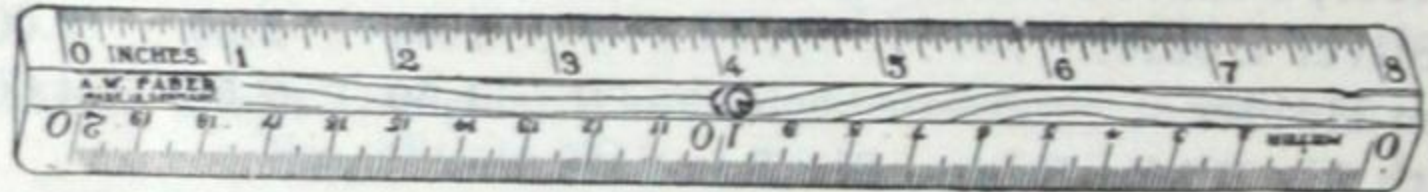
Divided Into Inches or Inches and Centimeters



700.	8 inch, Natural Polished, White Plain Edges, Inches	each, .25
	12 " " " " " "	" .40
	15 " " " " " "	" .45
	18 " " " " " "	" .50
710.	8 inch, Natural Polished, Brass Edges, Inches	each, .40
	12 " " " " " "	" .60
	15 " " " " " "	" .65
	18 " " " " " "	" .70

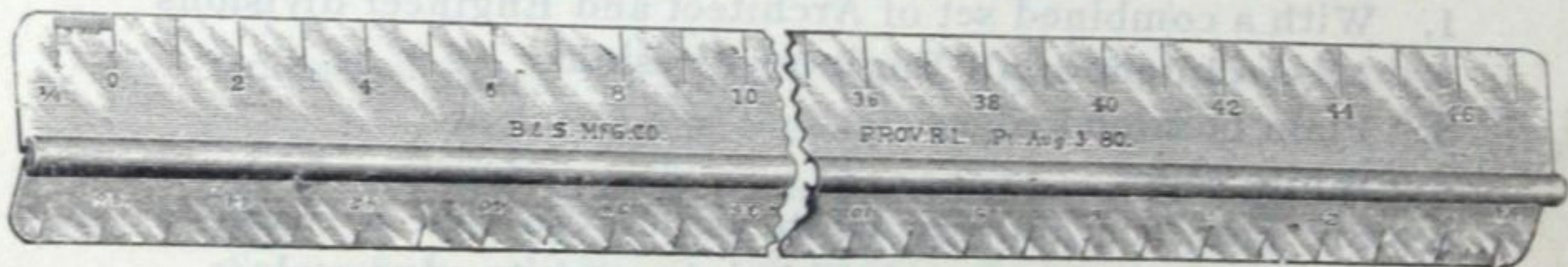


730.	8 inch, Natural Polished, Plain Edges, Inches	each, .30
	12 " " " " " "	" .45
	15 " " " " " "	" .50
	18 " " " " " "	" .55



760.	8 in., Natural Polished, Plain Edges, Inches and Meters	each, .35
	12 " " " " " "	" .50
	15 " " " " " "	" .55
	18 " " " " " "	" .60

IMPROVED NICKEL PLATED STEEL SCALE

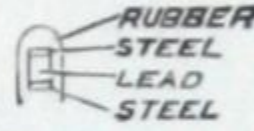


6 inch, Improved Scale for Draughtsmen	each, \$1.00	12 inch, \$1.25
6 inch, Special Scales made to order	each, 2.00	12 inch, 2.50

Twenty-one different graduations for Architects' Scales
 Twenty-nine different graduations for Engineers' Scales
 Each Scale has one kind of graduation on both sides; or a different one on each side, saving the constant care and loss of time required to avoid using the wrong graduation, where there are many on the same scale. A very convenient form. Weighs only 2½ ounces

ADJUSTABLE CURVE RULERS

Double Edge



NO. 8830

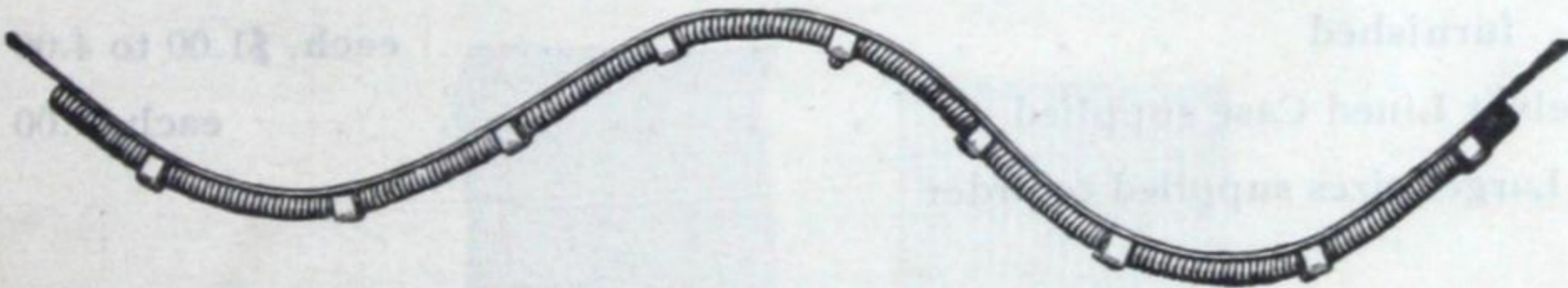
No. 8830.	Double Edge Adjustable Curve Rulers,	7 in. long	each, .45
8831.	" " " "	15 "	" .90
8832.	" " " "	31 "	" 1.70

These rulers are intended for drawing all forms of curved lines, and will retain the shape into which they are bent. They consist of thick, black rubber with a removable lead core, protected on both sides by steel ribbons. Of the two ruling edges one is square and the other rounded

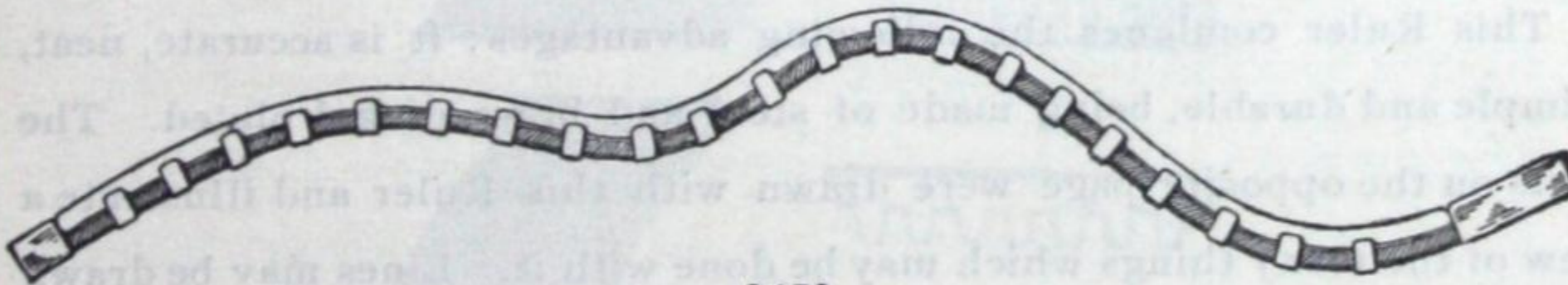
PATENT ADJUSTABLE CURVE RULERS



2175



2176

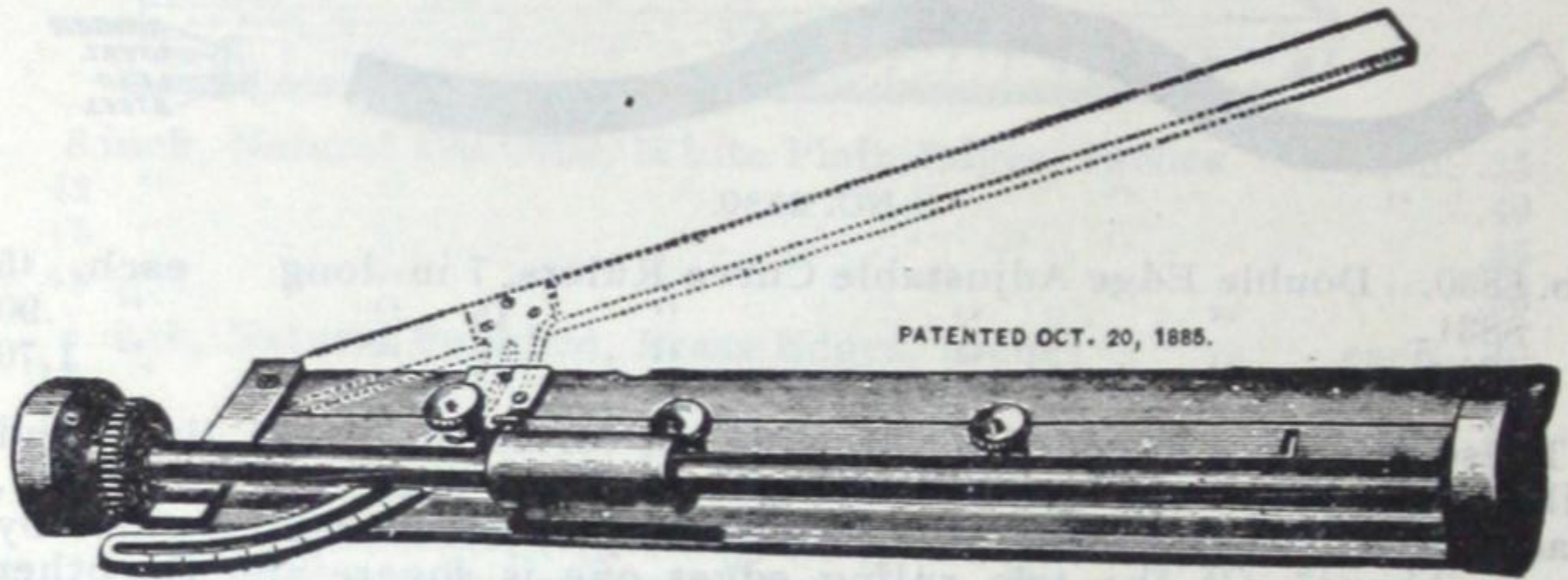


2178

No. 2175.	Curve Ruler,	14½ in. long	each, \$2.25
2176.	"	30 "	" 3.30
2177.	"	12 " cheaper construction	" 1.00
2178.	"	24 " " "	" 1.75

These rulers consist of a ruling edge of rubber (in Nos. 2175, 2177, 2178) or steel (in No. 2176) in combination with a bar of soft lead. They will hold any curve into which they are bent

THE "UNIVERSAL" RULER AND SECTION LINER



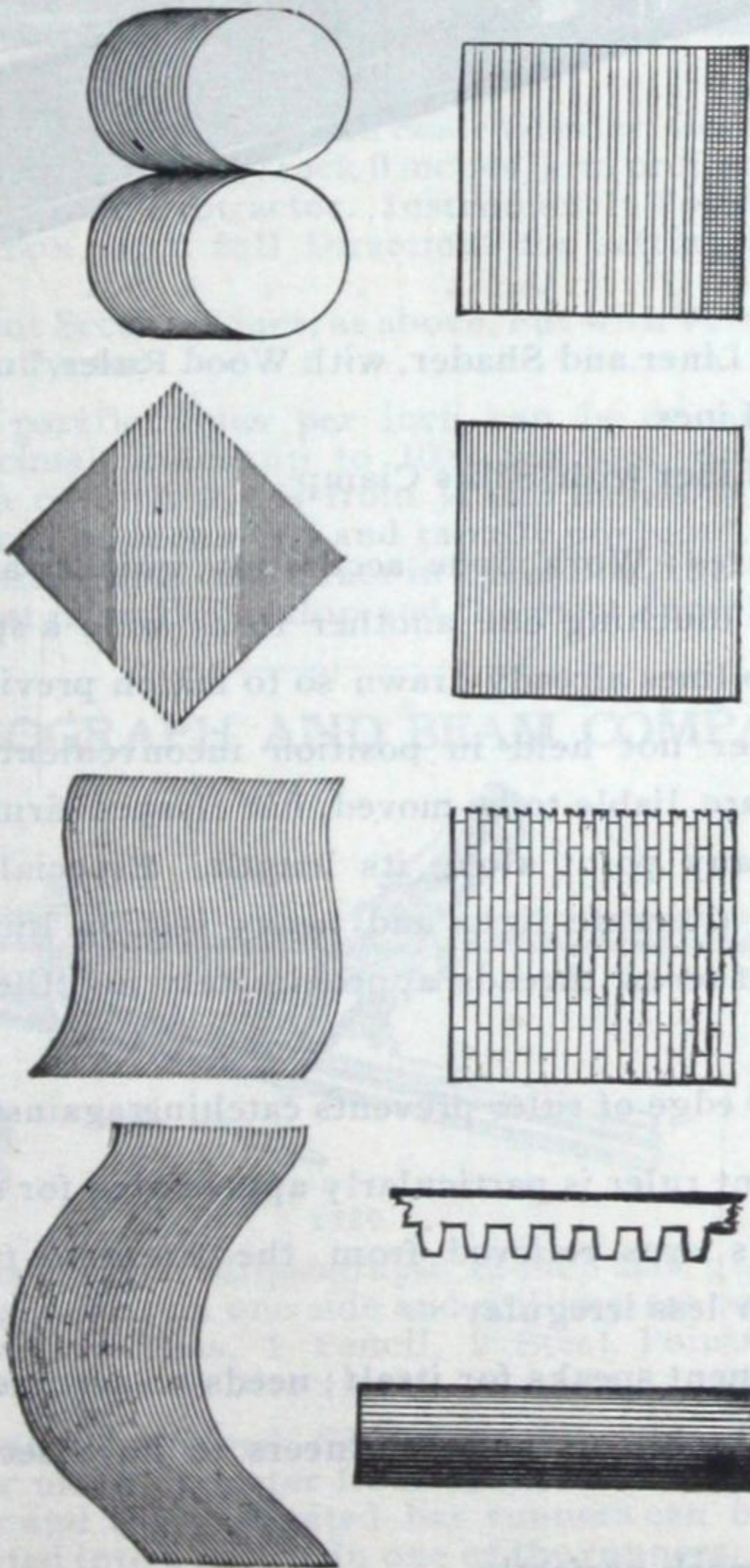
6 inch Ruler, without centre point	. . . . .	each, \$4.50
8½ inch Ruler	. . . . .	" 5.00
Nickel Plated Straight Edge of any length up to 3 feet, furnished	. . . . .	each, \$1.00 to 4.00
Velvet Lined Case supplied	. . . . .	each, 1.00
Larger sizes supplied to order		

This Ruler combines the following advantages: it is accurate, neat, simple and durable, being made of steel and brass nickel plated. The cuts on the opposite page were drawn with this Ruler and illustrate a few of the many things which may be done with it. Lines may be drawn in any direction and at any distance apart, from one-hundredth of an inch to any distance desired.

This instrument may be used without the spacing device, for parallel ruling, shading cylinders, etc., by simply turning the screw near the ratchet towards the right.

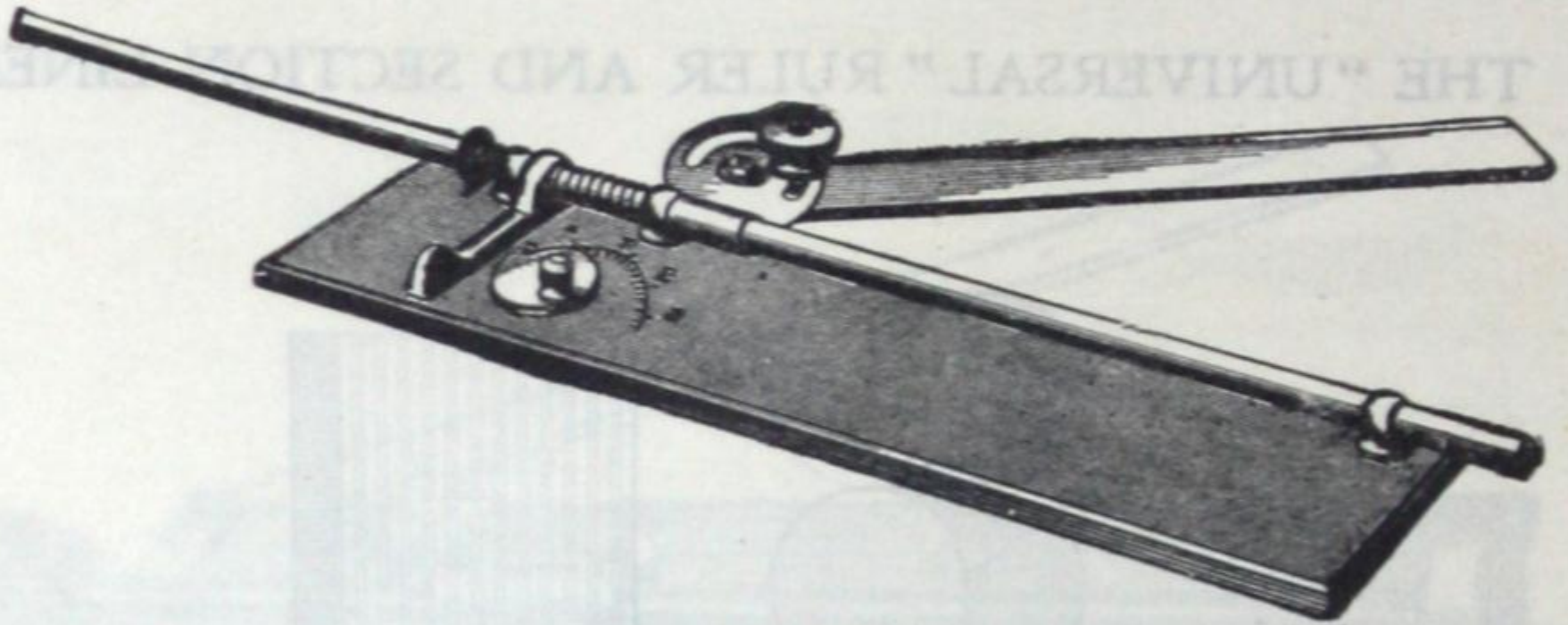
SAMPLES OF WORK DONE BY

THE "UNIVERSAL" RULER AND SECTION LINER



Larger Rulers made to order

WEBER SECTION LINER WITH HILL'S CLAMP



Sphinx Section Liner and Shader, with Wood Ruler, 7 in. long each	\$1.50
Weber Section Liner	2.00
Weber Section Liner with Hill's Clamp	4.00

Special Features: Work done accurately, quickly and easily; adjustment from lines touching one another to as wide a spacing as desired; easy to adjust to lines already drawn so to match previous section lining

A section liner not held in position inconveniently, loosely or by weights which are liable to be moved, but clasped firmly to the blade of a tee square at any point along its length. Especially convenient for double line and alternate light and heavy section lining, as well as for drawing the V of screw threads approximately and the spacing lines for lettering

Beveled under edge of ruler prevents catching against thumb tacks

The transparent ruler is particularly appreciated for section lining

Draughtsmen's eyes relieved from the tiresome free-hand spacing which is more or less irregular

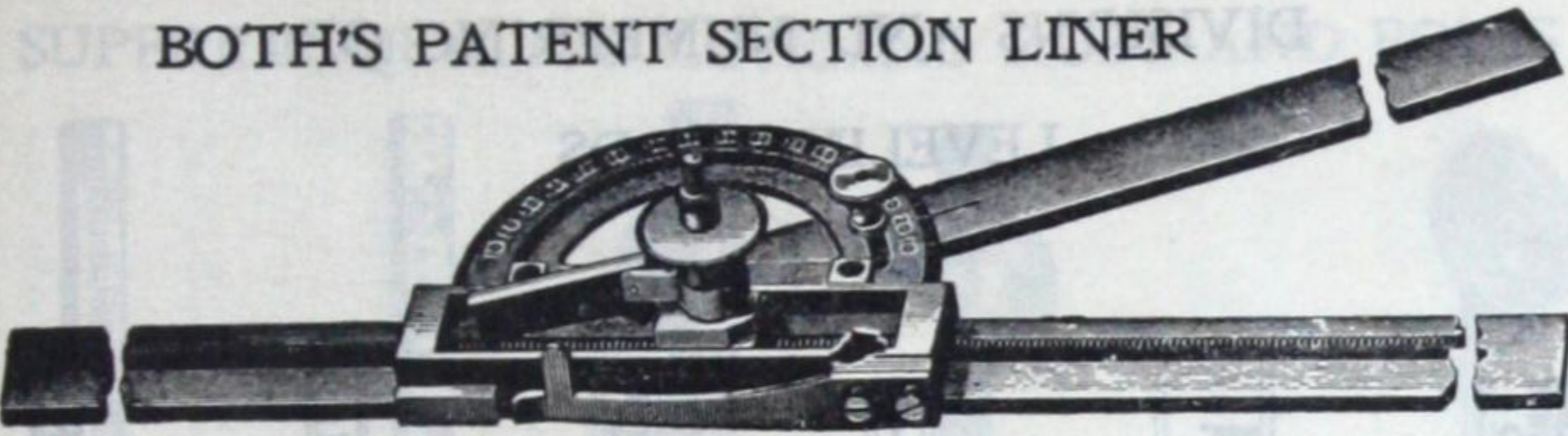
A good instrument speaks for itself; needs no argument

Economy for Architects and Engineers to have section lining done quickly

Warranted to work perfectly

Longer Rulers made to order

BOTH'S PATENT SECTION LINER

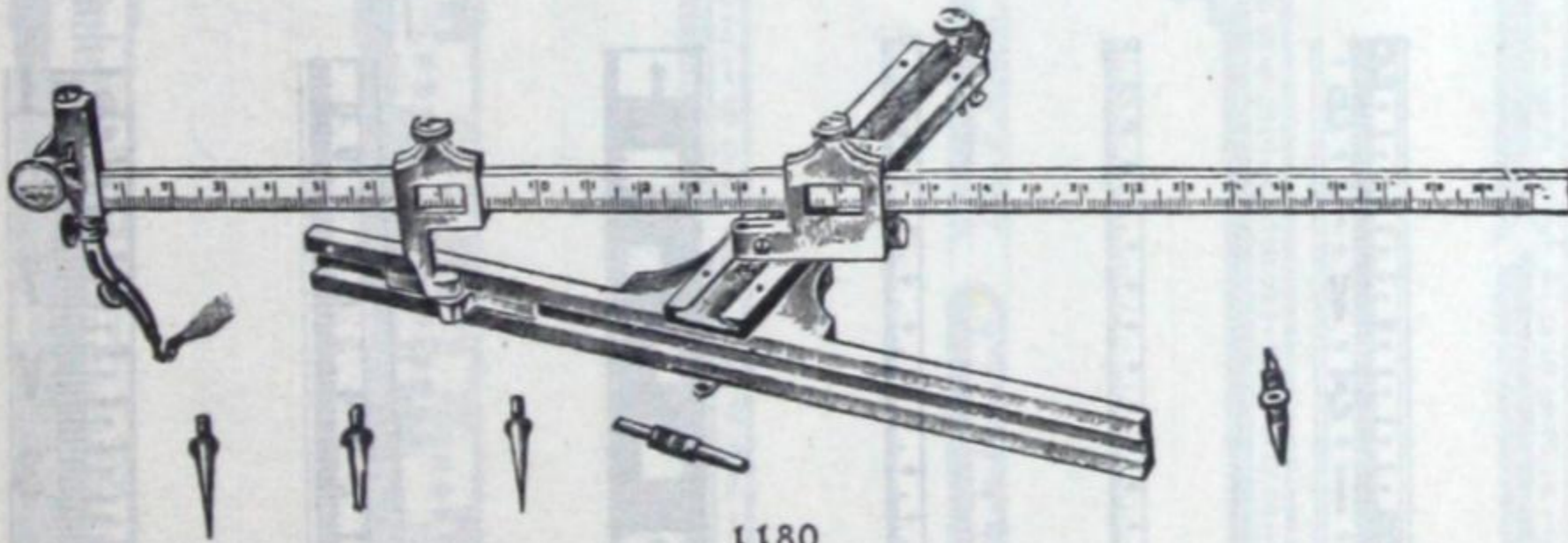


1159

1159. Both's Patent Section Liner and Scale Divider, German Silver, base $14\frac{3}{4}$ inches, rack 9 inches, arm projecting 10 inches beyond Protractor. Instrument in Polished Wooden Box, with full Directions for setting and using each, \$12.00
1160. Both's Patent Section Liner, as above, but with Vernier to the Protractor " 13.00

From 4 to 200 parallel lines per inch can be drawn. When set to proper angle, decimal scales up to 1000 per foot, duodecimal scales up to 100 per inch or inch scales from $\frac{1}{8}$ to 3 inches to the foot, in fact any desired scale can be accurately and rapidly produced. The easiest to manipulate, the most rapid and exact in execution, the simplest in construction, the finest in workmanship and the most durable known

ELLIPSOGRAPH AND BEAM COMPASSES



1180

1180. Fine German Silver Ellipsograph, 12-inch Bar, graduated 32ds inches on one side and millimeters on the other, with 2 Pens, 1 Pencil, 3 Steel Points, in Morocco Case, with Directions each, \$25.00

The best and most improved Ellipsograph made. It draws ellipses of any shape of a major diameter from $\frac{1}{2}$ inch up to 22 inches with the greatest accuracy and the graduated bar runners can be removed and a needlepoint inserted into a socket in one of the runners, forming a light, strong Beam Compass. The Ellipsograph can be taken apart and stored compactly in Case

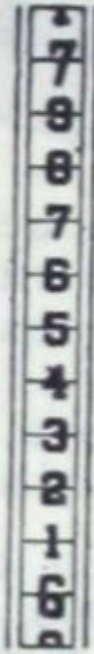
DIVISIONS AND NUMBERING OF LEVELING RODS



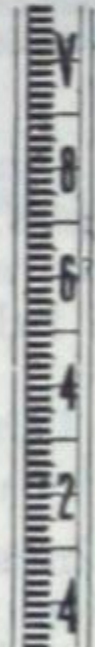
6250.



6251.



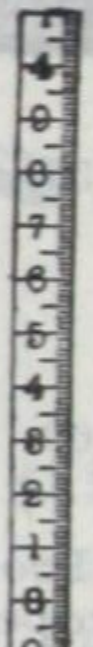
6254 & 5.
6260 & 1.
6267 & 8.



6256 & 7.
6263 & 3.



6269.
6264.



6270
6271.



6274.



6276,
6277.



6280.



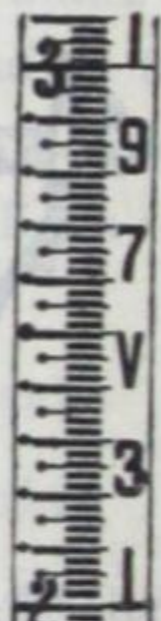
6281.



6284.
6285.



6288.



6290.
6292.

Copyright, 1904, by Kendall & Sons Co.

For description and prices see pages 555 and 556

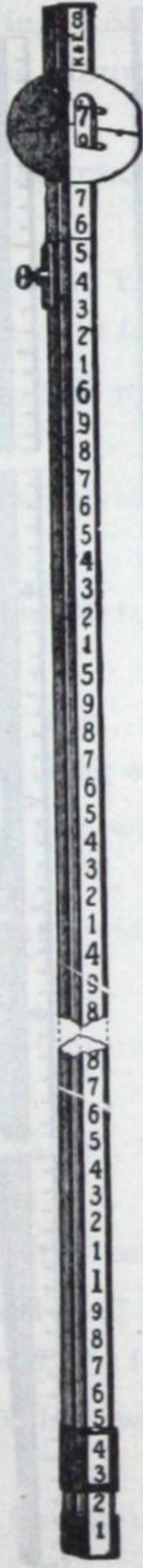
SUPERIOR QUALITY LEVELING RODS AND POLES



6250



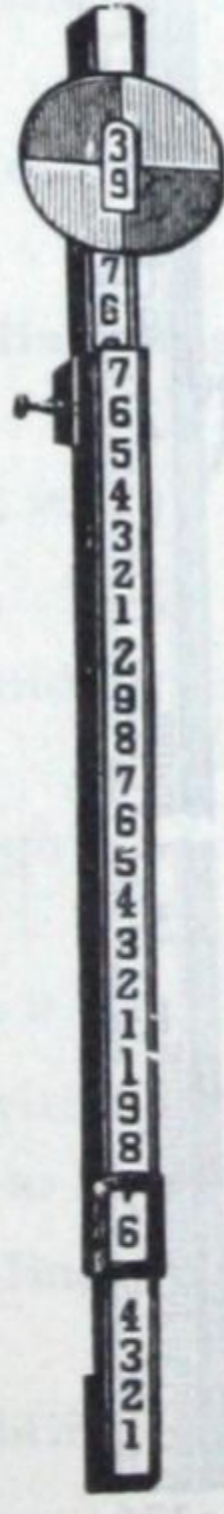
6251



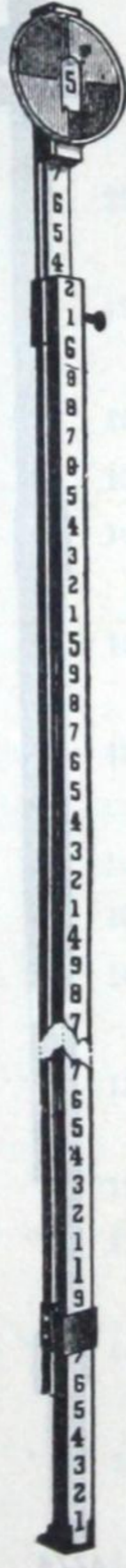
6255



6260



6267



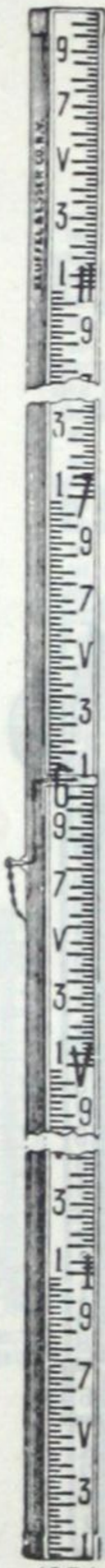
6270

For description and prices see pages 555 and 556

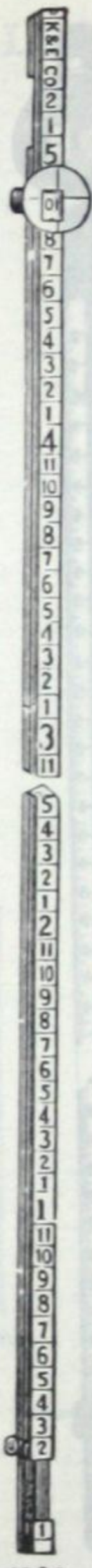
Leveling Rods and Poles — continued



6274



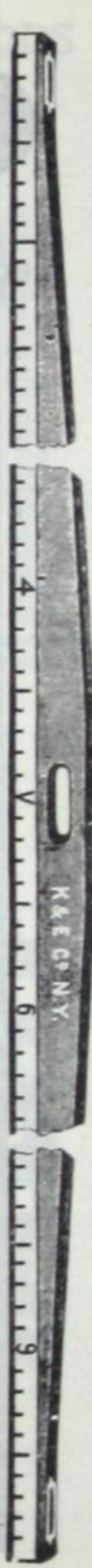
6276



6280



6285



6288



6290



6292



6293

For description and prices see pages 555 and 556

LEVELING RODS

6250.	English Self-Reading Rod, Telescoping, Mahogany, with strong Brass Mountings, 5 feet long, sliding out to 14 feet	each, \$22.50
6251.	The same as 6250, Metric, 1.5 meter, sliding out to 4 meters	" 22.50
6254.	Philadelphia Rod, with Target, Vernier and Clamp, 7 feet, sliding out to 12 feet	" 15.00
6255.	The same as 6254, but with Patent Rolling Angle Target	" 16.00
6256.	The same as 6254, but divided in $\frac{1}{10}$ and $\frac{1}{100}$ foot	" 15.00
6257.	" " 6255, " " $\frac{1}{10}$ and $\frac{1}{100}$ "	" 16.00
6258.	" " 6254, but Metric, 2.2 meters, sliding out to 4 meters	" 15.00
6260.	Light Philadelphia Rod, with Target, Vernier and Clamp, $6\frac{1}{2}$ feet, sliding out to 12 feet	" 13.00
6261.	The same as 6260, but with Patent Rolling Angle Target	" 14.00
6262.	The same as 6260, but divided in $\frac{1}{10}$ and $\frac{1}{100}$ feet	" 13.00
6263.	" " 6261, " " $\frac{1}{10}$ and $\frac{1}{100}$ "	" 14.00
6264.	" " 6260, but Metric, 2 meters, sliding out to 3.7 meters	" 13.00
6267.	Mining Rod, with Target, Vernier and Clamp, 3 feet, sliding out to 5 feet	" 12.00
6268.	The same as 6267, but 5 feet, sliding out to 9 feet	" 12.75
6270.	New York Rod, Hardwood of Light color, with Target, Vernier and Clamp, $6\frac{1}{2}$ feet, sliding out to 12 feet	" 14.00
6271.	The same as 6270, but with Patent Rolling Angle Target	" 15.00
6272.	The same as 6270, but Metric, 2 meters, sliding out to 3.7 meters	" 14.00

For illustrations see pages 552, 553 and 554

Leveling Rods — continued

- | | | |
|-------|---|---------------|
| 6274. | Boston Rod, Mahogany, Machine Divided on Satin-wood, with Target, Veriner at each end, 6½ ft. sliding out to 11 ft. | each, \$14.00 |
| 6276. | Telemeter Rod, Self-reading, Folding, with Strong Bronze Hinge, 12 feet, folding to 6 feet | “ 12.00 |
| 6277. | The same as 6276 14 feet folding to 7 feet | “ 13.50 |
| 6280. | Architects' Rod, Light Colored Hardwood, Brass Mounted, with Target, Vernier and Clamp, Divided to inches and ⅛, 5½ feet sliding out to 10 feet | “ 6.00 |
| 6281. | The same as 6280, Divided in ⅒ and ⅒⁰⁰ feet | “ 6.00 |
| 6284. | Florida Rod, (in one piece) 10 feet, Hardwood | “ 8.00 |
| 6285. | Florida Rod, 12 feet, Hardwood | “ 10.00 |
| 6288. | Cross Section Rod, 10 feet, Divided on both sides, in ⅒ and ⅒⁰⁰ ft., Pinewood, 2 Level Bubbles, opening for the hand | “ 10.00 |
- For illustrations see pages 552, 553 and 554**

RANGING POLES

- | | | | | |
|-------|--|--------------|--------------|---------------|
| 6290. | Iron Tubular Ranging Poles, ⅞ inch diameter, Painted red and white alternately every foot, 6 feet | each, \$2.75 | 8 ft. \$3.00 | 10 ft, \$3.50 |
| 6292. | Ranging Poles of best Seasoned Wood, Round, Tapered, Painted red and white alternately every foot, 6 feet | each, \$2.00 | 8 ft. \$2.25 | 10 ft. \$2.50 |
| 6293. | Ranging Poles of best Seasoned Wood, Octagon, Tapered, Painted red and white alternately every foot, 6 feet | each, \$2.00 | 8 ft. \$2.25 | 10 ft. \$2.50 |
| 6294. | Ranging Poles, Metric, of best Seasoned Wood, Octagon, Tapered, Painted red and white alternately every half meter, 2 met. each, \$2.50 2½ met. \$3.00 3 met. \$3.75 | | | |

FLEXIBLE OR POCKET LEVELING RODS

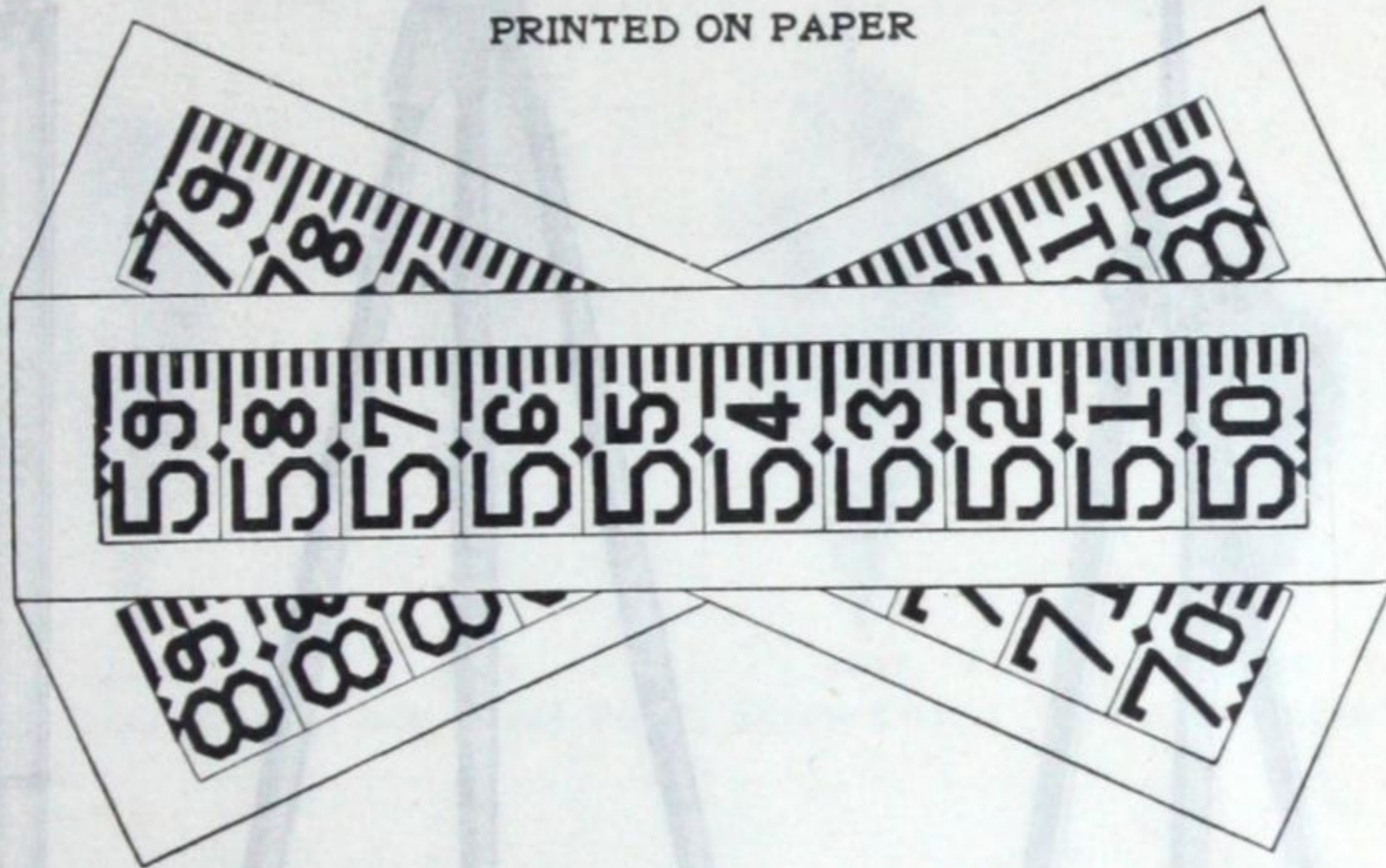


- | | | |
|-------|---|--------------|
| 6330. | Flexible or Pocket Leveling Rod, 8 ft., Div. in ⅒ and ⅒⁰⁰ ft. | each, \$3.00 |
| 6331. | “ “ 10 “ “ “ “ | “ 3.25 |
| 6332. | “ “ 12 “ “ “ “ | “ 4.00 |
| 6335. | “ “ 12 ft. Div. in. and ⅛ in. | “ 4.00 |
| 6340. | “ “ metric, 3.5 metre, | |
| | Div. to centimeter | “ 4.00 |

These Rods are strips of prepared canvas, 3 in. wide, divided like self-reading rods. For use they are fastened to a straight board with thumb tacks. When rolled up they are easily carried in the pocket

FROST & ADAMS CO'S
 NEW SELF READING LEVELING ROD

PRINTED ON PAPER



Self Reading Leveling Rod (Set of 12) per set, \$1.25

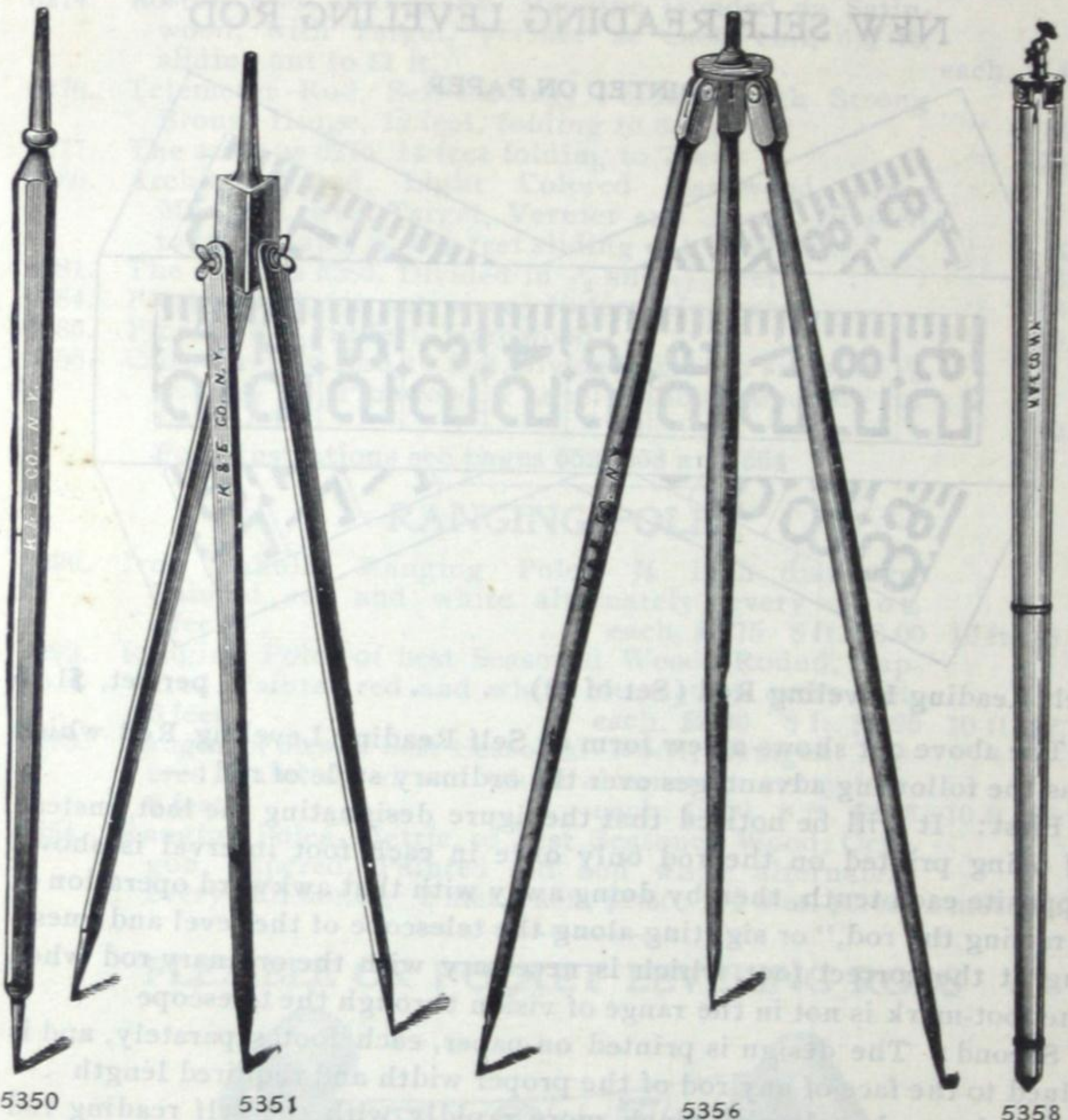
The above cut shows a new form of Self Reading Leveling Rod which has the following advantages over the ordinary style of rod:—

First: It will be noticed that the figure designating the foot, instead of being printed on the rod only once in each foot interval is shown opposite each tenth, thereby doing away with that awkward operation of "raising the rod," or sighting along the telescope of the level and guessing at the correct foot, which is necessary with the ordinary rod when the foot-mark is not in the range of vision through the telescope

Second: The design is printed on paper, each foot separately, and is glued to the face of any rod of the proper width and required length

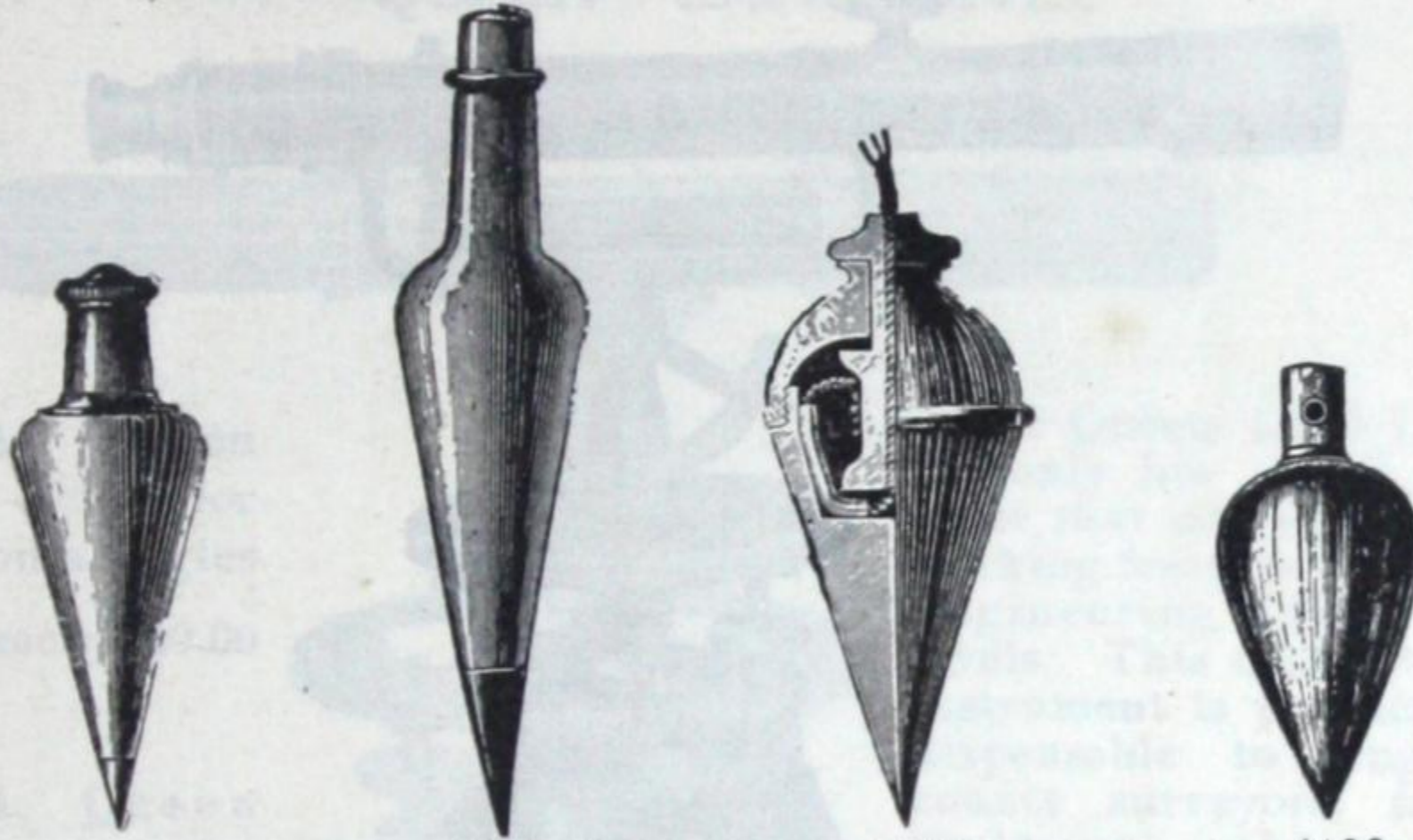
Levels can be taken so much more rapidly with the self reading rod than with the target rod that were it not for the awkwardness of transportation, probably the former would be used for nearly every purpose except precise leveling. This difficulty is overcome by obtaining the rod in the locality of the work (any two-inch strip of wood of the proper length will serve the purpose) and attaching the printed slips, which can be done in a few moments. A coat of varnish will make it as durable as a stenciled rod and the whole operation may be performed in one tenth of the time necessary to stencil an ordinary rod, at a very small proportion of the cost of the cheapest rod now on the market

JACOB STAFFS AND TRIPODS



- 5350. Jacob Staff, 54 inch Hardwood, Iron Shoe each, \$1.00
- 5351. Tripod, Hardwood, with Jacob Staff Head, light, for
Compasses No. 5320 to 5338 " 3.00
- 5356. Tripod, Hardwood, with Staff Head Brass Top, for
Compasses No. 5300 to 5338 " 5.00
- 5358. Tripod, Polished Mahogany, round, Cane Pattern, Ball
Joint with Socket, Metal Screw Cap for top, for No.
5330, 5331 and Prismatic Compasses No. 5400 and
5420 to 5429 " 12.50

BRASS PLUMB BOBS

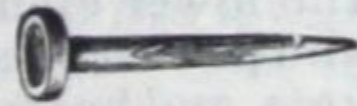


	6480	6483	6487	6488	
6480.	Brass Plumb Bob, Steel Point, Screw Cap,			6 ounce	each, \$1.50
6481.	" " " " " "			8 " "	" 1.75
6482.	" " " " " "			12 " "	" 2.00
6483.	" " " " " "			14 " "	" 2.25
	with Long Neck				" 2.25
6484.	The same as 6483			24 ounce	" 3.25
6485.	" " 6483			32 " "	" 3.75
6486.	" " 6483			48 " "	" 5.00
6487.	Brass Plumb Bob, with Concealed Reel, on which the line is wound and held by friction at any point of its length				" 2.50
6488.	Iron Plumb Bob			7 ounce	" .75
6489.	Common Brass Plumb Bob, Steel Point,			8½ " "	" 1.00
6490.	" " " " " "			11½ " "	" 1.20
6491.	" " " " " "				" .25

PLUMB BOB CORD

6496.	Plumb Bob Cord, Best Linen, thin medium or thick	per yard, .03
6497.	" " Best Braided Silk	" .06

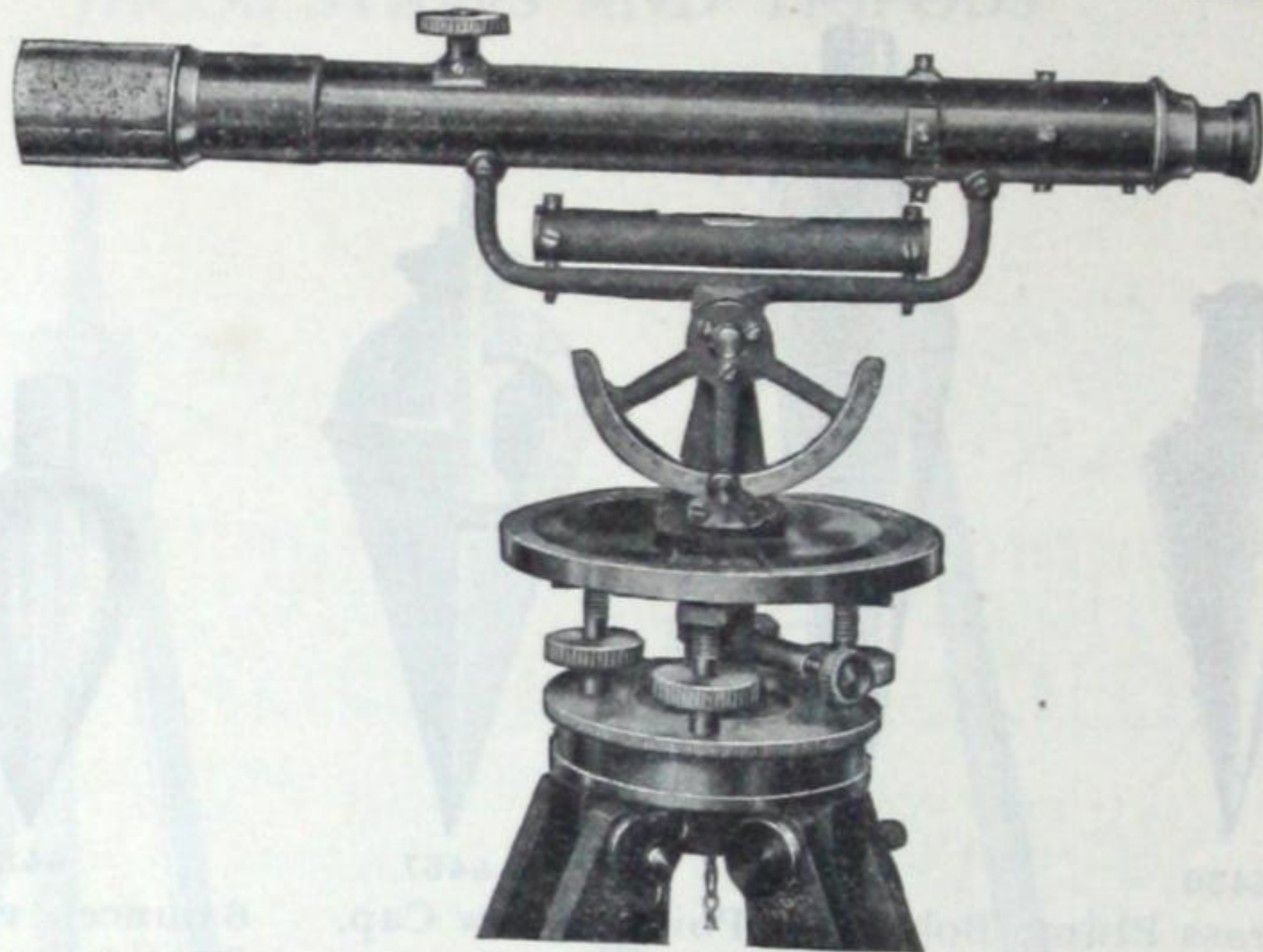
STAKE TACKS



6494.	Stake Tacks, Galvanized, tin box of 50	per box, .10
6495.	" " " tin box of 100	" .20

These Tacks have an indentation in the surface of the head to guide the point of the Plumb Bob in exactly indicating position

THE YANKEE — A COMPOUND LEVEL



The Yankee Level complete with Tripod, Carrying Case,
Plumb Rod and Sunshade, guaranteed \$40.00

For simple leveling and laying off horizontal and vertical angles, where speed and ease, or manipulation rather than precision is to be attained. As an auxiliary to the Engineer's transit for side parties, or estimate and similar work to the builder, mason, millwright, landscape gardener and architect indispensable. Ideal for preliminary surveying; farm surveying, street and road work, laying a ditch, pipe drainage, running sewer, water mains; the highest type of an inexpensive transit obtainable.

Workmanship and materials throughout are the best. Moderate cost was attained by eliminating complicated and costly features, and retaining all elementary principles.

A ten-inch erecting telescope of 12 diameter power, with ground and graduated level attached, is held by a swivel, forming the horizontal axis, around which the vertical arc of $1\frac{1}{2}$ " radius revolves. This arc is divided to single degrees and read by an index line placed on the standards. A rigid double standard carries the upper element, and between this and the vertical center a $3\frac{1}{2}$ " diameter plate is held, upon which the vernier is engraved, giving a reading of five minutes on horizontal angles.

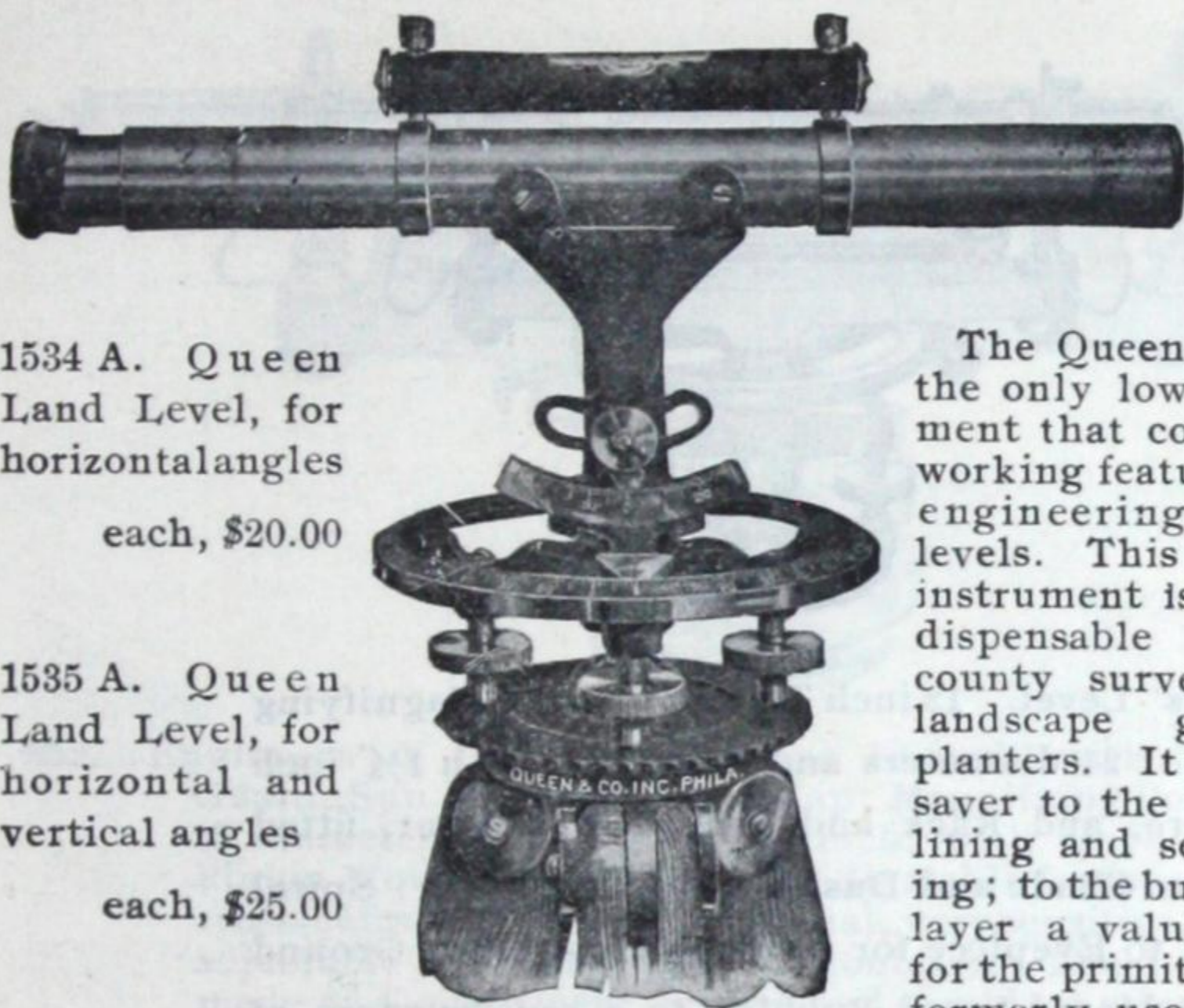
The horizontal circle is cast solid with leveling head, four leveling screws, shifting centre, large diameter foot plate, and a substantial, yet graceful tripod head, form the lower elements.

The Yankee is a New England product designed and now manufactured by experienced instrument makers, and has passed all "experimental stages."

EXCELLENT FEATURES OF THE YANKEE

"The lightest instrument made with as many provisions; the simplest instrument for the same number of uses; the best made instrument for such moderate cost; the vernier on a circular plate saves the circle from springing elliptical in case the instrument falls; the only instrument where the plate levels are saved by quickly employing the telescope level."

"QUEEN" LAND LEVEL



1535 A

1534 A. Queen
Land Level, for
horizontal angles
each, \$20.00

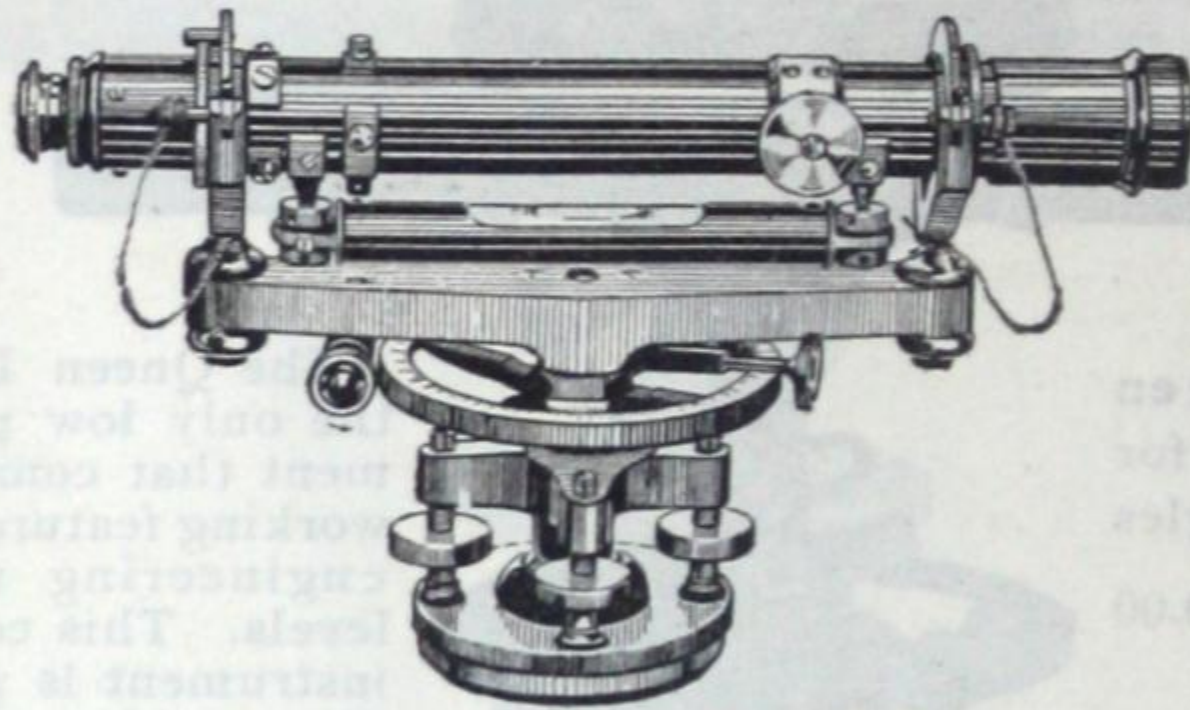
1535 A. Queen
Land Level, for
horizontal and
vertical angles
each, \$25.00

The Queen Land Level is the only low priced instrument that combines all the working features of the finer engineering transits and levels. This complete little instrument is practically indispensable to engineers, county surveyors, farmers, landscape gardeners and planters. It is a great labor saver to the wheelwright in lining and setting up shafting; to the builder and bricklayer a valuable substitute for the primitive level board formerly used in setting up foundations, floors, sills, and

running grades. It is also excellent for the scholar, illustrating the elementary principles of engineering and surveying. It can be used for angulation, level lines, grading streets, sewers and drains

The construction is extremely simple, having as few parts as possible, and combines compactness and efficiency so that anybody can at once work it successfully and without special explanations. The Telescope is $8\frac{1}{2}$ inches long, having achromatic objectives, with magnifying power 10 times. The Eye-piece has four lenses, showing objects in their natural position. The cross wires are fixed in the Telescope so that there is no danger of their losing the adjustment. The level is mounted on top of the Telescope and is provided with adjusting screws. The Telescope and Level are securely mounted on a swivel bearing, which permits of an elevation or inclination of the Telescope 25 degrees from the level line, and can be clamped in any position. The leveling frame is provided with four leveling screws whose lower ends are ball jointed. The centre is cast of one piece with the leveling plate, and its outer edge levelled and graduated into degrees. The socket is carefully fitted to the centre of the leveling frame, and is also provided with a clamp screw. The arc is cast on this socket and graduated into degrees. The lower end of the leveling plate has a half ball which connects the tripod plate to the upper part, as in the case of regular transits and levels. The instrument is screwed to a substantial tripod and is packed in a wooden carrying case, making it exceedingly portable

F. & A. CO.'S ARCHITECTS' LEVEL

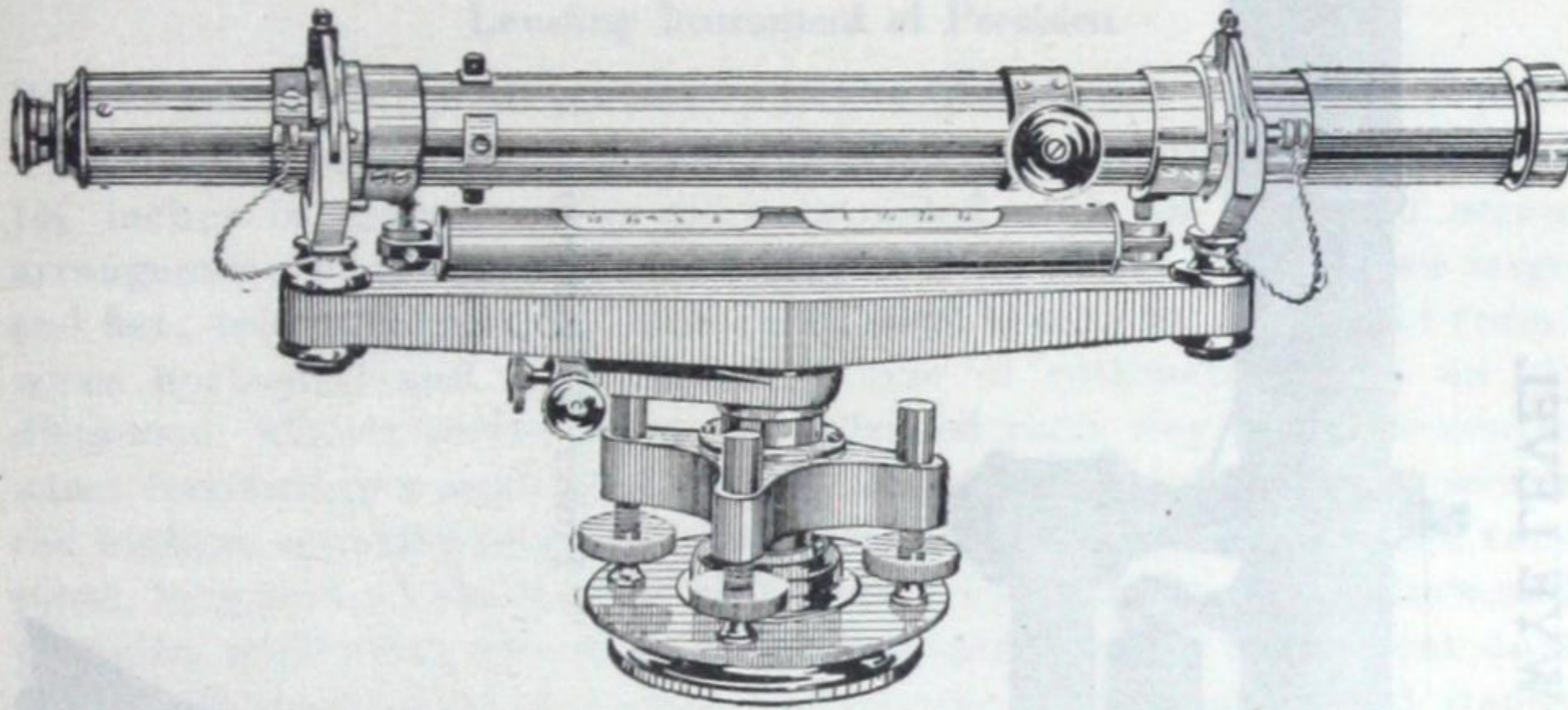


650. Architects' Level. 12 inch Telescope with Magnifying Power of 24 diameters and Objective with $1\frac{1}{8}$ inch Aperture, and Rack and Pinion Movement, fitted with Sun Shade and Dust Cap to Telescope. Spiral Motion to Eyepiece for focusing cross hairs, Ground and Graduated Level Bubbles to a sensitiveness of about 60 seconds. Horizontal Circle divided to degrees and reading by Vernier attached to spindle to five minutes. This Circle reversible for setting it to zero at any point. Instrument complete in Handsome Mahogany Finished Box with Plumb Bob, Metal Trivet (for Foundation work), and Adjusting Pins, Hardwood Tripod each, \$45.00

651. Architects' Level with Improved Clamp and Tangent Screw each, \$50.00

This instrument is especially designed for Architects and Contractors and may be used in Leveling Walls, Laying out Angles, Street and Building Work, Setting Line Shafts, and in fact doing all work requiring precision leveling. The Lenses are of the best. These instruments are constructed throughout of the best Phosphor-Bronze and Bell Metal.

F. & A. CO.'S ENGINEERS' Y LEVEL

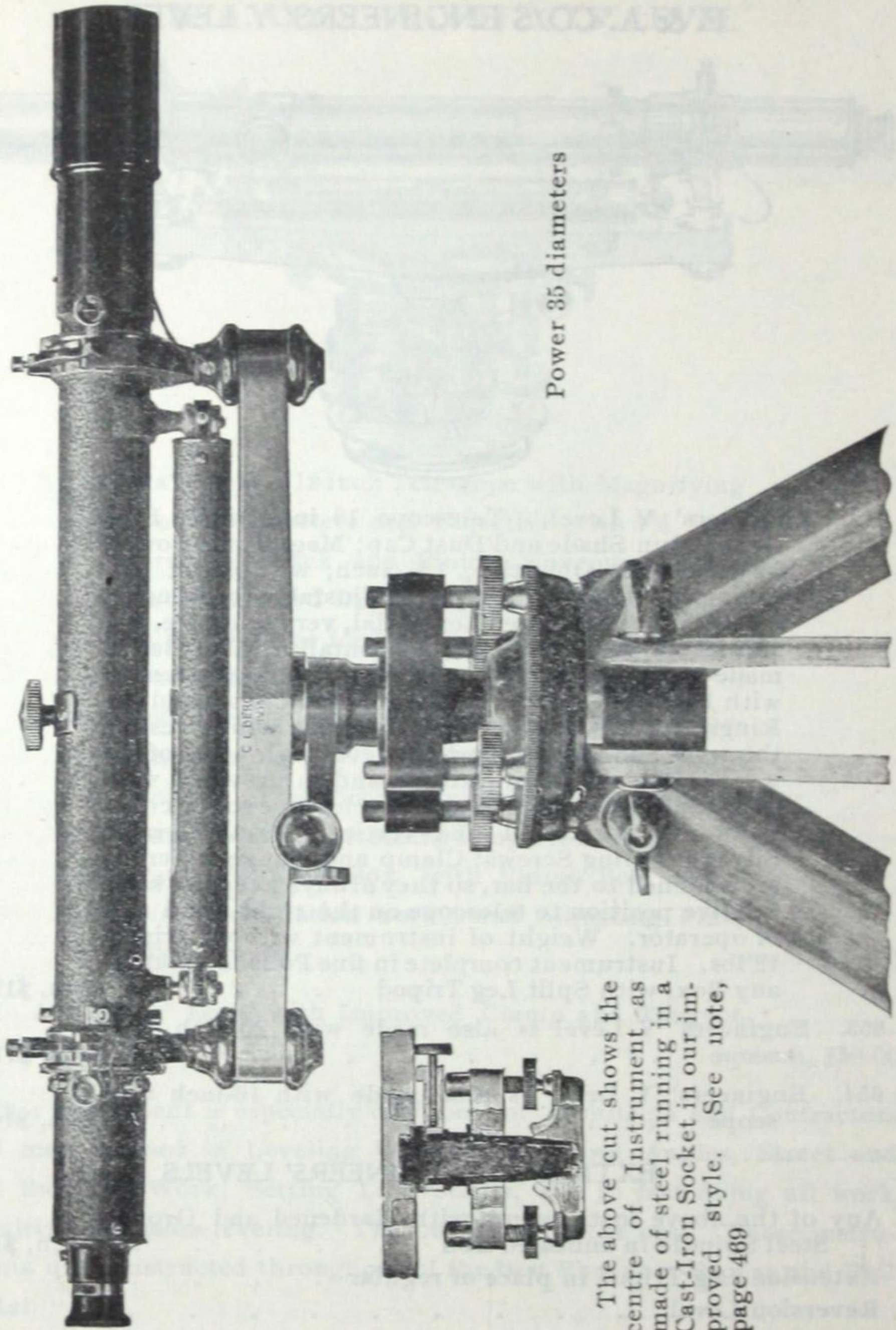


652. Engineers' Y Level. Telescope 18 inch, with Dust Guard, Sun Shade and Dust Cap; Magnifying Power, 35 diameters; Objective, $1\frac{3}{8}$ inch, with Rack and Pinion Movements; Eyepiece adjustable for focusing cross-hairs; Graduated Level Vial, very sensitive, and adjustable vertically and horizontally. The Bar is made of Government Bronze and combines strength with lightness; it has a Long Rigid Center and the Rings of Telescope are of Bell Metal, which rest in the wyes and also support the level vial. One of the wyes is adjustable for altitude and is provided with adjustable stop for placing the telescope so the cross-hairs are horizontal and vertical. Four German Silver Leveling Screws; Clamp and Tangent Screws are attached to the Bar, so they always keep the same relative position to telescope on the right hand side of operator. Weight of instrument without tripod, 12 lbs. Instrument complete in fine Polished Mahogany Box, with Split Leg Tripod each, \$110.00
653. Engineers' Y Level is also made with 20-inch telescope each, \$115.00
654. Engineers' Y Level is also made with 16-inch telescope each, \$100.00

EXTRAS TO ENGINEERS' LEVELS

- Any of the above instruments with Hardened and Ground Steel Spindle in annealed iron each, \$10.00
- Extension Leg Tripod in place of regular " 5.00
- Reversion Level " 10.00

BERGHER'S ENGINEERS' 18 INCH WYE LEVEL



Power 35 diameters

The above cut shows the centre of Instrument as made of steel running in a Cast-Iron Socket in our improved style. See note, page 469

BERGHER'S ENGINEERS' 18 INCH WYE LEVEL

Leveling Instrument of Precision

Wye Level, 18 inch with protection to the Object-slide each, \$140.00

Eighteen or seventeen inch powerful telescope; aperture of object-glass $1\frac{3}{8}$ inches in diameter; eye-piece provided with an improved screw arrangement for the accurate focussing of cross-wires; field of view large and flat; telescope provided with an adjustable stop to readily set cross-wires horizontal and perpendicular; line of collimation true on all distances; objects erect; telescope balanced each way from the centre when focussed to a mean distance with sun-shade attached to it to secure the highest accuracy attainable; telescope rings and the centre are very stout, long and of the hardest bell-metal; cross-bar is cast hollow and provided with ribs; 8 inch very sensitive spirit level; instrument does not detach from tripod above leveling screws; it packs whole and stands in the case erect. Mahogany Case, provided with straps and hooks, contains Sun-shade, Wrench, Screw Driver and an Adjusting Pin

Weight of Instrument 11 pounds, weight of Tripod from 7 to $7\frac{1}{2}$ pounds, gross weight of Instrument, packed securely for shipment, in 2 boxes, about 48 pounds

Telescope and Level Tube will be cloth-finished, unless ordered to the contrary, when an extra charge of \$5.00 will be made. However, we strongly advise the cloth-finish

BERGHER'S NO. 2 ENGINEERS' 14 INCH WYE LEVEL

No. 2, Engineers' Wye Level, including a protection to the
 Object Slide each, \$130.00
 Centre of Instrument made of Steel, and hardened, and run-
 ning in a Socket of Cast Iron, improved style † " 15.00

No. 2. The essential features of this instrument are like those enumerated above, and shown in cut of 18 inch Engineers' Wye Level with the exception of size and weight. It is designed to be used in cases where a lighter instrument is desirable. It is provided with a 14 inch telescope which has an aperture of $1\frac{1}{4}$ inches in diameter and a power of 27 diameter; 6 inch sensitive spirit level; steel centre; four leveling screws

Weight of instrument, 9 pounds; weight of tripod, from $6\frac{1}{2}$ to $7\frac{1}{2}$ pounds, gross weight of instrument, packed securely for shipment, in 2 boxes, about 40 pounds

EXTRAS TO BERGHER'S ENGINEERS' WYE LEVEL

Centre of Instrument made of Steel, and hardened, and running in a socket of cast iron, improved style ‡	each, \$15.00
Stadia Wires, fixed	" 3.00
Short Focus Lens, one pair	" 16.00
Metal Mirror with Universal Joint. This is readily attachable to the instrument and facilitates the reading of the bubble on soft ground without stepping aside	" 10.00
Extra Sun-shade with smaller aperture, for use with the telescope when the sun's rays are too bright for accurate work	" 1.50
Instrument provided with 3 Leveling Screws*	" 18.00
Gossamer Water Proof Bag, for protection from rain or dust	" 1.00
Bottle of fine Watch Oil, to lubricate the level centre	" .20

* Four leveling screws commend themselves in the ordinary class of instruments for the greater rapidity with which an instrument can be leveled up approximately and that (no matter how much the leveling screw may be worn) when brought to a true bearing on the lower leveling plate, all such looseness is taken up

‡ Steel Centres. — Although the centres of our Wye Levels, which are long and unyielding, to afford steadiness, are giving high satisfaction, inasmuch as they are made of very hard bell metal (nearly equal to soft steel), in order to revolve with a minimum of friction, we also make them, when so ordered, of steel to run in a socket of hard cast iron. In using these two latter metals whose co-efficient of expansion is nearly alike, the same condition as to a free motion in all temperatures obtains, whether below zero or 100 degrees above, as with our hard bell metal centre running in a socket of brass composition, with the difference, however, that the steel ones will retain their precise fitting qualities so well that the bubble of the telescope's spirit level will hardly show any displacement upon revolving the instrument when leveled up, even after years of constant service. In order to make our superior steel centre and cast iron socket construction a standing feature in our Wye Levels, we placed the cost at a nominally higher price only, although the cost of production to us is more than double that of the customary style of steel centre. We strongly advise to order it where first greater outlay is not considered as important as greater wearing qualities

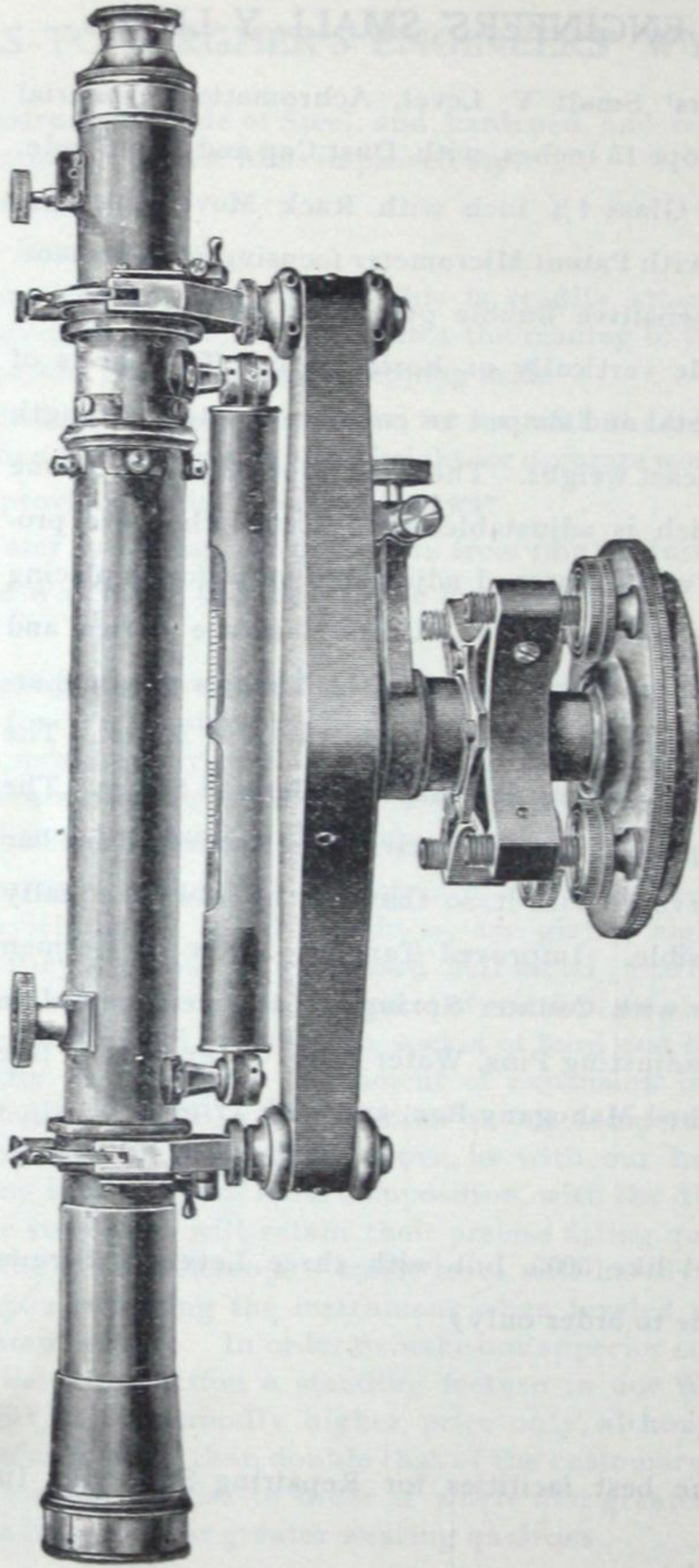
ENGINEERS' SMALL Y LEVEL

5005. Engineers' Small Y Level, Achromatic Terrestrial Telescope 15 inches, with Dust Cap and Sun Shade, Object Glass $1\frac{1}{4}$ inch with Rack Movement, Eyepiece with Patent Micrometer focusing arrangement. Fine sensitive Bubble graduated on the glass, adjustable vertically or horizontally. The bar is of gunmetal and shaped to combine greatest strength with least weight. The Telescope rests in Y's, one of which is adjustable for altitude; they are provided with improved adjustable stops for so placing the Telescope that the Cross Hairs are vertical and horizontal. It is locked in the Y's by a patented arrangement dispensing with the Pin Bolts. The Leveling Screws are made of German Silver. The Clamp and Tangent Screws are attached to the bar and revolve with it, so that they are always equally accessible. Improved Tangent Screw of German Silver with Counter Spring. Instrument complete with adjusting Pins, Water Proof Cover, etc., in fine Polished Mahogany Box, and with Tripod . . . each, \$100.00

5007. Y Level like 5005, but with three Leveling Screws
(made to order only) " 110.00

We have the best facilities for Repairing Surveying Instruments of
any make

K. & E. ENGINEERS' Y LEVEL



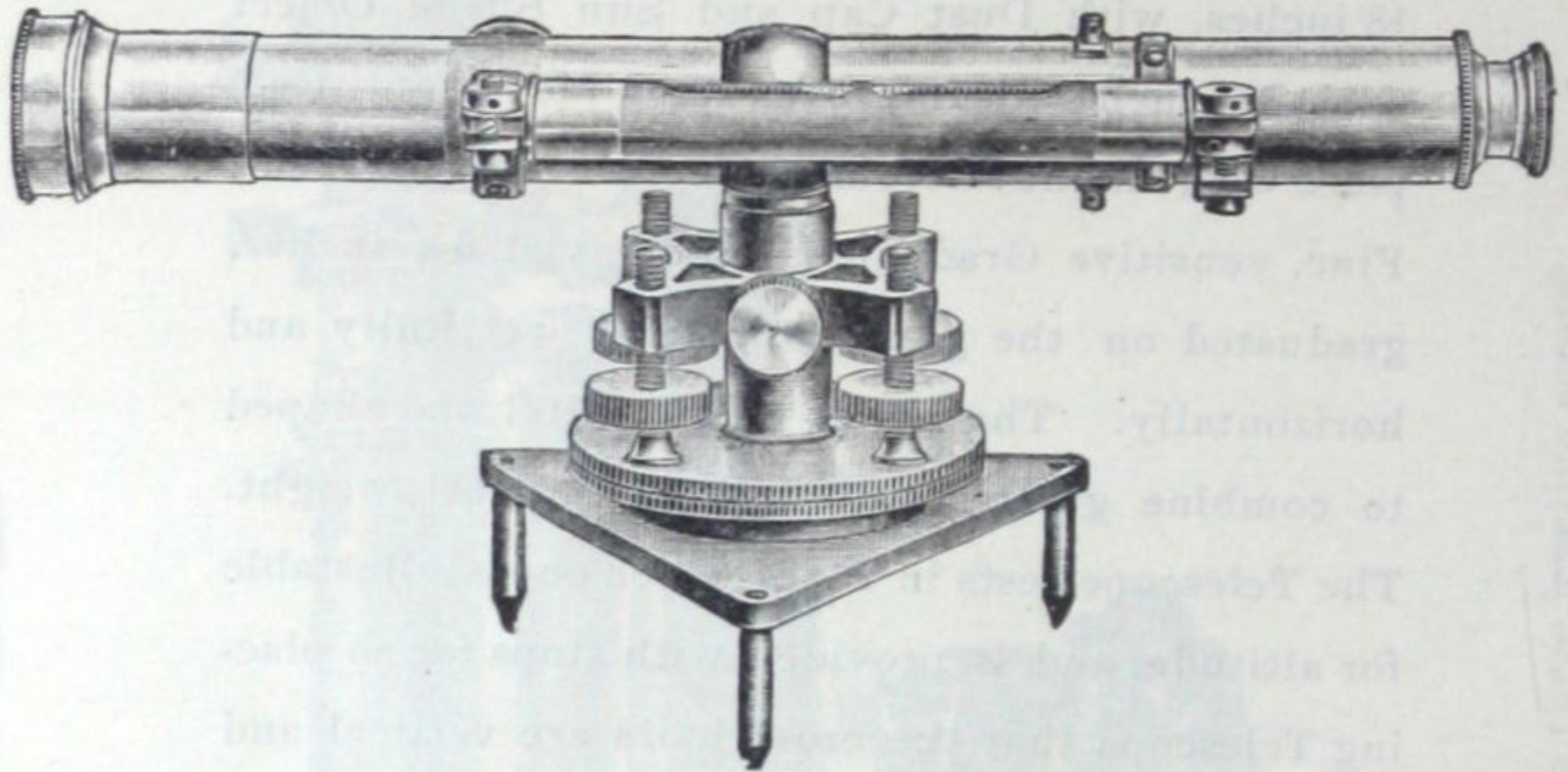
5010

No. 5015 is the same instrument, but with three leveling screws

ENGINEERS' Y LEVEL

5010. Engineers' Y Level, Achromatic Terrestrial Telescope, 18 inches, with Dust Cap and Sun Shade, Object Glass $1\frac{3}{8}$ inch, with Improved Rack Movement, Eyepiece with Patent Micrometer focusing arrangement. Fine, sensitive Graduated Bubble, vial $6\frac{3}{4}$ inches, graduated on the glass, adjustable vertically and horizontally. The bar is of gunmetal and shaped to combine greatest strength with least weight. The Telescope rests in Y's of which one is adjustable for altitude, and is provided with stops for so placing Telescope that the cross hairs are vertical and horizontal. It is locked in the Y's by a patented arrangement, dispensing with the pin bolts. The Leveling Plate is replaced by four arms. The Clamp and Tangent Screws are attached to the bar and revolve with it, so that they are always equally accessible. Improved Tangent Screw of German Silver, with Counter Spring. Instrument complete with Adjusting Pins, etc., in fine Polished Mahogany Box and with Tripod each, \$130.00
5012. Y Level, like 5010, but Telescope 20 in., level vial $6\frac{3}{4}$ in. " 135.00
5013. Y Level, like, 5010, but Telescope 22 in., level vial $6\frac{3}{4}$ in. " 140.00
5015. Y Level, like 5010, but Telescope 3 Leveling Screws " 140.00

AMERICAN DUMPY LEVEL

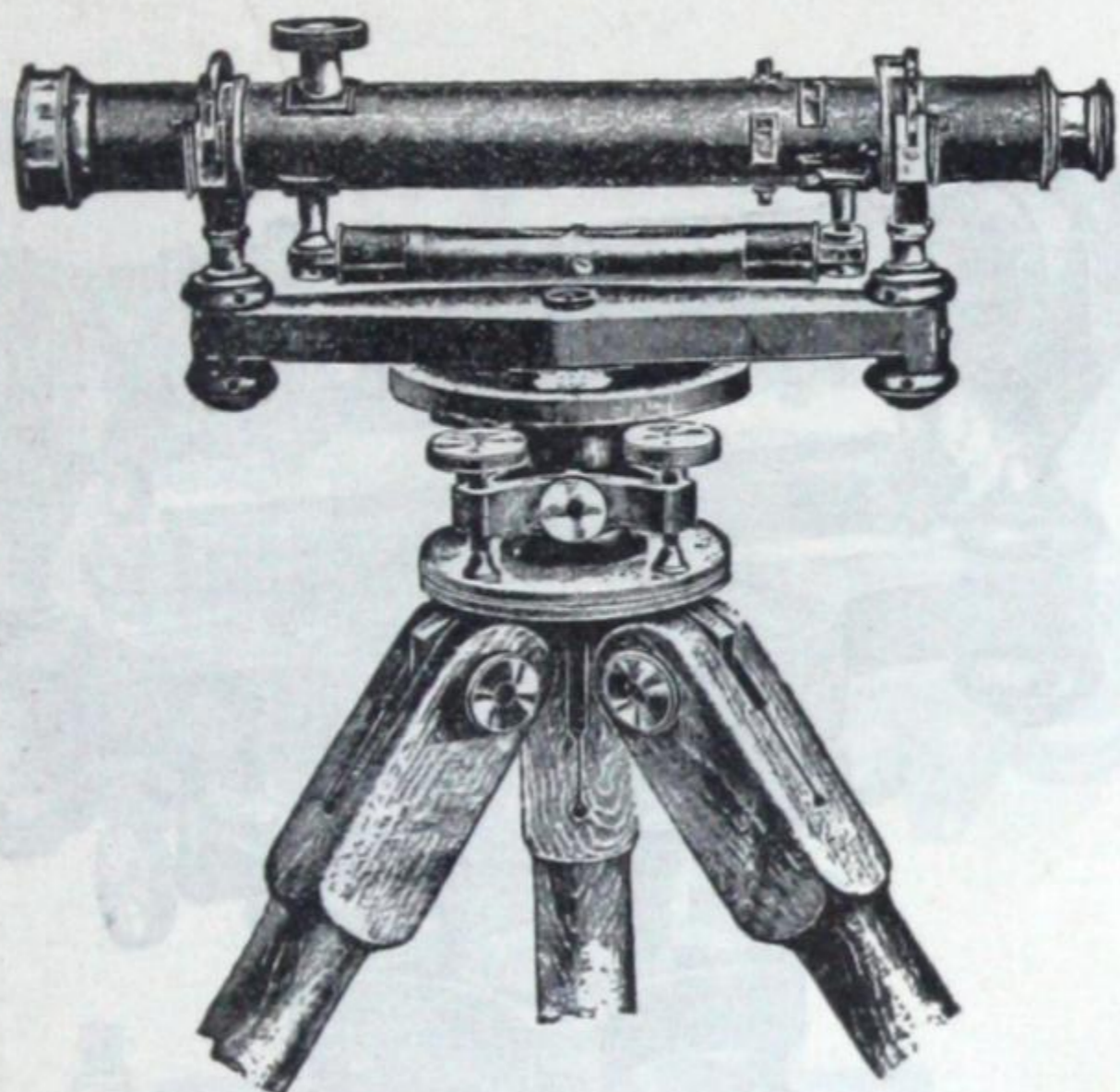


5107

5107. American Dumpy Level, an excellent instrument for work which does not require great accuracy, such as ditching, draining, road-leveling, etc. The achromatic telescope is 11 inches long, object-glass $1\frac{1}{2}$ inches, with Rack Movement, Graduated Bubble. The eye-piece is also adjustable to focus the cross-hairs. Instrument complete, with Metal Trivet, Plumb Bob, etc., in strong Box and with Hardwood Tripod each, \$35.00

We have the best facilities for Repairing Surveying Instruments of any make promptly and satisfactorily

K. & E. ARCHITECTS' LEVEL

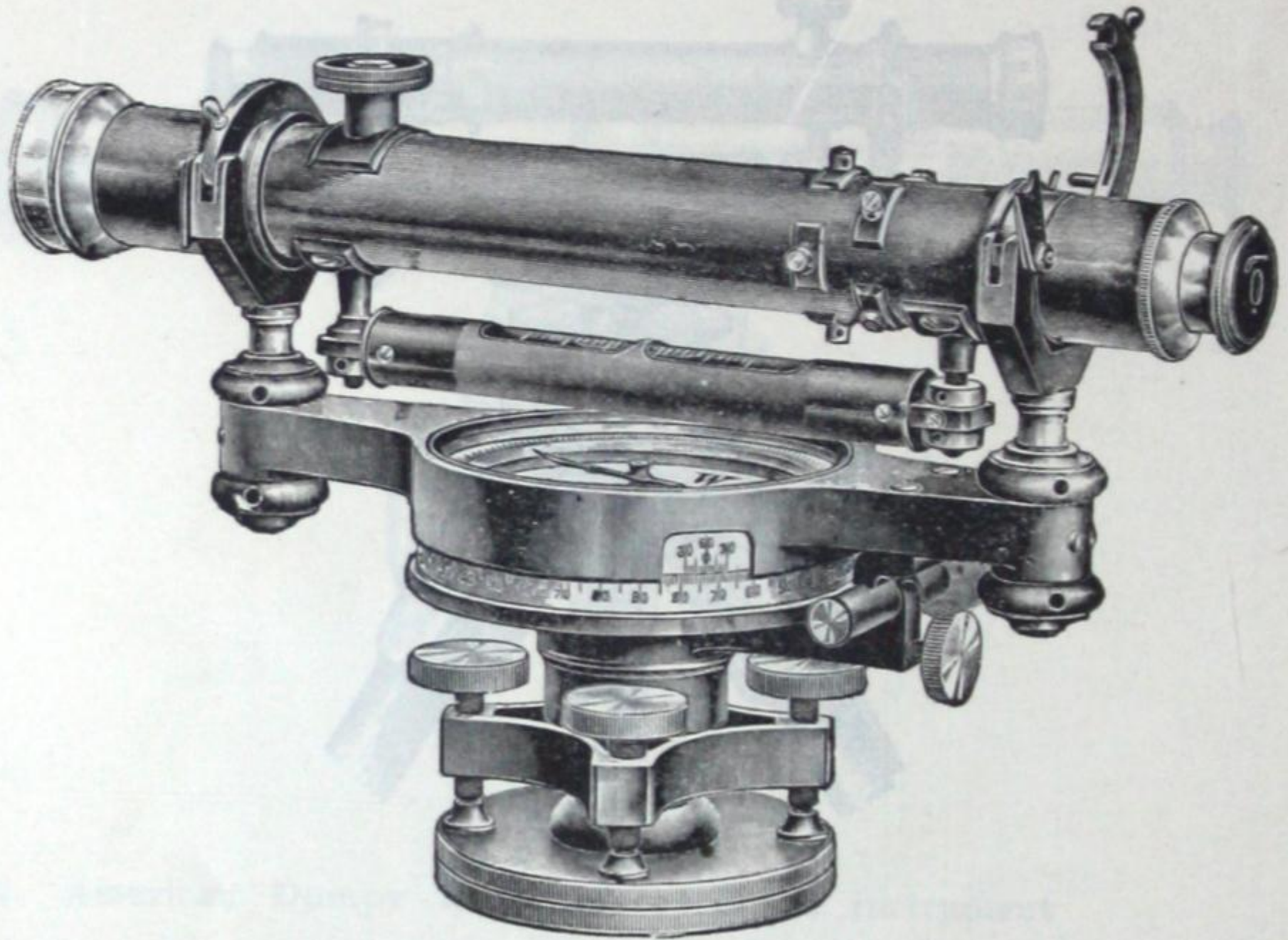


• 5110

5110. Architects' or Builders' Y Level, Achromatic Telescope 11 inches, with Dust Shade and Cross-Hairs graduated Bubble, Object Glass $1\frac{1}{8}$ inch with Rack Movement, Eye Piece adjustable to focus the cross-hairs. Horizontal circle 3 inch, divided to degrees with Vernier reading to 5 minutes. A most serviceable and compact instrument. Level complete, with Metal Trivet, Plumb Bob and Adjusting Pins, in Polished Mahogany Box and with Hardwood Tripod each, \$45.00

5111. Architects' or Builders' Y Level, like 5110, but with
 Tangent Screw " 50.00

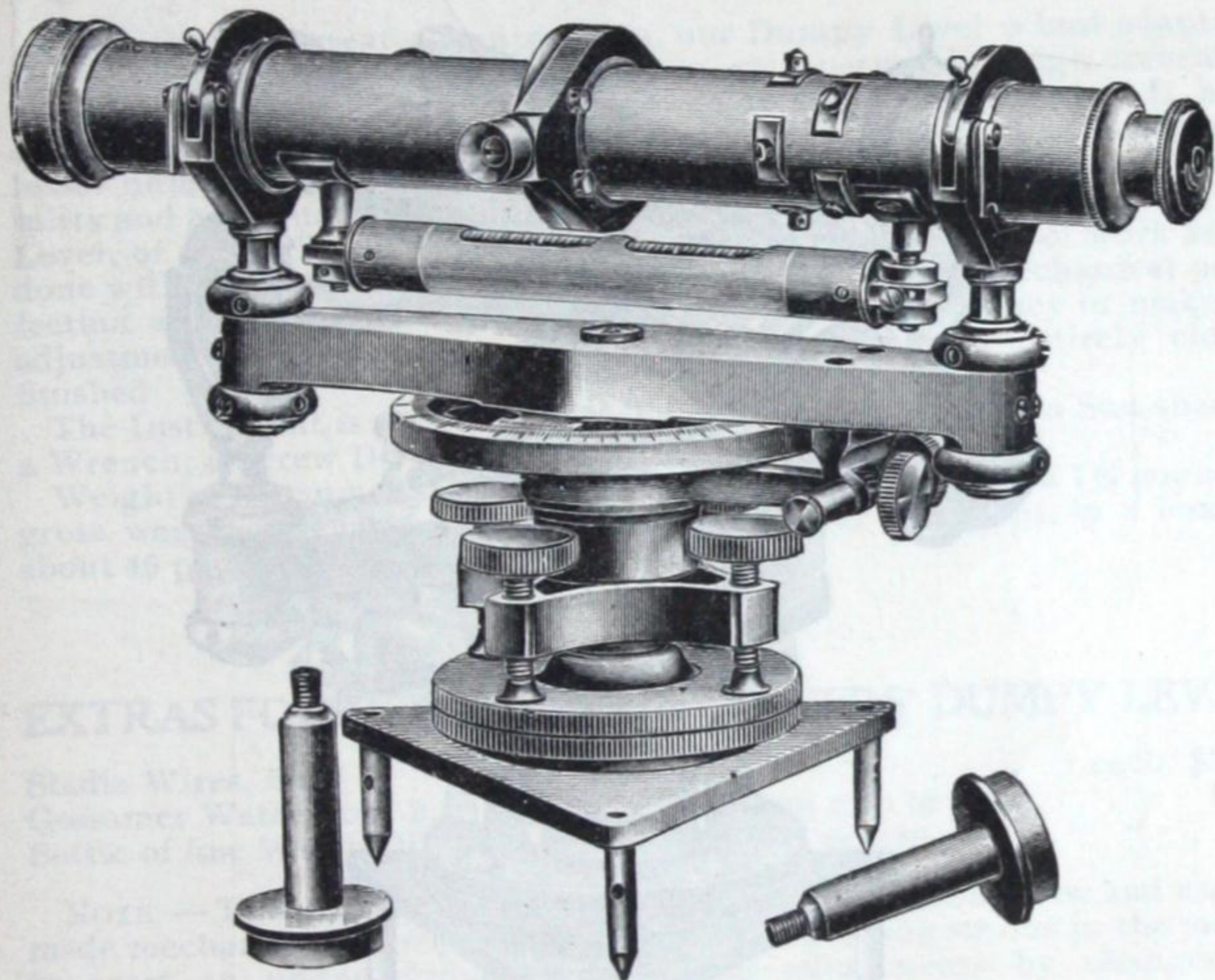
ARCHITECTS' LEVEL WITH COMPASS



5112

5112. Architects' or Builders' Y Level, Achromatic Telescope 11 inches, with Dust Shade and Cross Hairs, Graduated Bubble, Object Glass $1\frac{1}{8}$ inch with Rack Movement, Eyepiece Adjustment, Compass divided on raised ring to degrees, improved Needle about 3 inches, Horizontal Circle $3\frac{3}{4}$ inches divided to degrees, with Vernier reading to 5 minutes. A most serviceable and compact instrument. Level complete, with Metal Trivet, Plumb Bob and Adjusting Pins, in Polished Mahogany Box and with Hardwood Tripod each, \$60.00
5113. Architects' or Builders' Y Level with Compass, like No. 5112, but with Tangent Screw " 65.00

CONVERTIBLE ARCHITECTS' LEVEL



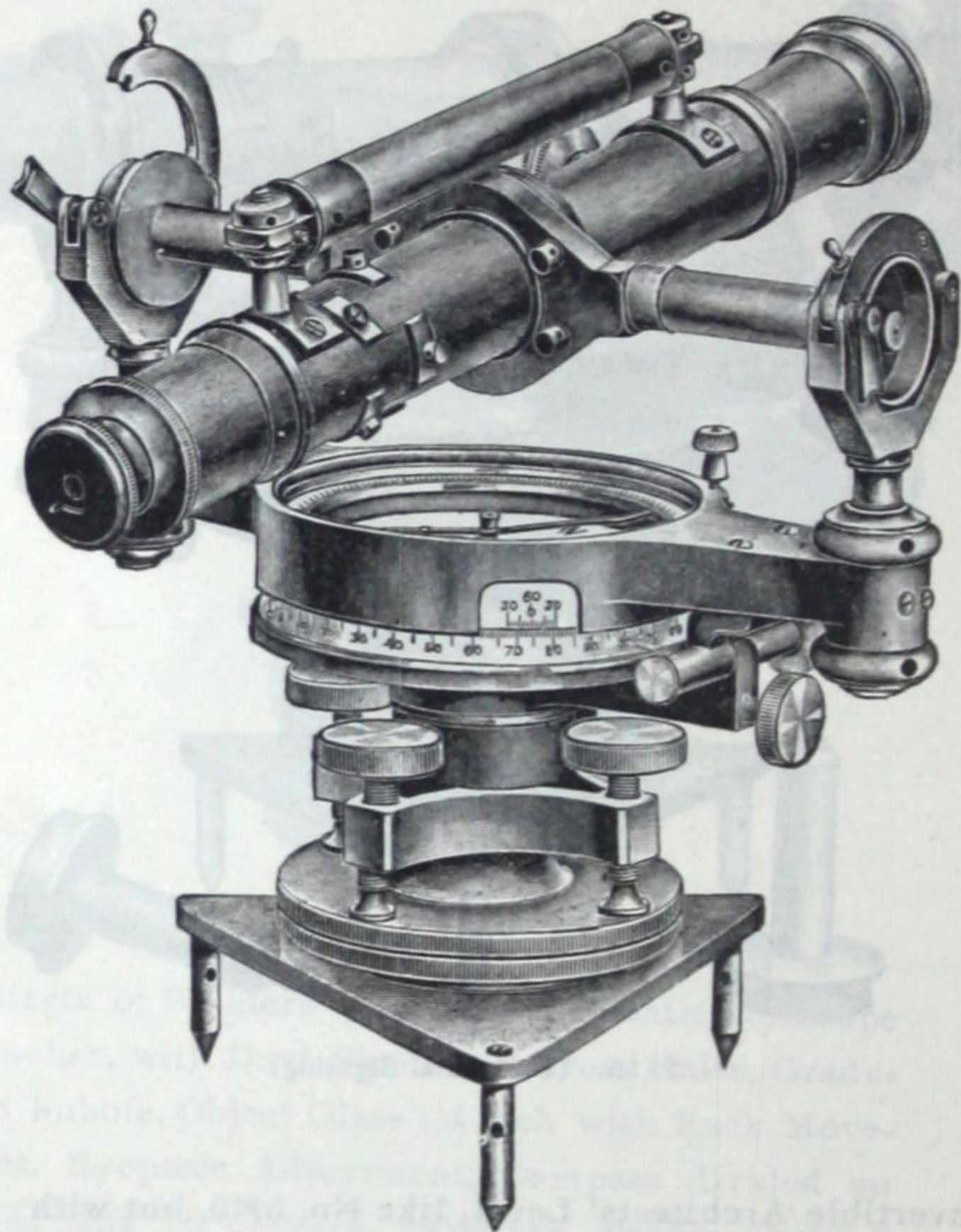
5115. (Horizontal Sighting)

5114. Convertible Architects' Level, like No. 5110, but with extra Removable Axis to adapt Telescope to sighting vertical lines. Instrument complete, with Metal Trivet, Plumb Bob, etc., in Polished Mahogany Box, and with Hardwood Tripod . . . each, \$60.00

5115. Convertible Architects' Level, like No. 5114, but with Tangent Screw . . . " 65.00

CONVERTIBLE ARCHITECTS' LEVEL

With Compass



5117. (Sighting a Vertical Line)

5116. Convertible Architects' Level, extra Removable Axis, like No. 5114, but with Compass, like No. 5112, (on page 650). Instrument complete, with Metal Trivet, Plumb Bob, etc., in Polished Mahogany Box, and with Hardwood Tripod each, \$75.00
5117. Convertible Architects' Level with Compass, like No. 5116, but with Tangent Screw " 80.00

BERGHERS' ENGINEER'S DUMPY LEVEL

Engineers' Dumpy Level each, \$100.00

On account of greater compactness, our Dumpy Level is best adapted for railroads, water works, reconnoissance, etc., permitting high accuracy by greater simplicity, and less liability to derangement of parts. It has all the advantages of the larger engineer's levels, but as it consists of a lesser number of pieces and screws, is superior to them in point of durability and permanency of adjustments. With a properly adjusted Dumpy Level, of our make, an engineer can perform as high a class of work as is done with a good wye level, depending, not so much on mechanical perfection as on his own superior skill and sense of accuracy in making adjustments. The upper part of this Instrument is entirely cloth finished.

The Instrument is packed in a Mahogany Box, containing a Sun-shade, a Wrench, a Screw Driver and an Adjusting Pin.

Weight of Instrument 10 pounds, weight of Tripod from 7 to 7½ pounds, gross weight of Instrument, packed securely for shipment, in 2 boxes, about 45 pounds.

EXTRAS FOR BERGHER'S ENGINEERS' DUMPY LEVEL

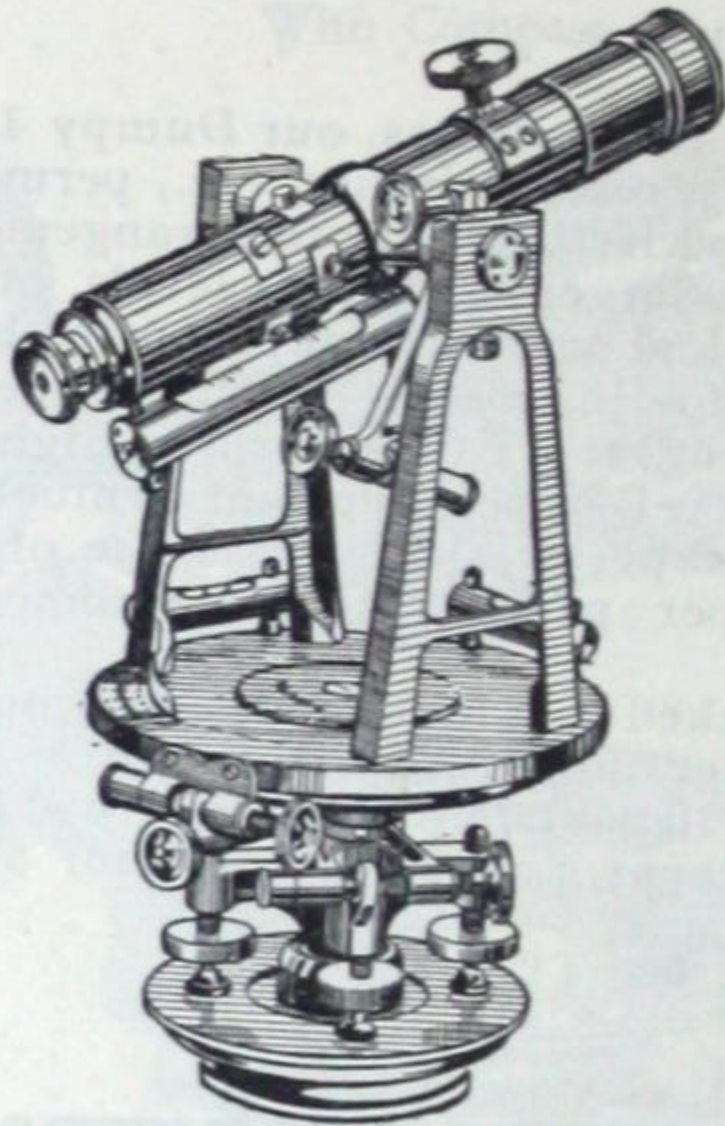
Stadia Wires, fixed each, \$3.00
 Gossamer Waterproof Bag, for protection from rain or dust " 1.00
 Bottle of fine Watch Oil, to lubricate the level centre " .25

NOTE. — The mechanical parts of this Dumpy Level are few and easily made mechanically correct, and there are no working strains in the metal to exert an undue influence upon the adjustments by changes of temperature.

The telescope barrel and both uprights are cast in one piece of hard composition metal; and to attain a high degree of accuracy the barrel is bored out truly cylindrical, a condition never attained with drawn tubing. Both ends of the outside tube are slightly larger in diameter, forming collars turned truly concentric to the bore, in principle the same object as collars of a Wye Level Telescope. The bottom surface of the uprights are planed parallel to the bore. The strongly ribbed cross-bar and instrument centre are cast in one piece of hard bell-metal. The centre about which the instrument revolves is fitted and the resting-places for the uprights turned off to be truly at right angles, so that the geometrical axis of the telescope barrel when placed upon them must be at right angles to the centre. The level casing, too, is a casting, and the spirit level is so fastened into this casing as to preclude any strain, and its true form preserved. The focussing slide is of drawn brass turned and closely fitted in the lathe.

This Dumpy Level stands as an example of good practice, and many Engineers prefer it to an ordinary Wye Level. The prevailing mistrust can generally be traced to the use of a cheap commercial article.

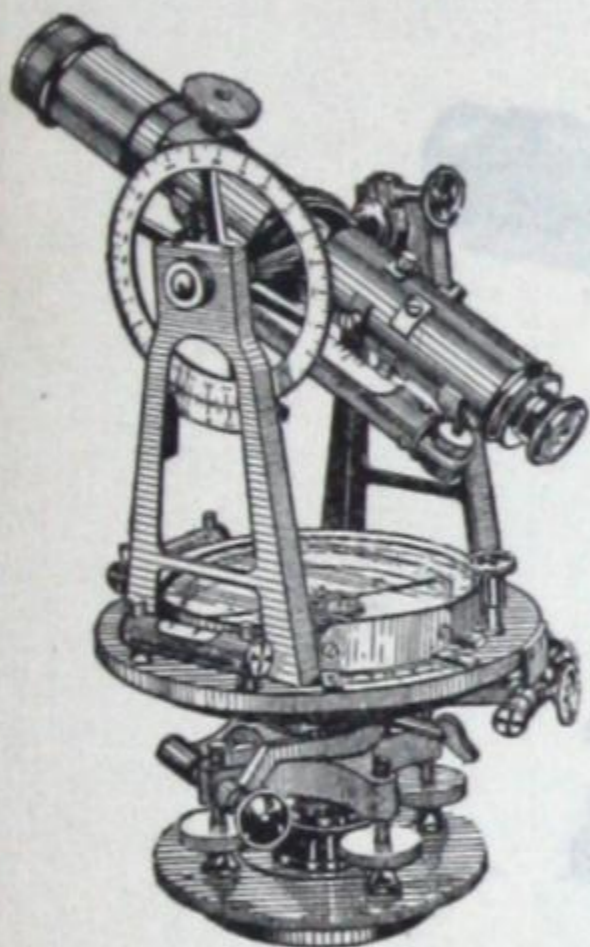
F. & A. CO.'S BUILDERS' TRANSIT



655. Builders' Transit. Erecting Telescope, 9 inch, with Magnifying Power of 25 diameters and Objective with $1\frac{1}{8}$ inch aperture. Dust Guard, Sun Shade and Cap. Level to Telescope with Ground and Graduated Bubble. Rack and Pinion Movement to Objective. Imported Spiral Motion to Eyepiece for focusing cross hairs. Clamp and Tangent Screws on Telescope Axis. Telescope reversible to both directions. Horizontal Limb $5\frac{1}{4}$ inches, graduated to $\frac{1}{2}$ degree, has two rows of figures reading in opposite directions from 0 to 360 degrees. One Double Vernier reading to single minutes. Vernier opening 30 degrees to the line of sight so as to be easily read. Two Plate Levels. Clamp and Tangent Screws to horizontal plates. Shifting Center. Weight of instrument without tripod about 9 lbs. Instrument complete in Mahogany Box with Plumb Bob, Magnifying Glass, Adjusting Pins and Metal Trivet (for Foundation work). Hardwood Tripod each, \$85.00
656. Extention Tripod instead of Hardwood Tripod, extra " 10.00

Especially for Builders, Contractors, etc., to do more accurate work than with the Architects' Level, saving the expense of a regular Surveyors' Transit. Useful Taking Angles, Leveling Foundations, giving Lines and Elevations for all kinds of Structural Work, especially Re-inforced Concrete and in Bridge Construction when a Compass is not needed

F. & A. CO.'S RECONNOISSANCE TRANSIT



325. Reconnaissance Transit, with
Extension Tripod No. 58 each, \$115.00

326. Reconnaissance Transit, like
No. 325, with $4\frac{1}{2}$ inch Ver-
tical Circle, divided to $\frac{1}{2}$
degrees, with vernier reading
to one minute . . . each, \$120.00

Gradiometer Screw, extra . . . " \$5.00

Telescope: Achromatic Terrestrial, length 9
inches, Magnifying Power 28 diameters, good
definition, reverses at both ends, Stadia Wires.
Clamp and tangent movement to telescope
axle. Object Glass, $1\frac{1}{8}$ inch aperture, with Dust

Protector and Cap, Rack and Pinion Movement to telescope slide. Eye-
piece with improved screw motion for focusing of cross and stadia hairs.
Level to Telescope, graduated on the glass.

Vertical Circle, $3\frac{1}{2}$ inches diameter, silvered, graduated to degrees and
numbered in quadrants, 0 to 90 each way, reading by one double vernier
to five minutes.

Compass: Needle Circle, graduated to $\frac{1}{2}$ degrees, and numbered from
0 to 90 each way. Needle, $3\frac{5}{8}$ inches long of hardened and tempered
steel. Variation Plate, set by capstan head pinion, Compass Box silvered.

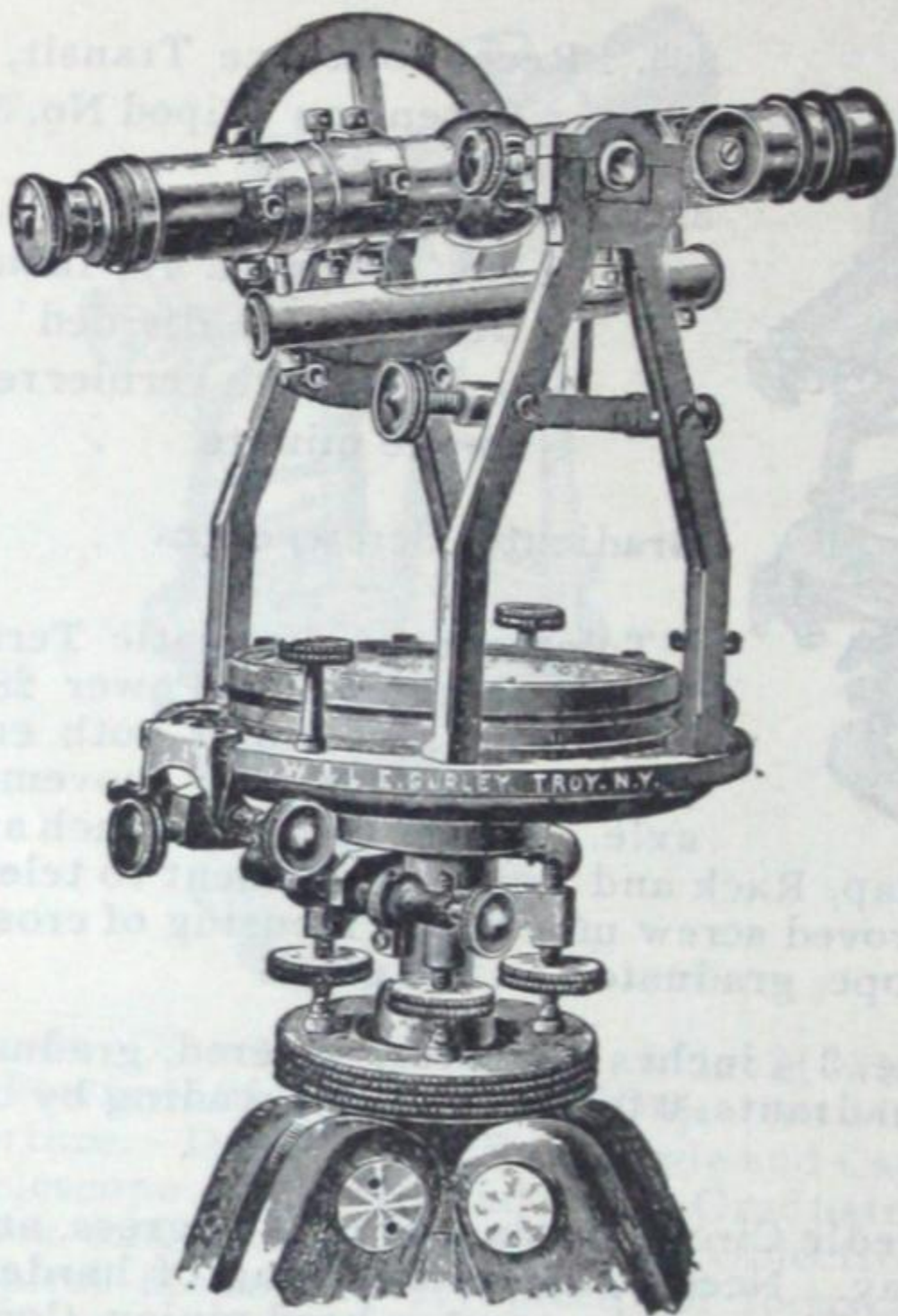
Horizontal Limb, $5\frac{1}{8}$ inches diameter, silvered, graduated to $\frac{1}{2}$ degrees,
and numbered with two rows of figures reading in opposite directions
from 0 to 360. One Double Vernier reading to single minutes, vernier
located 30° from line of sight, covered with polished glass and provided
with shade for illuminating vernier. Clamp and tangent movement.
Two Sensitive Plate Levels.

Leveling Head, Phosphor Bronze, solid construction, four substantial
Leveling Screws, Ball and Socket Cups. Shifting Plate, $\frac{5}{8}$ inch shift.
Gold and Gun Metal Finish, lacquered. Weight of Instrument, $9\frac{1}{2}$ lbs.,
Tripod 7 lbs.

Instrument is packed whole and lies in a horizontal position in our new
low Mahogany Box. Sun shade, plumb bob, magnifying glass, wrench
and adjusting pins are furnished with each instrument.

This instrument is designed for general surveying, which does not
require the highest degree of accuracy, and is recommended for rapid
and preliminary work where a light portable instrument is desired.

RECONNOISSANCE TRANSIT



Reconnaissance Transit, complete each, \$115.00

In response to a demand for a very light Transit for rapid work, where extreme accuracy is not required, the Reconnaissance Transit was introduced ten years ago. Its portability, with its capabilities for a large variety of rapid work have already made this a very popular instrument. It has a needle of $3\frac{1}{2}$ inches, a limb of 5 inches in diameter, graduated on Sterling Silver, reading by one double vernier to single minutes, and is supplied with new spring tangent movement like the larger instruments. The Telescope has a power of from 18 to 20 diameters, and is furnished with stadia wires for measuring distances; it has also, as shown, a long level to telescope, vertical circle reading to 5 minutes, and the clamp and tangent to axis

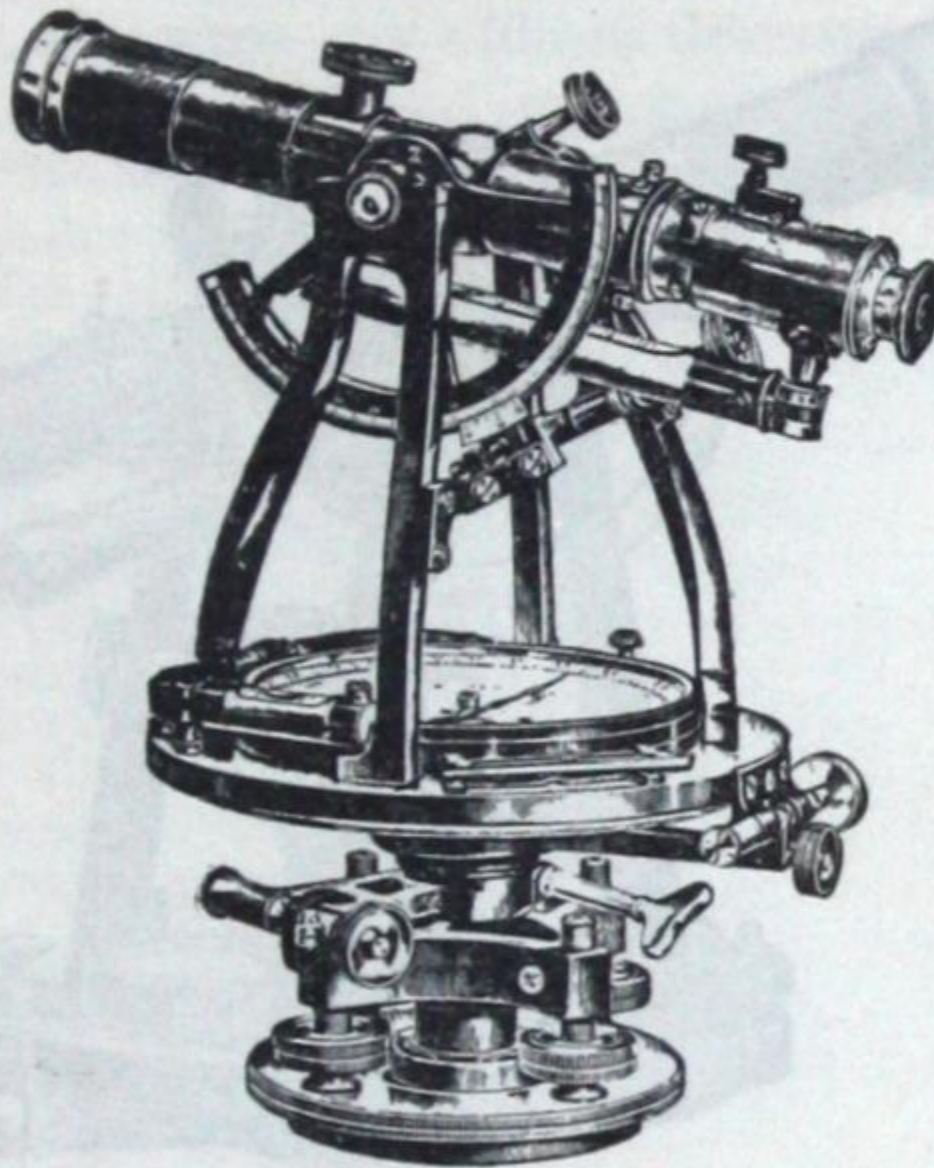
The compass circle is arranged to set off the variation of the needle, the movement being made by a pinion

It has also, as shown, a leveling head with a shifting centre, and with spring clamp and tangent, and the instrument is set upon a light extension tripod, the legs of which close up to about three feet

The weight of this transit without tripod is about $7\frac{3}{4}$ pounds; with tripod complete, about 15 pounds

K. & E. ENGINEERS' TRANSITS

With Vertical Arc



5050 X

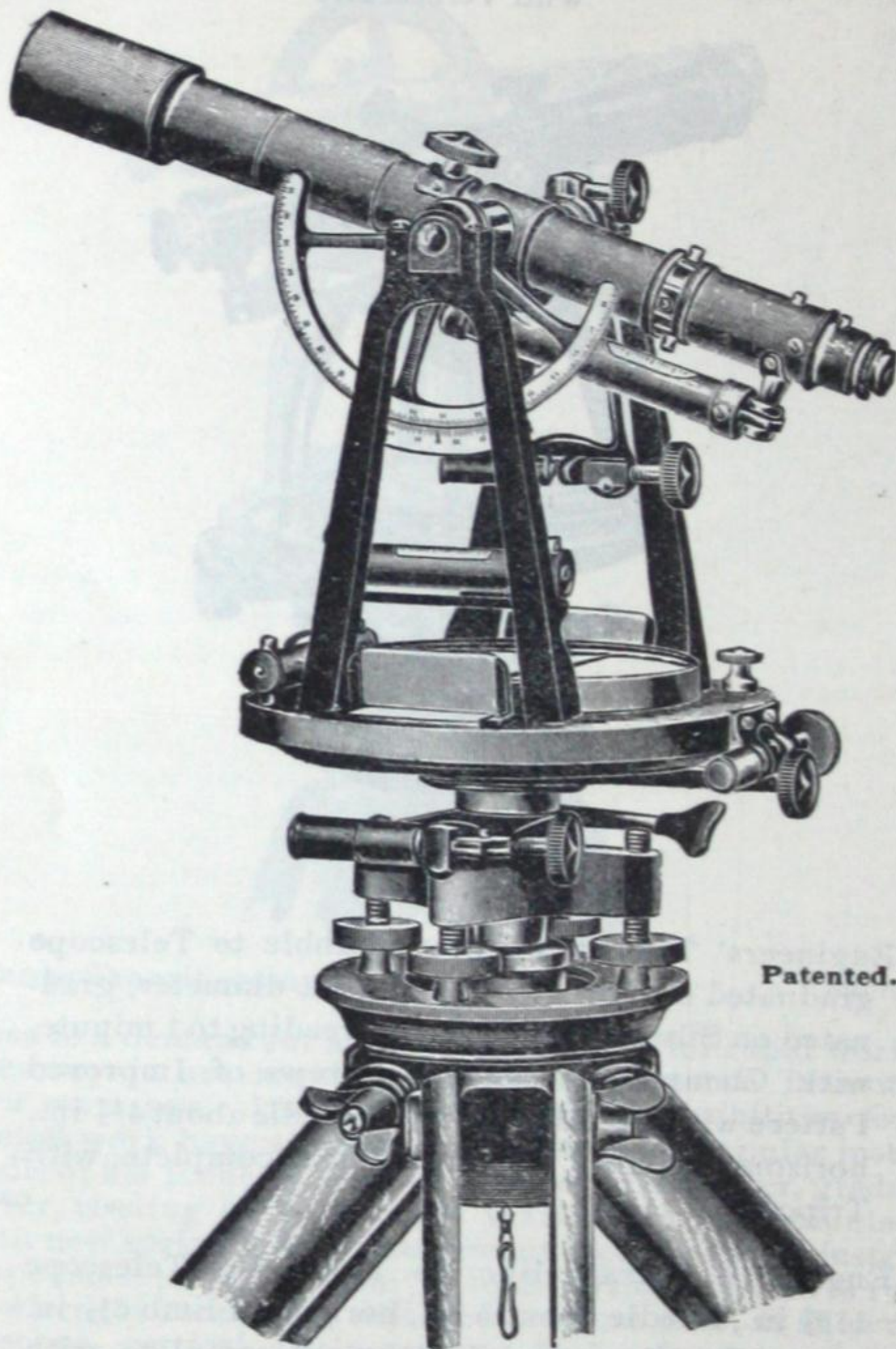
5050 X. Engineers' Transit, with fine bubble to Telescope graduated on the glass, Arc 5 in. diameter, graduated on Silver to half degrees, reading to 1 minute, with Clamp and Tangent Screws of Improved Pattern with Counter Spring; Needle about 4½ in., horizontal limb 6 in. Instrument complete, with Tripod each, \$220.00

5052 X. Engineers' Transit, like No. 5050X, but Telescope 11½ in., Needle about 5 in., horizontal limb 6½ in. arc 5½ in. diameter. Instrument complete, with Tripod, etc. " 225.00

The above Instrument with 3 Leveling Screws, (made to order) extra " 10.00

The above Instrument with Telescope with Inverting Eye Piece (astronomical telescope) made to order without additional charge

BERGHER'S
COMPLETE ENGINEERS' AND SURVEYORS' TRANSITS



Patented.

No. 1B. As above, with Cloth Finished Standards . . . each, \$225.00
Standards finished like Instruments, no Cloth finish . . . extra, 5.00

The 5 inch Vertical Arc is provided with Double Vernier Reading to minutes

NOTE.—When Stadia Wires are added, this Instrument becomes a Tachymeter. The Verniers of this Instrument can be placed at 90° to line of sight if so ordered

BERGHER'S

SMALL ENGINEER'S AND SURVEYORS' TRANSIT

Instrument of Precision. Recommended for all kinds of Land Surveying, Railroad Work, etc., where only a Minute Graduation is desired

No. 2. Plain Transit, with standards cloth-finished . . . each, \$180.00
 Standards finished like instrument (no cloth finish) extra " 5.00

No. 2. Plain Transit.* The essential features are like those enumerated under No. 1, with the exception of size and weight. It is designed to be used where a lighter instrument is desirable. All the parts, graduations, telescope, etc., are made with as great care as our larger instruments. We recommend it as a very reliable and superior instrument for railroad work, general land surveying and for mining purposes

Dimensions: Horizontal limb 5 inches; magnetic needle $3\frac{3}{4}$ inches; telescope 9 inches; clean aperture $1\frac{1}{8}$ to $1\frac{1}{4}$ inch; power 18 diameter

The Mahogany Case has a leather strap, hooks, etc. It contains a Sunshade, Wrench, a Screw Driver, an Adjustable Plumb Bob, a Magnifying Glass, an Adjusting Pin and weighs 7 lbs.; weight of instrument 10 lbs.; weight of tripod from $6\frac{1}{2}$ to 7 lbs.; gross weight of instrument, packed securely for shipment in 2 boxes 40 lbs.

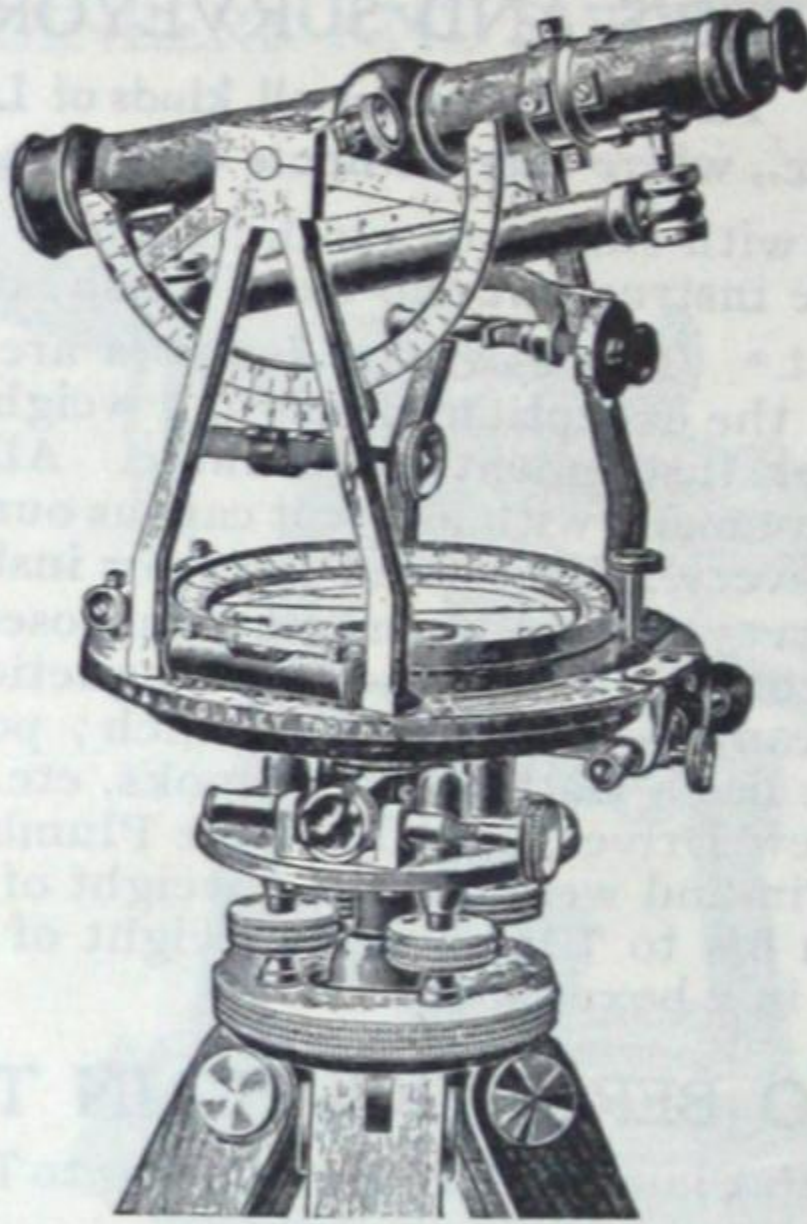
EXTRAS TO BERGHER'S PLAIN TRANSITS

Spirit Level $5\frac{1}{2}$ in., with Clamp and Tangent Screw to Telescope	each, \$30.00
Gradiometer attachment	" 5.00
Offsetting arrangement	" 5.00
Graduation of Horizontal Circle on Solid Silver	" 10.00
3 inch Vertical Arc, Double Verniers reading to minutes	" 15.00
3 inch Vertical Arc, graduation on Solid Silver	" 20.00
5 inch Vertical Circle, Double Verniers reading to minutes	" 20.00
5 inch Vertical Circle, graduation on Solid Silver	" 25.00
Stadia Wires, fixed	" 3.00
Short Focus Lens. One pair	" 16.00
Variation Plate	" 10.00
Silk Bag, to protect the instrument from rain or dust	" 1.00
Bottle of fine Watch Oil, to lubricate the centre, etc., of transit	" .25

NOTE.—If a Transit is intended for very close stadia work, Transit No. 1, with its larger telescope and higher power will be best suited for that purpose. But in all cases where greater lightness and portability is a factor and where only general good results in stadia measurements, as obtained with a smaller and less powerful telescope, will be deemed satisfactory, size No. 2 should be chosen. We cannot put a telescope of the size as described in Transit No. 1 upon a Transit No. 2. It should be borne in mind that all parts of an instrument are so closely related to each other that the preponderance of any one part would simply impair the efficiency of other parts. A telescope of the size given above, but showing objects inverted, will generally give the desired result. No extra charge for such a telescope, but the instrument must be made especially. The aperture will then be $1\frac{1}{4}$ inch and the power 22 diameter

* A Plain Transit has no spirit level, clamp or arc to telescope, see No. 1

GURLEY'S ENGINEERS' TRANSITS



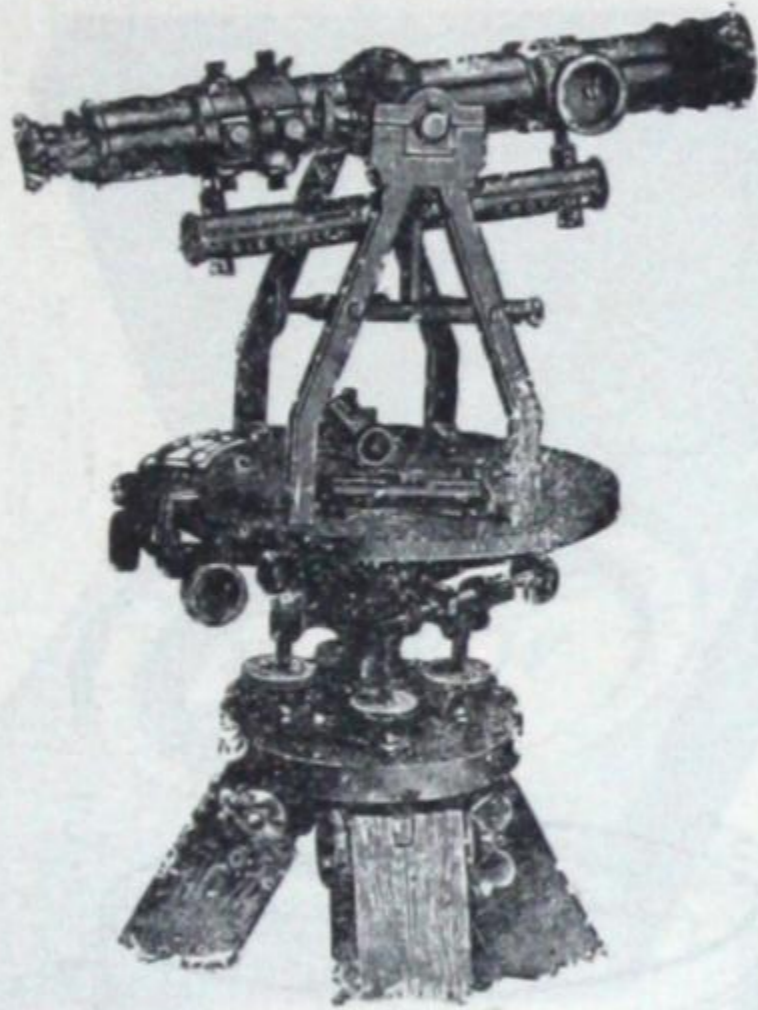
16

No. 1.	Engineers' Transit, 2 Verniers to Limb, 4 inch Needle, Plain Telescope*	each, \$145.00
6.	The same as No. 1, 4½ in. Needle, Plain Telescope	" 150.00
12.	The same as No. 1, 5 in. Needle, Plain Telescope	" 150.00
13.	The same as No. 1, 5 in. Needle, with Level on Telescope and Clamp and Tangent to Telescope Axis	" 168.00
14.	The same as No. 1, 5 in. Needle with 4½ in. Vertical Circle on Silver, reading with Vernier to one minute, Level on Telescope and Clamp, and Tangent to Telescope Axis	" 180.00
15.	The same as No. 1, 5 in. Needle with Vertical Arc of 3 in. radius, on Silver, and Vernier moved by Tangent Screw and reading to 30 seconds, Level on Telescope and Tangent to Telescope Axis	" 186.00
16.	The same as No. 1, 5 in. Needle, with Vertical Arc of 3 in. radius, on Silver, Vernier moved by Tangent Screw and reading to 30 seconds, Level on Telescope and Gradienter combined with Clamp and Tangent, as shown	" 198.00

NOTE.—Transits, Nos. 1 to 16 inclusive, furnished with shifting centre to the leveling head, and tripod and leveling screws and tangent to spindle

*A plain telescope is one without any attachments or extras, as we term, such as the clamp and tangent, vertical circle and level

GURLEY'S BUILDERS' TRANSIT

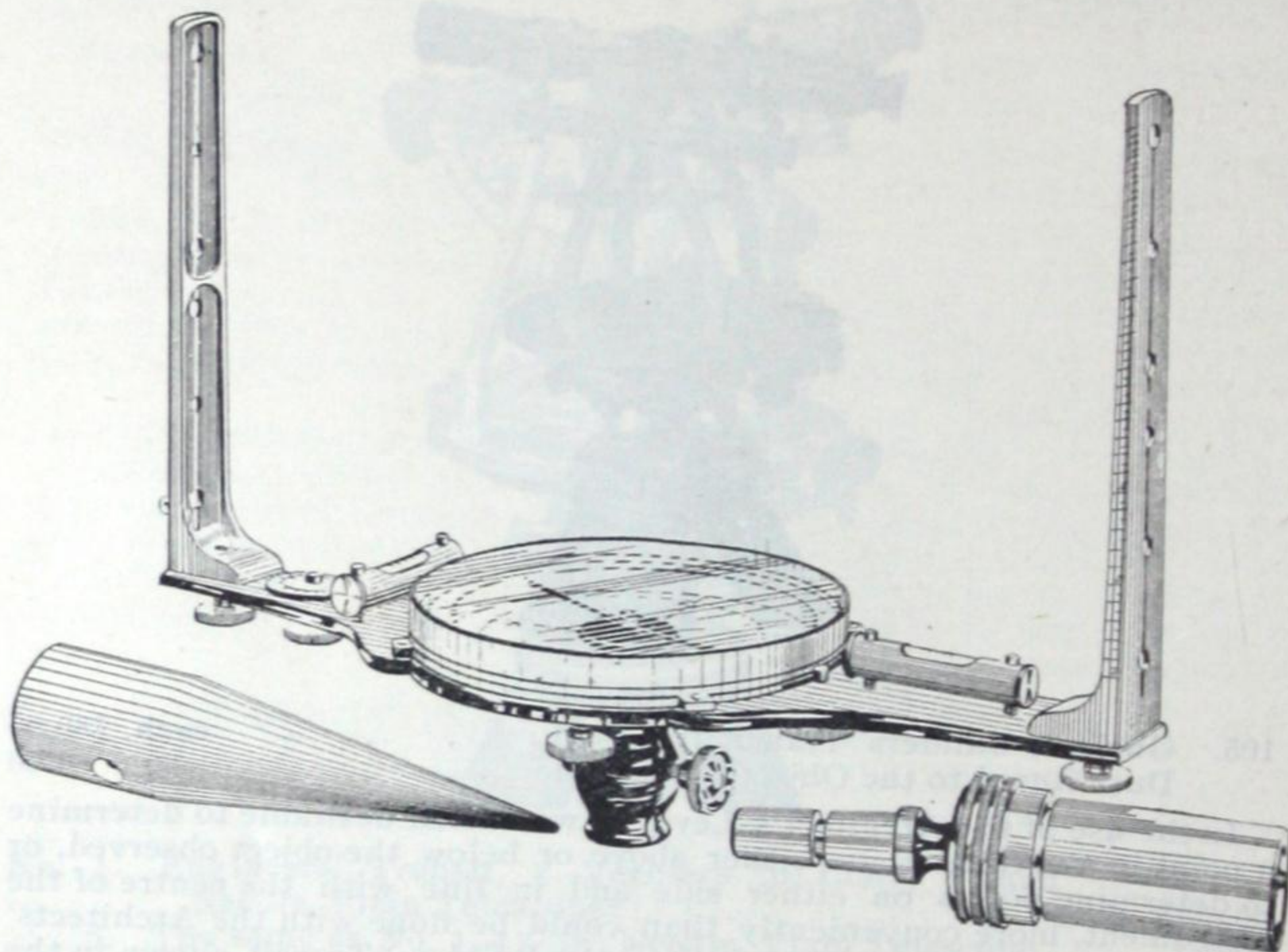


105

- | | |
|--|---------------|
| 105. Gurley's Builders' Transit | each, \$80.00 |
| Dust Guard to the Object Glass Slide | " 4.00 |

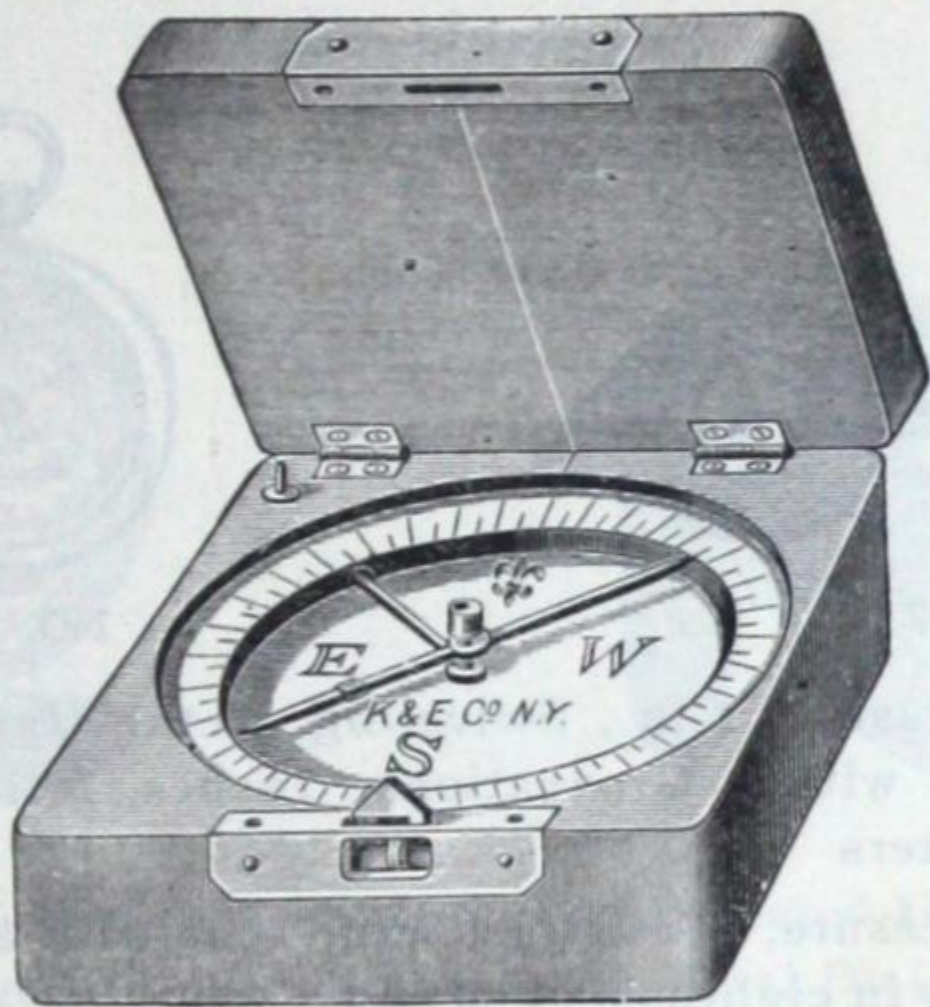
In the use of the Architect's Level it was often desirable to determine a point in a vertical plane either above or below the object observed, or to determine points on either side and in line with the centre of the instrument, more conveniently than could be done with the Architects' Level. To meet this want we devised the Builders' Transit, shown in the cut. It has a telescope nine inches long, with long graduated level, clamp and tangent to the axis, a graduated limb reading by an index to one degree, clamp and tangent movement to both limb and leveling head, and plain tripod and trivet plate. The limb is figured in one row from 0 to 180 each way. The objective is moved by a rack and pinion and the eye piece is focused by a spiral movement. Stadia wires are furnished without extra charge if ordered with the Transit. In use the instrument is set up either upon the tripod or trivet, and the plate accurately leveled by the two levels shown upon it. If it is desired to run a level line, the bubble of the telescope level is brought into the centre by the clamp and tangent of the axis, in which position the horizontal wire of the telescope will determine a level line when directed to any point in the horizontal plane, as by the telescope of the ordinary level, and any horizontal angle desired may be read off upon the limb. When desired to obtain points in a vertical plane, either above or below a given point (the plates being clamped and the clamp of the axis released), the telescope may be directed either above or below to the place desired. To determine two points in a straight line with the instrument and on either side of its centre, direct the telescope to one of the points, then clamp the plates, and the other point may be obtained by reversing the telescope on its axis. The Builders' Transit, complete with tripod weighs about 13 lbs.

F. & A. CO.'S SURVEYORS' FIELD COMPASS



657. This Instrument is constructed of Bronze metal, graduated to $\frac{1}{2}$ degrees and numbered in quadrants; has a 5 inch Needle, Plate 15 inches, two Spirit Levels, Detachable Sights which have fine slots cut through nearly their whole length, terminated at intervals by circular apertures through which the object sighted upon is more readily found; the N Sight is graduated on the right and left sides, by which angles of elevations and depressions for a range of 25 degrees each way can be taken with considerable accuracy. The S Sight has two Eyepieces for reading the graduations on the N Sight. Instrument is also furnished with an Outkeeper for keeping tally in chaining; Variation Plate inside the compass box, reading to five minutes, with Thumb and Clamp Screw for setting the magnetic variation of the needle. The Compass is fitted with Ball and Socket for Jacob Staff or Tripod. Complete in Mahogany Finished Box with Tripod . . . each, \$40.00
658. This Instrument furnished with Jacob Staff mounting in place of Tripod each, \$35.00

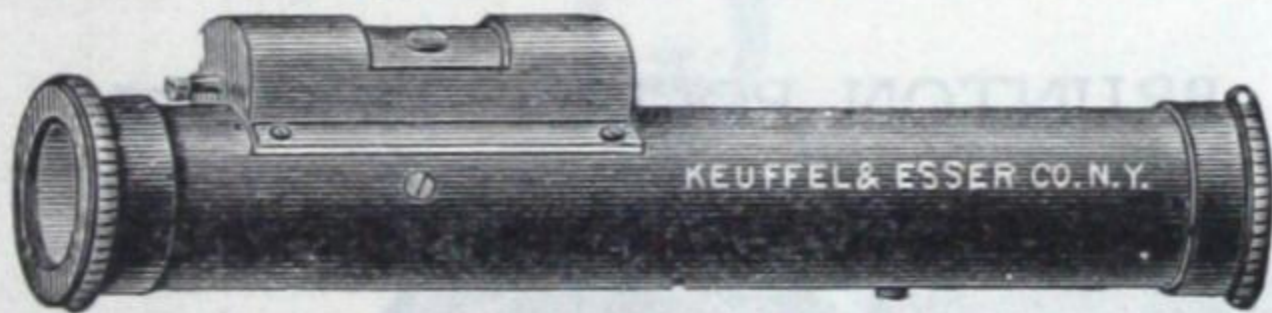
MILITARY COMPASS



5602

5602. Military Compass, 3×3 in., Needle 2 in. with Agate Centre and Automatic Stop, Divisions on raised ring to degrees. Polished Mahogany Box, the sides of which serve as fiduciary edges each, \$3.50

K. & E. HAND LEVELS



5700



5703



Diagram Showing appearance of field

5700. Lock's Hand Level, German Silver, in Case, 5 inch each, \$8.00
 5701. The same as 5700, Bronze, in Case, 5 inch " 7.00
 5703. K. & E. Co. Patent Hand Level, Square Tube, Bronzed 5 inch each, \$4.50

In No, 5703 the reflector is a narrow prismoid, crossing the middle of the field of view, so that the field appears on both sides of the reflected bubble, as shown in above diagram. As the lower surface of the tube is flat and parallel with the bubble, this hand level can be used also as a bench level

FROST & ADAMS CO'S MAP MEASURES

CHARTOMETERS



NO. 1692

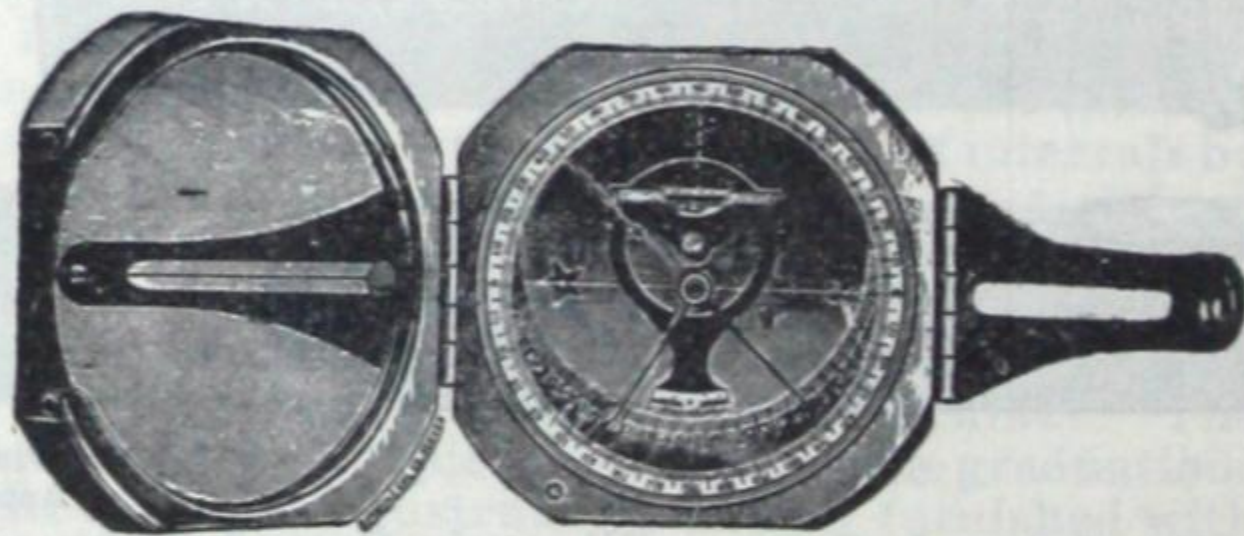


NO. 1694

- No. 1692. Map Measure, 5 in., Swiveling Metal Handle with Lock-nut, Dial with 2 Graduations: Inches, Miles, Centimeters, Kilometers each, \$3.20
- No. 1694. Map Measure, Watch Pattern, Dial with 2 Graduations: 12 inches in eighths and 25 feet each, \$2.15

To measure a line, the Instrument is set to 0, and the line is carefully followed in one direction, by the small projecting tracer wheel holding the Instrument vertical. The index hands on the dial will then indicate the distance

BRUNTON POCKET TRANSIT



NO. 5398

- No. 5398. Brunton Patent Pocket Transit each, \$25.00
- 5398S. Sling Case for No. 5398 " 2.00

This pocket instrument takes the place of a Sighting Compass, Clinometer, Prismatic Compass and Abney or Locke Level. It weighs about 8 oz.

MAGNETIC POCKET COMPASSES



5490



5493

- 5490. Fine Watch Pattern Compass, Nickel Plated Hunting Case, Edge Bar Needle, with Stop, Metal Dial, 1½ in. each, \$2.95
- 5491. The same as 5490, 1¾ inches " 3.20
- 5492. " " 5490, but with Singer's Card Dial, 1½ in. " 2.35
- 5493. " " 5492, 1¾ inches " 2.65
- 5494. " " 5492, but with Singer's Pearl Dial, 1¾ in. " 3.85



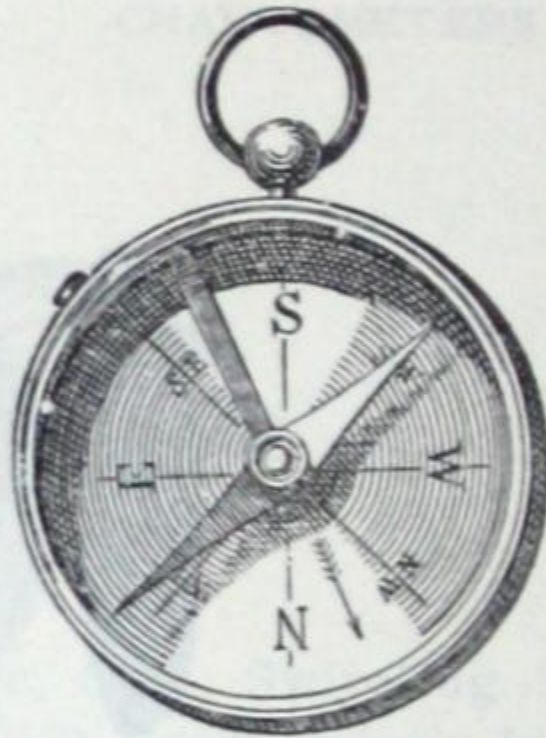
5510

- 5510. Fine Brass Mariner's Compass, Bronzed Brass Hunting Case, Floating Pearl Dial, 7/8 inch diameter, with Luminous North and South Points, suspended in Nickel Plated Collapsing Gimbals, with Stop . . . each, \$8.55

Magnetic Pocket Compasses — continued



5550

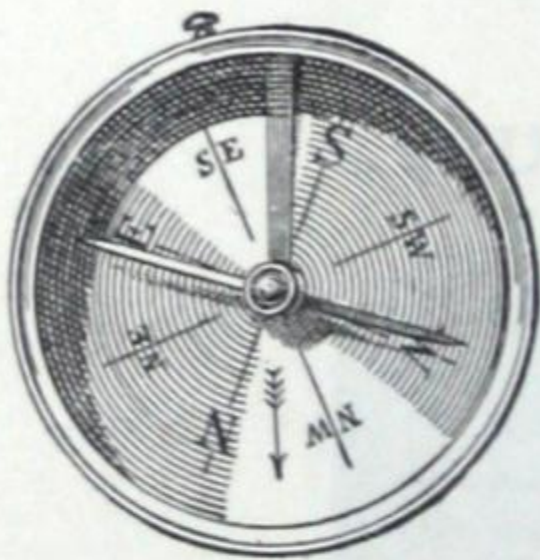


5556



5575

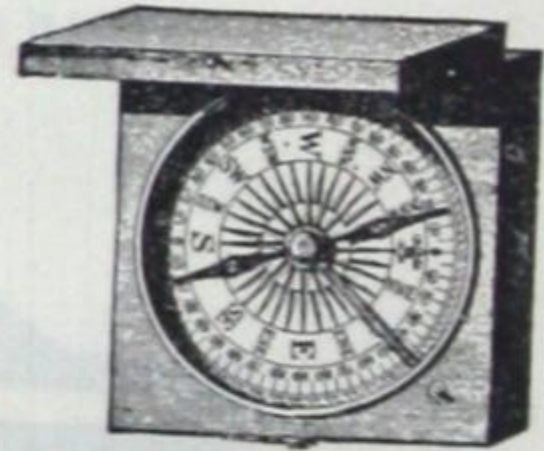
5550. Pocket Compass, Brass, Watch Pattern, Paper Dial each, $1\frac{1}{4}$ in. .20, $1\frac{3}{8}$ in. .25, $1\frac{5}{8}$ in. .30
5556. Pocket Compass, Brass, Watch Pattern, Metal Dial, Stop to Needle each, $1\frac{3}{8}$ in. .55, $1\frac{3}{4}$ in. .65
5575. Pocket Compass, Brass, Pull Off Cover, Paper Dial each, $1\frac{1}{4}$ in. .25, $1\frac{3}{8}$ in. .30, $1\frac{5}{8}$ in. .35



5585



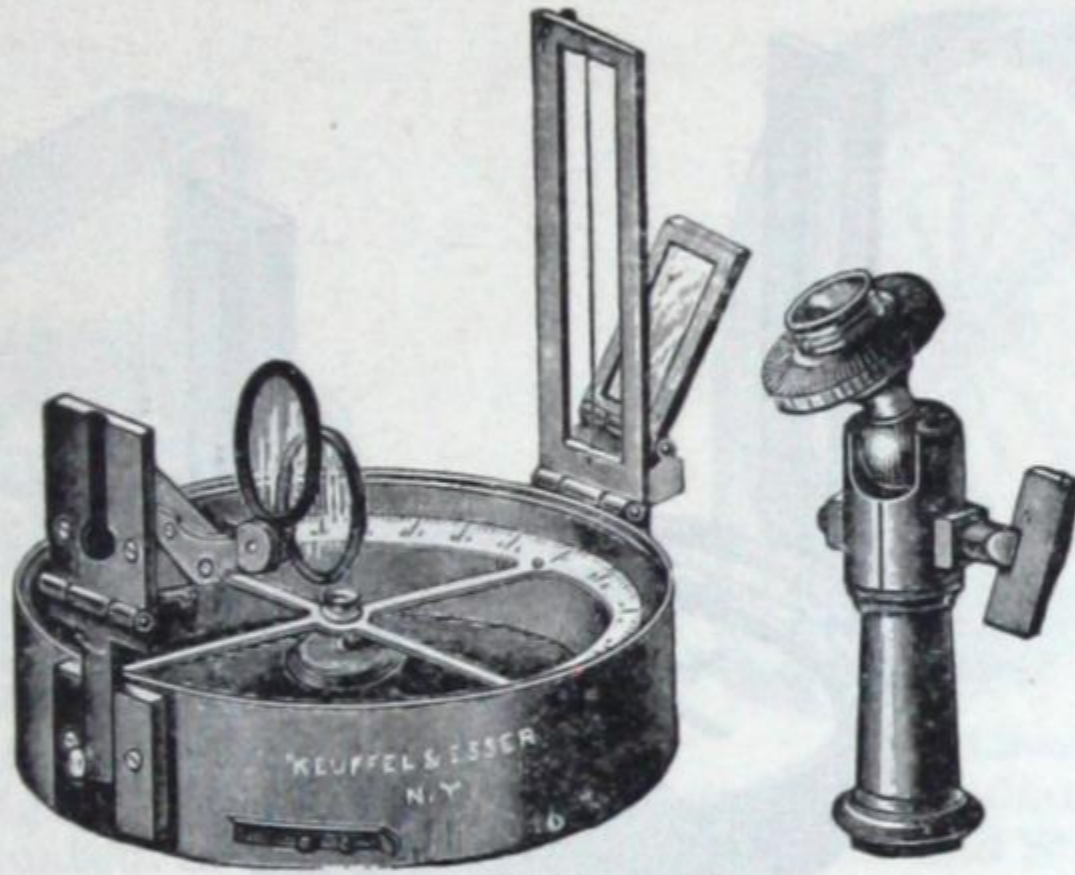
5592



5600

5585. Pocket Compass, Brass, Pull Off Cover, Metal Dial Stop to Needle each, $1\frac{3}{8}$ in. .85, $1\frac{3}{4}$ in. .95
5592. Pocket Compass, Brass, Pull Off Cover, Enameled Card Dial, div. to 2° , Edge Bar Needle with Agate Centre and Stop each, $1\frac{3}{8}$ in. \$1.90, $2\frac{3}{8}$ in. \$2.35
5600. Pocket Compass, Square Mahogany Case with Cover, Stop to Needle, Card Dial divided to degrees each, 2 in. \$2.25, 3 in. \$2.65

PRISMATIC COMPASS

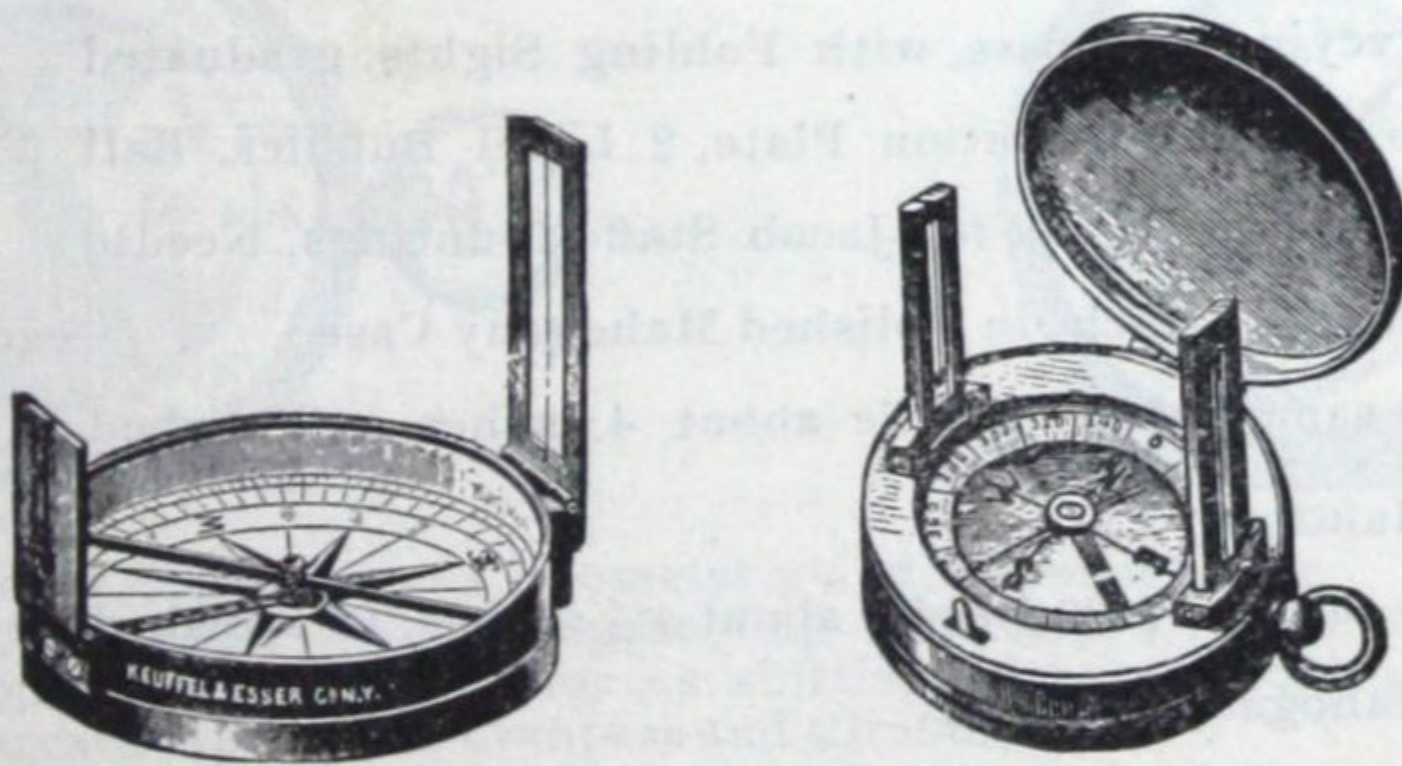


5429

- 5428. Prismatic Compass, 3 in. with Floating Metal Dial, Socket for Jacob Staff, in Mahogany Case . . . each, \$12.85
- 5429. The same as 5428, 3 3/4 in. with Azimuth Glasses, Ball Joint and Socket for Jacob Staff, in Morocco Case " 21.50

For Tripod for Prismatic Compasses, see page 458

SIGHT COMPASSES

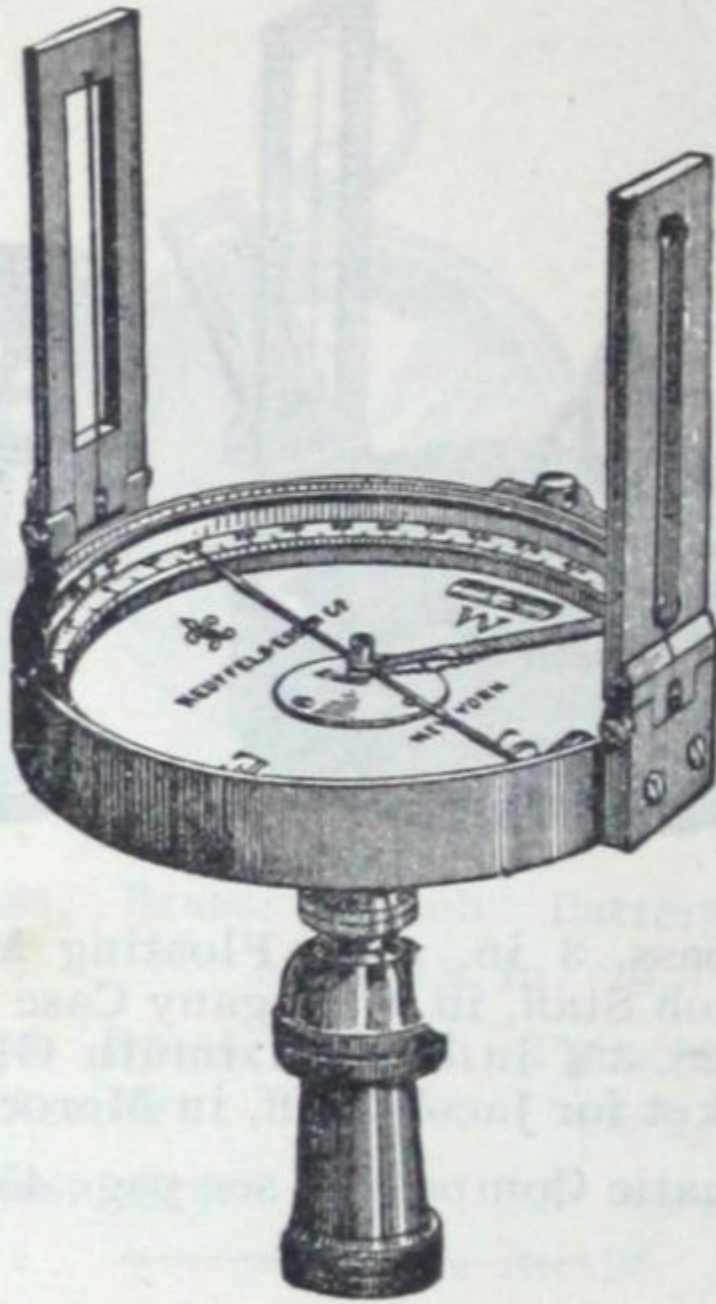


5441

5450

- 5440. Bronzed Pocket Compass, 2 1/2 in. with Cover, Folding Sights, Edge Bar Needle with stop each, \$5.25
- 5441. The same as 5440, 3 in. " 6.25
- 5450. Pocket Compass, Watch Pattern, with Folding Sights, Stop to Needle, each, 1 3/4 in. \$4.00, 2 in. \$4.60, 2 3/8 in. \$5.10

K. & E. SURVEYING COMPASS

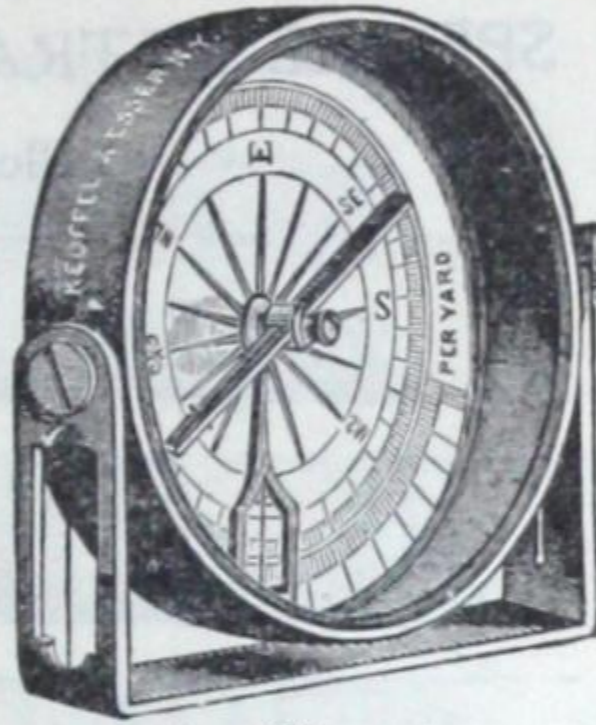
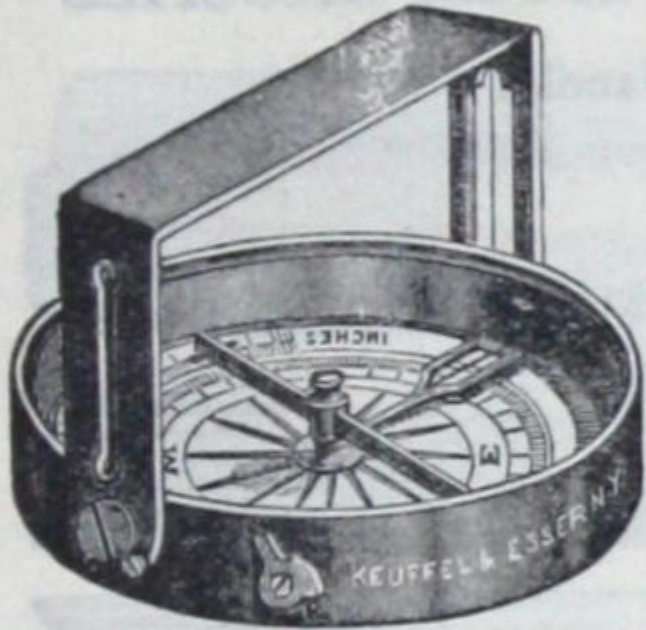


5321

5320. Surveying Compass, with Folding Sights, graduated to degrees, Variation Plate, 2 Level Bubbles, Ball Joint and Socket for Jacob Staff Mountings, Needle about $3\frac{1}{2}$ inch, in Polished Mahogany Case . . . each, \$16.00
5321. The same as 5320 Needle about 4 inches, in Polished Mahogany Case " 18.00
5322. The same as 5320 Needle about $4\frac{1}{2}$ inches, in Polished Mahogany Case " 20.00

Compasses Nos. 5320 to 5322 are of the most practical construction and very carefully and substantially made. The variation of the needle is set off by means of a pinion with capstan head, which admits of the most delicate adjustment and is protected from dust and rain

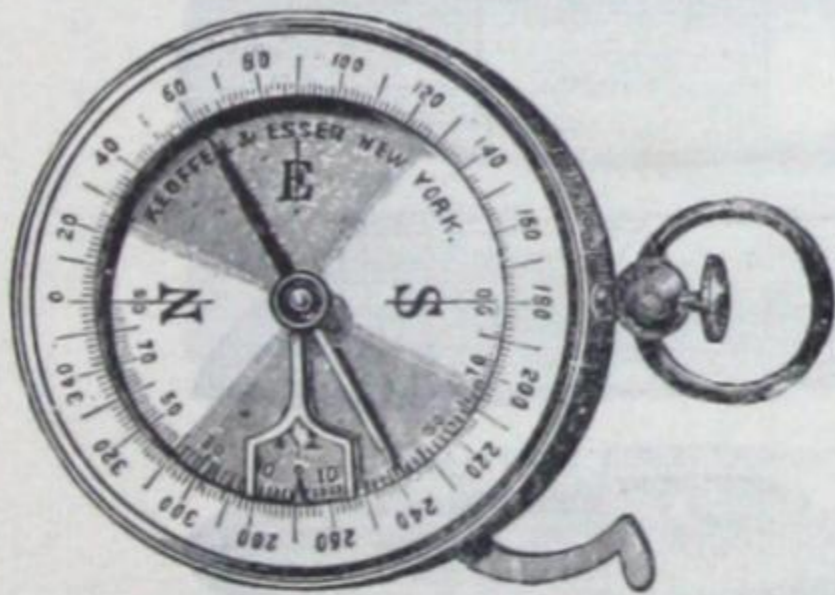
COMPASSES AND CLINOMETERS



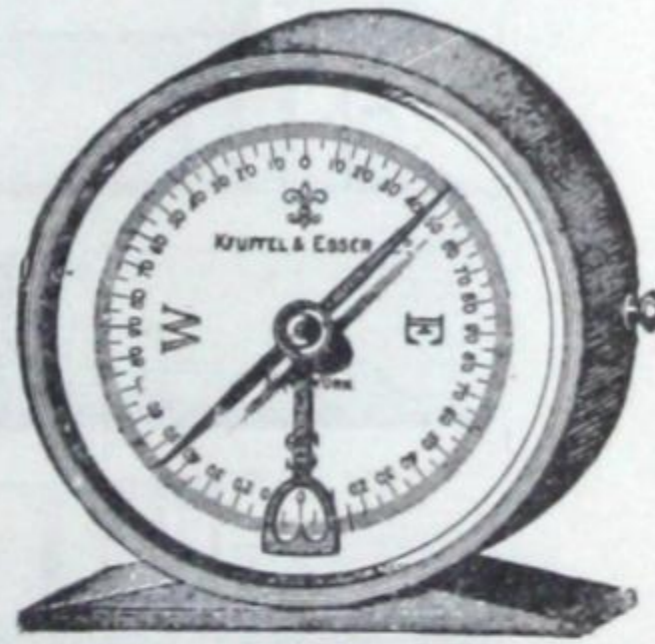
As a Sight Compass

As a Clinometer

5460. Bronzed Sight Compass and Clinometer, 2½ in. diameter, graduated to degrees, Edge Bar Needle and Stop. Sights connected by bar across top, which when turned down serves as fiduciary edge for using as a Clinometer, graduated to give slopes in inches per yard and in degrees. Practical for taking angles, bearings of walls or strata altitudes, etc. Its lightness and small size add to its usefulness. In Mahogany Box . each, \$7.25
5461. The same as 5460, diameter 3 inch " 8.75
5462. The same as 5460, diameter 4 inch " 10.50



5470



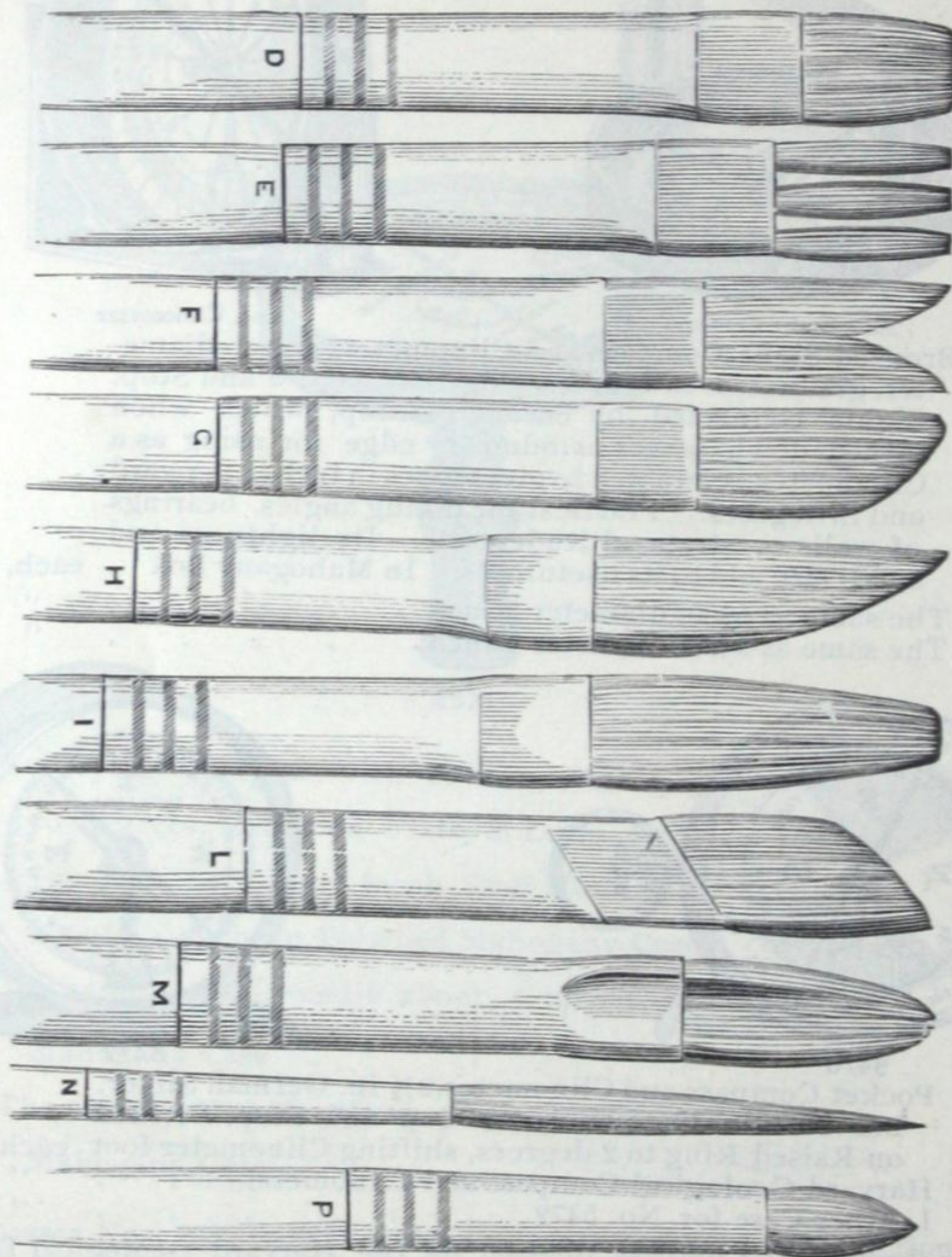
5472

5470. Pocket Compass and Clinometer, 2½ in. German Silver, Bar Needle 1¼ in., Agate Cap and Stop, Divided on Raised Ring to 2 degrees, shifting Clinometer foot . each, \$4.30
5472. Harvard Geological Compass and Clinometer " 4.00
- Leather Case for No. 5472 " .55

This Geological Compass, devised by the Harvard Geological Department, is used there to a great extent, giving excellent satisfaction. It is of brass, bronzed; 2 inches diameter, $\frac{9}{16}$ inch thick, solid base. The silvered dial is divided to degrees, numbered in quadrants, the needle is of the most approved pattern, with agate center and stop. The pendulum clinometer is very sensitive and can be read closely. Weighs 3½ ounces

WINSOR & NEWTON'S
SPECIAL EXTRA FINE BRISTLE BRUSHES

Yellow Polished Handles

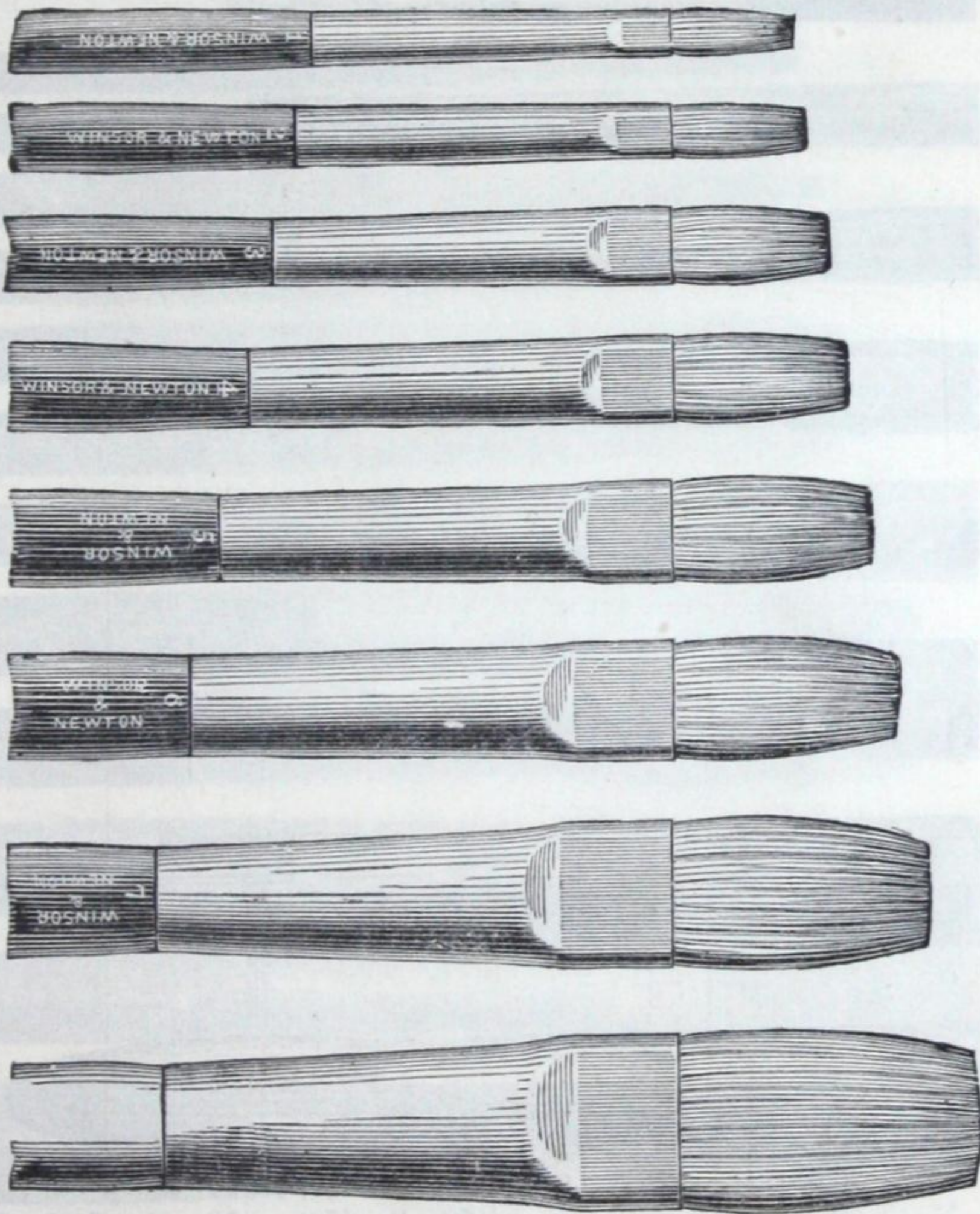


Any of the above shapes in various sizes each, .25

NOTE.— These Brushes are made after patterns suggested by some of the most eminent artists of the day. The hair used is specially prepared to insure the Brushes keeping their peculiar shapes

WINSOR & NEWTON'S BRISTLE BRUSHES

Red Polished Cedar Handles, in Tin, Flat

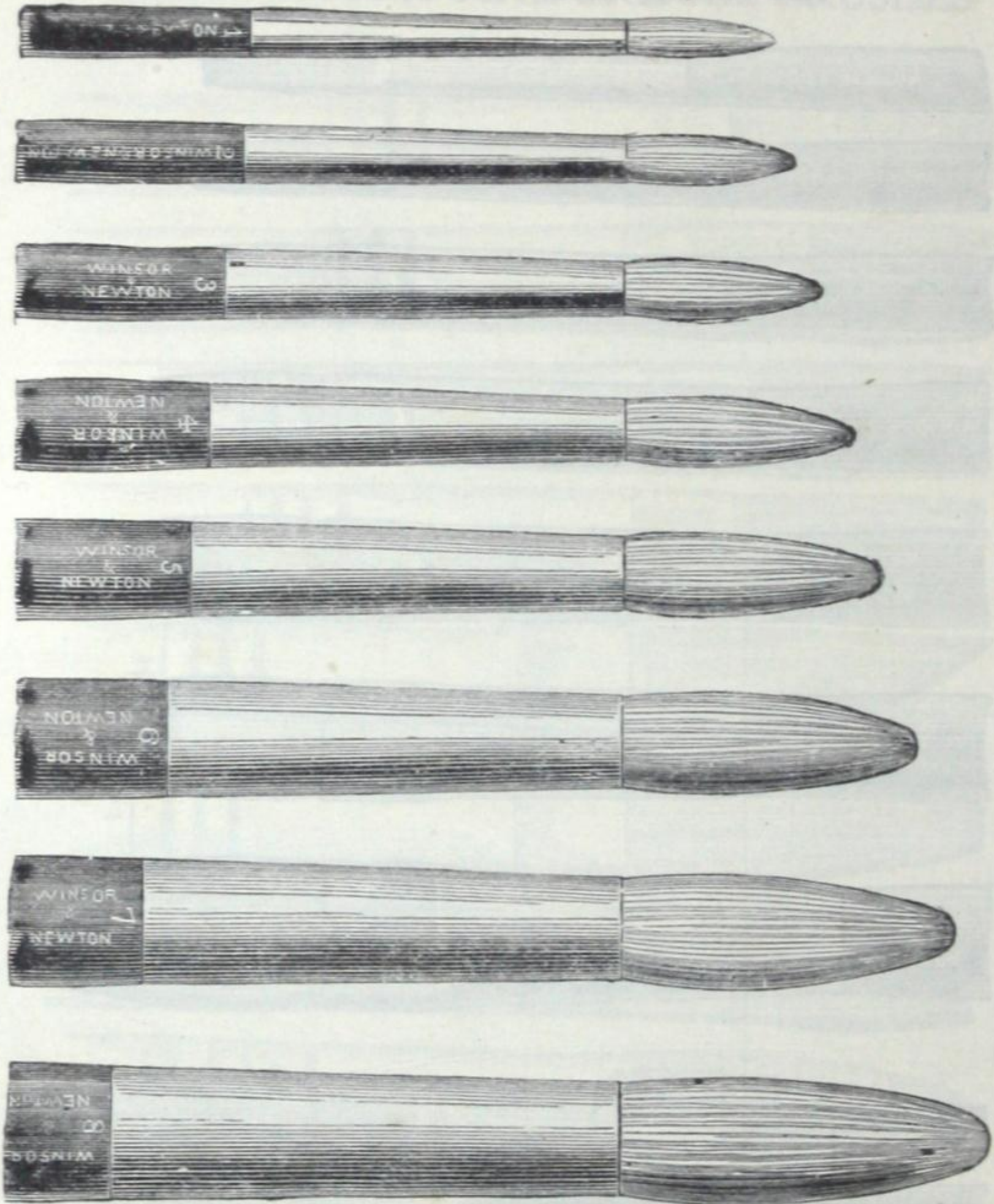


No. 0. doz., \$1.50 each, .12	No. 4. doz., \$1.50 each, .15	No. 9. doz., \$2.80 each, .23
1. " 1.50 " .12	5. " 1.50 " .15	10. " 3.25 " .25
2. " 1.50 " .14	6. " 1.50 " .17	11. " 3.60 " .28
3. " 1.50 " .14	7. " 2.20 " .17	12. " 4.40 " .35
	8. " 2.50 " .20	

NOTE.—Winsor & Newton's Bristle Brushes are made from selected stock, and are recommended for their superior toughness and durability

WINSOR & NEWTON'S BRISTLE BRUSHES

Polished Cedar Handles, in Tin, Round



No. 0. doz., \$1.50 each, .12	No. 4. doz., \$1.50 each, .15	No. 9. doz., \$2.80 each, .23
1. " 1.50 " .12	5. " 1.50 " .15	10. " 3.25 " .25
2. " 1.50 " .14	6. " 1.50 " .17	11. " 3.60 " .28
3. " 1.50 " .14	7. " 2.20 " .17	12. " 4.40 " .35
	8. " 2.50 " .20	

NOTE.—Winsor & Newton's Extra Fine Bristle Brushes, in Tin, made of the finest and softest Lyons' Bristles, feather edged and graduated so as to blend and keep well together in working, ranging in grade between Sable Hair and Ordinary Bristle Brushes, combining somewhat of the softness of the former with the firmness of the latter

WINSOR & NEWTON'S BRISTLE BRUSHES, SERIES C

In Polished Natural Cedar Handles, American Sizes, Round and Flat



No. 1.	.	.	doz.,	.80	each,	.08	No. 7.	.	.	doz.,	\$1.20	each,	.12
2.	.	.	"	.08	"	.08	8.	.	.	"	1.25	"	.12
3.	.	.	"	.95	"	.10	9.	.	.	"	1.40	"	.15
4.	.	.	"	1.00	"	.10	10.	.	.	"	1.45	"	.15
5.	.	.	"	1.05	"	.11	11.	.	.	"	1.75	"	.18
6.	.	.	"	1.10	"	.11	12.	.	.	"	1.85	"	.18
Assorted, No. 1 to No. 12											doz.,	\$1.20	

WINSOR & NEWTON'S
"LANDSEER'S" BRISTLE BRUSHES

Very Long and Thin of Hair, in Tin, Flat



No. 1.	.	doz., \$1.50	each, .10	No. 4.	.	doz., \$1.80	each, .15
2.	.	" 1.50	" .12	5.	.	" 1.80	" .16
3.	.	" 1.50	" .15	6.	.	" 1.80	" .17

WINSOR & NEWTON'S "BRIGHT'S" BRISTLE BRUSHES

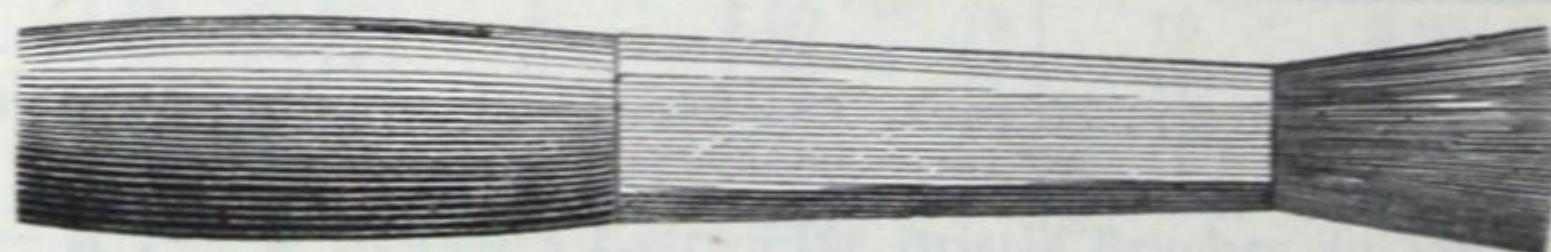
For Landscape, etc. Short and Full of Hair, in Tin



No 0.	.	doz., .85	each, .12	No. 7.	.	doz., \$1.50	each, .17
1.	.	" .85	" .12	8.	.	" 1.75	" .20
2.	.	" .85	" .14	9.	.	" 2.00	" .23
3.	.	" .85	" .14	10.	.	" 2.25	" .25
4.	.	" .85	" .15	11.	.	" 2.50	" .28
5.	.	" .85	" .15	12.	.	" 2.75	" .35
6.	.	" .85	" .17				

BRISTLE POONAH BRUSHES

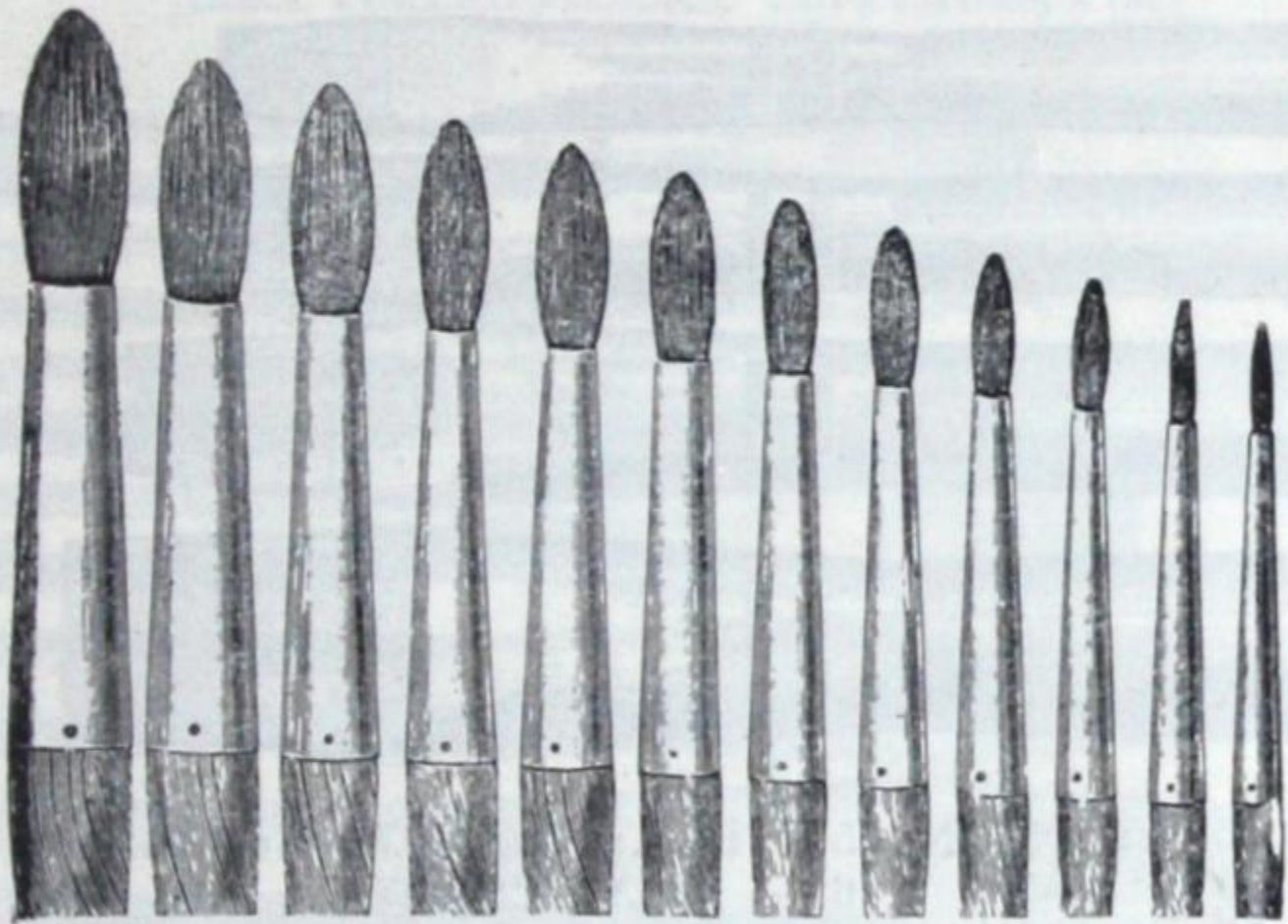
For Wax Flower Painting. Polished Handles, Tin Ferrules, Round



No. 1.	.	doz., .95	each, .08	No. 4.	.	doz., \$1.20	each, .12
2.	.	" 1.05	" .10	5.	.	" 1.30	" .13
3.	.	" 1.15	" .12	6.	.	" 1.40	" .14

ARTISTS' FRENCH BRISTLE BRUSHES

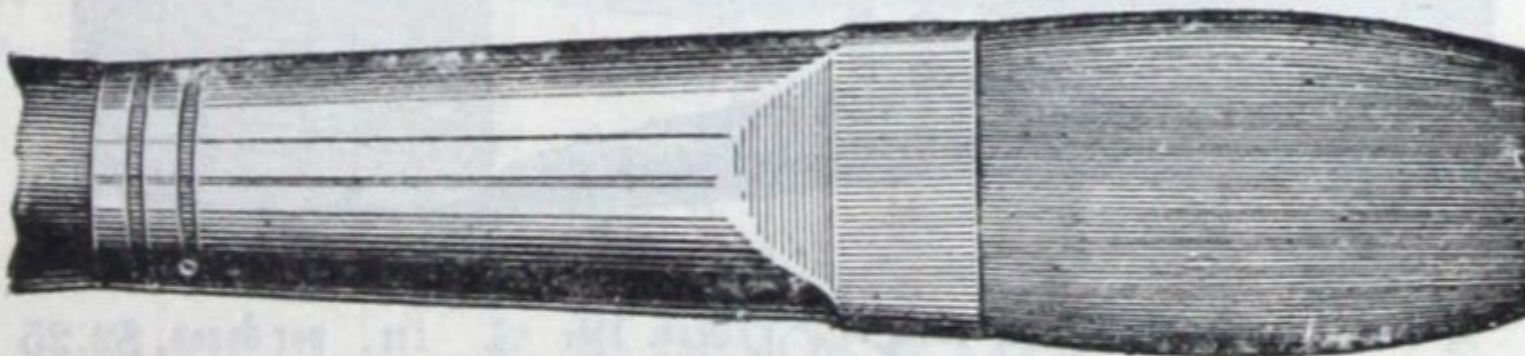
For Oil Painting. Plain Whitewood Handles, Tin Ferrules, Round and Flat



No. 1.	doz., .45	each, .05	No. 5.	doz., .60	each, .07	No. 9.	doz., .85	each, .09
2.	“ .50	“ .05	6.	“ .65	“ .07	10.	“ .90	“ .09
3.	“ .55	“ .06	7.	“ .70	“ .08	11.	“ .95	“ .10
4.	“ .55	“ .06	8.	“ .80	“ .08	12.	“ 1.00	“ .10
Assorted, No. 1 to No. 12						doz., .75		

EXTRA LARGE FRENCH BRISTLE BRUSHES

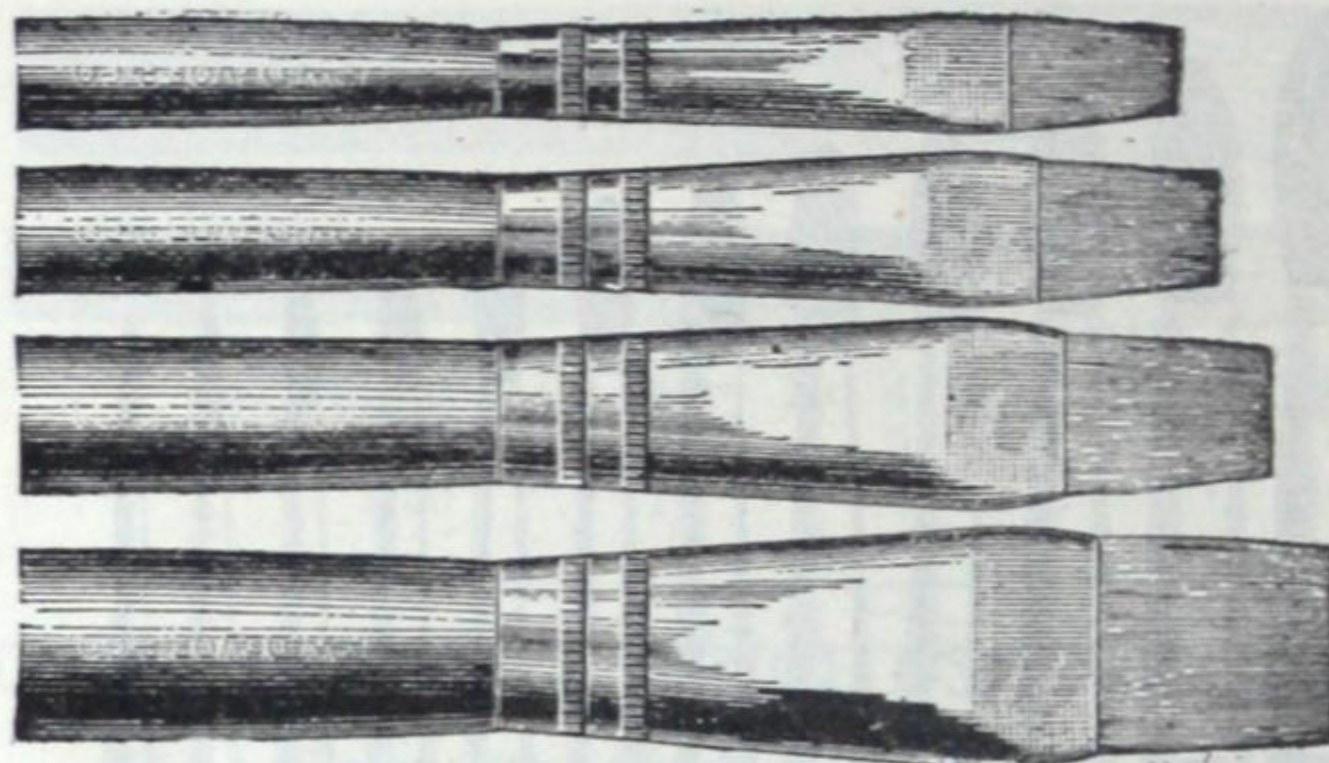
For Oil Painting. Whitewood Handles, Flat



No. 13.	1/2 in.	per dozen, \$1.10	each, .12	No. 19.	1 in.	per dozen, \$2.25	each, .22	
14.	1/2 “	“ 1.20	“ .13	20.	1 1/8 “	“ 2.50	“ .25	
15.	5/8 “	“ 1.35	“ .14	21.	1 1/8 “	“ 2.75	“ .27	
16.	3/4 “	“ 1.50	“ .15	22.	1 1/4 “	“ 3.00	“ .30	
17.	7/8 “	“ 1.75	“ .18	23.	1 1/4 “	“ 3.50	“ .35	
18.	1 “	“ 2.00	“ .20	24.	1 1/4 “	“ 4.10	“ .40	
Assorted, 13 to 24						per dozen, \$2.25		

ARTISTS' "BRIGHT'S" FRENCH BRISTLE BRUSHES

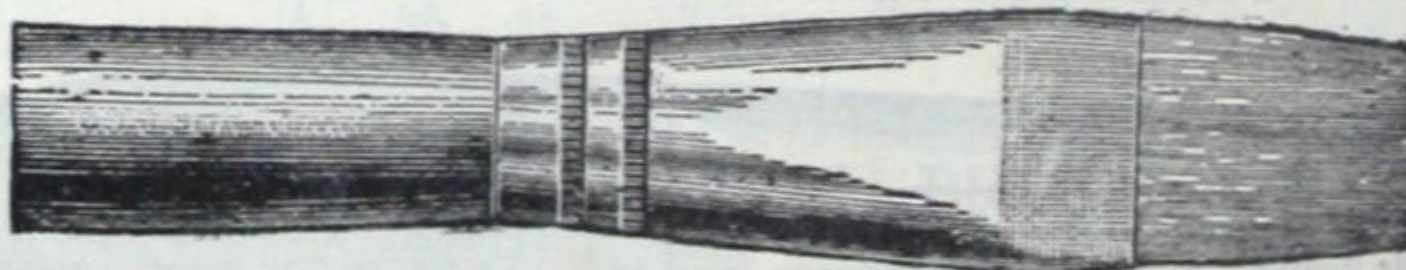
For Oil Painting. Plain Whitewood Handles, Tin Ferrules, Flat



No. 1.	doz., .45	each, .05	No. 5.	doz., .60	each, .07	No. 9.	doz., .85	each, .09
2.	" .50	" .05	6.	" .65	" .07	10.	" .90	" .09
3.	" .55	" .06	7.	" .70	" .08	11.	" .95	" .10
4.	" .55	" .06	8.	" .80	" .08	12.	" 1.00	" .10
Assorted, No. 1 to No. 12							doz., .75	

EX. LARGE "BRIGHT'S" FRENCH BRISTLE BRUSHES

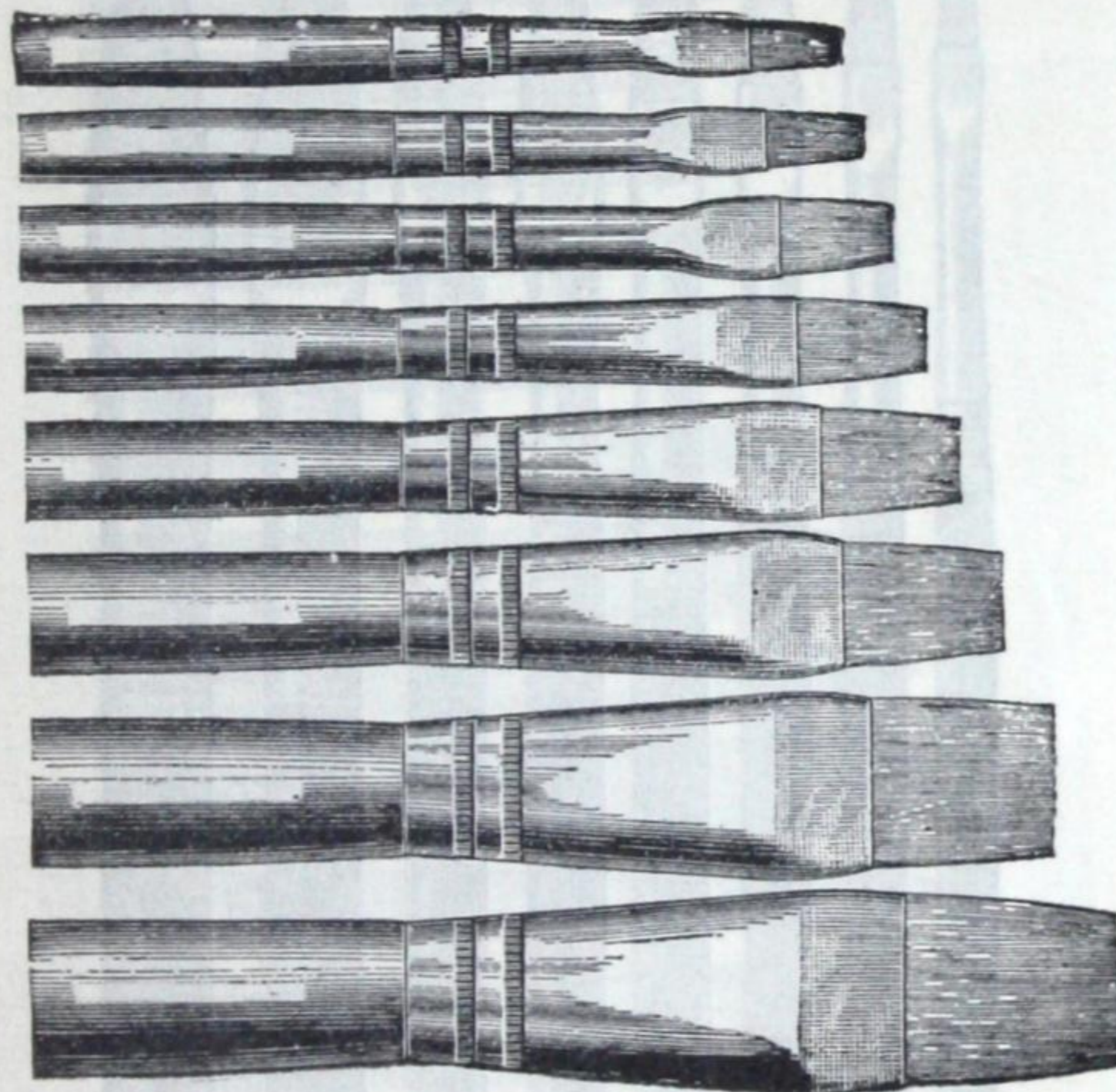
For Oil Painting. Plain Whitewood Handles, Tin Ferrules, Flat



No. 13.	½ in.	per dozen, \$1.10	each, .12	No. 19.	1 in.	per dozen, \$2.25	each, .22	
14.	½ "	" 1.20	" .13	20.	1 ⅛ "	" 2.50	" .25	
15.	⅝ "	" 1.35	" .14	21.	1 ⅜ "	" 2.75	" .27	
16.	¾ "	" 1.50	" .15	22.	1 ¼ "	" 3.00	" .30	
17.	⅞ "	" 1.75	" .18	23.	1 ¼ "	" 3.50	" .35	
18.	1 "	" 2.00	" .20	24.	1 ¼ "	" 4.10	" .40	
Assorted, 13 to 24							per dozen, \$2.25	

F. W. DEVOE & CO'S
ARTISTS' "BRIGHT'S" BRISTLE BRUSHES

For Oil Painting. Firm, Square Touching and General Landscape Work
 Black Polished Handles, Tin Ferrules, Flat



No. 2-0.	. . .	doz., .75	each, .07	No. 3.	. . .	doz., .75	each, .08
1-0.	. . .	" .75	" .07	4.	. . .	" .80	" .10
1.	. . .	" .75	" .07	5.	. . .	" .85	" .10
2.	. . .	" .75	" .08	6.	. . .	" .90	" .10
Assorted, No. 2-0 to No. 6						doz., .75	

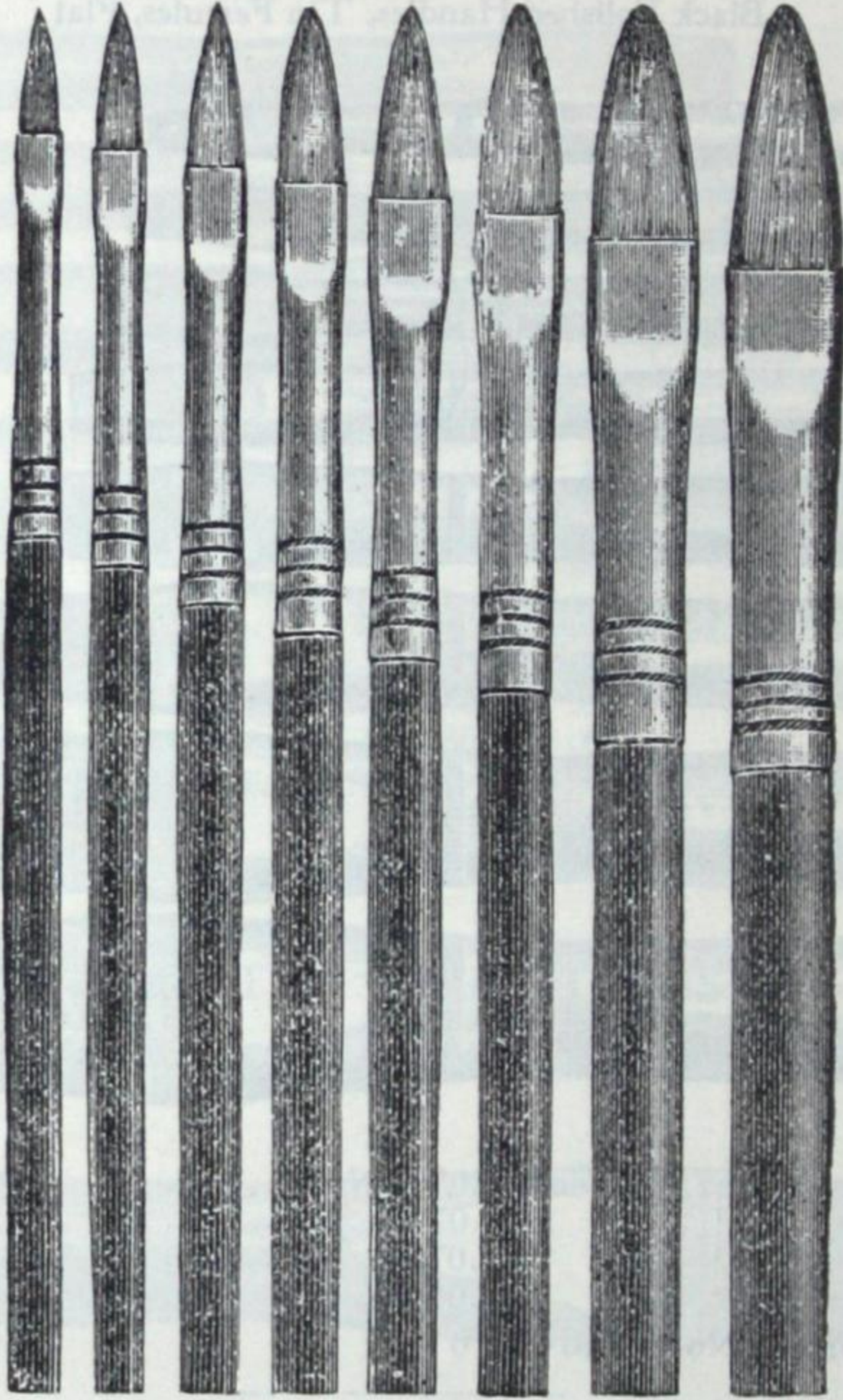
F. W. DEVOE & CO'S
ARTIST'S "BRIGHT'S" BRISTLE BRUSHES

Extra Wide for Oil Painting. Black Polished Handles, Tin Ferrules, Flat

No. 7.	$\frac{3}{4}$ in.	doz., \$1.25	each, .12	No. 10.	$1\frac{1}{8}$ in.	doz., \$1.75	each, .18
8.	$\frac{7}{8}$ "	" 1.45	" .14	11.	$1\frac{1}{4}$ "	" 2.00	" .20
9.	1 "	" 1.60	" .15	12.	$1\frac{1}{2}$ "	" 2.25	" .25

FROST & ADAMS CO'S "SUPER" BRISTLE BRUSHES

For Oil Painting. Black Polished Handles, Flat

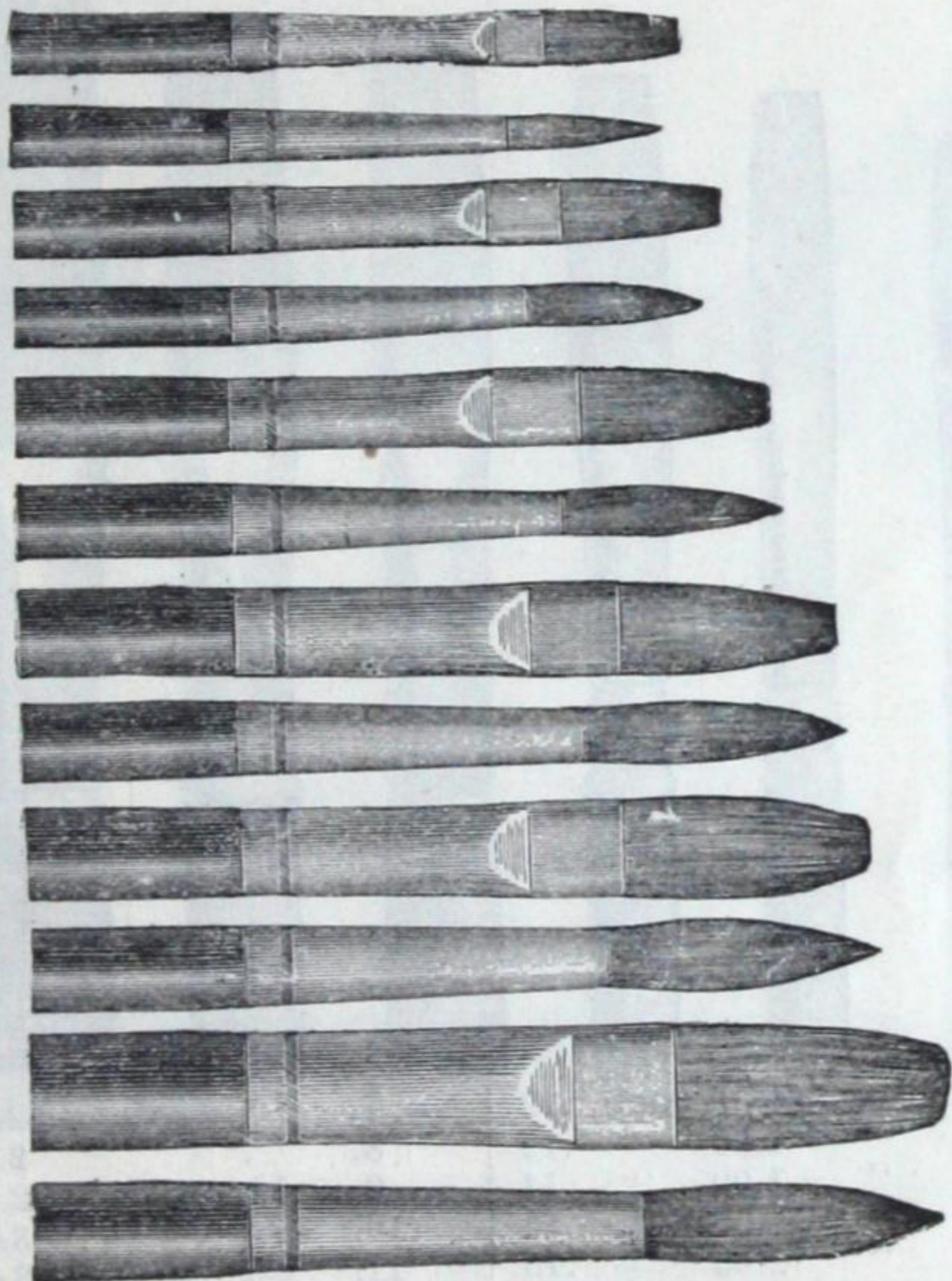


No. 00.	doz., .60 each, .07	No. 3.	doz., .65 each, .08
0.	" .60 " .07	4.	" .65 " .08
1.	" .60 " .07	5.	" .70 " .09
2.	" .60 " .07	6.	" .70 " .09
Assorted No. 00 to No. 6		doz., 65.	

FROST & ADAMS CO'S

LYONS' ARTISTS' SUPERFINE BRISTLE BRUSHES

For Oil Painting. Yellow Polished Handles, Tin Ferrules, Round and Flat



No. 1.	doz., .60	each, .05	No. 5.	doz., .70	each, .07	No. 9.	doz., .85	each, .09
2.	" .60	" .05	6.	" .70	" .07	10.	" .95	" .09
3.	" .65	" .06	7.	" .75	" .08	11.	" 1.00	" .10
4.	" .65	" .06	8.	" .80	" .08	12.	" 1.00	" .10
Assorted, No. 1 to No. 12							doz., .90	

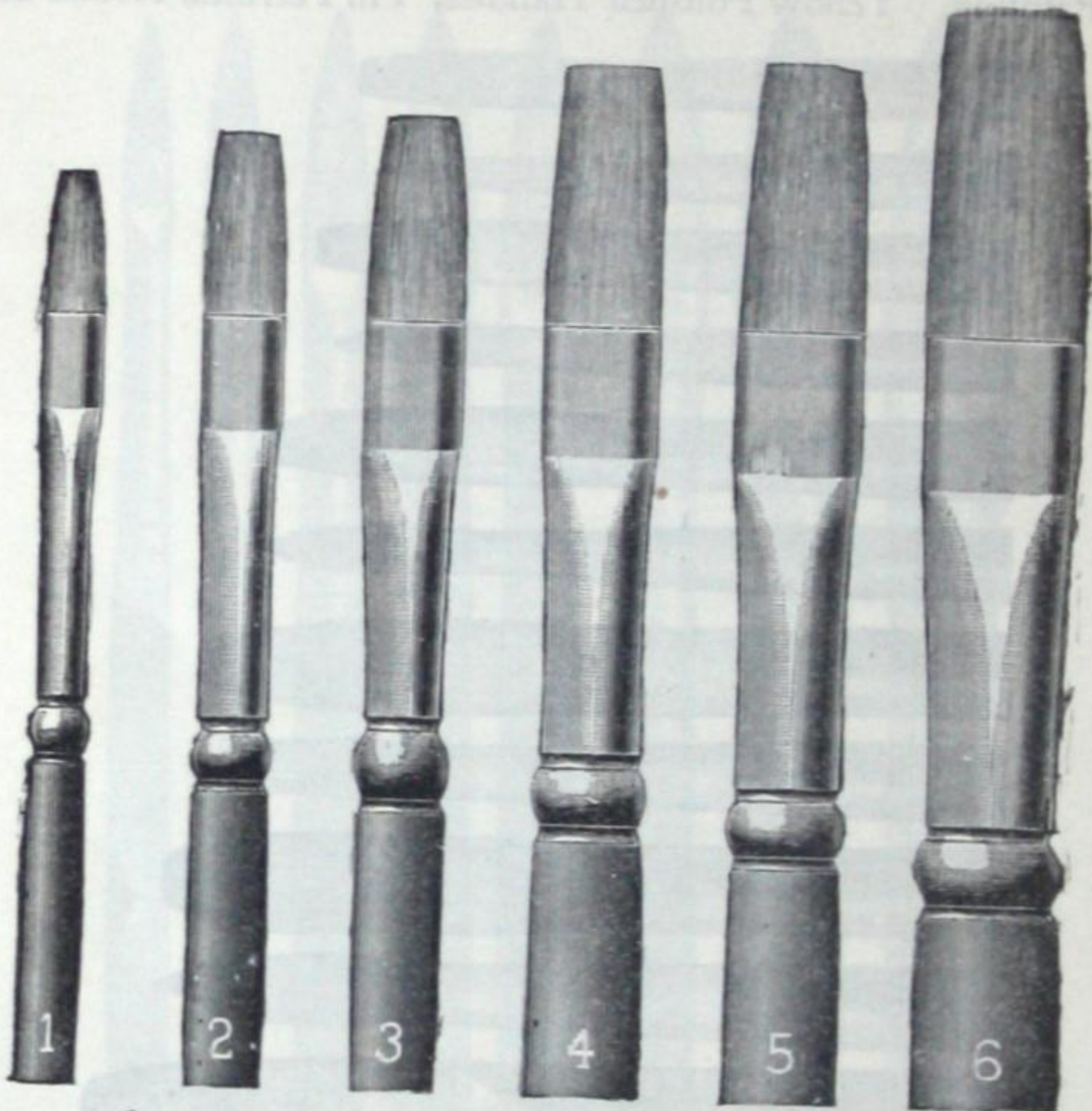
FROST & ADAMS CO'S BRIGHT'S BRISTLE BRUSHES



No. 1.	doz., .60	each, .07	No. 3.	doz., .70	each, .09	No. 5.	doz., .80	each, .12
2.	" .65	" .08	4.	" .75	" .10	6.	" .85	" .14

RUBEN'S ARTISTS' FLAT & ROUND BRISTLE BRUSHES

Made of Selected Bleached Bristles, in Nickel Plated Ferrules,
Yellow Polished Handles



No. 1.	. . .	doz., \$1.35	each, .12	No. 7.	. . .	doz. \$2.45	each, .20
2.	. . .	" 1.60	" .12	8.	. . .	" 2.65	" .23
3.	. . .	" 1.90	" .14	9.	. . .	" 2.90	" .24
4.	. . .	" 1.95	" .14	10.	. . .	" 3.15	" .25
5.	. . .	" 2.05	" .15	11.	. . .	" 3.45	" .28
6.	. . .	" 2.20	" .17	12.	. . .	" 3.90	" .35
Assorted, No. 1 to No. 12				doz., \$2.50			

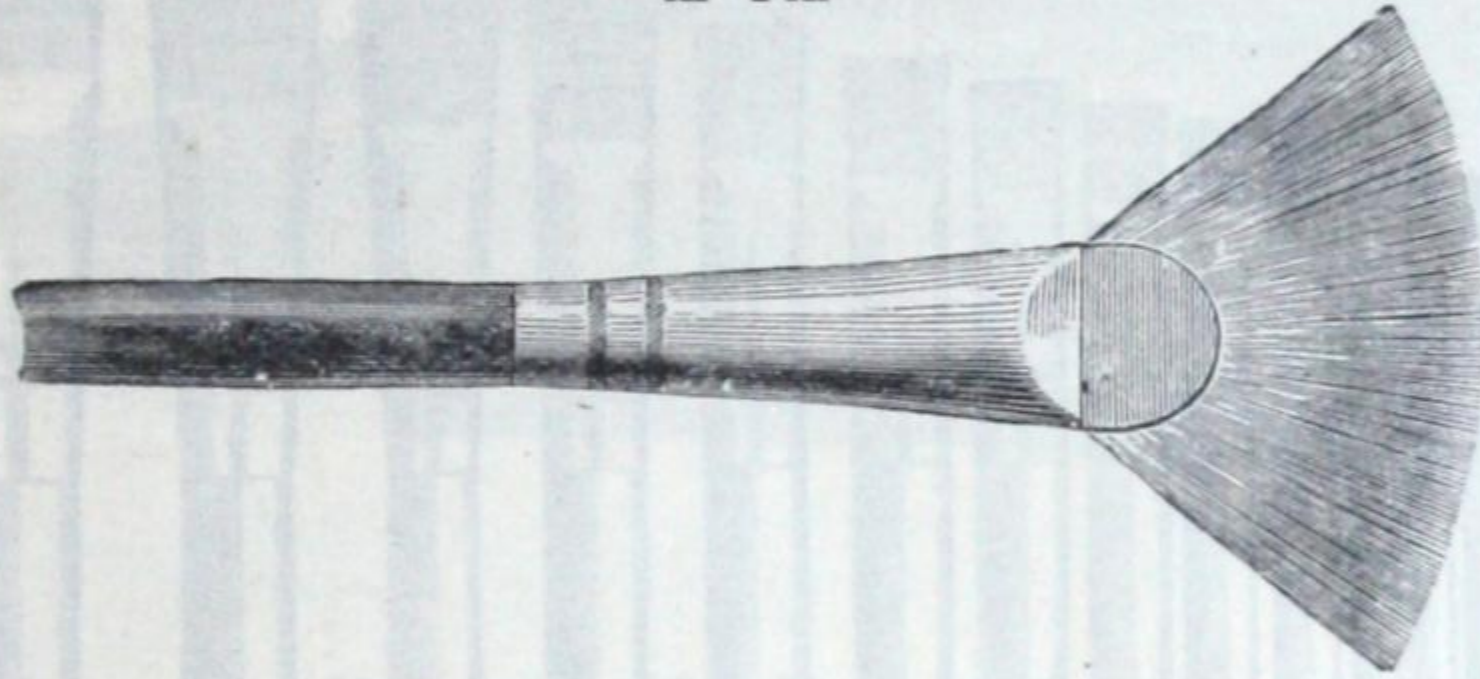
RUBEN'S ARTISTS' FLAT BRISTLE BRUSHES

Extra Large Series

No. 1.	. . .	doz., \$1.80	each, .18	No. 7.	. . .	doz., \$4.20	each, .42
2.	. . .	" 1.80	" .18	8.	. . .	" 4.80	" .48
3.	. . .	" 2.40	" .24	9.	. . .	" 5.40	" .54
4.	. . .	" 3.00	" .30	10.	. . .	" 6.60	" .66
5.	. . .	" 3.00	" .30	11.	. . .	" 7.80	" .78
6.	. . .	" 3.60	" .36	12.	. . .	" 9.00	" .90
Assorted, No. 1 to No. 12				doz., \$4.45			

FROST & ADAMS CO'S
EXTRA FINE BRISTLE "FAN" BRUSHES

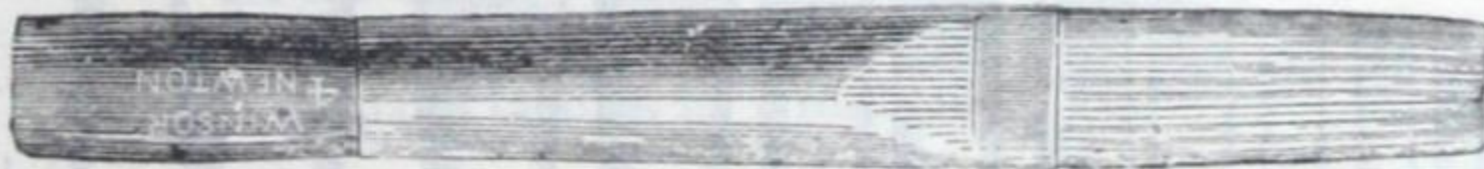
For Light Touching, Slight Dragging, Scumbling, Hair, Foliage, Herbage, etc.
in Tin



No. 1.	doz., \$1.10	each, .20	No. 4.	doz., \$2.50	each, .25
2.	" 1.50	" .20	5.	" 3.00	" .25
3.	" 2.00	" .20	6.	" 3.50	" .25

FROST & ADAMS CO'S
"LANDSEER'S" BRISTLE BRUSHES

For Oil Painting. Polished Handles, Tin Ferrules, Flat



No. 1.	doz., .65	each, .10	No. 4.	doz., .80	each, .16
2.	" .70	" .12	5.	" .85	" .18
3.	" .75	" .14	6.	" .90	" .20

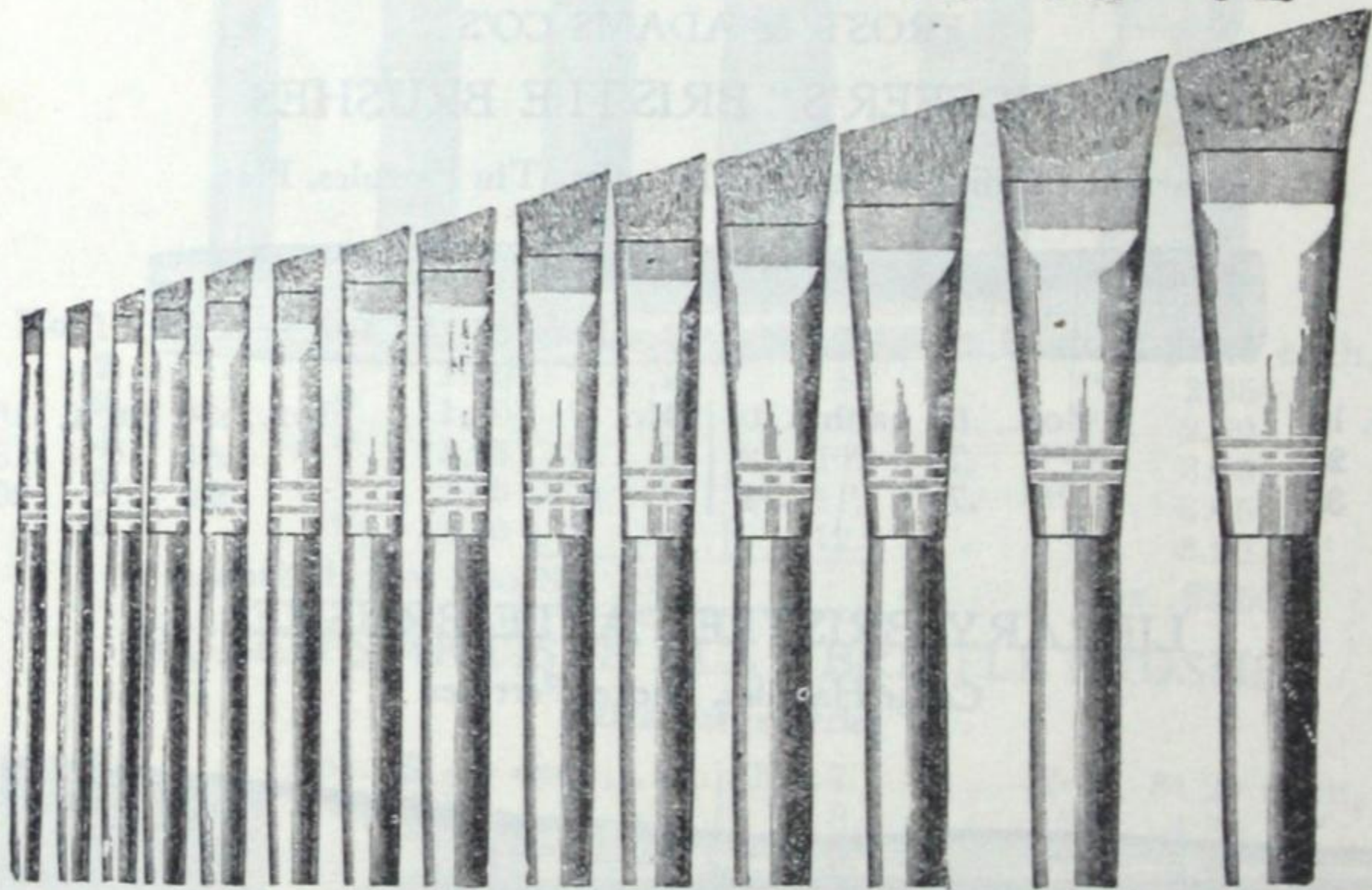
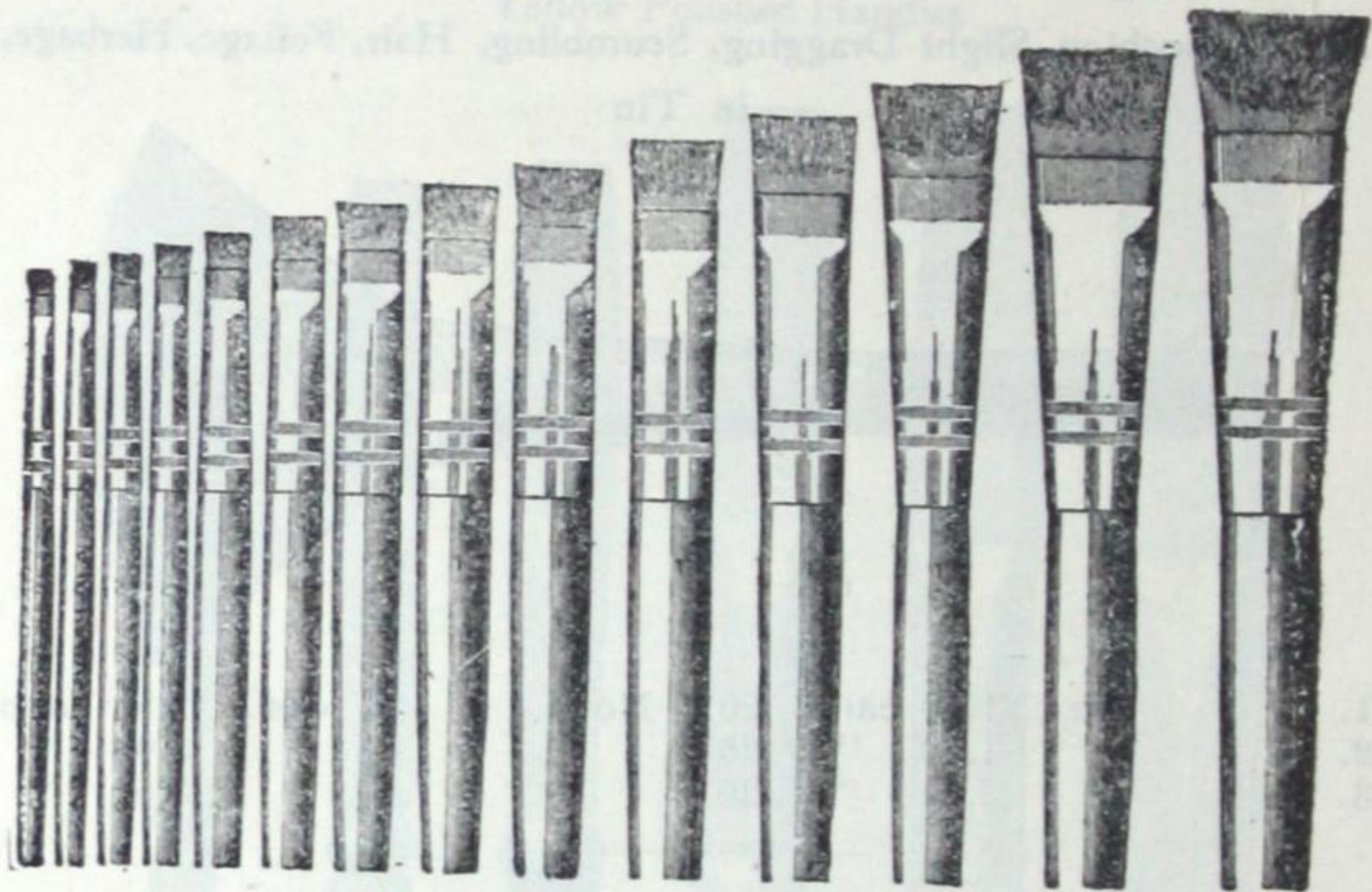
LIBRARY BRISTLE PASTE BRUSHES
Cedar Handles, Nickel Ferrules



No. 1.	$\frac{3}{4}$ inch	per dozen, \$1.25	each, .15
2.	$1\frac{1}{4}$ "	" 2.40	" .25

TAPESTRY PAINTING BRISTLE BRUSHES

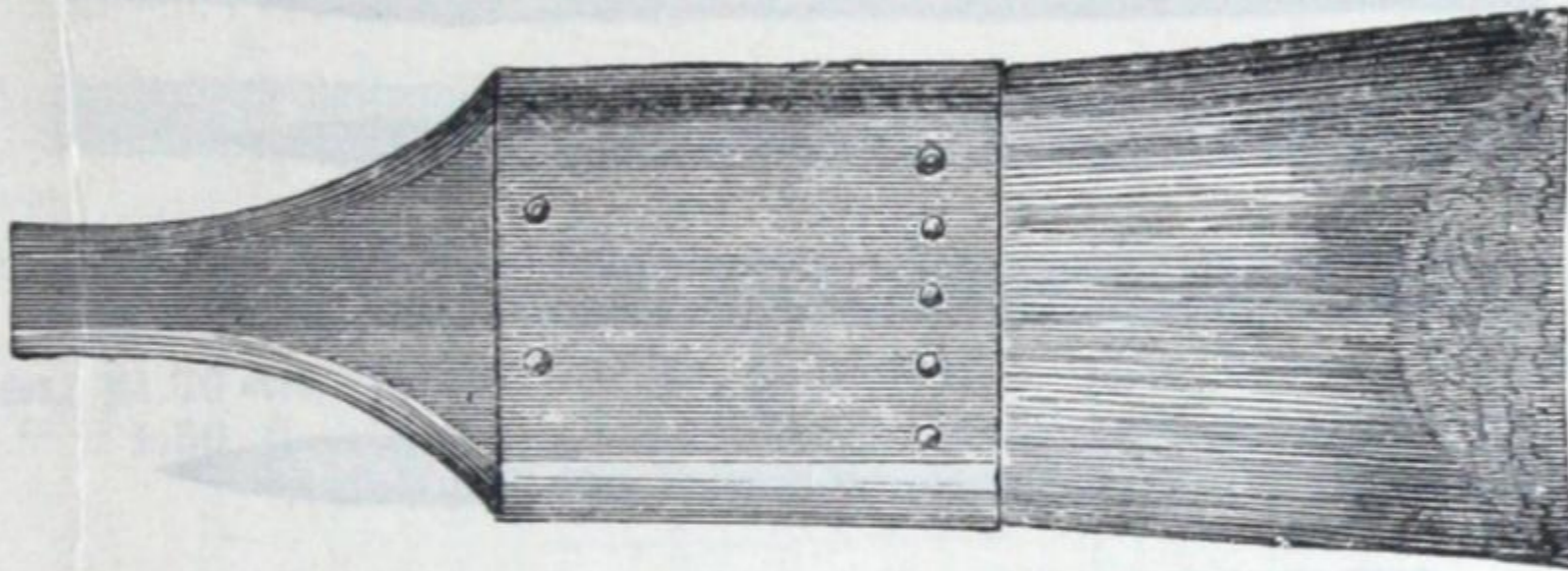
Polished Handles, Square or Angular Chiseled Edge, Flat



No. 1.	doz., .81	each, .08	No. 5.	doz., \$1.12	each, .12	No. 9.	doz., \$1.64	each, .16
2.	“ .90	“ .09	6.	“ 1.20	“ .13	10.	“ 2.03	“ .18
3.	“ 1.02	“ .10	7.	“ 1.35	“ .14	11.	“ 2.38	“ .20
4.	“ 1.10	“ .11	8.	“ 1.52	“ .15	12.	“ 2.60	“ .25

SUPER BRISTLE VARNISH BRUSHES

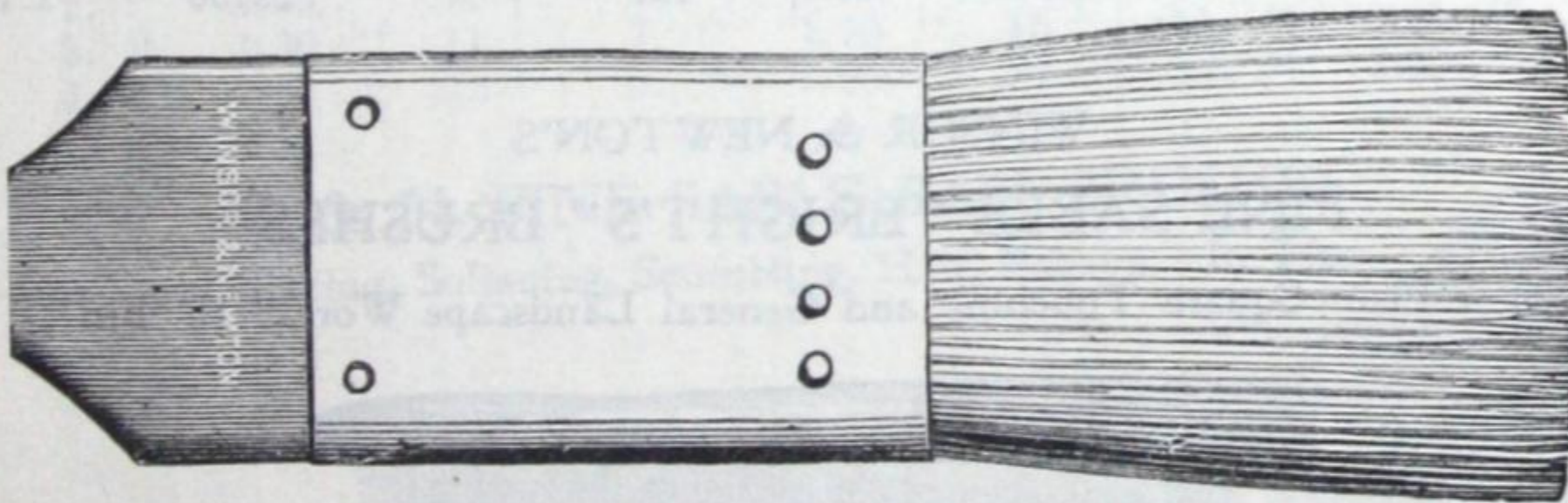
Chiseled Edge, Cedar Handles, in Tin, Flat



1 in. wide	doz., \$1.85 each	.20	3 in. wide	doz., \$ 9.00 each,	.75
1½ " "	" 2.90 "	.25	3½ " "	" 13.20 "	1.00
2 " "	" 4.45 "	.35	4 " "	" 16.80 "	1.25
2½ " "	" 6.55 "	.50			

BRISTLE VARNISH BRUSHES

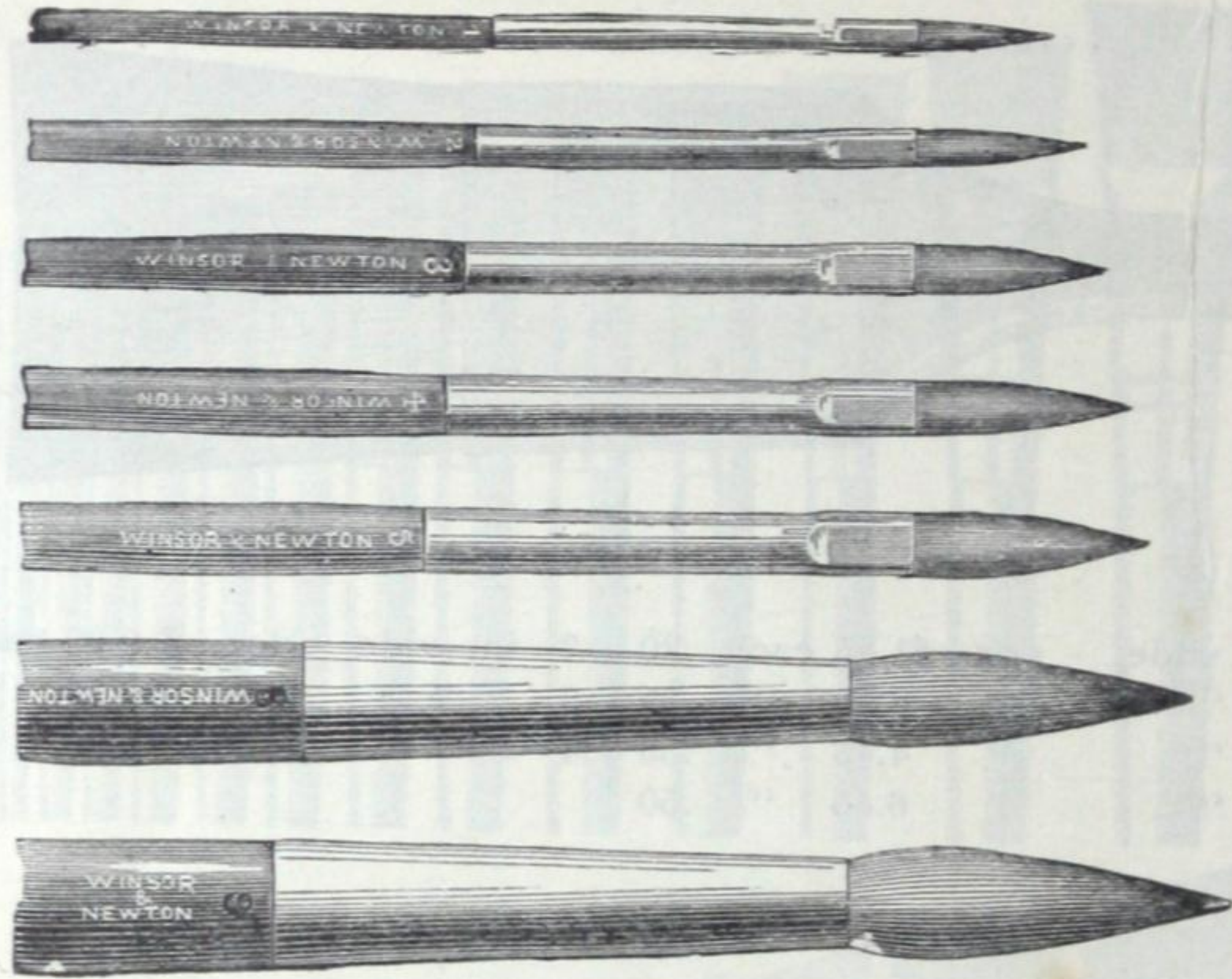
Cedar Handles, in Tin, Nailed, Flat



1 in. wide	doz., \$1.30 each,	.15	2½ in. wide	doz., \$5.00 each,	.38
1½ " "	" 2.05 "	.20	3 " "	" 7.00 "	.45
2 " "	" 3.35 "	.30	4 " "	" 12.00 "	.60

WINSOR & NEWTON'S RED SABLE BRUSHES

For Oil Painting. Red Polished Cedar Handles, in Tin, Flat and Round

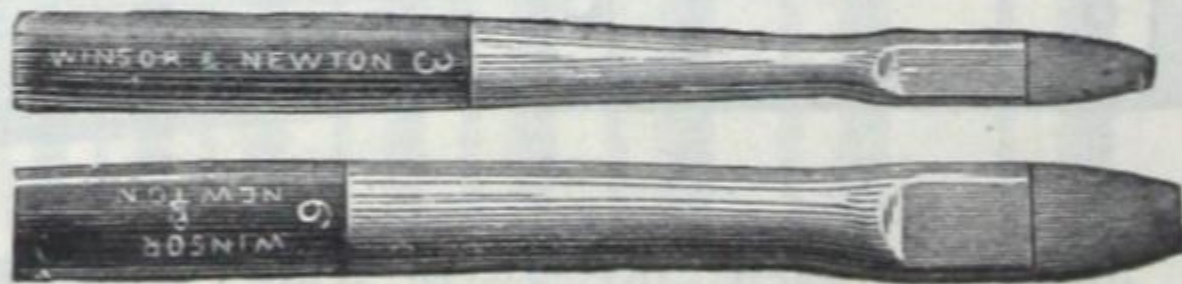


No. 1	.	doz., \$1.70	each, .18	No. 7	.	doz., \$7.80	each, .80
2.	.	" 2.00	" .25	8.	.	" 9.30	" .90
3.	.	" 2.50	" .30	9	.	" 12.60	" 1.05
4.	.	" 3.30	" .35	10.	.	" 15.60	" 1.25
5.	.	" 3.80	" .40	11.	.	" 19.20	" 1.50
6.	.	" 4.80	" .50	12.	.	" 22.90	" 1.75

WINSOR & NEWTON'S

FINE SABLE "BRIGHT'S" BRUSHES

For Firm, Square Touching and General Landscape Work. In Tin



No. 1.	.	doz., \$1.70	each, .18	No. 4.	.	doz., \$3.30	each, .35
2.	.	" 2.00	" .25	5.	.	" 3.80	" .40
3.	.	" 2.50	" .30	6.	.	" 4.80	" .50

W. & N. FINE RED SABLE RIGGER BRUSHES

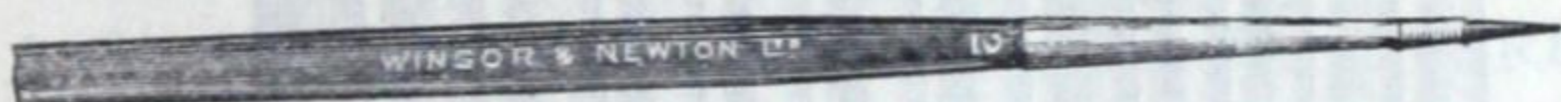
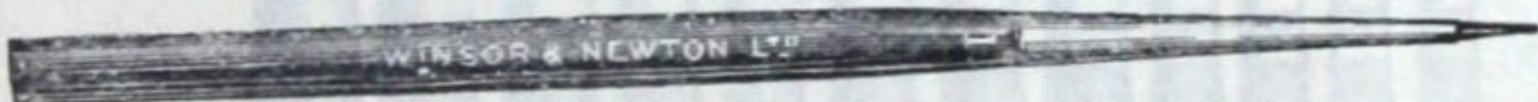
For Delicate Work, Fine Line Drawing. In Tin



No. 0. doz., \$1.70 each, .15	No. 2. doz., \$2.00 each, .25	No. 5. doz., \$3.80 each, .40
1. " 1.50 " .18	3. " 2.50 " .30	6. " 4.80 " .50
	4. " 3.30 " .35	

W. & N. FINEST RED SABLE BRUSHES

Red Polished Cedar Handles, Nickel Ferrules, American Sizes, Flat and Round



No. 1. doz., \$1.20 each, .10	No. 5. doz., \$1.50 each, .13	No. 9. doz., \$2.10 each, .18
2. " 1.20 " .10	6. " 1.60 " .14	10. " 2.40 " .20
3. " 1.30 " .11	7. " 1.70 " .15	11. " 2.95 " .25
4. " 1.35 " .12	8. " 1.95 " .17	12. " 3.55 " .40

W. & N. FINE SABLE FAN BRUSHES

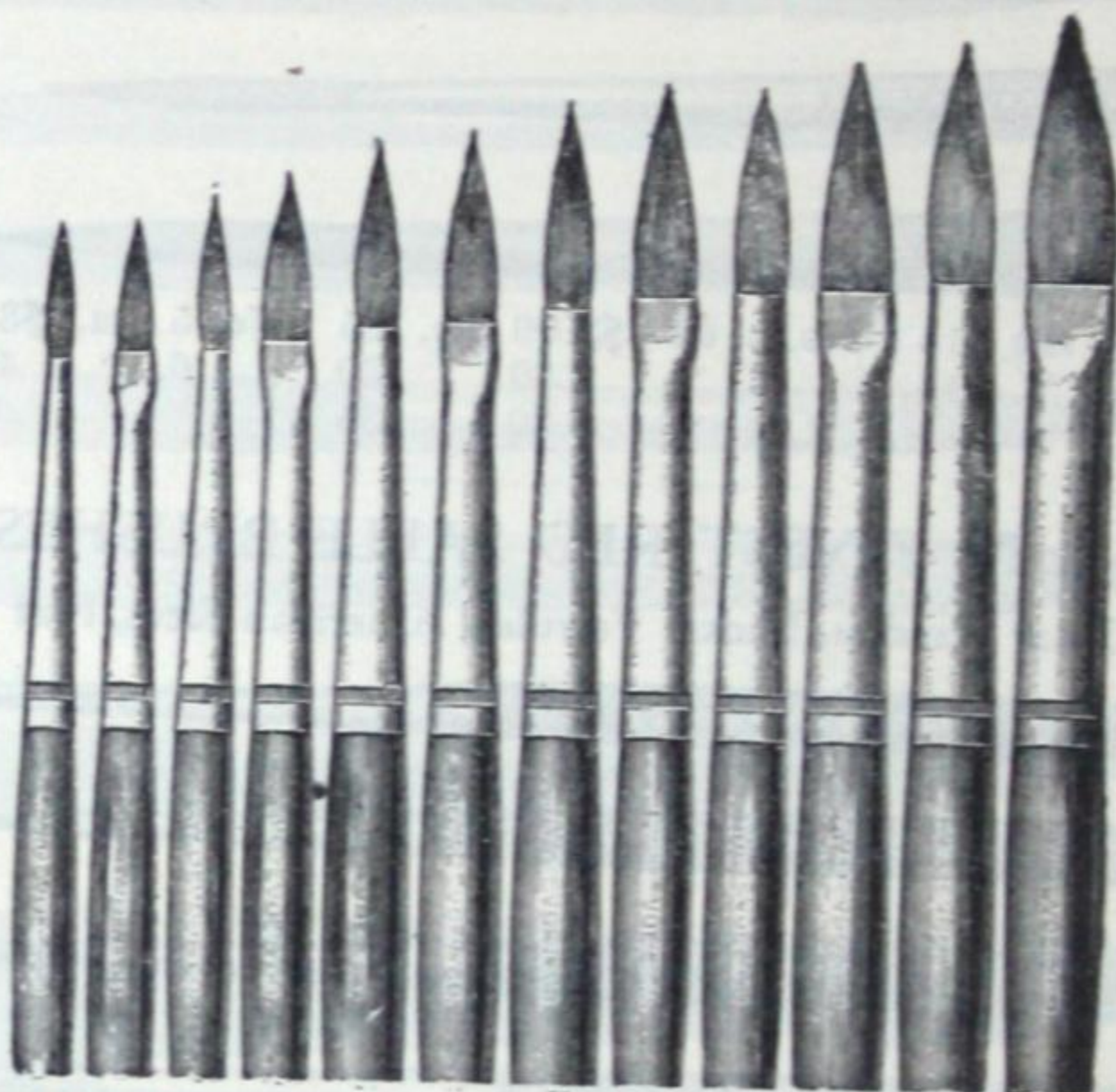
For Light Glazing, Softening, Scumbling, Hair, Foliage. In Tin



No. 1. each, .50	No. 4. each, .60
2. " .55	5. " .60
3. " .55	6. " .65

FROST & ADAMS CO'S ARTISTS' RED SABLE BRUSHES

For Oil Painting. Polished Handles, Nickel Plated Ferrules, Round and Flat



No. 1.	Round	doz.,	.70	each,	.10	No. 7.	Round	doz.,	\$1.70	each,	.24
2.	"	"	.75	"	.12	8.	"	"	1.85	"	.26
3.	"	"	.85	"	.15	9.	"	"	2.00	"	.28
4.	"	"	1.00	"	.18	10.	"	"	2.25	"	.30
5.	"	"	1.10	"	.20	11.	"	"	2.75	"	.32
6.	"	"	1.25	"	.22	12.	"	"	3.30	"	.34
Assorted, No. 1 to No 12								doz., \$1.60			

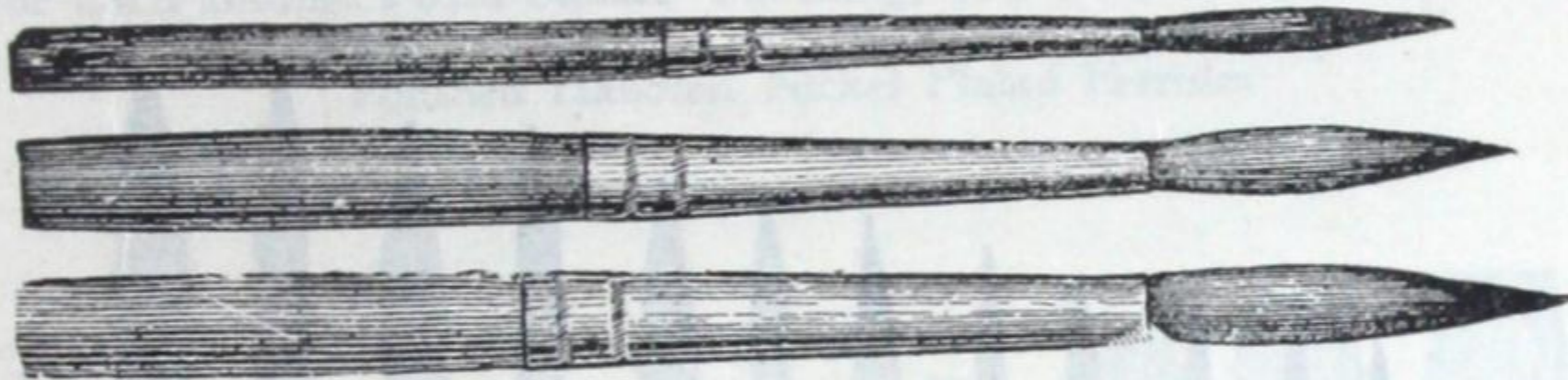
FROST & ADAMS CO'S ARTISTS' RED SABLE BRUSHES

For Oil Painting. Polished Handles, Nickel Plated Ferrules, Flat

No. 1.	Flat	doz.,	.70	each,	.09	No. 7.	Flat	doz.,	\$1.70	each,	.22
2.	"	"	.75	"	.11	8.	"	"	1.85	"	.24
3.	"	"	.85	"	.13	9.	"	"	2.00	"	.26
5.	"	"	1.00	"	.15	10.	"	"	2.25	"	.28
5.	"	"	1.10	"	.16	11.	"	"	2.75	"	.30
6.	"	"	1.25	"	.20	12.	"	"	3.30	"	.32
Assorted, No. 1 to No. 12								doz., \$1.60			

FROST & ADAMS CO'S
FINE RED SABLE RIGGER BRUSHES

For Oil Painting, Fine Lines. Polished Handles, Nickel Plated Ferrules, Round

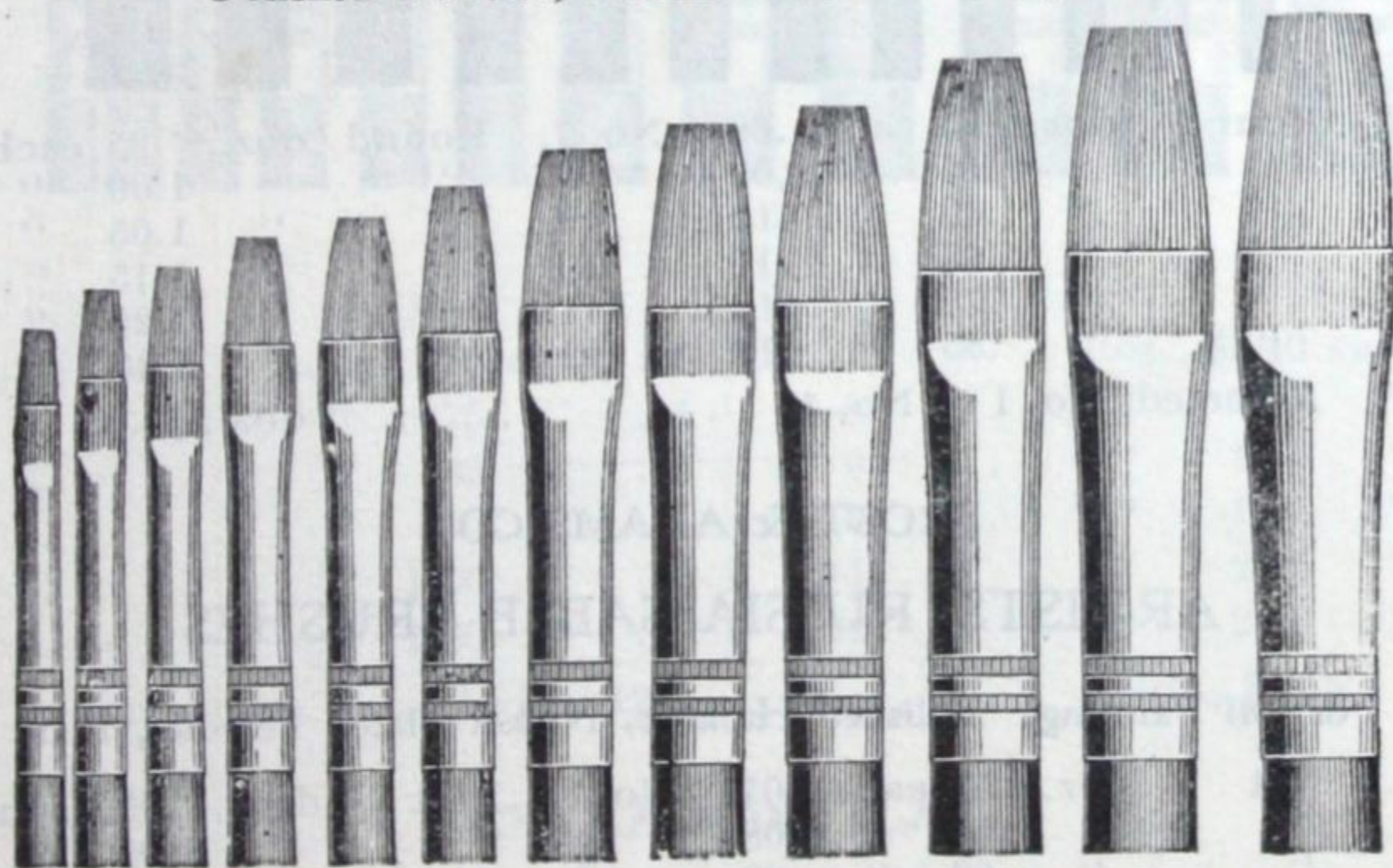


No. 1.	doz.,	.80	each,	.10	No. 7.	doz.,	\$1.80	each,	.24
2.	"	.90	"	.12	8.	"	2.10	"	.26
3.	"	1.00	"	.15	9.	"	2.50	"	.28
4.	"	1.10	"	.18	10.	"	3.00	"	.30
5.	"	1.25	"	.20	11.	"	3.50	"	.32
6.	"	1.50	"	.22	12.	"	4.50	"	.34
Assorted, No. 1 to No. 12					doz.,	\$2.00			

F.&A.CO'S ARTISTS' "BRIGHT'S" RED SABLE BRUSHES

For Oil Painting, Firm Square Touching and General Landscape Work.

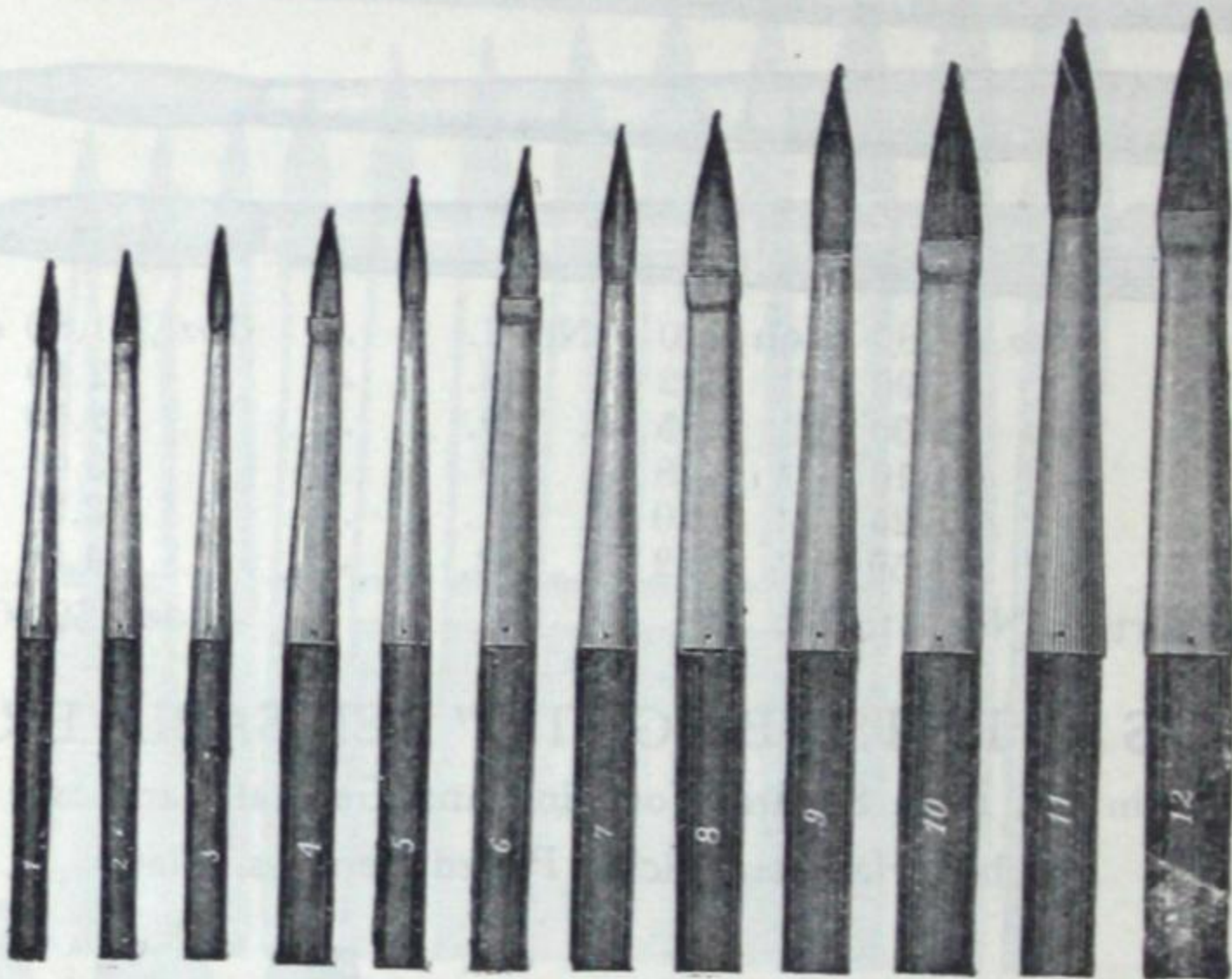
Polished Handles, Nickel Plated Ferrules, Flat



No. 1.	doz.,	\$1.00	each,	.12	No. 5.	doz.,	\$2.00	each,	.20	No. 9.	doz.,	\$4.00	each,	.35
2.	"	1.10	"	.14	6.	"	2.50	"	.25	10.	"	4.70	"	.40
3.	"	1.40	"	.16	7.	"	3.00	"	.28	11.	"	5.65	"	.45
4.	"	1.75	"	.18	8.	"	3.50	"	.30	12.	"	6.60	"	.50
Assorted No. 1 to No. 12										doz.,	\$2.50			

FROST & ADAMS CO'S
ARTISTS' RUSSIA SABLE BRUSHES

For Oil Painting. Polished Handles, Nickel Plated Ferrules, Round and Flat



No. 1.	Round	doz.,	.55	each,	.08	No. 7.	Round	doz.,	.95	each,	.15
2.	"	"	.55	"	.09	8.	"	"	1.00	"	.16
3.	"	"	.60	"	.10	9.	"	"	1.05	"	.17
4.	"	"	.65	"	.11	10.	"	"	1.15	"	.18
5.	"	"	.75	"	.12	11.	"	"	1.25	"	.20
6.	"	"	.85	"	.13	12.	"	"	1.40	"	.21
Assorted, No. 1 to No. 12									doz.,	\$1.00	

FROST & ADAMS CO'S
ARTISTS' RUSSIA SABLE BRUSHES

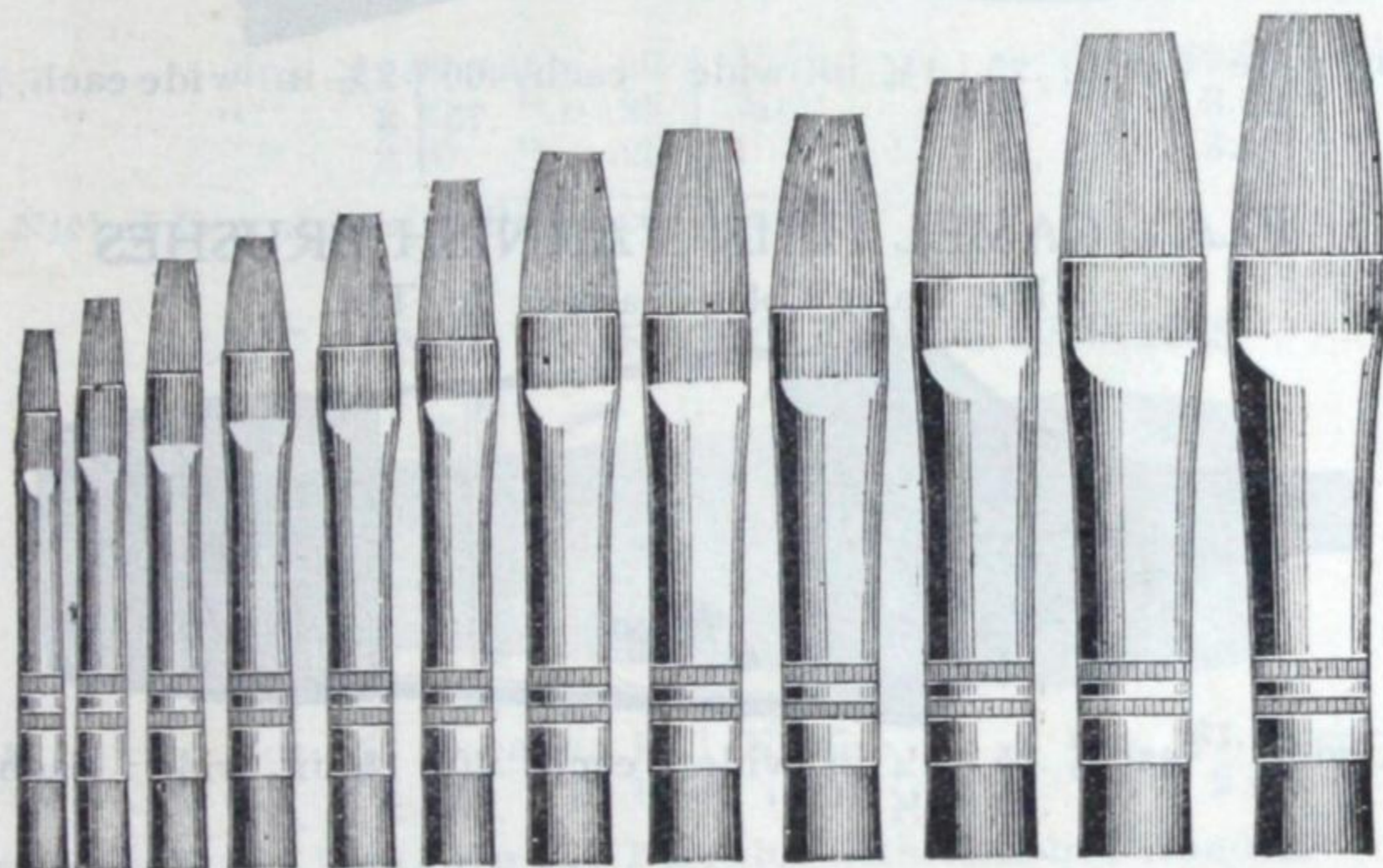
For Oil Painting. Polished Handles, Nickel Plated Ferrules, Flat

No. 1.	Flat	doz.,	.55	each,	.07	No. 7.	Flat	doz.,	.95	each,	.14
2.	"	"	.55	"	.08	8.	"	"	1.00	"	.15
3.	"	"	.60	"	.09	9.	"	"	1.05	"	.16
4.	"	"	.65	"	.10	10.	"	"	1.15	"	.17
5.	"	"	.75	"	.11	11.	"	"	1.25	"	.18
6.	"	"	.85	"	.12	12.	"	"	1.40	"	.19
Assorted, No. 1 to No. 12									doz.,	\$1.00	

FROST & ADAMS CO'S
ARTISTS' "BRIGHT'S" RUSSIA SABLE BRUSHES

For Oil Painting, Firm, Square Touching, and General Landscape Work.

Polished Handles, Nickel Plated Ferrules



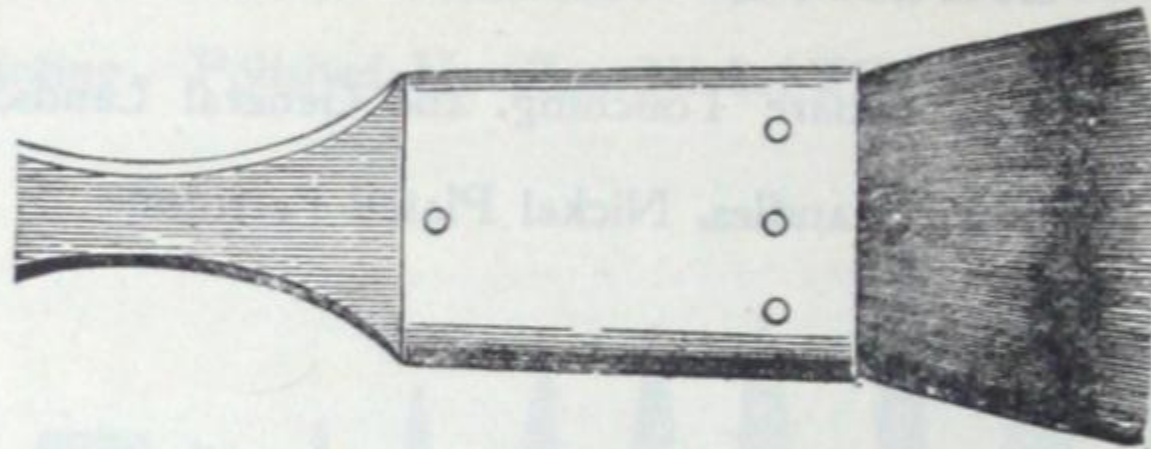
No. 1.	.	doz., .70	each, .10	No. 7.	.	doz., \$1.40	each, .18
2.	.	" .75	" .11	8.	.	" 1.55	" .20
3.	.	" .85	" .12	9.	.	" 1.70	" .22
4.	.	" .90	" .13	10.	.	" 1.95	" .24
5.	.	" 1.00	" .14	11.	.	" 2.25	" .28
6.	.	" 1.30	" .15	12.	.	" 2.40	" .30
Assorted, No. 1 to No 12				.	.	doz., \$1.15	

EXTRA WIDE, FLAT

No. 10.	$\frac{3}{8}$ in. wide	doz., \$2.50	each, .35	No. 16.	$\frac{3}{4}$ in wide	doz., \$4.50	each, .50
11.	$\frac{1}{2}$ "	" 2.70	" .40	18.	$\frac{7}{8}$ "	" 5.75	" .55
14.	$\frac{5}{8}$ "	" 3.60	" .45	20.	1 "	" 8.00	" .60

FRENCH CAMEL HAIR MOTTLETS OR SPALTERS

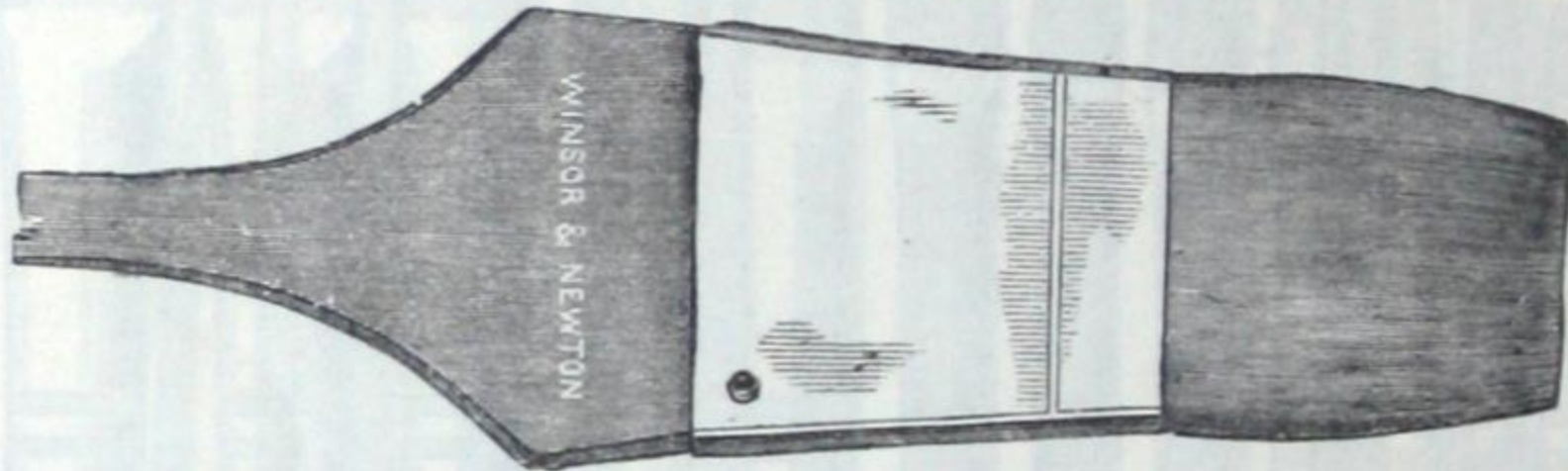
Short Stained Handles, Riveted



1 in. wide	each, .25	1 3/4 in. wide	each, .60	2 1/2 in. wide	each, \$1.00
1 1/4 " "	" .30	2 " "	" .75	3 " "	" 1.50
1 1/2 " "	" .45				

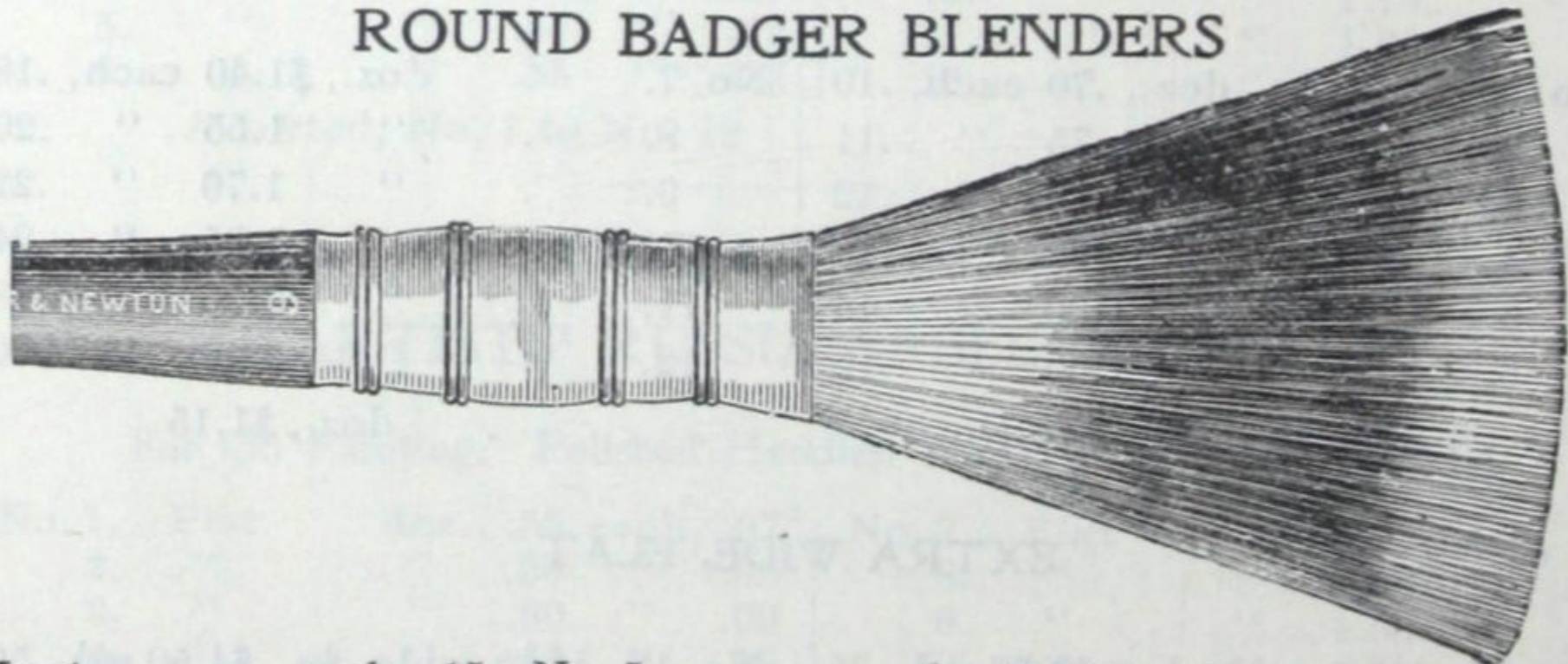
FLAT CAMEL HAIR VARNISH BRUSHES

For Water Color Washes. In Tin



1/2 in. wide	each, .25	1 1/4 in. wide	each, .40	1 3/4 in. wide	each, .65
3/4 " "	" .30	1 1/2 " "	" .55	2 " "	" .75
1 " "	" .35				

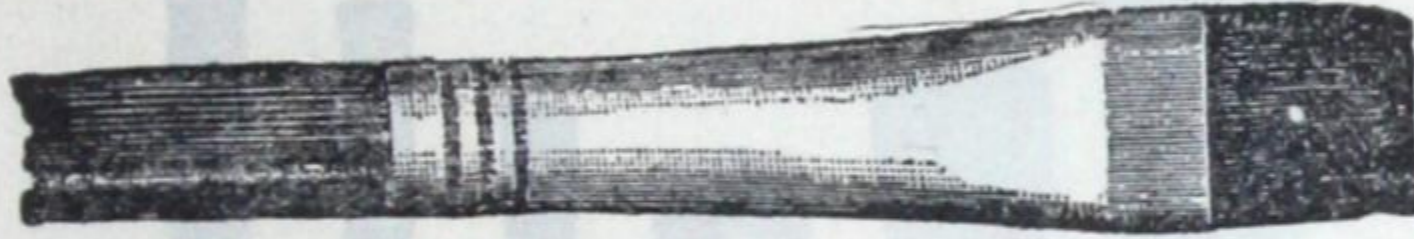
FROST & ADAMS CO'S ROUND BADGER BLENDERS



No. 1.	each, .15	No. 5.	each, .40	No. 9.	each, .85
2.	" .20	6.	" .50	10.	" .90
3.	" .25	7.	" .60	11.	" 1.10
4.	" .30	8.	" .70	12.	" 1.20

FROST & ADAMS CO.'S
BRUSHES FOR CHINA PAINTING

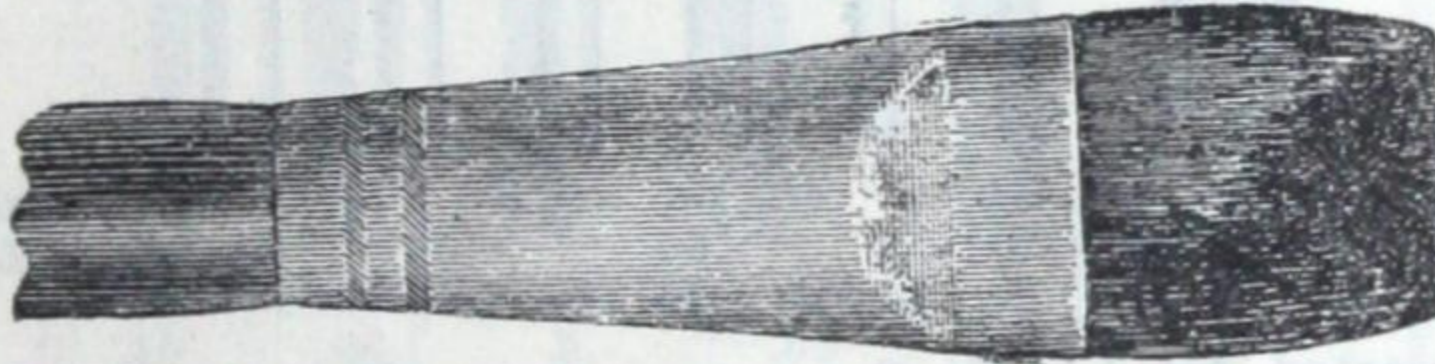
FLAT RUSSIA SABLE GROUNDING BRUSHES



$\frac{3}{8}$ in.	.	doz., \$2.00 each,	.20	|	$\frac{3}{4}$ in.	.	doz., \$2.75 each,	.30
$\frac{1}{2}$ "	.	" 2.25 "	.25	|	$\frac{7}{8}$ "	.	" 3.00 "	.30
$\frac{5}{8}$ "	.	" 2.50 "	.25	|	1 "	.	" 3.50 "	.35

In Nickel Ferrules with Polished Handles

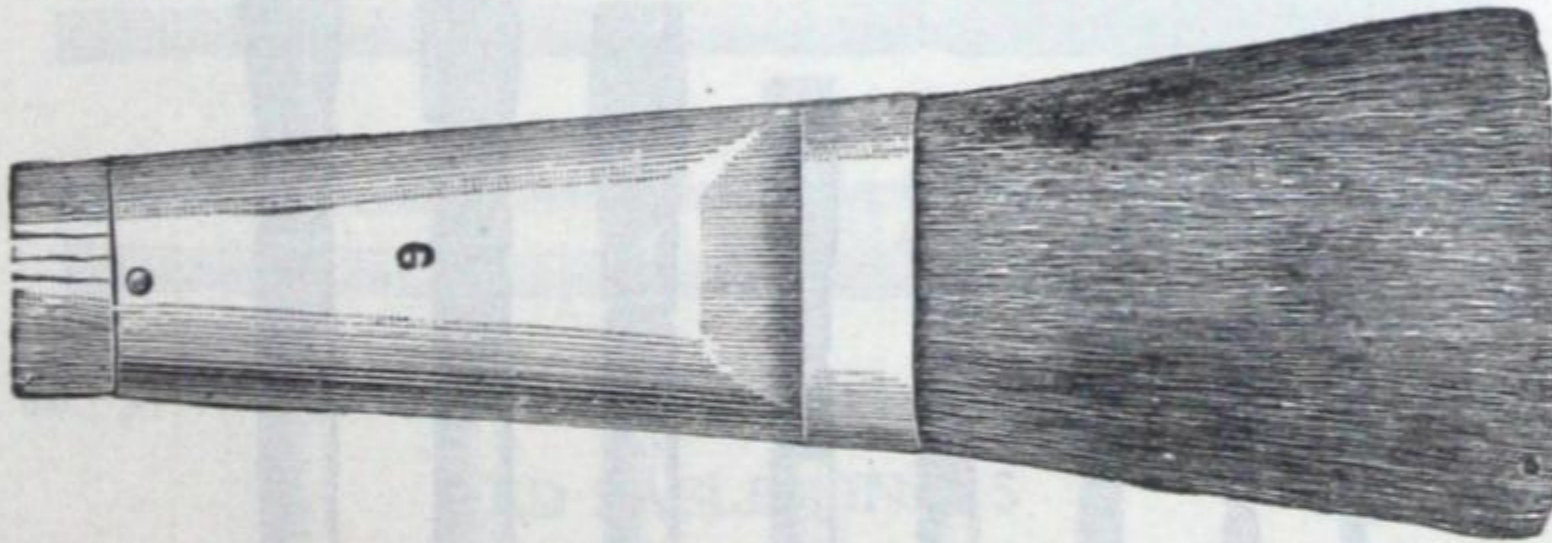
FLAT CAMEL HAIR GROUNDING BRUSHES



No. 1.	.	doz., \$1.10 each,	.10	|	No 5.	.	doz., \$1.60 each,	.15
2.	.	" 1.30 "	.15	|	7.	.	" 2.00 "	.20

Extra short and thin. In Tin Ferrules with Polished Handles

FRENCH FLAT CAMEL HAIR TINTING BRUSHES



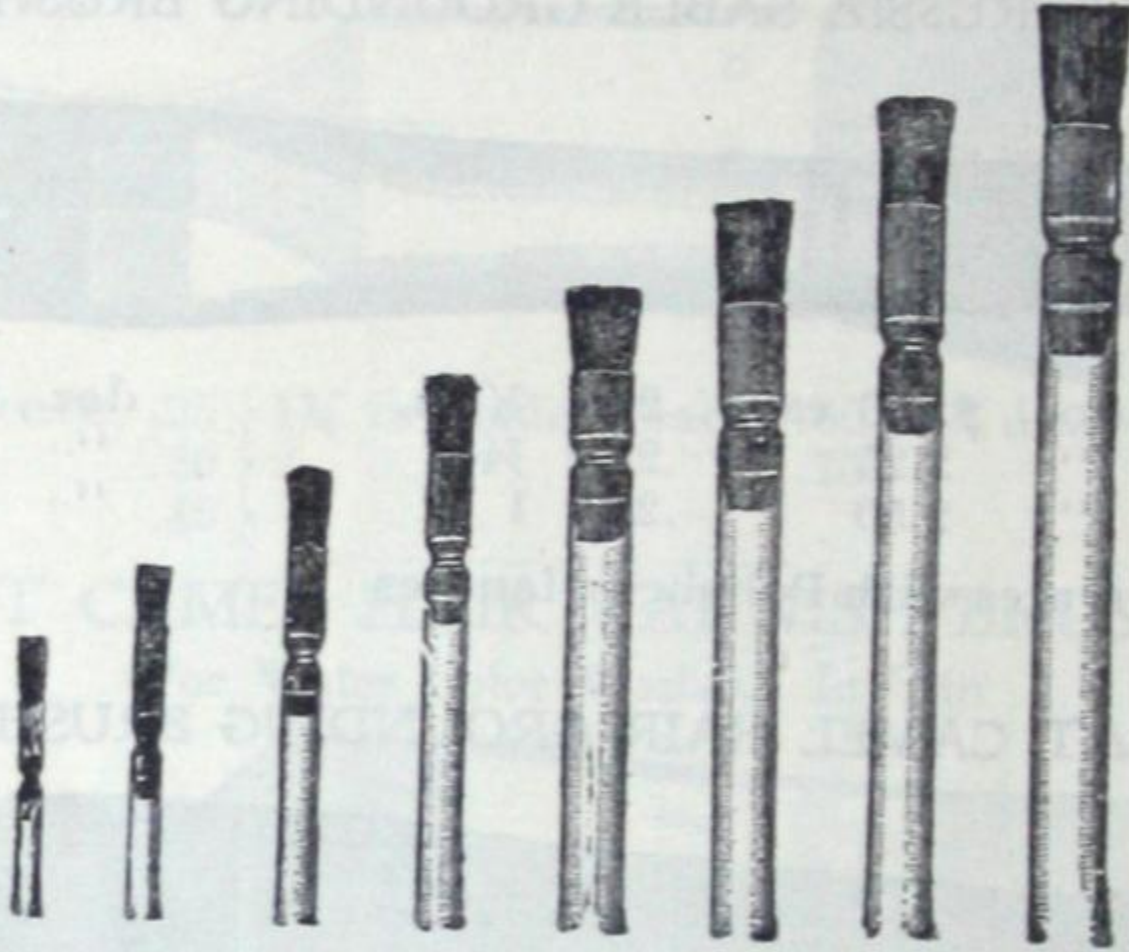
No. 2.	.	doz., \$1.50 each,	.15	|	No. 10	.	doz., \$5.00 each,	.45
4.	.	" 2.00 "	.20	|	11	.	" 6.00 "	.50
6.	.	" 3.00 "	.25	|	12.	.	" 7.00 "	.60
8.	.	" 4.00 "	.35	|	13	.	" 8.00 "	.70

In Tin Ferrules with White Wood Handles

Brushes for China Painting — continued

NO. 91 S. FRENCH SQUARE SHADERS, "EXTRA SHORT"

Superfine Camel Hair in Quills

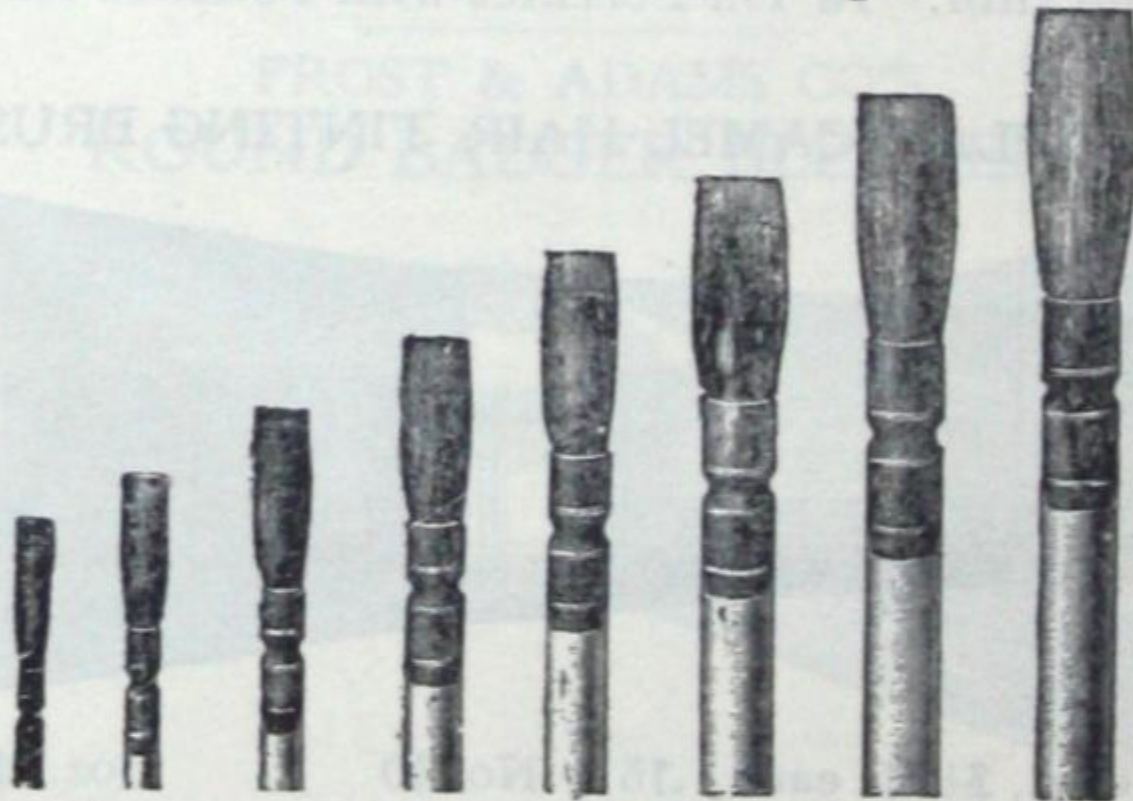


No. 1.	doz., .35	each, .05	No. 4.	doz., .55	each, .08	No. 7.	doz., .90	each, .11
2.	" .40	" .06	5.	" .65	" .09	8.	" 1.25	" .12
3.	" .50	" .07	6.	" .75	" .10			

Assorted, No. 1 to No. 8 . . . gross, \$7.80 dozen, .70

NO. 91. FRENCH SQUARE SHADERS, "REGULAR"

Superfine Camel Hair in Quills



No. 1.	doz., .35	each, .05	No. 4.	doz., .55	each, .08	No. 7.	doz., .90	each, .11
2.	" .40	" .06	5.	" .65	" .09	8.	" 1.25	" .12
3.	" .50	" .07	6.	" .75	" .10			

Assorted, No. 1 to No. 8 . . . gross, \$7.80 dozen, .70

Brushes for China Painting — continued

NO. 95. FRENCH SQUARE STRIPERS

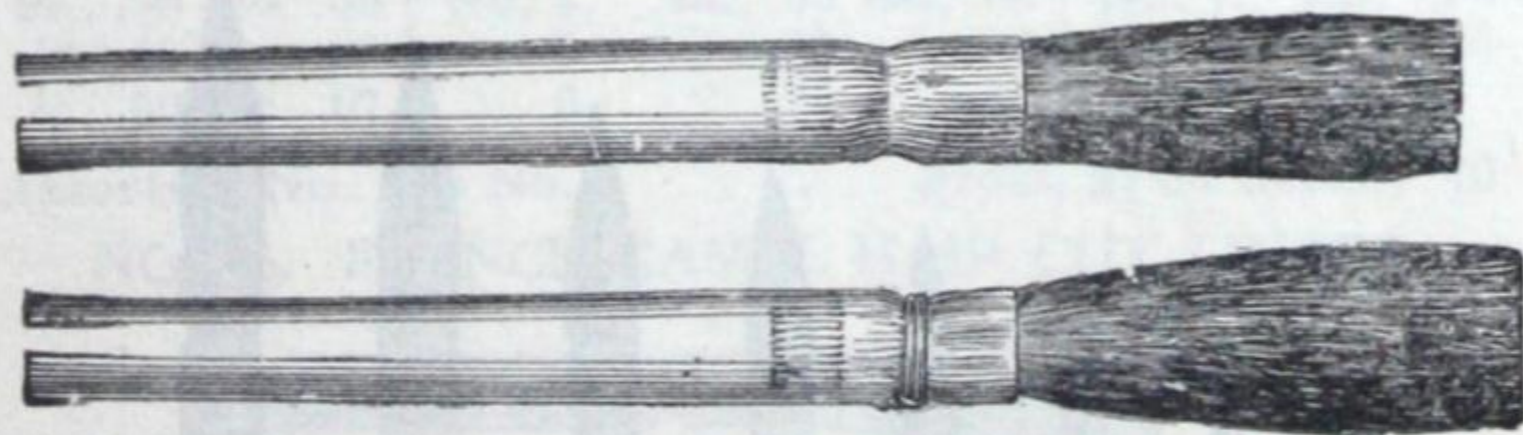
Superior Camel Hair in Quills



No. 1.	doz., .35	each, .05	No. 4.	doz., .55	each, .08	No. 7.	doz., .90	each, .11
2.	" .40	" .06	5.	" .65	" .09	8.	" 1.25	" .12
3.	" .50	" .07	6.	" .75	" .10			

Assorted, No. 1 to No. 8 . . . gross, \$7.80 dozen, .70

NO. 97. FRENCH SQUARE SHADERS, "EXTRA LARGE"



No. 10.	doz., \$1.70	each, .15	No. 11.	doz., \$1.95	each, .20	No. 12.	doz., \$2.30	each, .25
---------	--------------	-----------	---------	--------------	-----------	---------	--------------	-----------

RED SABLE LINERS

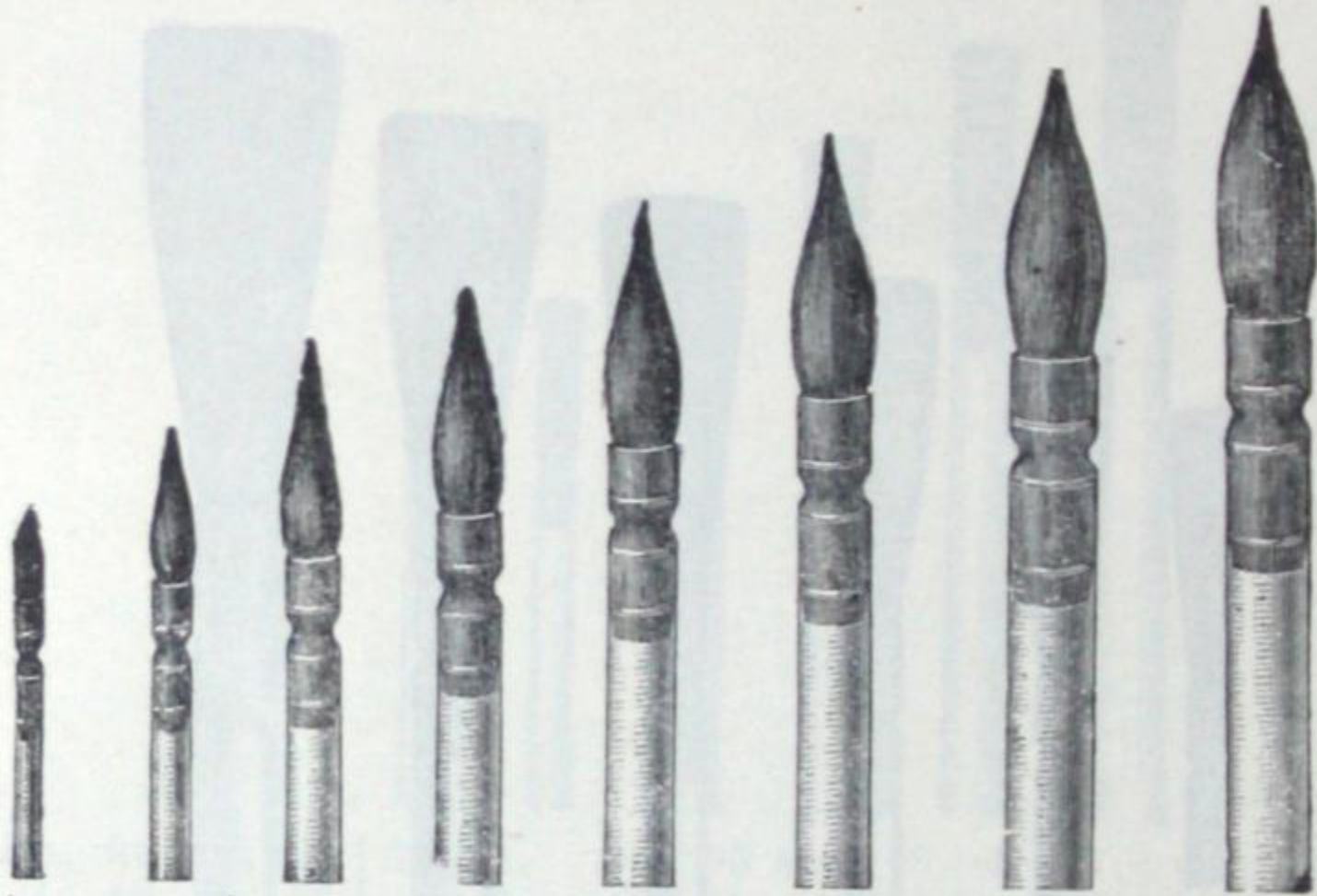
Black, Polished Handles, Nickel Plated Ferrules



No. 0.	doz., \$1.70	each, .20	No. 2.	doz., \$1.90	each, .20	No. 5.	doz., \$3.00	each, .30
1.	" 1.70	" .20	3.	" 2.20	" .25	6.	" 3.60	" .35
			4.	" 2.50	" .25			

Brushes for China Painting — continued

NO. 90 Ex.S. FRENCH POINTED BRUSHES, "EXTRA SHORT"
Superfine Camel Hair in Quills



No. 1.	doz., .35	each, .05	No. 4.	doz., .55	each, .08	No. 7.	doz., .90	each, .11
2.	" .40	" .06	5.	" .65	" .09	8.	" 1.25	" .12
3.	" .50	" .07	6.	" .75	" .10			

Assorted, No. 1 to No. 8 . . . gross, \$7.80 dozen, .70

NO. 90 S. FRENCH POINTED BRUSHES, "SHORT"
Superfine Camel Hair in Quills



No. 1.	doz., .35	each, .05	No. 4.	doz., .55	each, .08	No. 7.	doz., .90	each, .11
2.	" .40	" .06	5.	" .65	" .09	8.	" 1.25	" .12
3.	" .50	" .07	6.	" .75	" .10			

Assorted, No. 1 to No. 8 . . . gross, \$7.80 dozen, .70

Brushes for China Painting — continued
 NO. 90 L. FRENCH POINTED BRUSHES, "LONG"
 Superfine Camel Hair in Quills



No. 1.	doz., .35 each, .05	No. 4.	doz., .55 each, .08	No. 7.	doz., .90 each, .11
2.	" .40 " .06	5.	" .65 " .09	8.	" 1.25 " .12
3.	" .50 " .07	6.	" .75 " .10		

Assorted, No. 1 to No. 8 . . . gross, \$7.80 dozen, .70

NO. 93. FRENCH CAMEL HAIR SCROLLERS "EXTRA LONG"

No. 1.	doz., .35 each, .05	No. 4.	doz., .55 each, .08	No. 7.	doz., .90 each, .11
2.	" .40 " .06	5.	" .65 " .09	8.	" 1.25 " .12
3.	" .50 " .07	6.	" .75 " .10		

Assorted, No. 1 to No. 8 . . . gross, \$7.80 dozen, .70

NO. 96. FRENCH CAMEL HAIR CUT LINERS



No. 1.	doz., .55 each, .08	No. 4.	doz., .90 each, .11	No. 7.	doz., \$1.75 each, .15
2.	" .65 " .09	5.	" 1.20 " .12	8.	" 2.00 " .14
3.	" .75 " .10	6.	" 1.50 " .13		

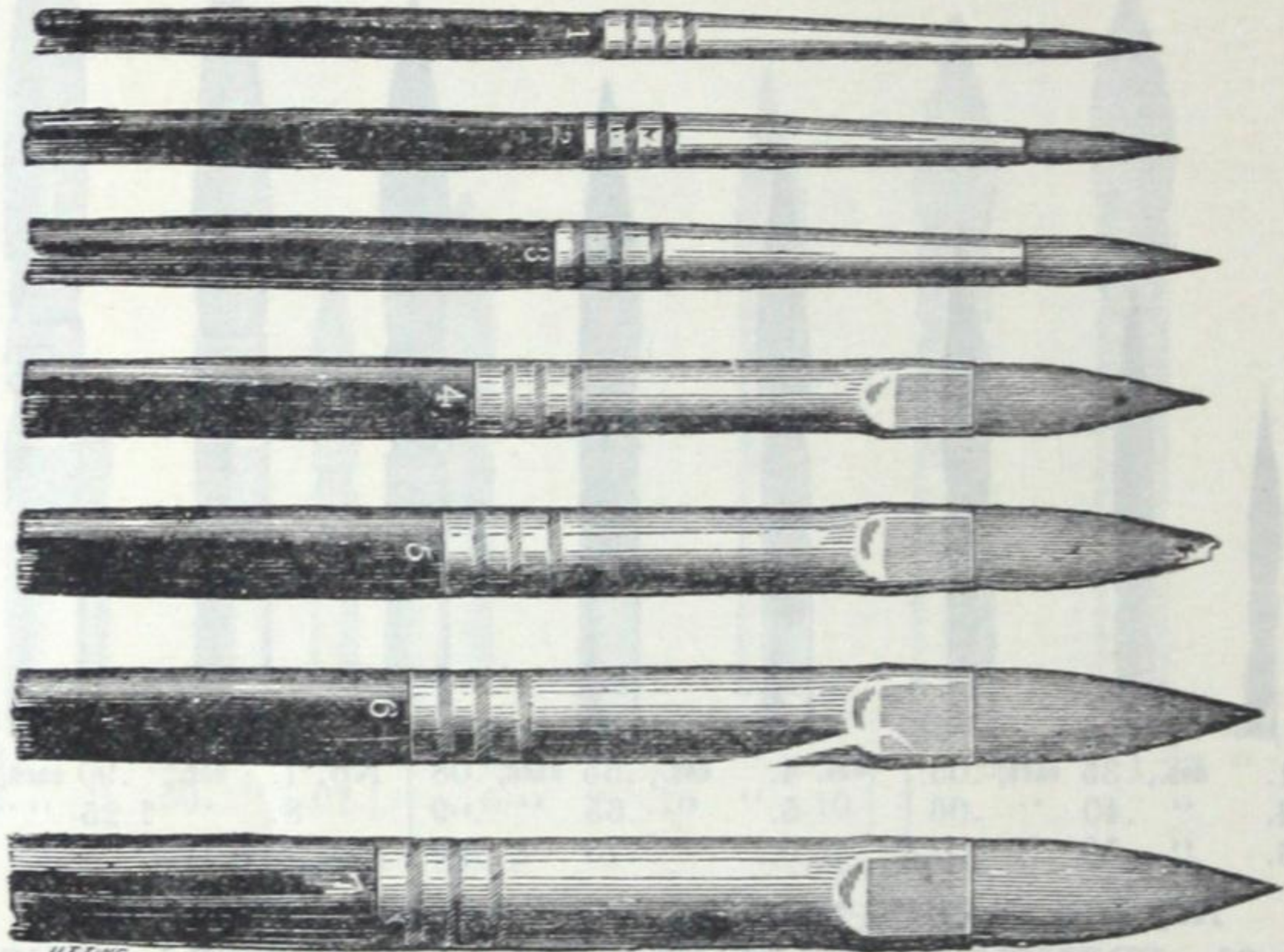
NO. 99, SQUARE — FITCH HAIR STIPLERS — NO. 100, SLANTING
 For Blending. Wire-Bound Quills



No. 1.	doz., .55 each, .08	No. 4.	doz., .90 each, .11	No. 7.	doz., \$1.75 each, .14
2.	" .65 " .09	5.	" 1.20 " .12	8.	" 2.00 " .15
3.	" .75 " .10	6.	" 1.50 " .13		

FROST & ADAMS CO.'S
 ENGLISH SIZE RED SABLE WATER COLOR BRUSHES

Round, Polished Walnut Handles, Albata Ferrules



No. 0. doz., \$2.00 each, .20	No. 3. doz., \$3.25 each, .35	No. 6. doz., \$6.25 each, .65
1. " 2.00 " .20	4. " 4.60 " .45	7. " 7.50 " .75
2. " 2.50 " .25	5. " 5.40 " .55	
Assorted, No. 1 to No. 6		doz., \$4.00

FROST & ADAMS CO.'S
 FRENCH SIZE RED SABLE WATER COLOR BRUSHES

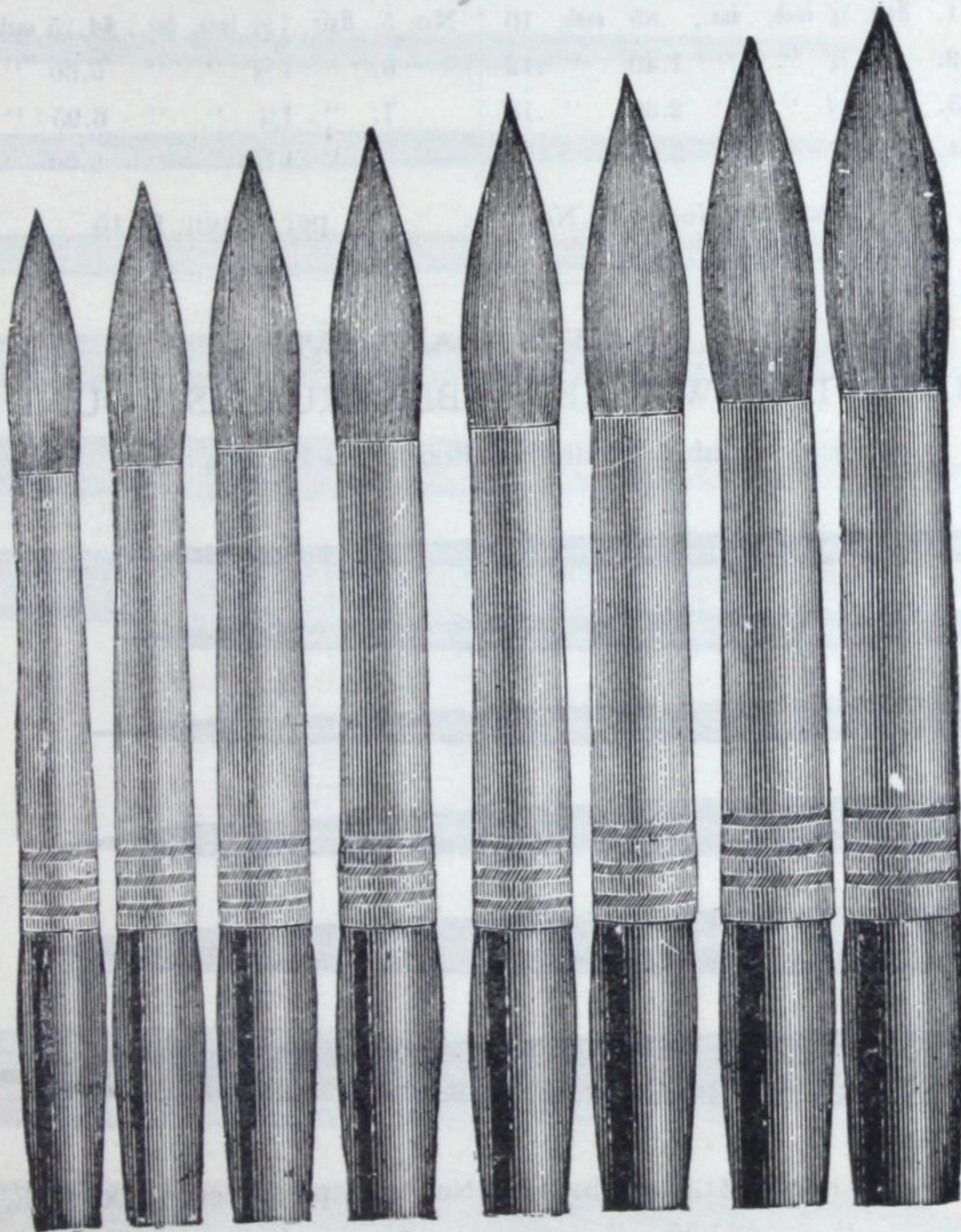
Round, Polished Black Handles, Nickel Plated Ferrules

No. 0. doz., \$1.00 each, .10	No. 4. doz., \$2.55 each, .25	No. 9. doz., \$7.50 each, .75
1. " 1.00 " .10	5. " 3.60 " .35	10. " 8.25 " .85
2. " 1.30 " .15	6. " 5.00 " .50	11. " 10.00 " 1.00
3. " 1.90 " .20	7. " 5.75 " .60	12. " 12.00 " 1.20
	8. " 6.50 " .65	
Assorted, No. 1 to No. 6		doz., \$2.55

FROST & ADAMS CO.'S

EXTRA LARGE RED SABLE WATER COLOR BRUSHES

Round, Black Polished Handles, Albata Ferrules



No. 13.	.	.	.	each, \$1.00	No. 17.	.	.	.	each, \$1.95
14.	.	.	.	" 1.15	18.	.	.	.	" 2.25
15.	.	.	.	" 1.40	19.	.	.	.	" 2.50
16.	.	.	.	" 1.65	20.	.	.	.	" 2.90

RED SABLE LETTERING PENCILS IN QUILLS

Rose Silk and Gold Thread Binding

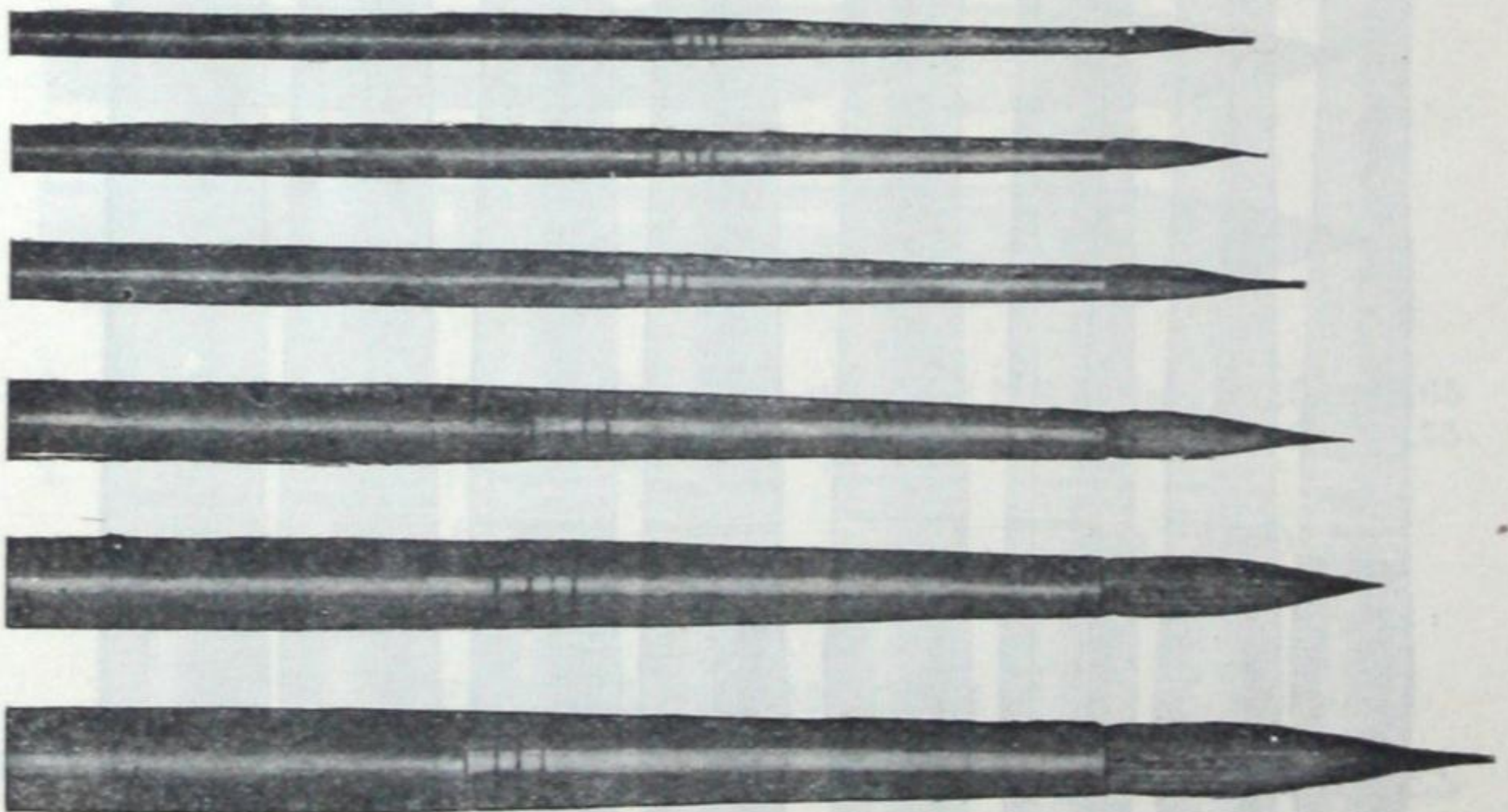
Hair, $\frac{3}{4}$, 1, $1\frac{1}{8}$ and $1\frac{1}{4}$ inches long

No. 1. Hair, $\frac{3}{4}$ inch, doz., .85 each, .10	No. 5. Hair, $1\frac{1}{8}$ inch, doz., \$4.15 each, .32
2. " $\frac{3}{4}$ " " 1.40 " .12	6. " $1\frac{1}{8}$ " " 5.60 " .42
3. " 1 " " 2.30 " .18	7. " $1\frac{1}{4}$ " " 6.95 " .54
4. " 1 " " 3.10 " .26	8. " $1\frac{1}{4}$ " " 8.00 " .66
Assorted, Nos. 1 to No. 8 . . . per dozen, \$4.15	

FROST & ADAMS CO.'S

IMITATION W.C. RED SABLE BRUSHES, ROUND

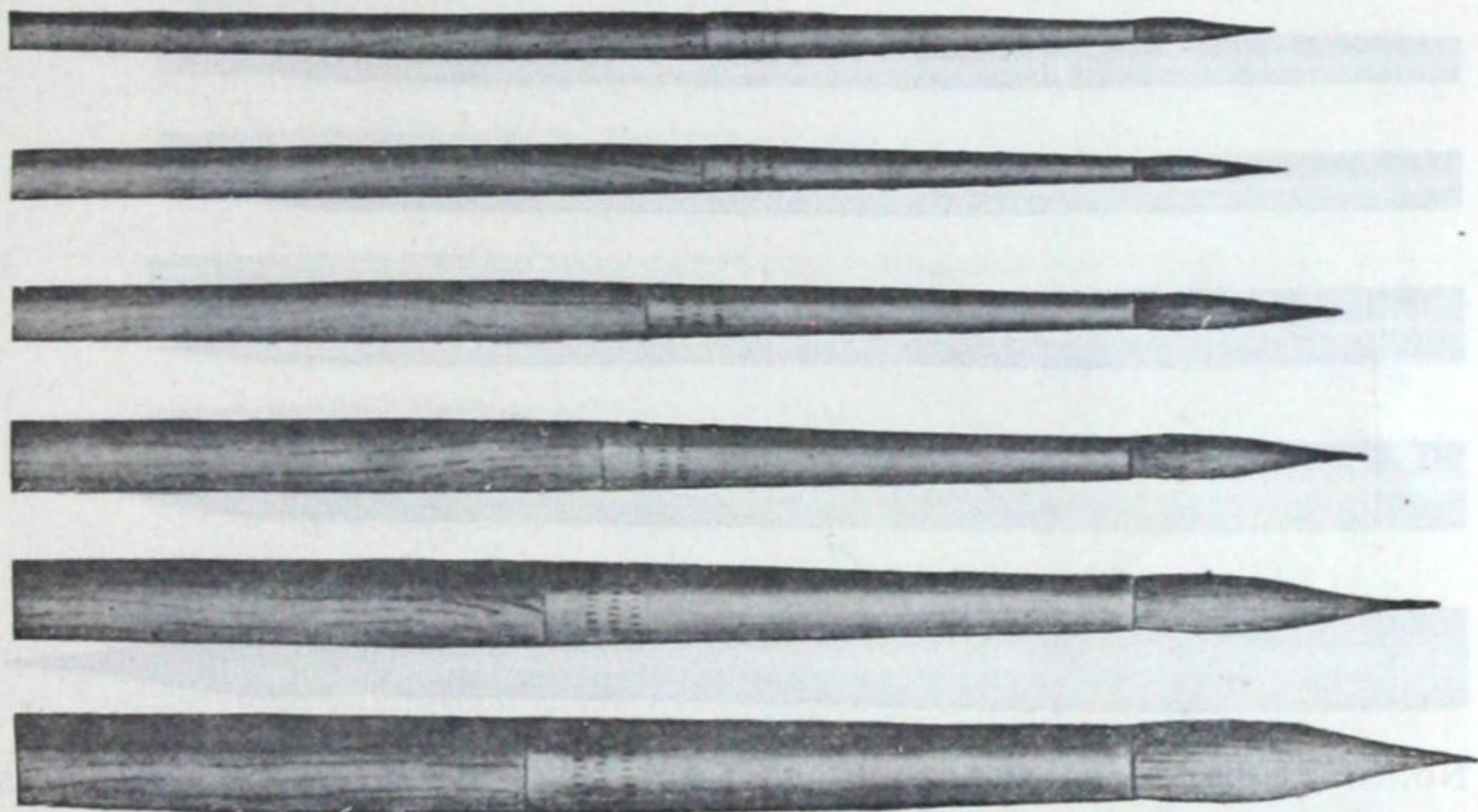
Polished Walnut Handles, Albata Ferrules



No. 1. per dozen, \$1.25 each, .12	No. 5. per dozen, \$2.00 each, .20
2. " 1.35 " .13	6. " 2.50 " .25
3. " 1.50 " .15	7. " 3.00 " .30
4. " 1.75 " .17	8. " 3.50 " .35

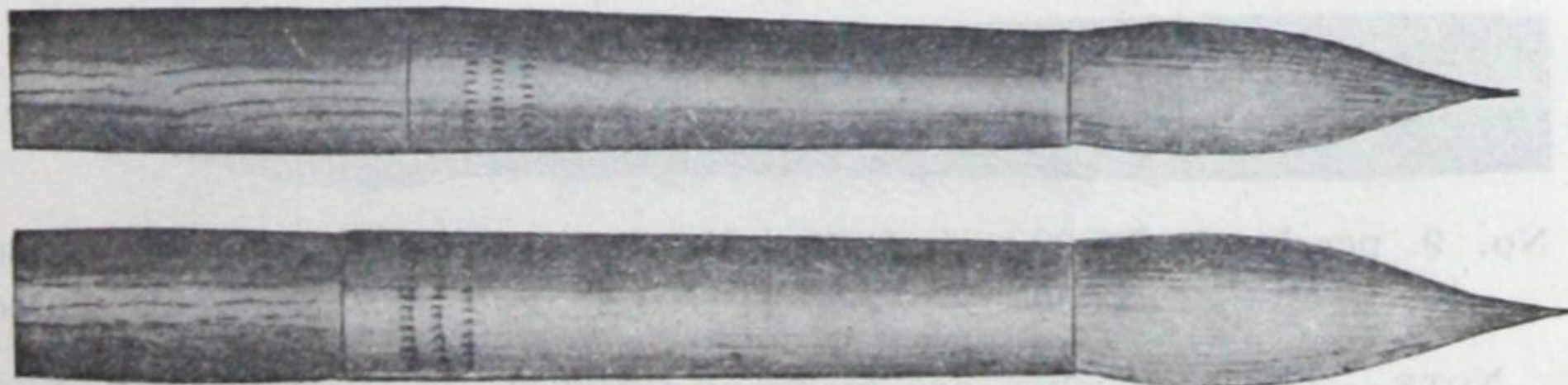
HARDTMUTH'S
VIENNA RED SABLE, WATER COLOR BRUSHES

Made of the Finest Quality Red Sable Hair, Cocoa Handles, Nickel Ferrules



No. 00.	per dozen, \$1.80 each, .20	No. 4.	per dozen, \$5.30 each, .45
0.	" 2.00 " .20	5.	" 7.20 " .60
1.	" 2.20 " .20	6.	" 9.60 " .80
2.	" 2.90 " .25	7.	" 11.60 " 1.00
3.	" 4.10 " .35	8.	" 14.40 " 1.25

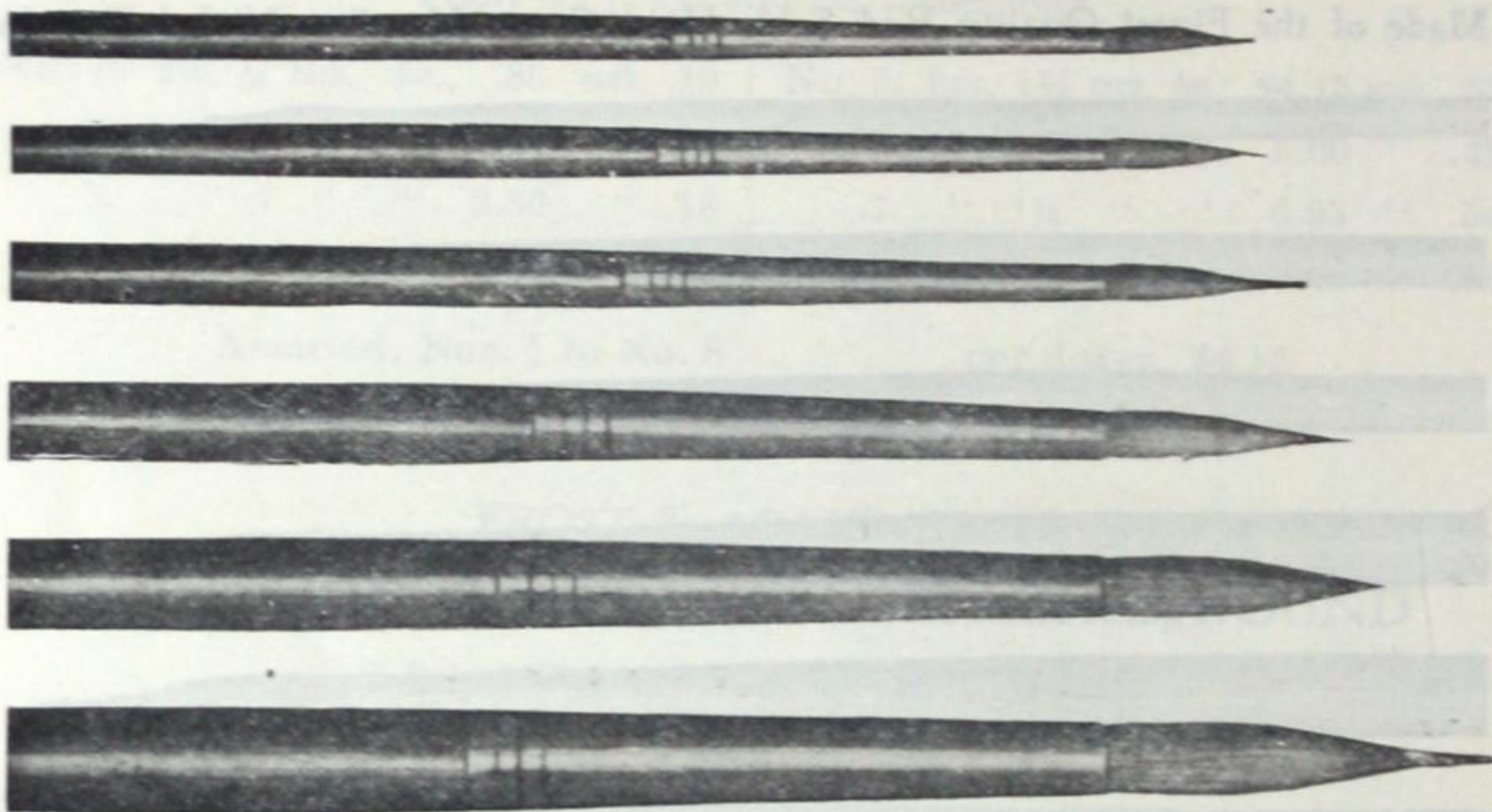
EXTRA SIZE VIENNA RED SABLE BRUSHES



No. A 1.	each, \$2.00	No. C 3.	each, \$4.00
B 2.	" 3.00	D 4.	" 5.50

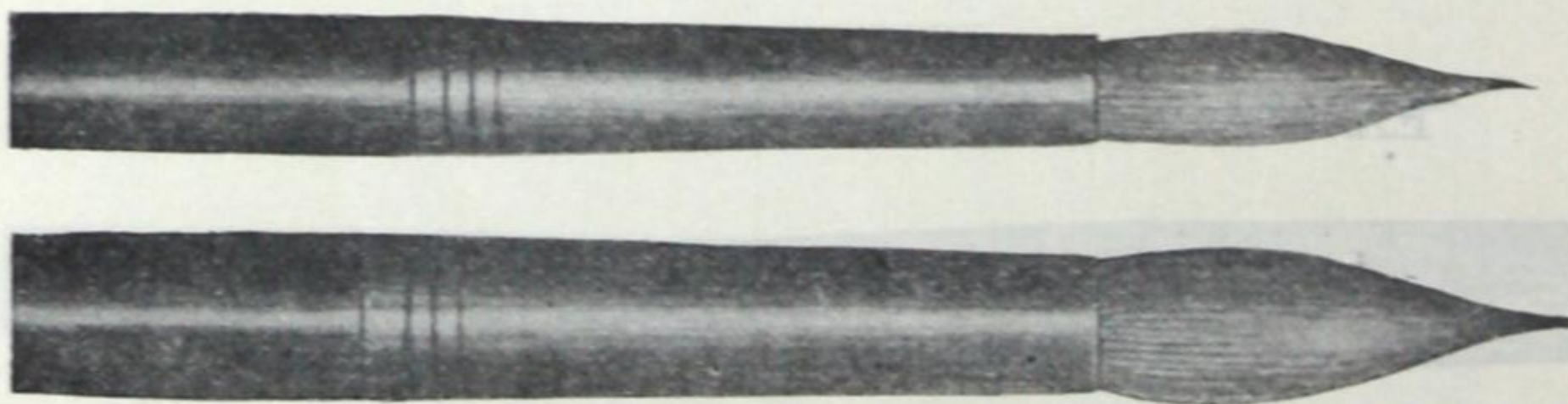
HARDTMUTH'S "KOH-I-NOOR" RED SABLE BRUSHES

For Water Color Painting. Genuine Ebony Handles, Albata Ferrules



No. 00.	per dozen, \$2.50 each, .25	No. 4.	per dozen, \$6.50 each, .55
0.	" 2.70 " .25	5.	" 8.70 " .75
1.	" 2.90 " .25	6.	" 11.60 " 1.00
2.	" 3.60 " .35	7.	" 14.40 " 1.25
3.	" 5.10 " .45	8.	" 17.20 " 1.50

EXTRA SIZE "KOH-I-NOOR" RED SABLE BRUSHES

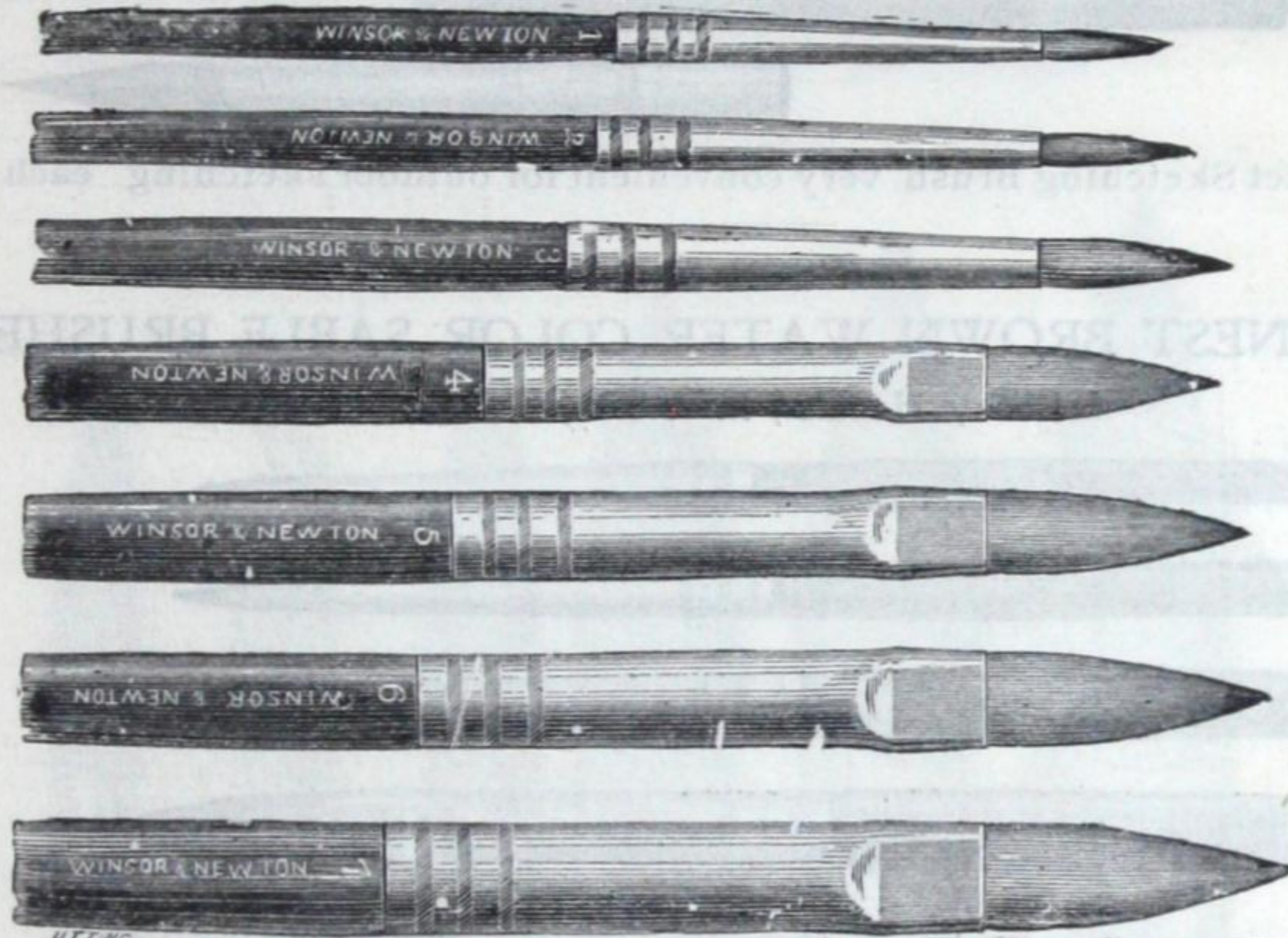


No. 9.	per dozen, \$20.20 each, \$1.75	No. 11.	per dozen, \$26.00 each, \$2.50
10.	" 23.30 " 2.00	12.	" 31.60 " 3.00

NOTE.—These Brushes are made of selected stock, and stamped in Gold, with the registered trade mark, "Koh-i-noor," and are, without question, the finest Water Color Brushes made

WINSOR & NEWTON'S BRITISH RED SABLE BRUSHES

Black Walnut Handles, Nickeled Ferrules, Round and Flat



No. 00. doz., \$2.00 each, .20	No. 4. doz., \$3.90 each, .35	No. 9. doz., 16.00 ea., 1.25
0. " 2.00 " .20	5. " 4.60 " .40	10. " 20.00 " 1.55
1. " 2.20 " .20	6. " 6.60 " .50	11. " 25.00 " 2.00
2. " 2.70 " .25	7. " 8.80 " .70	12. " 30.00 " 2.50
3. " 3.20 " .30	8. " 11.80 " .95	

BRITISH RED SABLE BRUSHES

Extra Large Series with 9 inch Polished Walnut Handles, Round

No. 1. each, \$1.50	No. 3. each, \$3.20
2. " 2.25	4. " 4.50

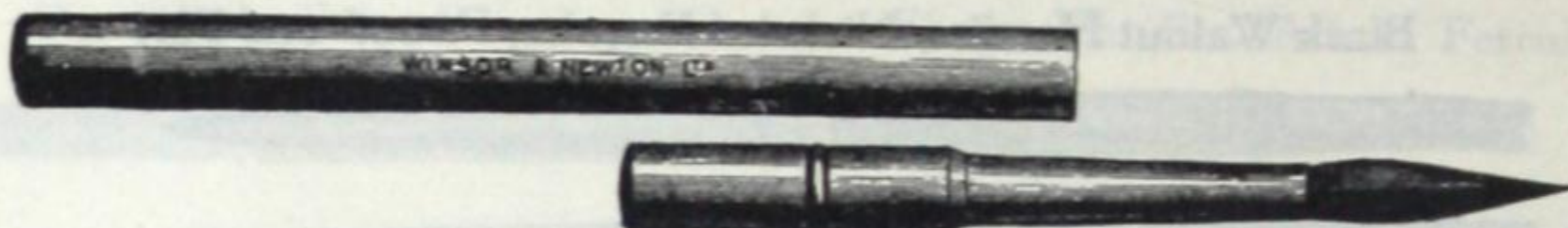
WINSOR & NEWTON'S

BRITISH BROWN SABLE BRUSHES

Black Walnut Handles, in Nickled Ferrules

No. 00. doz., \$3.30 each, .30	No. 2. doz., \$4.20 each, .35	No. 5. doz., \$7.80 each, .65
0. " 3.30 " .30	3. " 5.40 " .45	6. " 10.80 " .90
1. " 3.60 " .30	4. " 6.60 " .55	7. " 13.20 " 1.10

W. & N. POCKET RED SABLE SKETCHING BRUSH



Pocket Sketching Brush, very convenient for outdoor sketching each, .35

WINSOR & NEWTON'S
FINEST BROWN WATER COLOR SABLE BRUSHES

Ebony Handles, in Albata, Round and Flat



No. 0. doz., \$5.10 each, .45	No. 3. doz., \$8.30 each, .70	No. 6. doz., \$15.00 ea., 1.25
1. " 5.10 " .45	4. " 10.00 " .90	7. " 19.00 " 1.60
2. " 6.80 " .55	5. " 12.70 " 1.10	
Assorted, No. 1 to No. 6		doz., \$9.20

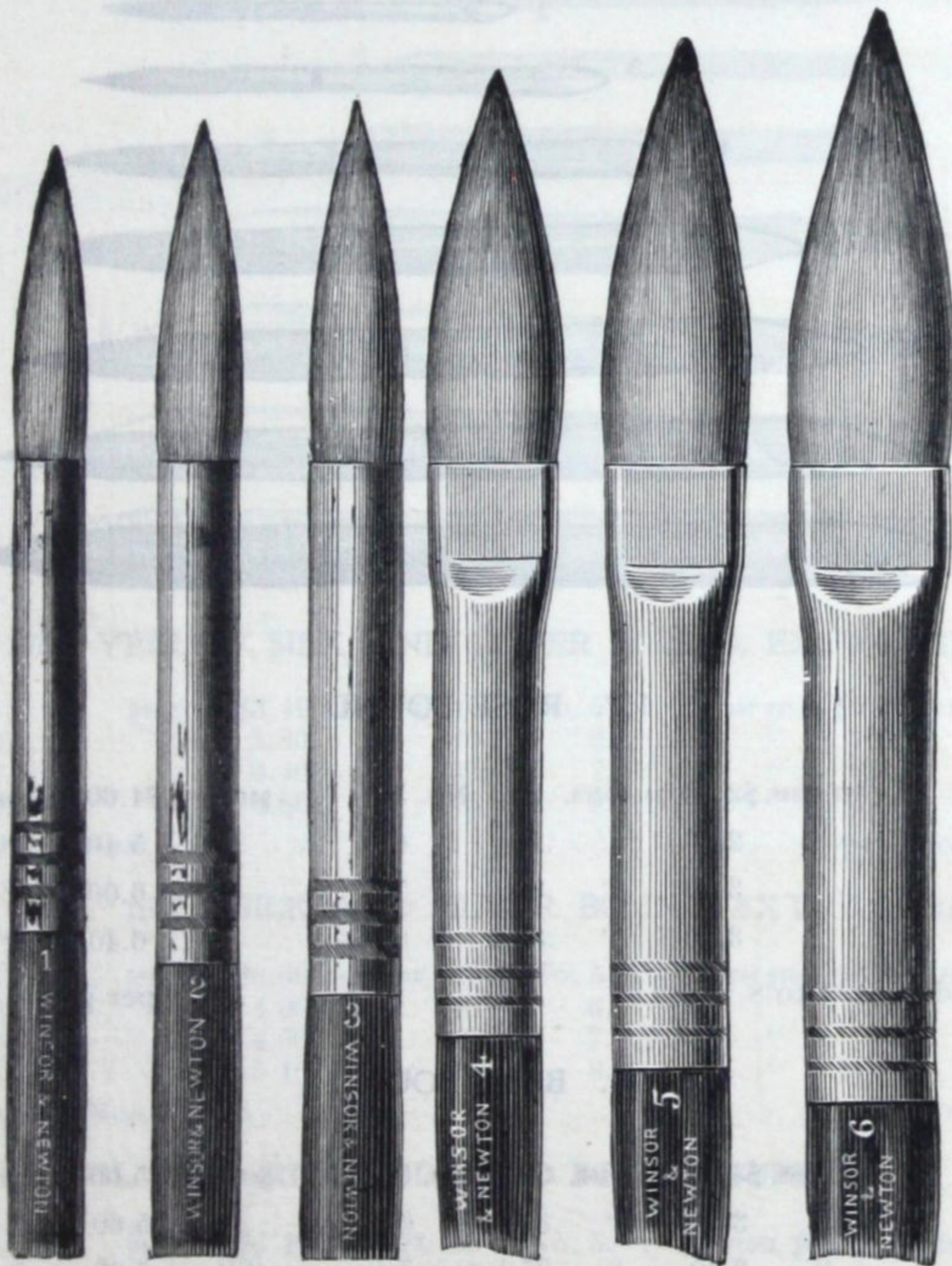
WINSOR & NEWTON'S
FINEST RED WATER COLOR SABLE BRUSHES

In Albata, Round and Flat

No. 0. doz., \$3.60 each, .35	No. 3. doz., \$6.00 each, .55	No. 6. doz., \$10.80 each, .90
1. " 3.60 " .35	4. " 7.20 " .65	7. " 13.20 " 1.25
2. " 4.80 " .45	5. " 9.00 " .75	
Assorted, No. 1 to No. 6		doz., \$6.90

WINSOR & NEWTON'S
 EXTRA LARGE SERIES, FINEST BROWN OR RED
 WATER COLOR SABLE BRUSHES

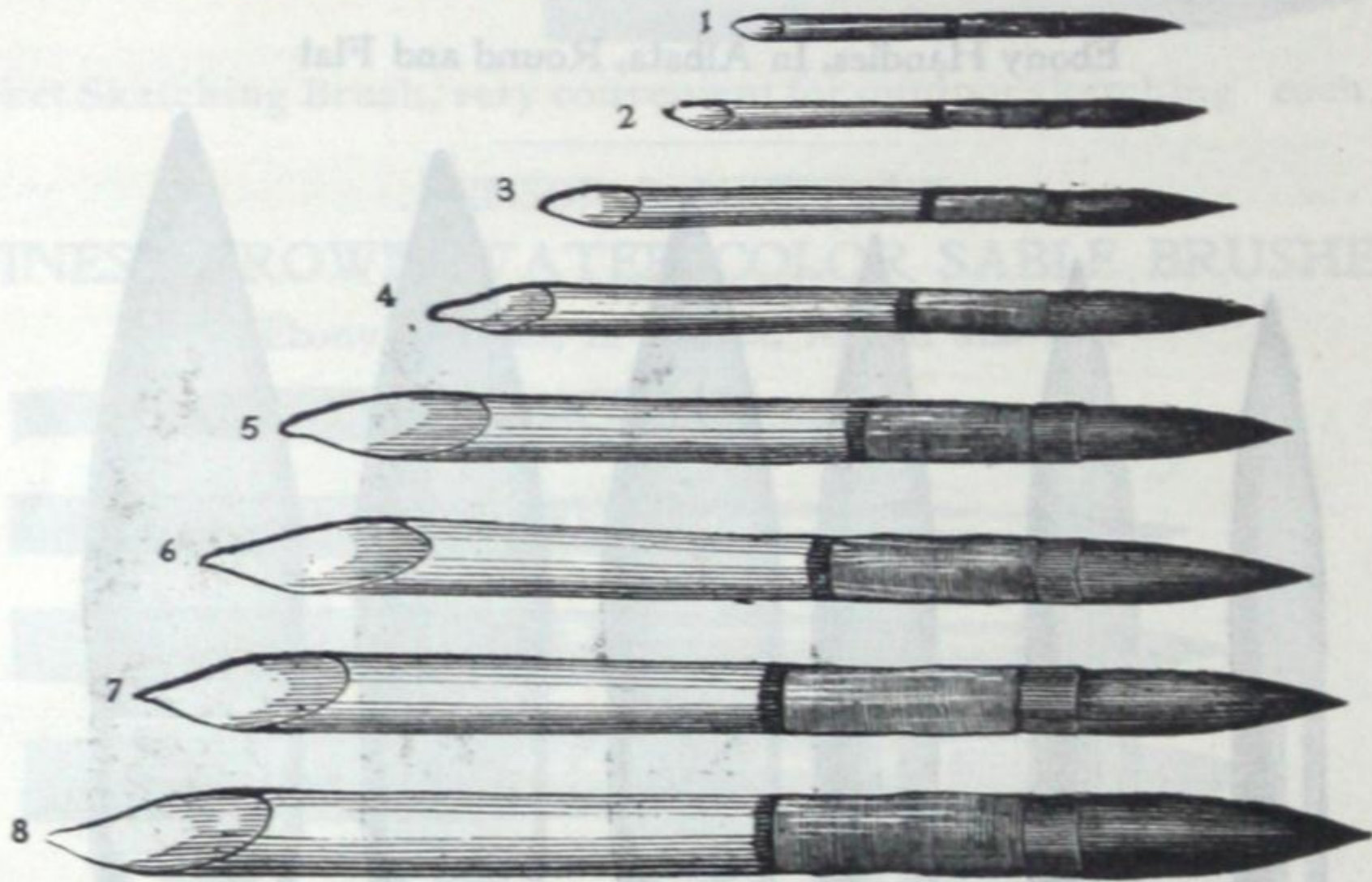
Ebony Handles, In Albata, Round and Flat



No. 1.	Brown each,	\$3.20	Red	\$1.80	No. 4.	Brown each,	\$7.00	Red	\$4.80
2.	"	4.50	"	2.70	5.	"	8.30	"	6.00
3.	"	5.40	"	3.60	6.	"	10.25	"	7.20

CAMEL HAIR MINIATURE PENCILS

For Water Color Painting



157. ROSE BOUND

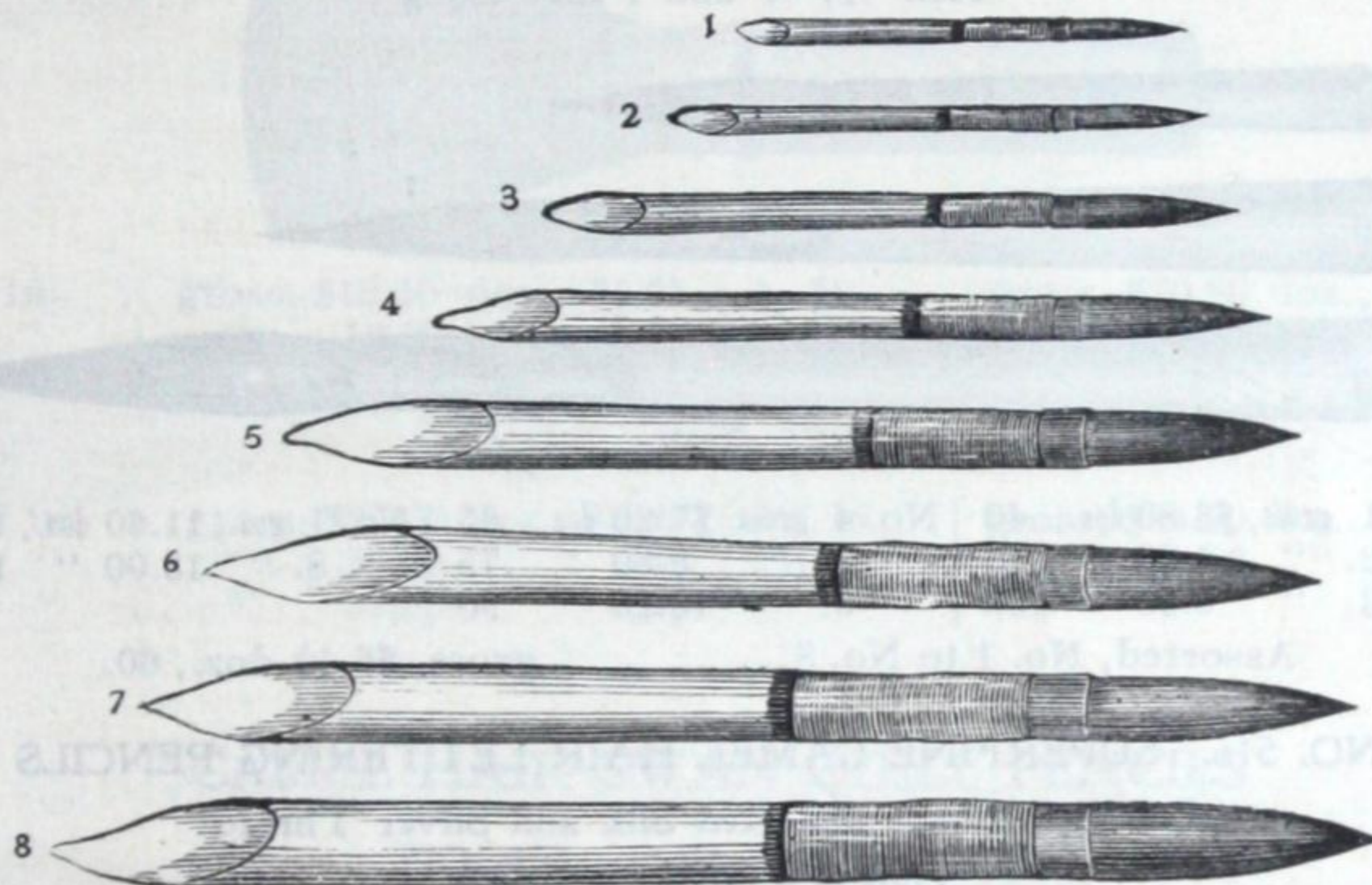
No. 1.	per gross, \$2.60	per dozen, .25	No. 5.	per gross, \$4.60	per dozen, .40
2.	" 2.80	" .25	6.	" 5.40	" .50
3.	" 3.20	" .30	7.	" 6.00	" .55
4.	" 3.60	" .35	8.	" 6.40	" .60
Assorted, Nos. 1 to 8				per gross, \$3.80	

162. BLUE BOUND

No. 1.	per gross, \$3.00	per dozen, .30	No. 5.	per gross, \$5.00	per dozen, .45
2.	" 3.20	" .30	6.	" 5.60	" .55
3.	" 3.40	" .35	7.	" 6.20	" .60
4.	" 3.60	" .40	8.	" 6.80	" .65
Assorted, Nos. 1 to 8				per gross, \$4.40	

CAMEL HAIR MINIATURE PENCILS

For Water Color Painting



178. YELLOW SILK AND SILVER BOUND, EXTRA FINE

No. 1.	per gross, \$3.40	per dozen, .40	No. 5.	per gross, \$6.00	per dozen, .50
2.	" 3.80	" .40	6.	" 7.20	" .60
3.	" 4.40	" .40	7.	" 8.40	" .75
4.	" 4.80	" .45	8.	" 9.60	" .85
Assorted, Nos. 1 to 8			per gross, \$5.40		

182. BLUE SILK AND SILVER BOUND, EXTRA FINE

No. 1.	per gross, \$3.60	per dozen, .40	No. 5.	per gross, \$6.80	per dozen, .60
2.	" 4.00	" .40	6.	" 8.00	" .70
3.	" 4.80	" .45	7.	" 9.60	" .80
4.	" 5.40	" .50	8.	" 10.80	" .90
Assorted, Nos. 1 to 8			per gross, \$6.00		

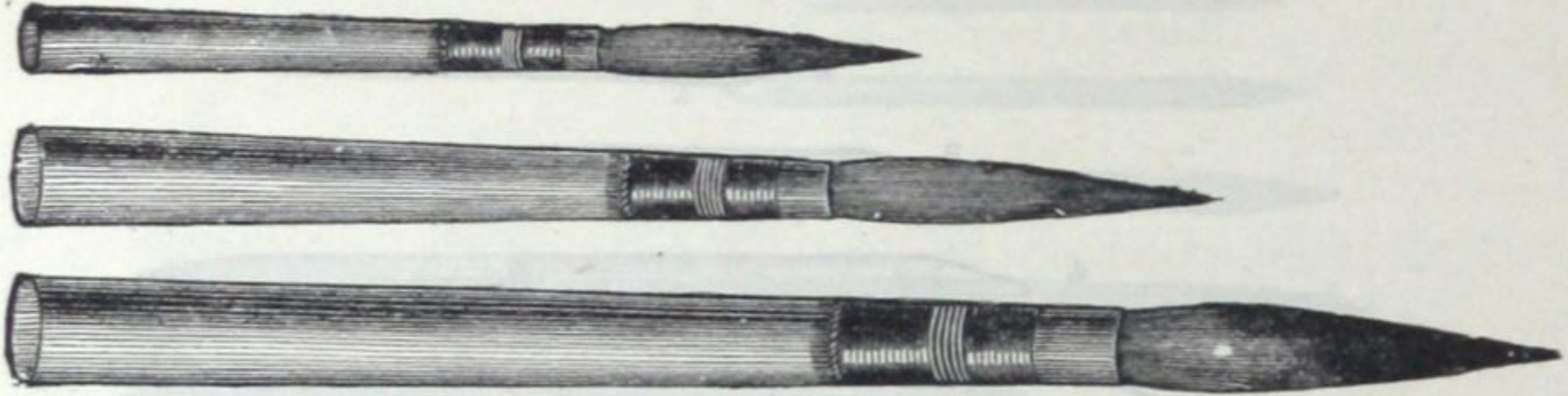
196. RED SILK AND GOLD BOUND, SUPERFINE

No. 1.	per gross, \$4.40	per dozen, .40	No. 5.	per gross, \$11.20	per dozen, \$1.00
2.	" 5.40	" .45	6.	" 12.60	" 1.10
3.	" 7.00	" .60	7.	" 14.20	" 1.25
4.	" 8.00	" .70	8.	" 15.60	" 1.35
Assorted, Nos. 1 to 8			per gross, \$8.60		

NO. 514. SUPERFINE CAMEL HAIR PENCILS

For Lettering. Bound in Green and Red Silk and Silver Thread

Hair $\frac{1}{2}$, $\frac{3}{4}$ and 1 Inch Long



No. 1. gross, \$3.80 doz., .40	No. 4 gross, \$7.20 doz., .65	No. 7. gro., 11.60 doz., 1.00
2. " 4.60 " .45	5. " 8.80 " .75	8. " 13.00 " 1.15
3. " 6.00 " .50	6. " 10.20 " .90	
Assorted, No. 1 to No. 8 . . . gross, \$6.40 doz., 60.		

NO. 516. SUPERFINE CAMEL HAIR LETTERING PENCILS

Bound in Green and Red Silk and Silver Thread

Hair, $1\frac{1}{4}$ and $1\frac{1}{2}$ Inches

No. 1. gross, \$4.00 doz., .40	No. 4. gross, \$7.60 doz., .65	No. 7. gro., 12.60 doz., 1.10
2. " 4.80 " .50	5. " 9.40 " .80	8. " 14.80 " 1.25
3. " 6.60 " .55	6. " 11.40 " 1.00	
Assorted, No. 1 to No. 8 . . . gross, \$7.00 doz., .65		

NO. 518 SUPERFINE CAMEL HAIR STRIPING PENCILS

Bound in Green and Red Silk and Silver Thread

Hair, $1\frac{3}{4}$ and 2 Inches Long

No. 1. gross, \$4.20 doz., .45	No. 4. gross, \$8.20 doz., .70	No. 7. gro., 14.00 doz., 1.25
2. " 5.00 " .55	5. " 10.20 " .90	8. " 16.00 " 1.50
3. " 6.80 " .60	6. " 12.00 " 1.10	
Assorted, No. 1 to No. 8 . . . gross, \$8.00 doz., .75		

NO 520. SUPERFINE CAMEL HAIR STRIPING PENCIL

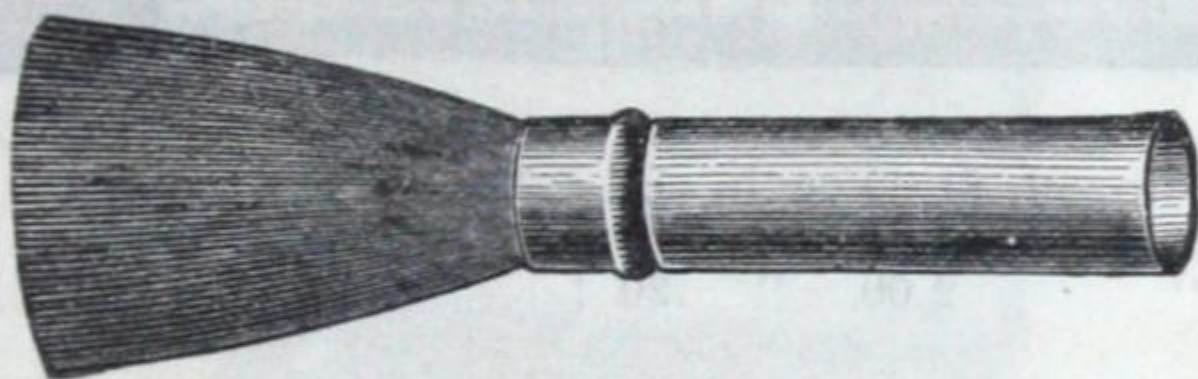
Bound in Green and Red Silk and Silver Thread

Hair, $2\frac{1}{4}$ and $2\frac{1}{2}$ Inches Long

No. 1. gross, \$4.80 doz., .50	No. 4. gross, \$9.60 doz., .75	No. 7. gro., 16.20 doz., 1.40
2. " 6.00 " .60	5. " 12.00 " 1.00	8. " 18.20 " 1.60
3. " 8.00 " .65	6. " 13.80 " 1.20	
Assorted, No. 1 to No. 8 . . . gross, \$9.20 doz., .85		

CAMEL HAIR SWAN IN METAL TUBES

NO. 464. FOR LETTERING



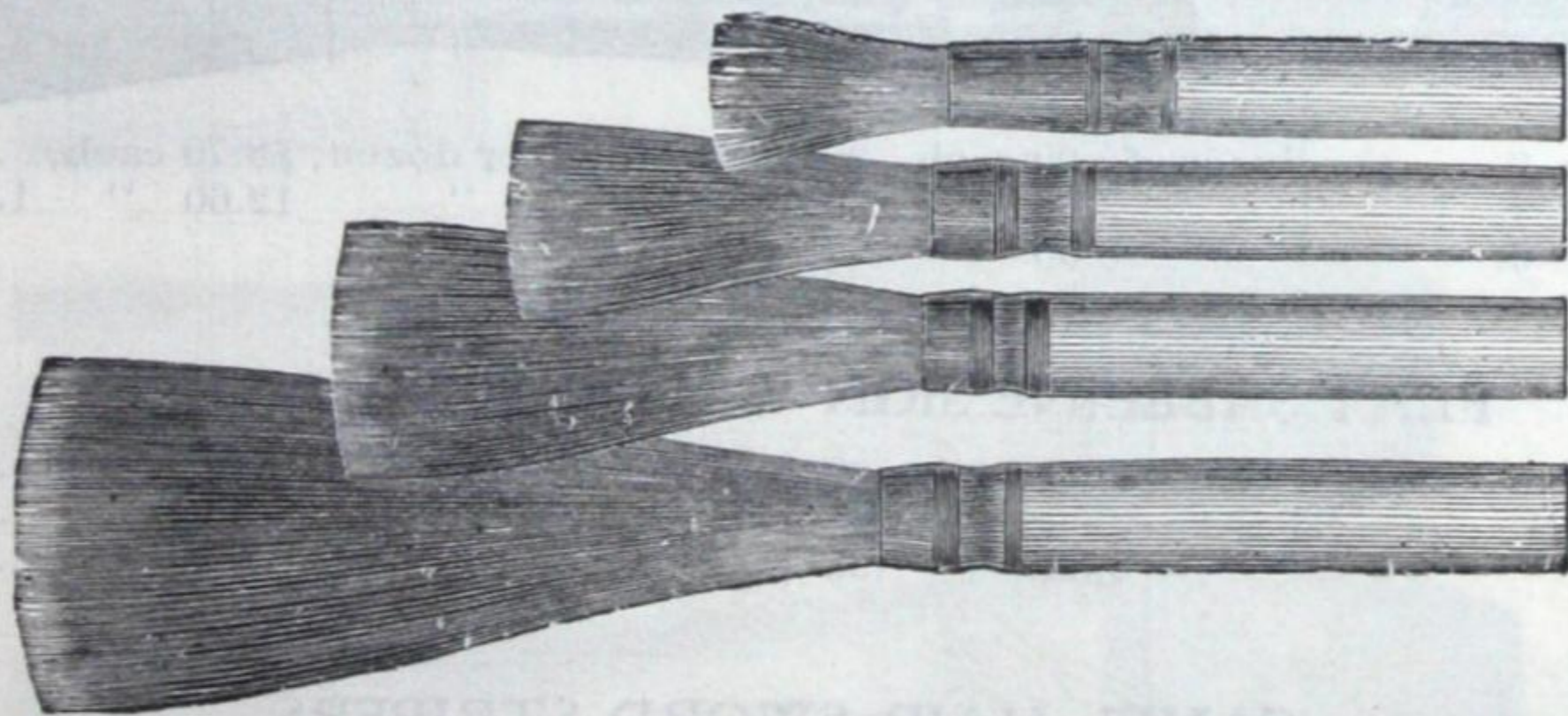
1/2 in.	gross, \$18.40	doz., \$1.55	1 in.	gross, \$20.80	doz., \$1.75
3/4 "	" 19.60	" 1.70	1 1/4 "	" 23.60	" 2.00

NO. 466. FOR STRIPING

1 1/2 in.	gross, \$26.00	doz., \$2.20	2 1/4 in.	gross, \$34.00	doz., \$2.75
1 3/4 "	" 28.00	" 2.40	2 1/2 "	" 44.00	" 3.75
2 "	" 31.00	" 2.55			

CAMEL HAIR SWAN QUILL PENCILS

NO. 458. FOR LETTERING



1/2 in.	gross, \$10.00	doz., .90	1 in.	gross, \$13.00	doz., \$1.10
3/4 "	" 11.00	" 1.00	1 1/4 "	" 14.00	" 1.25

NO. 460. FOR STRIPING

1 1/2 in.	gross, \$15.00	doz., \$1.25	2 1/4 in.	gross, \$18.00	each, \$1.50
1 3/4 "	" 16.00	" 1.35	2 1/2 "	" 20.00	" 1.75
2 "	" 17.00	" 1.45			

CAMEL HAIR LETTERING BRUSHES IN HANDLES



No. 2.	per dozen, \$1.30 each, .10	No. 8.	per dozen, \$2.65 each, .25
4.	" 1.65 " .15	10.	" 3.00 " .25
6.	" 2.00 " .20	12.	" 3.65 " .30

OX HAIR LETTERING BRUSHES IN HANDLES



No. 2.	per dozen, \$1.30 each, .10	No. 8.	per dozen, \$2.65 each, .25
4.	" 1.65 " .15	10.	" 3.00 " .25
6.	" 2.00 " .20	12.	" 3.65 " .30

RED SABLE SHOW CARD WRITERS IN HANDLES



No. 2.	per dozen, \$2.00 each, .20	No. 8.	per dozen, \$8.70 each, .75
4.	" 3.60 " .30	10.	" 12.60 " 1.05
6.	" 6.00 " .50		

FLAT SABELINE SIGN WRITERS IN HANDLES

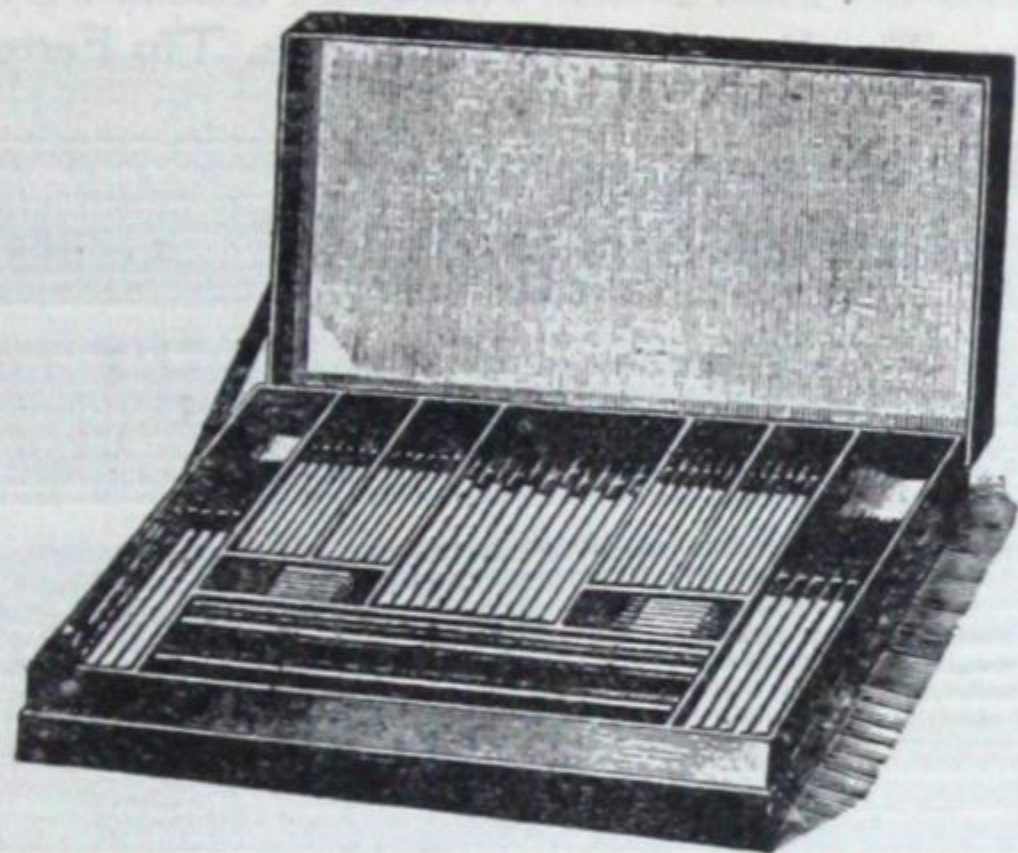
¼ in.	per dozen, \$2.00 each, .20	¾ in.	per dozen, \$5.00 each, .45
⅜ "	" 3.00 " .25	⅝ "	" 5.00 " .50
½ "	" 4.00 " .35	¾ "	" 6.50 " .55

CAMEL HAIR SWORD STRIPERS



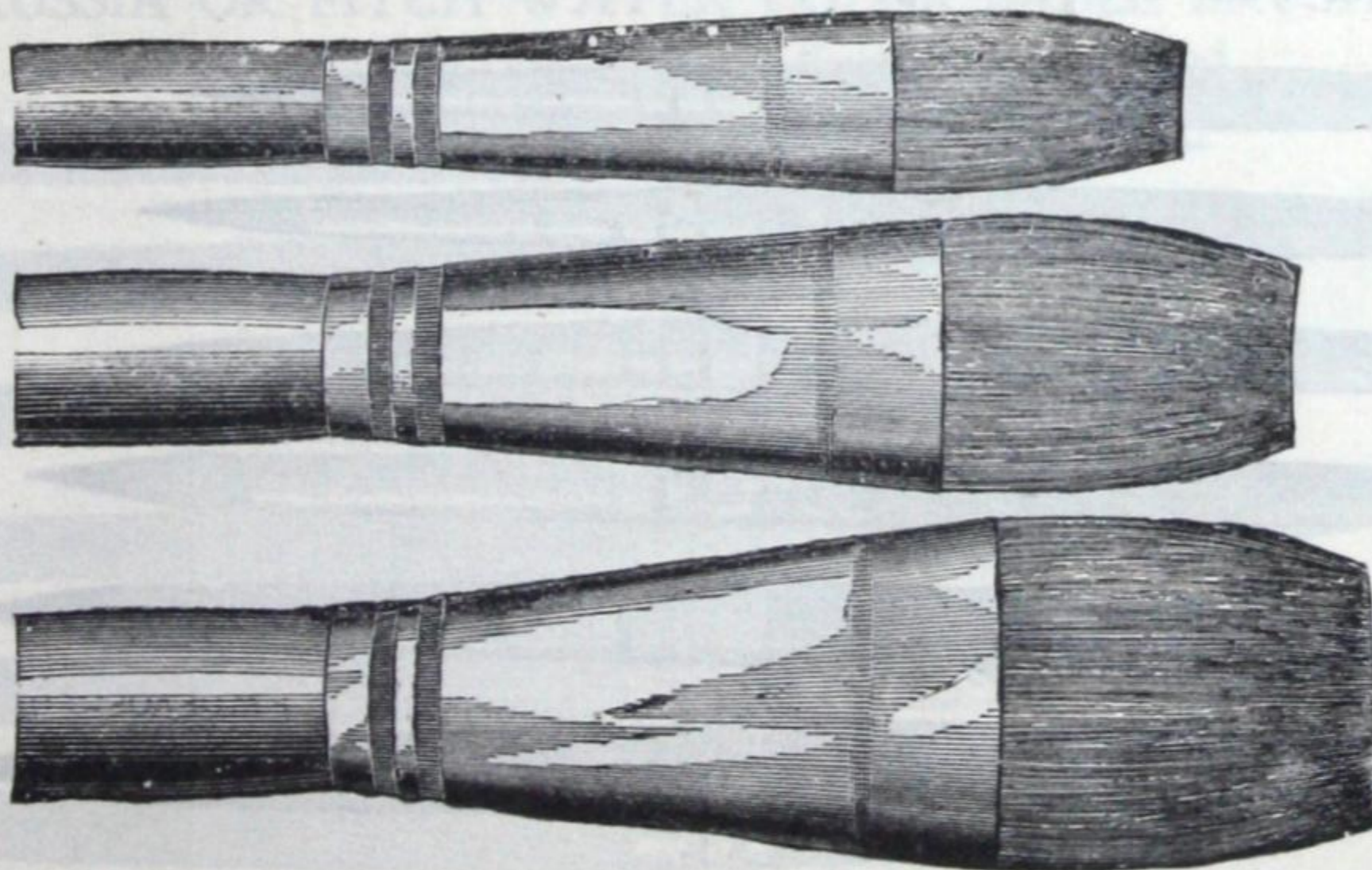
No. 0.	per dozen, \$1.50 each, .10	No. 3.	per dozen, \$1.80 each, .20
1.	" 1.60 " .15	4.	" 1.90 " .20
2.	" 1.70 " .15		

CAMEL HAIR QUILL PENCILS



Superior Quality, Rose Bound, in Glass Top Box, containing 1 gross Assorted Sizes, 1 to 8, and 4 dozen sticks per gross, \$3.60 per dozen, .40

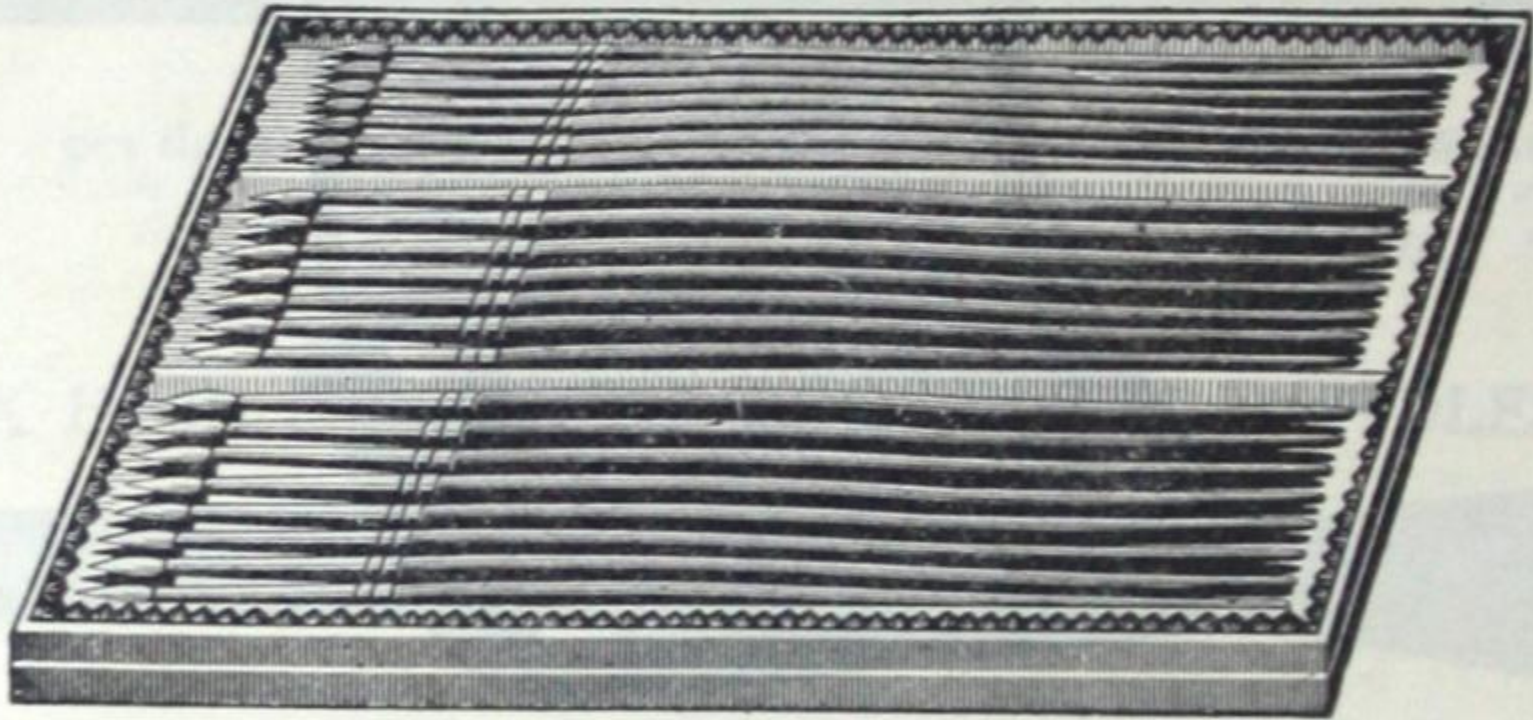
FROST & ADAMS CO.'S
CAMEL HAIR LAQUERING BRUSHES
Polished Handles, 1 in Ferrules Flat



$\frac{3}{8}$ in.	doz., .80 each, .10	$\frac{5}{8}$ in.	doz., \$1.25 each, .15	$\frac{7}{8}$ in.	doz., \$1.75 each, .20
$\frac{1}{2}$ "	" 1.00 " .12	$\frac{3}{4}$ "	" 1.50 " .17	1 "	" 2.00 " .25
	Assorted, $\frac{3}{8}$ inch to 1 inch			doz., \$1.40	

CAMEL HAIR SCHOOL BRUSHES

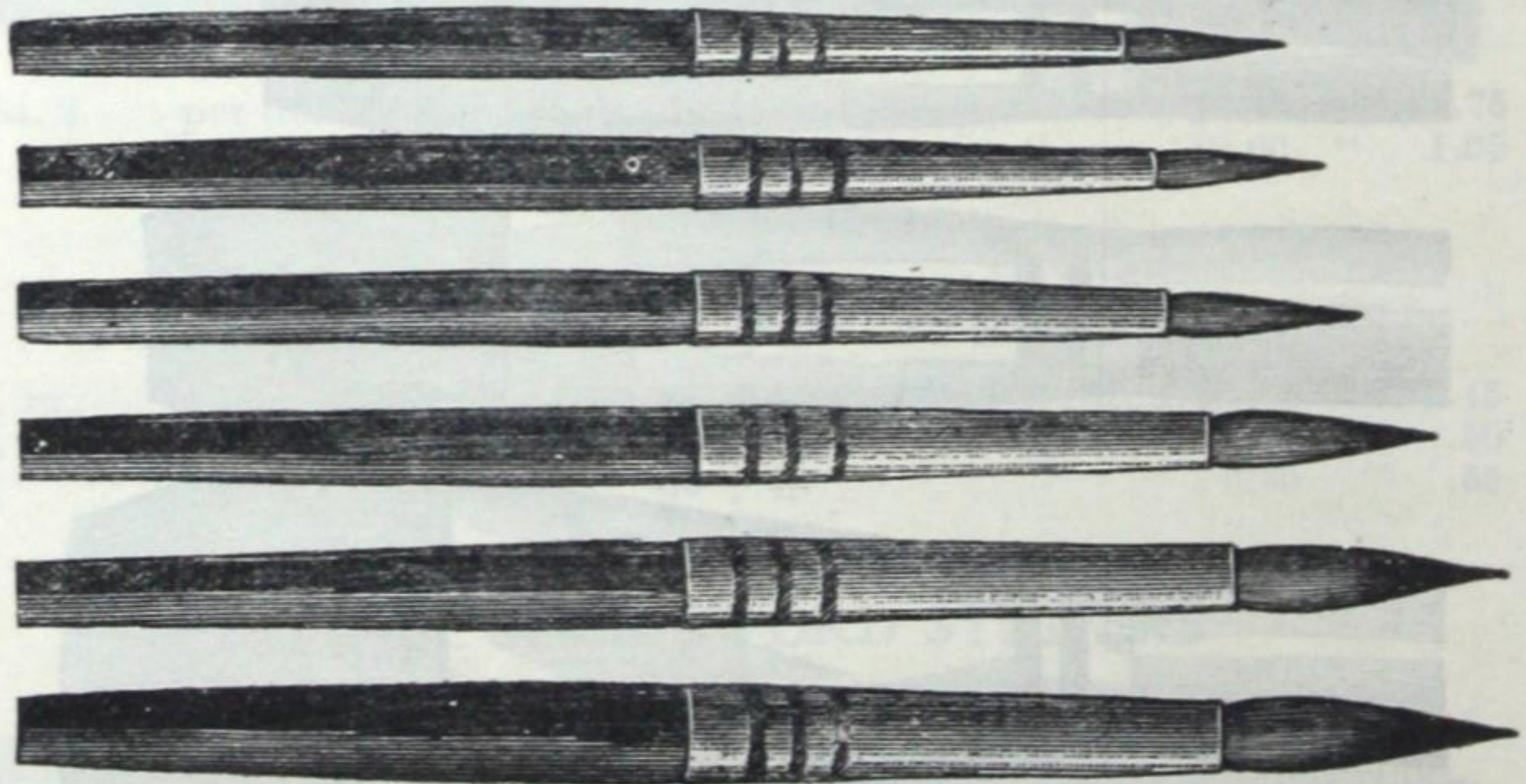
In Glass Top Boxes Black Handles, Tin Ferrules



Assorted Sizes, 1 to 6 per gross, \$6.00 each, .60

CAMEL HAIR SCHOOL BRUSHES

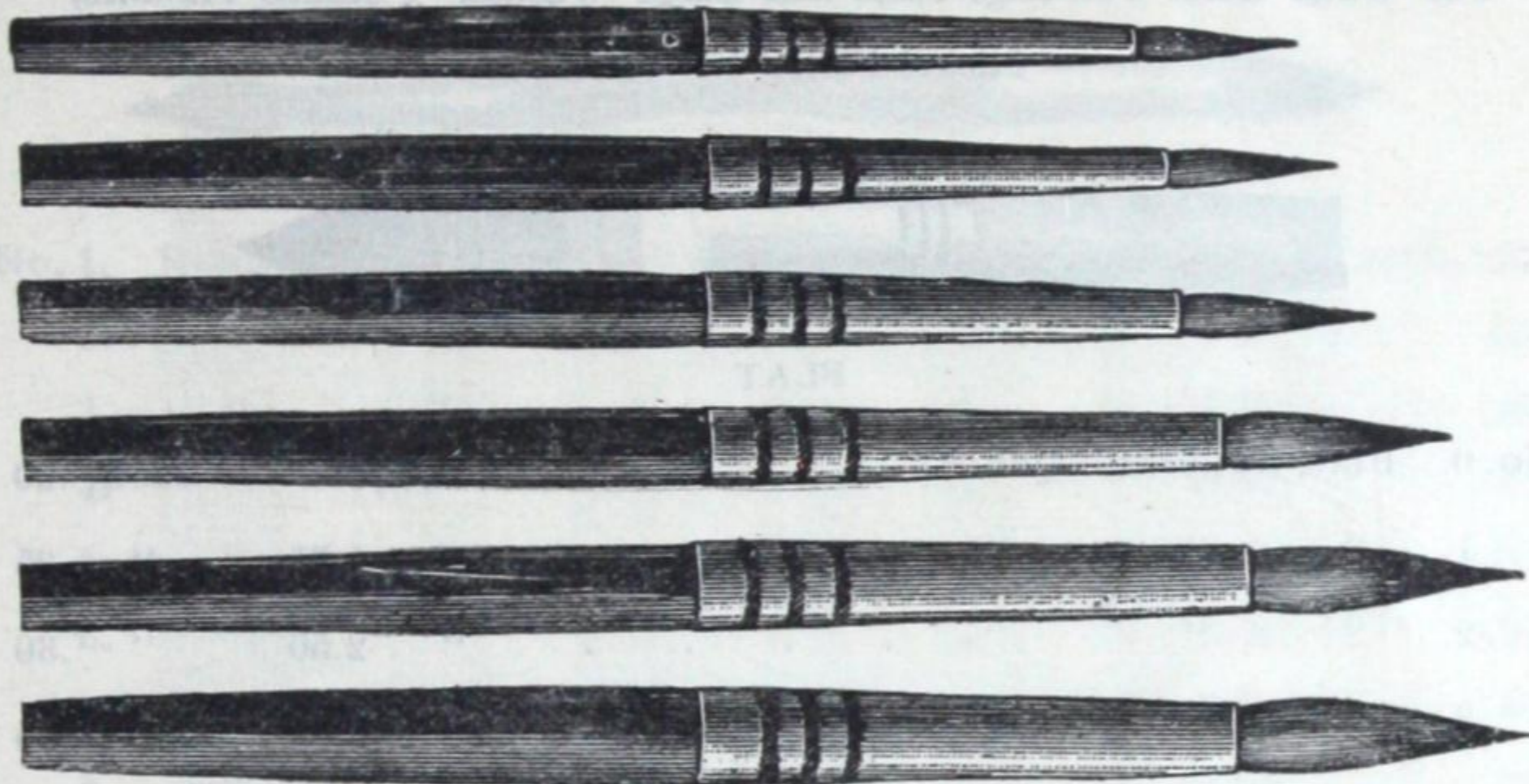
For Water Color Painting. Red Polished Handles, Tin Ferrules, Round



No. 1.	per dozen, .40	each, .05	No. 5.	per dozen, .65	each, .07
2.	" .45	" .05	6.	" .75	" .08
3.	" .55	" .05	7.	" .85	" .10
4.	" .60	" .06	Assorted, 1 to 6	per dozen, .60	

CAMEL HAIR SIBERIAN WATER COLOR BRUSHES

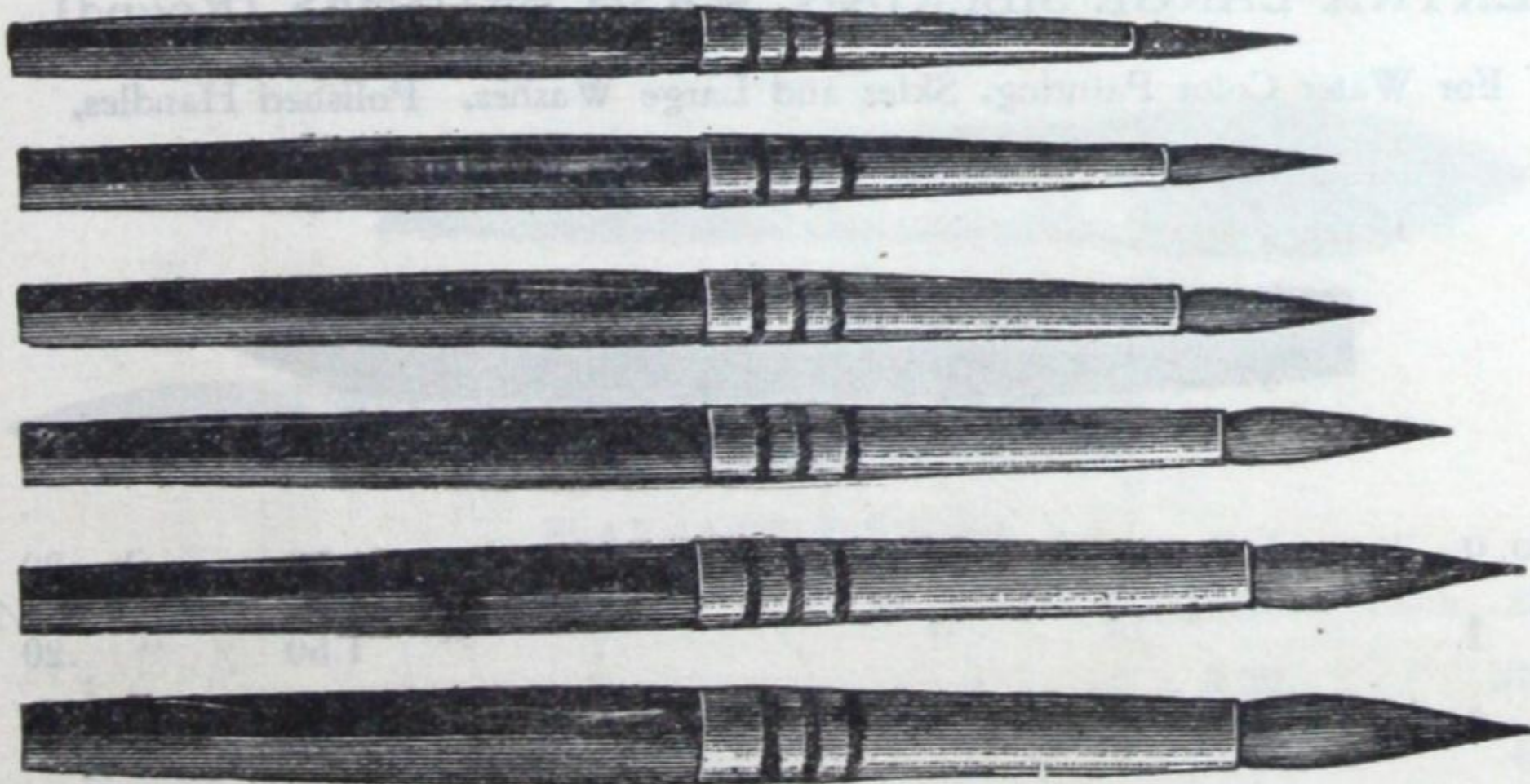
Yellow Polished Handles, Nickel Plated Ferrules, Round



No. 1.	per dozen, \$1.00	each, .10	No. 4.	per dozen, \$1.60	each, .15		
2.	"	1.10 "	.12	5.	"	1.75 "	.15
3.	"	1.30 "	.15	6.	"	2.10 "	.20

RUSSIA OR FITCH WATER COLOR SABLE BRUSHES

Cedar Polished Handles, Nickel Plated Ferrules, Round



No. 1.	per dozen, \$1.25	each, .12	No. 4.	per dozen, \$1.80	each, .20		
2.	"	1.45 "	.14	5.	"	2.00 "	.20
3.	"	1.65 "	.15	6.	"	2.50 "	.25

EXTRA LARGE SIBERIAN WASH BRUSHES (Flat)

For Water Color Painting, Skies and Large Washes. Polished Handles,
Nickel Plated Ferrules



FLAT

No. 0.	Flat, Superfine Quality	. . . . .	doz., \$1.75	each, .20
1.	" " " "	. . . . .	" 1.75	" .25
2.	" " " "	. . . . .	" 2.50	" .30
3.	" " " "	. . . . .	" 3.50	" .35
4.	" " " "	. . . . .	" 4.25	" .45

EXTRA LARGE SIBERIAN WASH BRUSHES (Round)

For Water Color Painting, Skies and Large Washes. Polished Handles,
Nickel Plated Ferrules



ROUND

No. 0.	Round, Superfine Quality	. . . . .	doz., \$1.50	each, .20
1.	" " " "	. . . . .	" 1.50	" .20
2.	" " " "	. . . . .	" 2.00	" .25
3.	" " " "	. . . . .	" 2.75	" .30
4.	" " " "	. . . . .	" 3.50	" .35

CAMEL HAIR WASH BRUSHES (Double Ended)

Polished Handles, Nickel Ferrules

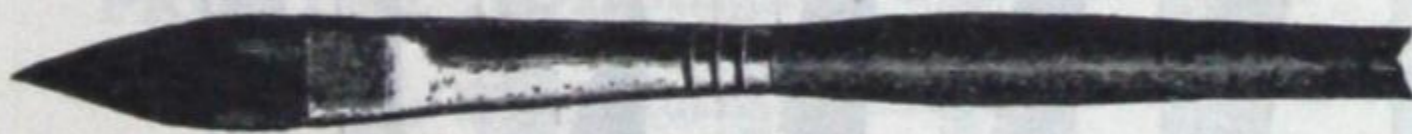


ROUND, DOUBLE ENDED

No.	Round, Superfine Quality	doz.,	each,
No. 1.	Round, Superfine Quality	\$3.00	.25
2.	" " "	4.00	.35
3.	" " "	5.00	.40
4.	" " "	6.00	.45
5.	" " "	7.00	.50
6.	" " "	8.00	.55
7.	" " "	9.00	.60
8.	" " "	10.00	.65

SIBERIAN WASH BRUSHES (Double Ended)

For Water Color Painting, Skies and Large Washes. Polished Handles, Nickel Plated Ferrules

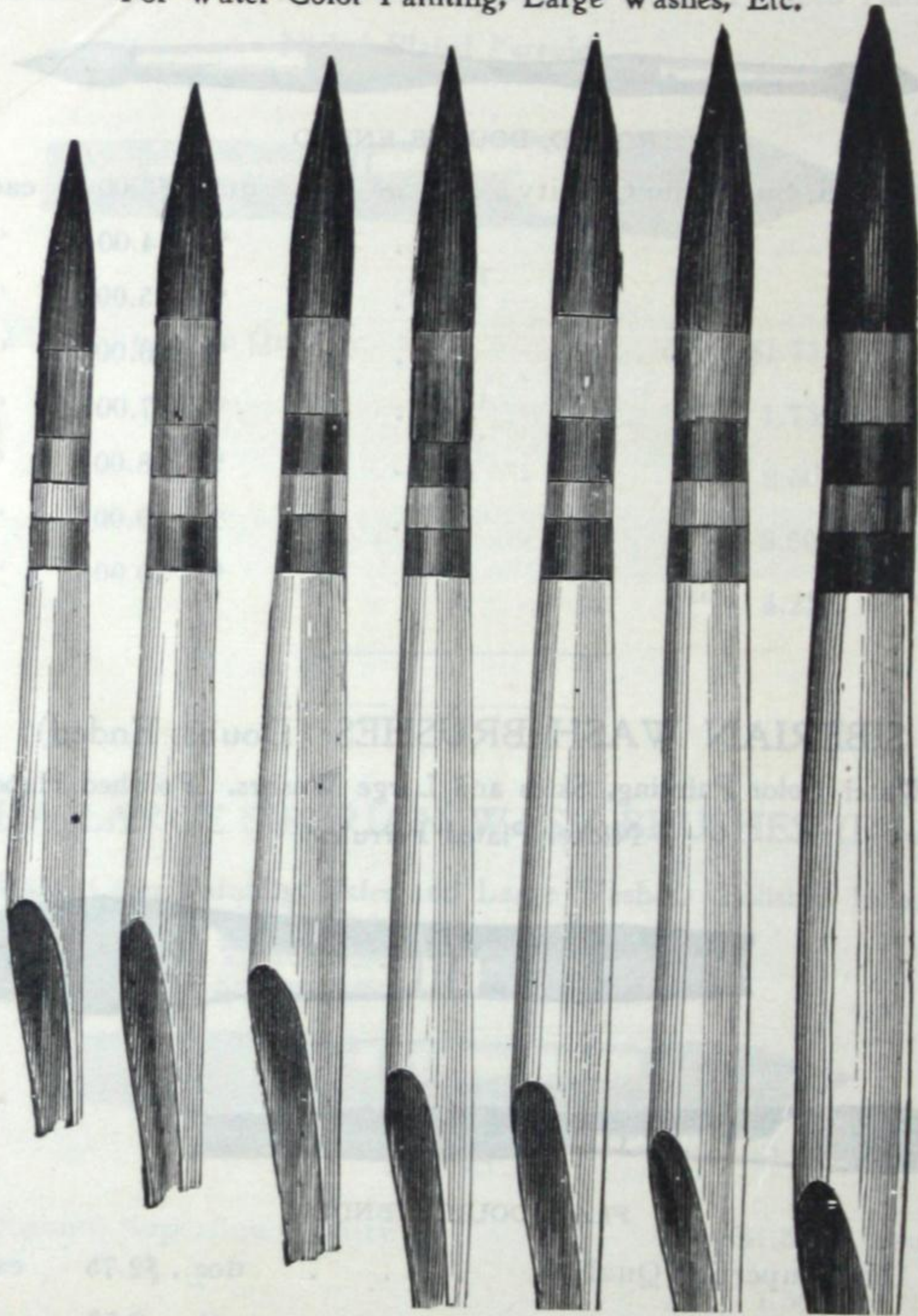


FLAT, DOUBLE ENDED

No.	Flat, Superfine Quality	doz.,	each,
No. 0.	Flat, Superfine Quality	\$2.75	.25
1.	" " "	3.50	.35
2.	" " "	4.50	.45
3.	" " "	5.60	.55
4.	" " "	6.80	.65

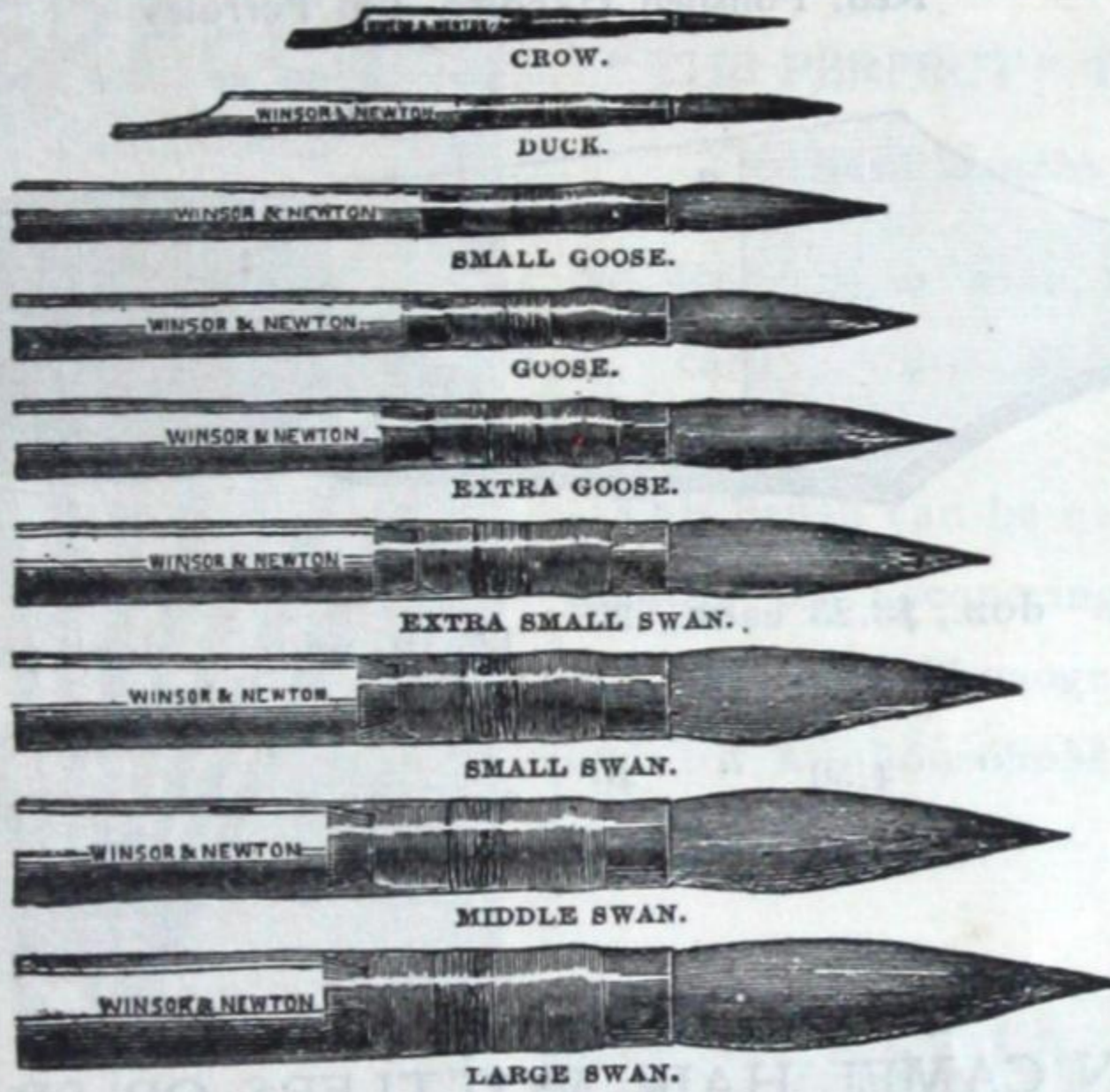
FRENCH CAMEL HAIR SWAN QUILL PENCILS

For Water Color Painting, Large Washes, Etc.



No. 00.	Extra large doz	\$7.50	each,	.75	No. 4.	doz.,	\$2.20	each,	.25
0.	" "	6 00	"	.60	5.	"	1.65	"	.15
1.	" "	4.75	"	.45	6.	"	1.15	"	.10
2.	" "	4.00	"	.40	7.	"	.90	"	.10
3.	" "	2.80	"	.30					

WINSOR & NEWTON'S
FINEST BROWN OR RED SABLE BRUSHES
 For Water Color Painting. In Quills



Crow Quill	each, .23	Extra Small Swan Quill, each, \$1.50	
Duck Quill	" .37	Small Swan Quill	" 1.95
Small Goose Quill	" .45	Middle Swan Quill	" 2.50
Goose Quill	" .63	Large Swan Quill	" 3.50
Extra Goose Quill	" .85		

FROST & ADAMS CO.'S SIBERIAN WASH BRUSHES

For Water Color Painting. Skies and Large Washes
 Wire Bound Quills. Round, Maroon, Polished Handles

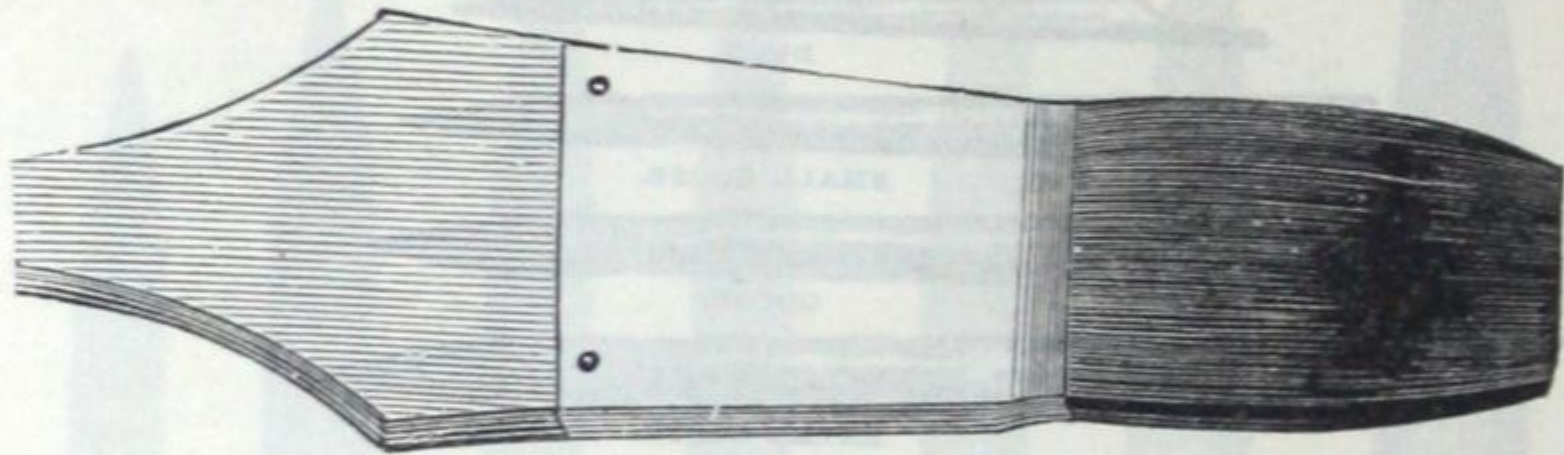


No. 1.	doz., \$3.25	each, .35	No. 3.	doz., \$5.25	each, .55
2.	" 4.40	" .45	4.	" 6.75	" .65

FLAT CAMEL HAIR BRUSHES

For Water Color Painting, Large Washes

Red, Polished Handles, Tin Ferrules

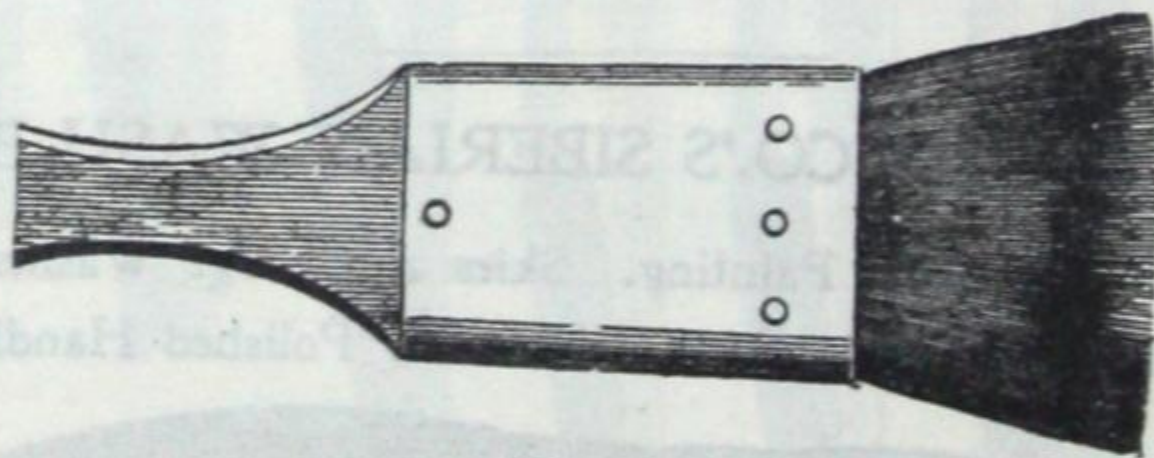


1/2 in. wide	doz., \$3.25	each, .30	1 1/2 in. wide	doz., \$6.85	each, .60
1/4 " "	" 3.85	" .35	1 1/4 " "	" 8.15	" .70
1 " "	" 4.50	" .40	2 " "	" 9.50	" .80
1 1/4 " "	" 5.10	" .45			

GERMAN CAMEL HAIR MOTTLETS OR SPALTERS

For Water Color, Washes or Color

Short Cedar Handles, Riveted, Nickel Ferrules



NO. 4367

1/2 in. wide	doz., \$1.00	each, .10	1 1/4 in. wide	doz., \$1.75	each, .20
3/4 " "	" 1.25	" .12	1 1/2 " "	" 2.25	" .20
1 " "	" 1.50	" .15	2 " "	" 3.00	" .25

FLAT CAMEL HAIR BRUSHES



"THE PERFECT" BRUSH

Green Handles

No. 4564. 1/2 in. wide, 1 doz. on a card doz., \$1.50 each, .15

This Brush can be used for Varnishing or Lacquering, Dusting Dry Plates and Phonograph Films, and for all household and practical purposes



"THE COLUMBIA" BRUSH

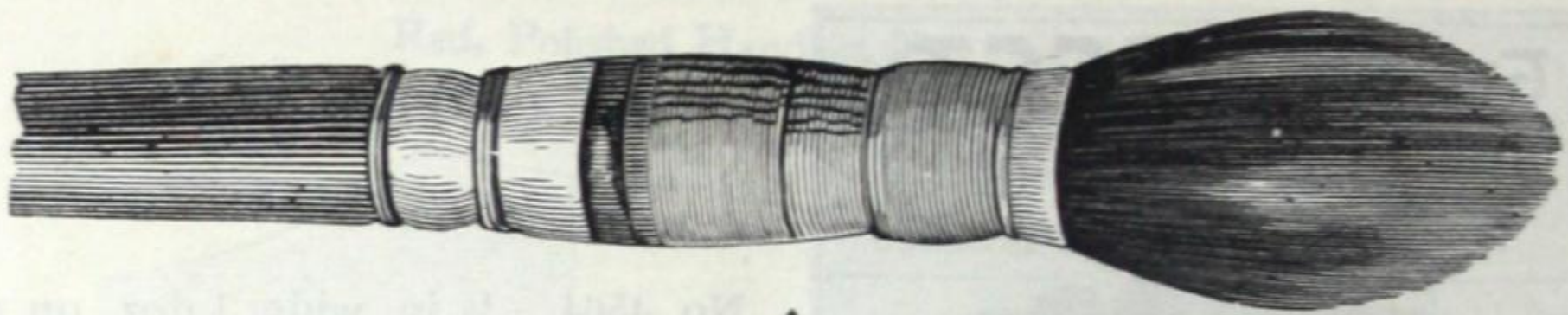
Red Handles

No. 4366. 1 in. wide, 1 doz. on a card doz., \$2 00 each, .20

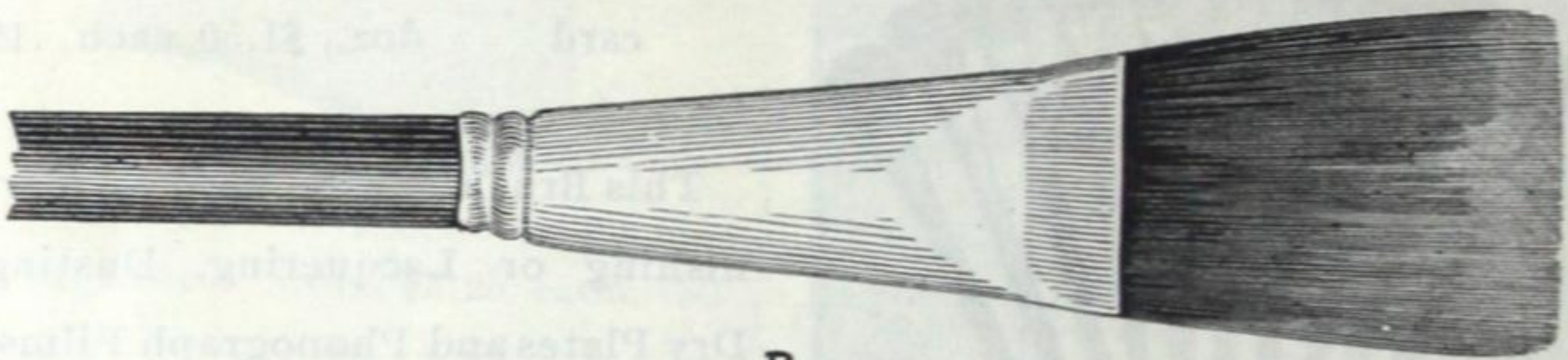
This Brush can be used for Varnishing or Lacquering, Dusting Dry Plates and Phonograph Films, and for all household and practical purposes

WINSOR & NEWTON'S SKY OR WASH BRUSHES

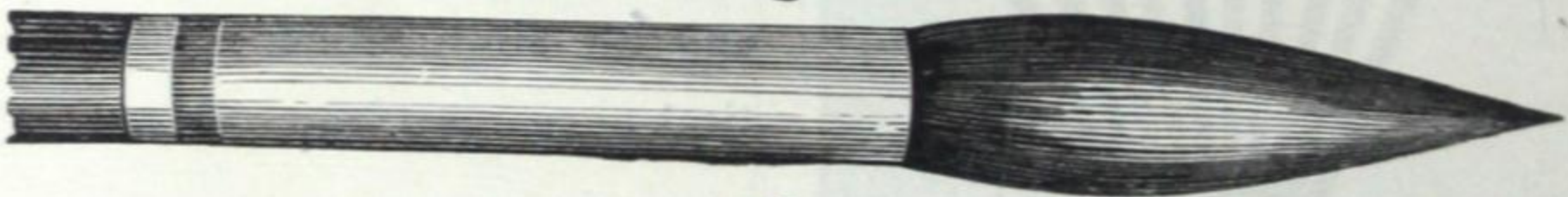
For Water Color-Painting



A



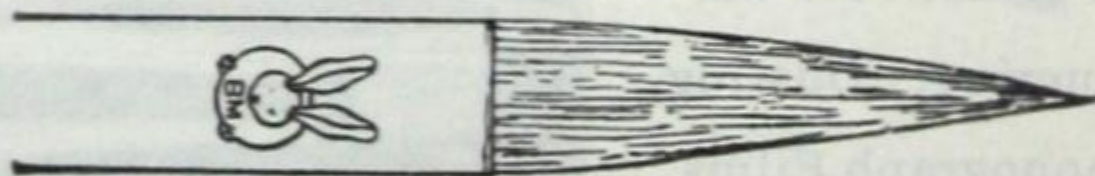
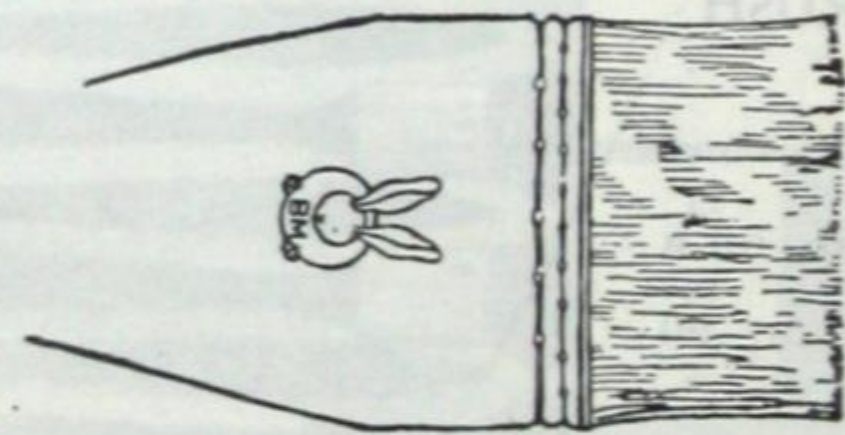
B



C

- | | | | | | |
|----|--|---|---|---|--------------|
| A. | Round, Siberian Hair, Wire Bound Quill | . | . | . | each, \$1.00 |
| B. | Flat, " in Tin | . | . | . | " 1.50 |
| C. | Round, Dyed Sables, in Tin | . | . | . | " 1.50 |

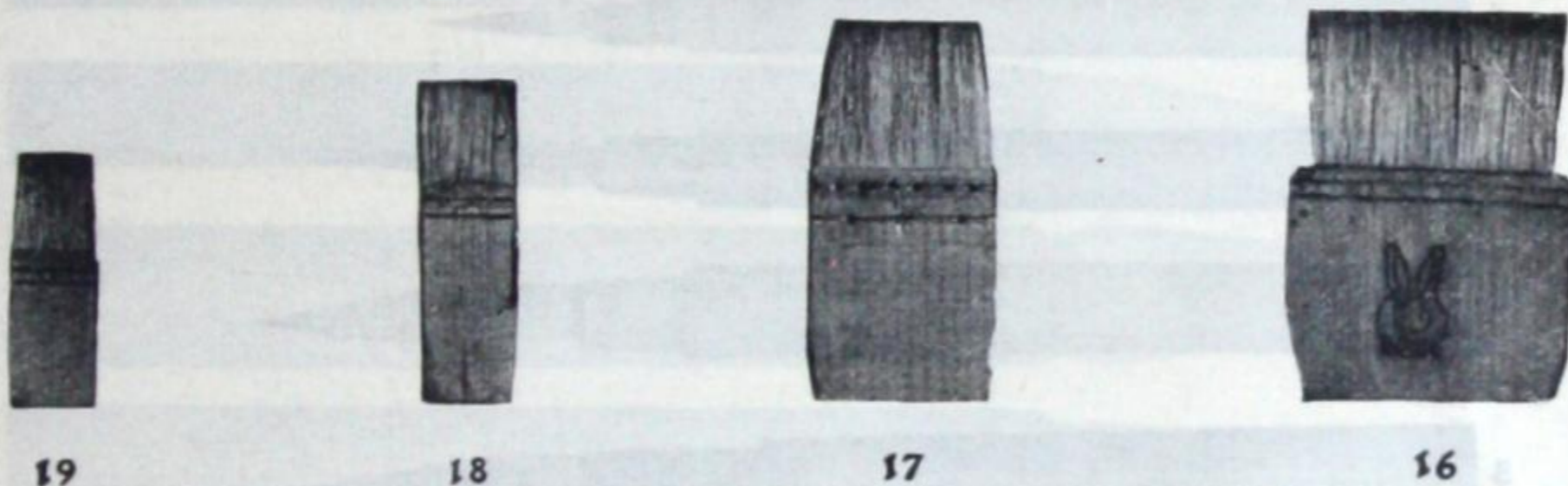
IMPORTED JAPANESE WATER COLOR BRUSHES



DIRECTIONS FOR USING THE BRUSHES

Before and after you use the brush rinse it in clear water in a good sized bowl, but do not wash with fingers or rub against bowl

Imported Japanese Water Color Brushes—continued

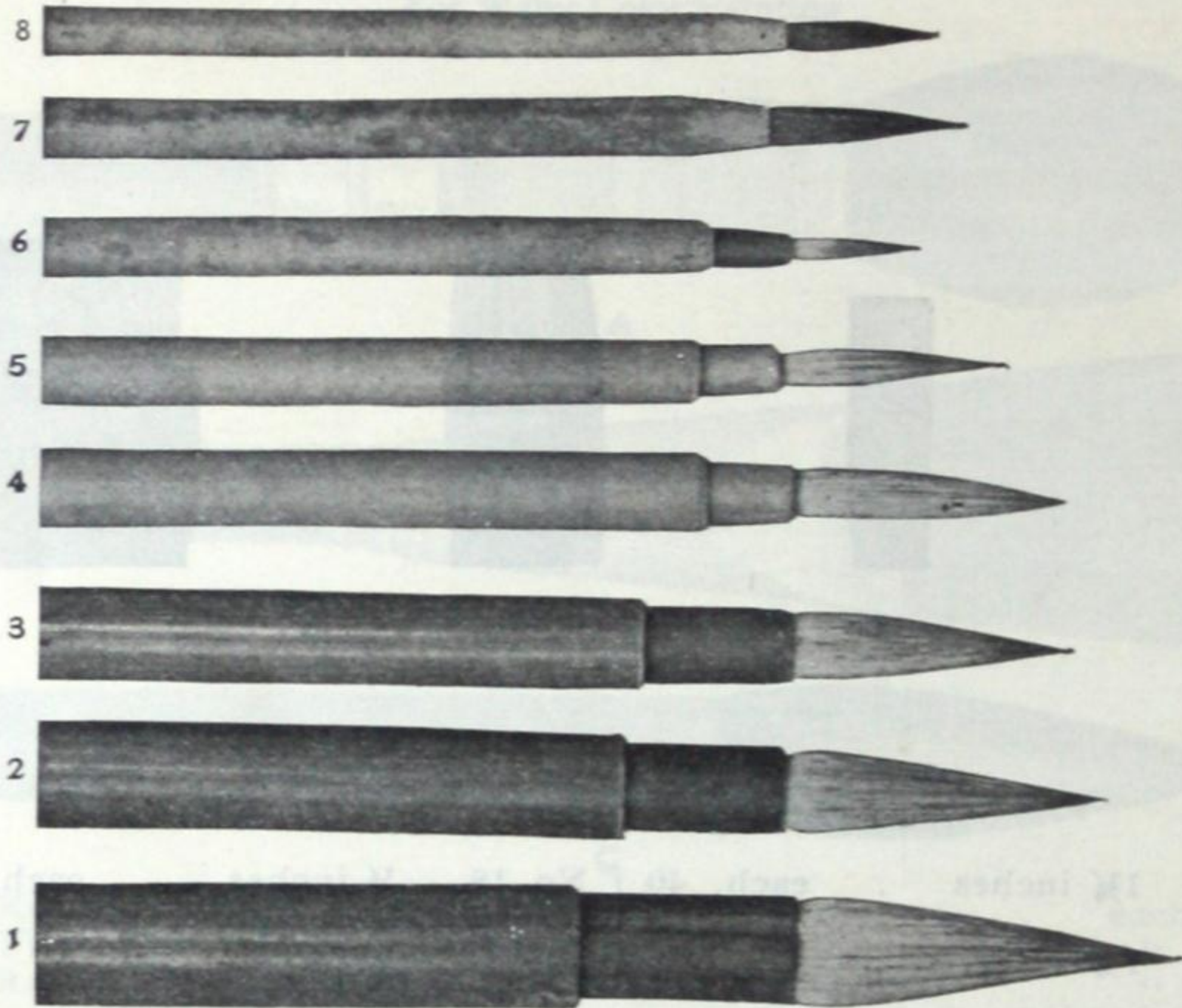


No. 16.	1 1/4 inches	.	each, .40	No. 18.	5/8 inches	.	each, .25
17.	1 1/4 "	.	" .30	19.	1/4 "	.	" .15

No. 15 is our celebrated School Brush which cannot be equalled in merit and price, and is extensively used in the public schools in this country. There are already worthless imitations.

Nos. 16, 17, 18 and 19. The Hake or Flat Brush for general washwork is one of the most important brushes used in Japanese water color work

Imported Japanese Water Color Brushes — continued



No. 1.	each, .50	No. 5.	each, .25
2.	" .40	6.	" .20
3.	" .30	7.	" .30
4.	" .30	8.	" .25

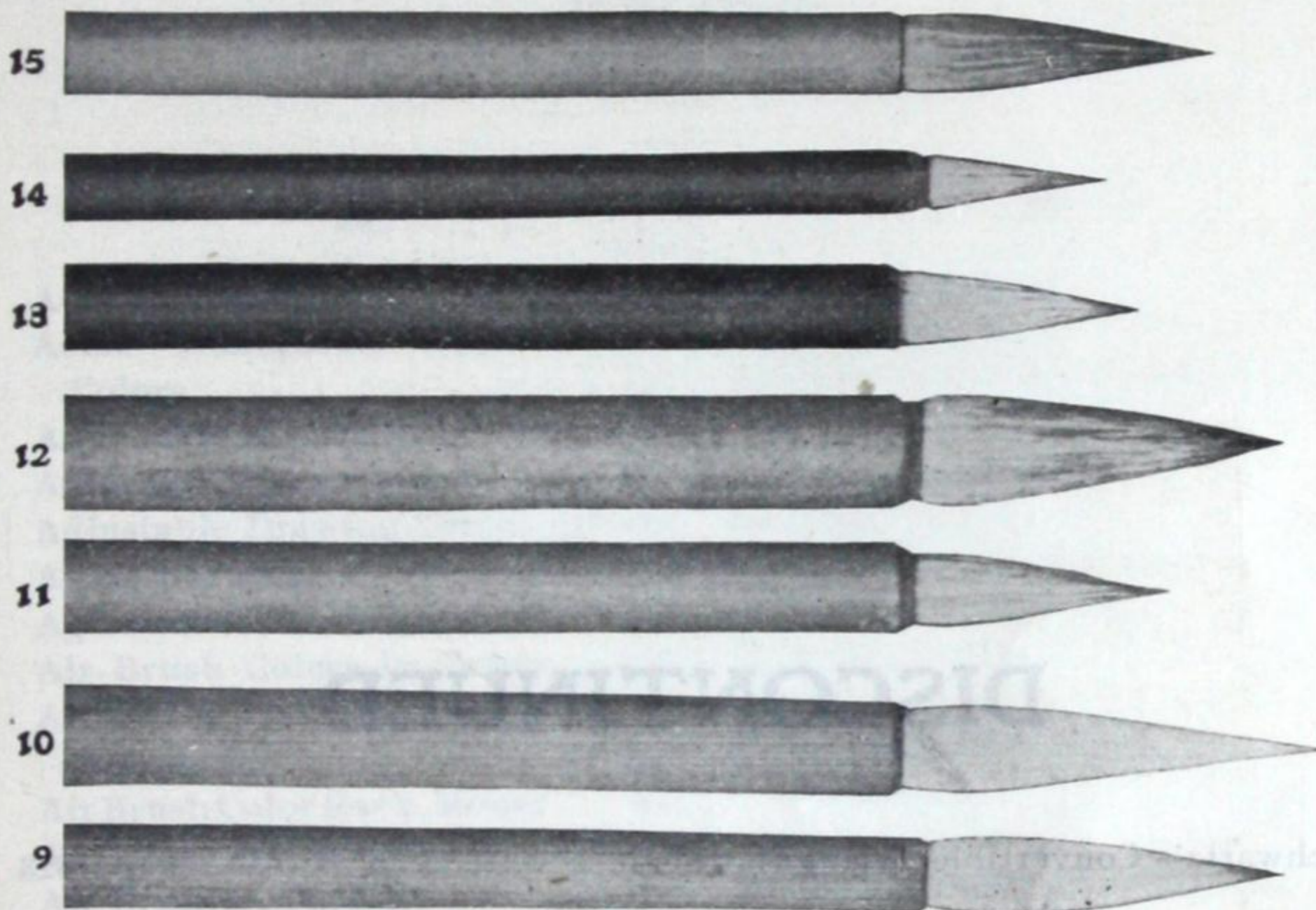
DESCRIPTIVE

Nos. 1, 2 and 3 are called Chinzan Brush; derived its name from that of famous painter about 1780-1820; has a most important place in work of present day because of its practical use in drawing landscapes, flowers, birds, etc.

Nos. 4 and 5 are Korin Brushes, so called from the name of the renowned master of the latter part of the 17th century, who used this style of brush. It is of great value in sketching stems, petals of flowers, etc.

Nos. 6, 7 and 8 are called Menso Brushes, and are generally used in drawing leaf veins, calyx, and pistils of flowers

IMPORTED JAPANESE WATER COLOR BRUSHES



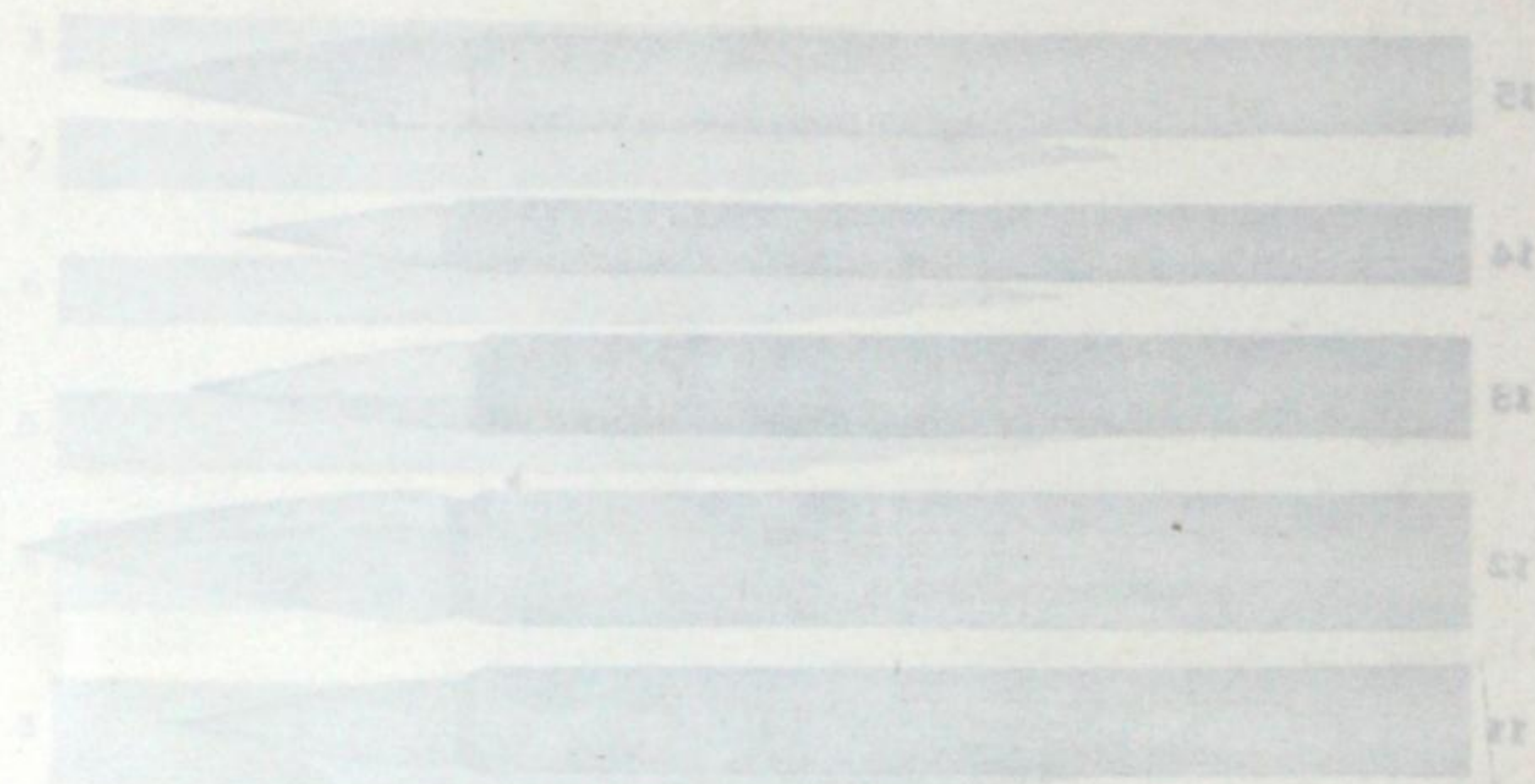
No. 9.	. . . . .	each, .30	No. 13.	. . . . .	each, .25
10.	. . . . .	" .40	14.	. . . . .	" .20
11.	. . . . .	" .40	15.	. . . . .	" .10
12.	. . . . .	" .55			

Nos. 9 and 10. Shijio Brushes have long and rather soft bristles, and used by followers of Shijio School. They are very useful for sketching flowers, birds, landscape, etc.

Nos. 11 and 12 the used by famous master Okio Maruyama, are very valuable in retaining paint for a long period, and give beautiful, modulated tones

Nos. 13 and 14. Art School Brushes added new life to the work of Japanese painters. This great brush was invented by the late Kano Hogal and is now one of the most popular brushes in use among the pupils of the Tokio Art School. It has peculiar merit in making thin or broad lines in one stroke

IMPORTED JAPANESE WATER COLOR BRUSHES



DISCONTINUED

Schwartz's Convertible Triangular Scale Page 623

The "Universal" Ruler and Section Liner Pages 626, 627

No. 1	each, .25	No. 18	each, .30
No. 2	each, .30	No. 19	each, .35
No. 3	each, .35	No. 20	each, .40
No. 4	each, .40	No. 21	each, .45
No. 5	each, .45	No. 22	each, .50
No. 6	each, .50	No. 23	each, .55
No. 7	each, .55	No. 24	each, .60
No. 8	each, .60	No. 25	each, .65
No. 9	each, .65	No. 26	each, .70
No. 10	each, .70	No. 27	each, .75
No. 11	each, .75	No. 28	each, .80
No. 12	each, .80	No. 29	each, .85
No. 13	each, .85	No. 30	each, .90
No. 14	each, .90	No. 31	each, .95
No. 15	each, .95	No. 32	each, 1.00
No. 16	each, 1.00	No. 33	each, 1.05
No. 17	each, 1.05	No. 34	each, 1.10
No. 18	each, 1.10	No. 35	each, 1.15

... and 10. Shijo brushes have long and rather soft bristles and
 need by following of Shijo school. They are very useful for sketching
 flowers, birds, landscapes, etc. and are very popular among
 the artists. The brush is made of horsehair and is very
 valuable in retaining paint for a long period, and gives beautiful
 modulated tones.
 No. 13 and 14. Art school brushes added new life to the work of
 Japanese painters. This great brush was invented by the late Kano
 Hoyal and is now one of the most popular brushes in use among the
 pupils of the Tokyo Art School. It has peculiar merit in making thin and
 broad lines in one stroke.

INDEX

A		B	
	PAGE		PAGE
Academy Boards	54	Background Pastels	242
Acme Transparent Water Colors	144	Bags, Sketching	477
Adjustable Blackboards	544	Ballance Reservoir Shading Pens	194
Adjustable Curve Rules	625	Ball Pointed Pens	188
Adjustable Drawing Tables 520-544		Banding Wheels	104
Agate Burnishers	103	Bars for Beam Compasses	292
Agreements, Architects'	455	Basin, China Architects'	109
Air Brush Colors in Tubes	137	Bath Trays, Zinc	554
Air Brush Colors, Powders and Stains	250-256	Bath Tub Enamel	68
Air Brush Color Rack, Moore	255	Beam Compasses, F. & A. Co. and Kern's,	418-422
Air Brush Gas Outfit	252-254	Bergher's Levels	642
Air Brushes, Paasche	246-248	Bergher's Transit	658, 659
Air Brushes, Thayer & Chandler	249, 250	Bischoff's China Colors	88
Air Pencil, The	195	Blackboard Dividers, Wood	285
Albanine and Process Black, W. & N.	167	Blackboard Rulers	285
Alexander Drawing Tables 534-538		Blackboard Sets	285
Aloe's Photo-Optican	257	Black Print Papers	443
Alphabet Books	487	Blanzy, Poure Crow Quill Pens	190
Aluminum Enamel	66	Blocks, Charcoal	476
Aprons, Waterproof	471	Blocks, Cross Section	450, 451
Architects' Agreement	455	Blocks, Sand Paper	282
Architects' Basin, China	109	Blocks, Water Color (various) 474, 475	
Architects' Time Receipts	455	Blocks, Whatman's	473
Arkansas Oil Stones	282	Bloodstone Burnishers	103
Arrows, Steel	563	Blotting Paper	427
Art Gum	269	Blue Print Cars	555-557
Artists' Palette Knives	26, 28	Blue Print Cloth	442
Atomizers	244	Blue Print Frames	553-555
Automatic Shading Pens	194	Blue Print Machines, Electric	552

	PAGE		PAGE
Blue Print Paper	442	Boxes, Empty Oil Color	49-53
Boards, Academy	54	Boxes fitted with China Colors	101
Boards, Canvas, Russell's	55	Boxes fitted with Oil Colors	45-48
Boards, Cartridge	461	Boxes of Water Colors	117-137
Boards, Cutting	471	Boxes, Palette Chalk	240
Boards, Drawing	516, 517	Boxes, Water Color, Half and Whole Pan	115
Boards, Mat	462	Boxwood Modeling Tools	507-509
Boards, Melton	461	Brackets for Roll Paper	441
Boards, Oil Sketching	55	Brads, Wire	467
Boards, Pulp	461	Brass Buttons	468
Books, Alphabet	487	Brass Dividers	408
Books, Certificate	455	Brass Plumb Bobs	637
Books, Contract	455	Brass Protractors	312
Books, Cross Section	451	Briedbach's Oil Colors	26
Books, Drawing	495-500	Brilliantines and Diamond Dust	62
Books, Field, Transit and Level	452-454	Bristol Boards	456-458
Books on China Painting	96	Bronze Powders	63
Books on Leather Decoration	260	Bronzing Liquid	65
Books on Mechanical Drawing	482-494	Brown's Linen Paper	427
Books, Painting	501	Brunton's Pocket Transit	664
Books, Prang's Outline	500	Brush Cabinets	8
Books, Profile	451	Brush Cases, Japanned Tin	423
Books, Rowney's Hand Books	499, 500	Brushes, Badger Blenders, Round	690
Books, Sketch	478-481	Brushes, Bright's Tapestry	682
Books, V. Foster's Drawing Books	496, 497	Brushes, Bristle, Bright's Devoe	677
Books, W. & N. Hand Books	498	Brushes, Bristle, Bright's F. & A. Co.	679
Booth Section Liner	629	Brushes, Bristle, Bright's W. & N.	674
Bottles Empty, for Higgins' Ink	173	Brushes, Bristle, Fan, F. & A. Co.	681
Bourgeois Drawing Inks	170	Brushes, Bristle, Flat, W. & N.	671
Bourgeois Water Colors, in Tubes and Pots	161	Brushes, Bristle, French, Round and Flat	675, 676
Boxes, China Color, Empty	102		
Boxes, Empty, for Water Color Tubes	116-137		

	PAGE		PAGE
Brushes, Bristle, Landseer's, F. & A. Co.	681	Brushes, C. H. Swan, Quills, French	714
Brushes, Bristle, Landseer's, W. & N.	674	Brushes, C. H. Swan Quill and Metal	707
Brushes, Bristle, Lyons, F. & A. Co.	679	Brushes, C. H. Sword Stripers	708
Brushes, Bristle, Paste, F. & A. Co.	681	Brushes, C. H. Varnish	690
Brushes, Bristle, Poonah	674	Brushes, C. H. Writers and Stripers	706
Brushes, Bristle, Round, W. & N.	672	Brushes, Flat, Perfect	717
Brushes, Bristle, Ruben's Flat and Round	680	Brushes, Glass	96
Brushes, Bristle, Series C, W. & N.	673	Brushes, Ox Hair Lettering, in Handles	708
Brushes, Bristle, Special W. & N.	670	Brushes, Red Sable, American Size, W. & N.	685
Brushes, Bristle, Super, F. & A. Co.	678	Brushes, Red Sable, Bright's F. & A. Co.	687
Brushes, Bristle Varnish, Flat	683	Brushes, Red Sable, Bright's W. & N.	684
Brushes, C. H. China, Grounding, Flat	691	Brushes, Red Sable Card Writers	708
Brushes, C. H. China, in Quills	692-695	Brushes, Red Sable, Fan, W. & N.	685
Brushes, C. H. China Tinting	691	Brushes, Red Sable Imitation Water Color, F. & A. Co.	698
Brushes, C. H. Flat	716	Brushes, Red Sable, in Quills, W. & N.	715
Brushes, C. H. Flat, Columbia	717	Brushes, Red Sable Lettering Pencils in Quill	698
Brushes, C. H. German Mottlers	716	Brushes, Red Sable Liners for China	693
Brushes, C. H. Lacquer- ing	709	Brushes, Red Sable, Oil Color, F. & A. Co.	686
Brushes, C. H. Lettering, in Handles	708	Brushes, Red Sable, Oil Color, W. & N. and F. & A. Co.	684-687
Brushes, C. H. Mottlers, Fr.	690	Brushes, Red Sable Riggers, W. & N.	685
Brushes, C. H. Quill	709		
Brushes, C. H. Quill, Miniature	704, 705		
Brushes, C. H. School	710		

	PAGE	C		PAGE
Brushes, Red Sable, Water Color, Extra Large, F. & A. Co.	697		Cabinet and Cutter	548
Brushes, Red Sable, Water Color, F. & A. Co.	696, 697		Cabinet Saucers	111
Brushes, Red Sable, Water Color, Hardmuth	699, 700		Cabinets, Brush	8
Brushes, Red Sable, Water Color, W. & N. Co.	701-703		Cabinets, Double Elephant	551
Brushes, Red Sable, Water Color, W. & N. Extra Large	703		Cabinets, Imperial	550
Brushes, Russia or Fitch	711		Cabinets, Morse's	255
Brushes, Russian Sable, Bright's, F. & A. Co.	689		Cabinets, Water Color	8
Brushes, Russian Sable, Grounding,	691		Calculators, Charpentier's and Boucher's	560
Brushes, Russian Sable, Round and Flat	688		Cambridge Oil Colors, Studio	20
Brushes, Sable Sign Writers, Flat	708		Campana China Colors	90, 91
Brushes, Siberian Double End, Flat and Round	713		Camp Stools	71
Brushes, Siberian Wash, Flat and Round	712		Canvas Blocks	477
Brushes, Siberian Wash, Round Wire Bound Quills	715		Canvas in Rolls, French	34
Brushes, Siberian Water Color	711		Canvas in Rolls, F. & A. Co.	33-37
Brushes, Sky and Wash, W. & N.	718		Canvas in Rolls, Pastel	35
Brushes, Water Color, Fitch, F. & A. Co.	711		Canvas in Rolls, Rowney's	37
Brushes, Water Color, French Siberian	711		Canvas in Rolls, Tapestry	36
Brushes, Water Color, Japanese,	719-721		Canvas in Rolls, W. & N.	36, 37
Burnishers Bloodstone	103		Canvas on Stretchers, F. & A. Co.	38-40
Burnishers Illuminating	103		Canvas on Stretchers, W. & N.	39
Buttons, Brass	468		Canvas Pins	32
			Canvas Pliers	32
			Card Board Railroad Curves	305
			Card Boards, White	461
			Cards, Gilt Edge	55
			Cards, Ragged Edge	54
			Cars for Blue Prints	555-557
			Carter's Inks	172
			Carter's Inks for Fountain Pens	177
			Carter's Paste in Tubes and Jars	183
			Cartridge Boards	461
			"Castell" Colored Pencils	208-210
			"Castell" Drawing Pencils	203

	PAGE		PAGE
Celluloid Curves	304-307	Clips, Spring	310
Celluloid Curves in Sets	307, 308, 311	Clips, Pen and Pencil	224
Celluloid Protractors	311	Cloth Back Mounted Papers	440
Celluloid Sheets	56	Cloth, Enamel	455
Celluloid Splines	311	Colored Chart for Oil Colors	10
Celluloid Templets	295	Colored Chart for Water	
Celluloid Triangles	294	Colors	146
Celluloid Triangles, Special	297	Colored Crayons, Raphael's	235
Cement, Fry's Vitriifiable	95	Colors Bischoff's China	88
Cement, Western	187	Colors, Carter's Velvet Show	
Centrolineads	290	Card	172
Certificate Book	455	Colors, Campana China	90, 91
Chalk Boxes, W. & N.	240	Colors, Fry's China	86, 87
Chalk Diagram	202	Colors, Lacroix China	92, 93
Chalk Pencils	220	Colors, Mason's China	89
Chalks in Wood, Faber's	207	Colors, Muller & Hennig's	
Chamois Palettes	236	China	94
Chamois Skins	244	Colors, Osgood's China	98
Chamois Stumps	243	Colors, Photographic,	
Champion Drawing Tables	523	Talen's	167
Charcoal Blocks	476	Colors, W. & N. Retouching	158
Charcoal, French	239	Columbia Rubber	273
Charcoal Paper	428	Combination Filing Cab-	
Charcoal, Russian, W. & N.	238	inets	545-551
Chart for Oil Colors, Color-		Commerce Pencils, E. F.	211
ed	10	Compasses and Clinometers	669
Chart for Water Colors,		Compasses, Beam, Kern's	
Colored	146	and F. & A. Co.	418-422
Chesterman's Steel Tapes	592	Compasses, Eagle	406
Chinaware	109-111	Compass Pencils	205
China Kilns	105-108	Composition of Pigments,	
China Medallions	104	by W. & N.	4-7
China Painting Outfits	101	Conté Crayons	237
China Palettes	96, 110	Conté Crayon Pencils	239
China Slants	109	Contract Books	455
China Tiles for Decorating	95	Cooley's Gold for China	99
Circular Erasers	273	Cooley's Oil and Mediums	
Claude Lorraine Glasses	424	for China	99
Clay, Composite Modeling	512-515	Copper Foil or Tinsel	427
Clinometers and Compasses	669	Coquille Paper	427

	PAGE		PAGE
Coradi's Mechanical		Devoe's Double Tubes Oil	
Integrgraph	570	Colors	17, 18
Cord for Plumb Bobs	637	Devoe's Wood Stains in	
Crayons for Drawing	230-236	Powder Form	256
Crayons for Oil Checking	233	Diamond Dust and	
Crayons for School Use	228	Brilliantines	62
Crayon Holders	245	Diminishing Glasses	424
Crayons, Lecturers'	229	Dividers, Alteneder's, Kern's	
Crayon Paper	428	and F. & A. Co.	407-417
C r a y o n P e n c i l s,		Dividers, Brass,	408
Colored	203, 208, 209, 234	Dividers, German Silver	409-417
Crayons, Railroad	233	Dividers, Nickel, F. & A. Co.	407
Crayon Sauce	237	Dividers, Proportional	382
Crayons, Wax	202	Double Elephant Cabinet	551
Cross Section Blocks	450, 451	Dowse's Tracing Cloth	433
Cross Section Books	451	Drawing Boards	516, 517
Cross Section Papers	445-449	Drawing Board Mucilage	181
Crowell's Tape	464	Drawing Board Trestles	519
Crow Quill Pens, K. & E.	188, 190	Drawing Books	495-500
Cups, Oil Color	112, 113	Drawing and Duplex Paper	425-440
Cups, Water Color	112-114	Drawing Instruments in	
Curves, Card Board Railroad	305	Pocket Book Cases 338, 340, 349, 351	
Curves, Celluloid	304, 307	Drawing Instruments, Sets,	
Curves, Pearwood	301	Alteneder's	356-374
Curves, in Sets	307, 308, 311	Drawing Instruments, Sets,	
Curves, Railroad	305-309	F. & A. Co.	324-355
Curves, Rubber	300	Drawing Models	505, 506
Curve Rules	625	Drawing Outfit	291
Curves, Ship	293, 301, 302	Drawing Sets	291
Cutting Boards	471	Drawing Tables	520-544
		Drawing Tablets, School	480
		Dunne's Transparent Colors,	
		in Tubes	140, 141
		Duplex Paper, Drawing	426-438
D		E	
David's Letterine	171	Eagle Compasses	406
Day's Paste in Tubes and		Easel Backs, Wire	465
Jars	184		
Decorator's Banding Wheel	104		
Detail Papers, Manila	434-437		

	PAGE
Easels, Plaque	59
Easels, Ranger Sketching	76
Easels, Studio	72, 77, 78, 80-84
Eclipse Paper	426
Eddy's Tapes	587-589
Eggshell Papers	439
Eidograph	320
Electric Blue Print Machine	552
Ellipsograph and Beam Compasses	629
Ellipses, Celluloid	297
Ellipses, Pearwood	298
Ellipses, Rubber	299
Emerald and Ruby Erasers	273
Emerson's Drawing Tables	542, 543
Empire Drawing Paper	425
Empty Bottles for Higgins' Ink	173
Empty Bottles for Water Color Tubes, F. & A. Co.	116, 137
Empty Collapsible Tubes	9
Empty Half and Whole Pans	114
Empty Instrument Cases	323
Empty Whole and Half Pan Boxes	115
Enamels	66-68
Enamel Cloth	455
Engineers' Field Book Asst.	308
English Metallic Paper	426
Erasers	266-275
Erasers and Scrapers	245
Erasing Fluids for Blue Prints	171
Erasing Shields	456
Etchers' Materials	502, 503
Eternal Ink, Higgins'	174
Eyes, Screw	468

F

	PAGE
Faber's Cabinet Eraser	270
Faber's Carpenter's Pencils	205
Faber's Chalks in Wood	207
Faber's Compass Pencils	224
Faber's English Drawing Pencils	207
Faber's Ideal Eraser	269
Faber's J., Siberian Pencils	214
Faber's Lead Points	207
Faber's Leads, A. W. F. & J. F.	205, 207, 215
Faber's Round Gilt Pencils	206
Faber's Siberian Pencils	204
Fasteners, McGill's	455
Field, Transit and Level Books	452-454
Field Book Assistant, Engineers'	308
Files, Pencil	282
Filing Cabinets	545-551
Fitted Oil Color Boxes	45-48
Flat Scales	610-619
Flat Scales, White Edge	617-619
Flitters	63
Folding Palette, Japanned Tin, Water Color	478
Folding Rules	599
Foot Pump for Paasche Air Brush	251
Foster's Drawing Books	496, 497
Fountain Air Brush	246-248
Fountain Pens, Waterman's	192, 193
Frames for Blue Prints	553-555
Frames for Decorating	60-62
French Knives	28
French Tapestry Colors	44
Frisket Paper	460
F. & A. Co. Empty Whole and Half Pan Boxes	115, 116

	PAGE		PAGE
F. & A. Co. Erasing Fluid . . .	171	Glue, LePage's . . .	186
F. & A. Co. Fixatif . . .	41	Gold and Silver Water Color Half Pans and Jars . . .	138
F. & A. Co. Half Pans, Water Colors . . .	114, 147	Gold, Metallic Water Color . . .	139
F. & A. Co. Half Pans, Water Colors for School . . .	114, 147	Gold for China Painting, Cooley's . . .	99
F. & A. Co. Mediums . . .	41	Gold for China Painting, Fry's . . .	95
F. & A. Co. Oil . . .	41	Gold for China Painting, Hall's . . .	99
F. & A. Co. Oils and Mediums for China . . .	41, 100	Gold for China Painting, Hasburg's . . .	99
F. & A. Co. School Water Color Boxes, Fitted . . .	124	Gold for China Painting, Marching's . . .	95
F. & A. Co. Varnishes . . .	41	Gold for China Painting, Mason's . . .	95
F. & A. Co. Water Colors in in Tubes . . .	152	Gold for China Painting, Sherratt's . . .	99
Fry's China Colors . . .	86, 87	Gold Inks . . .	65
Fry's Drawing Tables . . .	529, 530	Gold Paints . . .	63, 64
Fry's Gold, Silver and Platinum, Liquid Form . . .	95	Gold Shells and Saucers . . .	139
Fry's Oils and Mediums . . .	87	Guards for Scales . . .	609
Fuller's Slide Rules . . .	558	Gurley's Transits . . .	660, 661
G		H	
Gauge, Hasburg's . . .	104	Half and Whole Pans, Empty . . .	114
Gelatine in Sheets . . .	440	Half Pans, W & N. Water Colors . . .	115
German Shape Palette Knife . . .	26	Half Tubes, W. & N. Water Colors . . .	153, 154
German Silver Dividers . . .	409-417	Hall's Gold for China Painting . . .	99
German Silver Protractors . . .	312-314	Hall's Specialties for China . . .	95
Gilders' Knives . . .	28	Handihook, Brass . . .	279
Gillott's Pens . . .	189	Hand Books on China Painting . . .	96
Gillott's Penholders . . .	189	Hand Levels . . .	663
Gilt Edge Cards . . .	55		
Glass Brushes . . .	96		
Glass Mullers . . .	98		
Glass Slabs . . .	98		
Glasses, Claude Lorraine . . .	424		
Glasses, Water . . .	110		
Glue, Higgins' Vegetable . . .	182		

	PAGE		PAGE
Hangers, Plaque	57, 58	India Ink Slabs, China	109
Harding's Drawing Papers	425	Indicators for Slide Rules	606
Hardtmuth's Diagram		Ink and Pencil Erasers, in	
Chalks	202	Cedar	275
Hardtmuth's Negro Pencils	201	Ink Erasers	274, 275
Hardtmuth's Rubber	266	Ink for Fountain Pens	172
Hasburg's Gold for China		Ink, Higgins' Engrossing	174
Painting	99	Inkholders	175, 176
Hasburg's New Ceramic		Inkoff Tracing Cloth Fluid	169
Gauge	104	Ink Saucers	111
Hasburg's Plate Divider	103	Ink Slabs	111
Helios Erasing Fluid	171	Inkstands	175, 176
Higgins' Engrossing Ink	174	Inks, Bourgeois Drawing	170
Higgins' Inks	173	Inks, Fountain Pen	177
Higgin's Office Paste	182	Inks, Gold	65
Higgin's Photo Mounter	180	Inks, Indelible	172
Higgin's Vegetable Glue	182	Inks, Higgins'	173
Holders for Crayons	245	Inks, Higgins' Eternal	174
Holders for Ink Bottles	175, 176	Inks, Letterine	171
Hooks for Pictures	470	Inks, Larrabee's White	170
Horadam's Whole Tubes,		Inks, Pomeroy's White	170
Water Colors	159, 160	Inks, Stick India	178, 179
Horn and Metal Centres.	277	Inks, Tesco Drawing	174
Horn Knives	28	Instrument Cases, Empty	323
Horn Protractors	310	Instruments, Beam Com-	
Hyperbolas, Celluloid	297	passes, Alteneder's, F. &	
Hyperbolas, Pearwood	298	A. Co., Kern's	418-422
Hyperbolas, Rubber	299	Instruments for Calculating	558-560
Horses, Whitewood	519	Instruments in Sets, F &	
Halden Calculex	561	A. Co.	324-355
		Instruments, Spring Bow,	
		Alteneder's	400-405
		Instruments, Spring Bow,	
		F. & A. Co.	396
		Instruments, Spring Bow,	
		Kern's	397-399
		Instruments in Pocket Book	
		Cases	338-340, 349, 351
		Instruments in Sets,	
		Alteneder's	356-374

	PAGE		PAGE
Instruments, Trammel		Lamp Black and Sepia for	
Points	423	Air Brush	137
Ivories	54	Larrabee's White Inks	170
Ivory, Agate and Wood		Leads for Instruments	323
Tracers	103	Leadpoints	207
		Leads, A. W. F.	205, 207
J		Leads, J. Faber's	215
Japanese Paper	428	Leads, Koh-i-noor	200
Japanese Transparent Water		Leather Decoration, Book	
Color	142, 143	on	260
Japanned Brush Cleaners		Leather Working Tools	261-265
and Washers	112	Le Page's Glue	186
Japanned Tin Brush Cases	423	Letterine, David's	171
Japanned Tin Folding		Leveling Rods and Poles	630-634
Palettes, Water Color	478	Leveling, Rods, Self-	
Japanned Water Bottles	113	Reading	635
Jewels for Decorating China	96	Levels	638-661
		Level, The Yankee	638
K		Liquid Colors, Tapestry	44
Keys, Shattuck's	31	Liquid for Bronzing	65
Kilns, China	105-108	Liquid Gold, Silver,	
Kneaded Rubber	268	Platinum	64, 95
Knives, Artists' Palette	26, 28	Logarithmic Spiral Curve	299
Knives, French	28	Lufkin's Steel Tapes	573-579
Knives, Guilders'	28	Lumber Crayons	232, 233, 235
Knives, Horn	28	Lettering Pens, Payzant	375
Koh-i-noor Leads	200	Lettering Pens, Shepard	375
Koh-i-noor Pencils	195-200		
K. & E. Hand Levels	645-652	M	
K. & E. Tapes	580-586	Magnifiers for Slide Rules	606
K. & E. Transits	657	Magnifying Glasses	424
		Mahl Sticks	32
L		Manikins	504
Lacroix China Colors	92, 93	Manila Detail Papers	434-437
Lacroix Oils and Mediums		Map Measures	664
for China	41, 100	Marble Mounts	459
		Marching's Gold for China	95

	PAGE		PAGE
Marsching's Liquid Gold, Silver and Platinum	95	Moist Water Colors, W. & N. in Studio Size Tubes	157
Marking Pencils for China	91, 96	Mongol Pencils	213
Marking Pins, Yankee	562	Moore's Push Pins	280, 281
Mason's China Colors	89	Moore's Push Pins, Points, Tacks	280, 281
Mason's Liquid Gold, Silver and Platinum	95	Morse's Cabinets	255
Mat Boards	462	Morse's Drawing Tables	535-539
Materials for Etchers	502, 503	Mounted Papers, F. & A. Co.	440
McGill's Fasteners	455	Mucilage for Drawing Boards	181
Measuring Chains	591	Mucilage, Taurine	185
Mechanical Drawing Books	482-494	Muller & Hennig's China Colors	94
Mechanical Integrator, Coradi's	570	Murillo Water Color Boxes, Fitted, French and German	121
Medallions for Decoration	104	Mussini's Oil Colors, Dou- ble Tubes	22, 23
Mediums, F. & A. Co.	41	Mussini's Oils and Mediums	48
Mediums, Robertson's	26	Mussini's Varnishes	43
Mediums, W. & N.	166		
Melton Boards	461	N	
Menders for Steel Tape	571	Needle Points	323
Mephisto Copying Pencils	201	New English Water Color Boxes, fitted	121-128
Mesurier's Oil Colors, Double Tubes	21, 22	Nickel Dividers	407
Metal Pantographs	317-319	Nigrivorine Rubber	275
Metallic Curves	308, 309	Normal Drawing Tables	533
Metallic Flitters	63	Normal Drawing Paper	426
Metallic Triangular Scales	624		
Metallic Water Color Gold and Colors	139	O	
Military Compasses	663	Office Paste, Higgins'	182
Miniature Ivories	54	Oil Color, Briedbach's	26
Mixing Palettes, China	96	Oil Color, Cambridge Studio	20
Modeling Clay	512, 515	Oil Color, Devoe's Double	17, 18
Modeling Tools	507-511	Oil Color, Devoe's Single	16, 17
Modeling Tools, Steel	510, 511		
Modeling Tools, Wire	509		
Modeling Wax	515		
Models for Drawing	505, 506		
Moist Water Color Box, School	124		

	PAGE
Oil Color, F. & A. Co. Flake White	26
Oil Color, Mesurier's Double	21, 22
Oil Color, Mussini's	22, 23
Oil Color, Raffaelli's	27
Oil Color, Roberson's Medium	26
Oil Color, Schoenfield's	24, 25
Oil Color, W. & N.	12-15
Oil Color, in Tubes, Devoe's Studio Size	12
Oil Color, in Tubes, W. & N. Studio Size	11, 12
Oil Color, Winton White	15
Oil Color Chart	10
Oil Color Cups	112, 113
Oils and Mediums for China, Cooley's	99
Oils and Mediums for China, F. & A. Co.	100
Oils and Mediums, Fry's	87
Oils and Mediums for China, Lacroix	41, 100
Oil Sketching Boards	55
Oil Sketching Paper	54
Oil Stones, Arkansas	282
Oils, Varnishes and Med- iums, F. & A. Co.	41
Oils and Varnishes, Mus- sini's	43
Oils and Varnishes, Vibert's	42
Oils and Varnishes, W. & N.	42
Opaque Edge, Transparent Celluloid Triangles	294
Orloff Pencils	218
Osgood's Specialties	98
Outfits for Wood Burning	258, 259
Oval Stretchers	31

P		PAGE
Paasche Air Brushes		246-248
Paasche Automatic Electric Air Compressor Outfits		253, 254
Paasche Foot Pump Outfit		251
Paasche Liquid Carbonic Gas Outfit		252
Painting Books		501
Paints, Gold		63, 64
Palette, Chamois		236
Palette, China		96, 110
Palette for China Colors		97-99
Palette for School Use		114
Palette Knife, German Shape		26, 28
Palette, Wood, Assorted Kinds		29
Panels, Porcelain		56
Pantographs		316
Pantographs, Metal		317-319
Paper, Black Print		443
Paper, Blotting		427
Paper, Blue Print		442
Paper, Brown's Linen		427
Paper, Charcoal		428
Paper, Coquille		427
Paper, Crayon		428
Paper, Cross Section		445-449
Paper, Detail Manila		434-437
Paper, Duplex and Drawing		426, 438
Paper, Eclipse		426
Paper, Eggshell		493
Paper, Empire Drawing		425
Paper, English Metallic		426
Paper for Oil Sketching		54
Paper, Frisket		250, 460
Paper, Gold		427
Paper, Harding's Drawing		542
Paper, Japanese		428
Paper, Leonine		438

	PAGE		PAGE
Paper, Normal	426	Pastel for Background	242
Paper, Paragon	439	Pastel, Hard	236
Paper, Parchment	426	Pastel Papers	428
Paper, Passepartout	463, 464	Pastel, Soft, Girrault's	241
Paper, Pastel	428	Pastel, Soft, LeFranc's	241
Paper, Profile	445-448	Pearwood Curves	301
Paper Protractors	310	Pearwood Railroad Curves	305
Paper Protractors and Horn	310	Pearwood Ship Curves	301
Paper Pulp Cases	442	Pencil and Ink Erasers in Cedar	275
Paper, Ross, Stippled	429	Pencil, A. W. Faber's "Castell"	208, 210
Paper Scales	609	Pencil, Blaisdell's	221
Paper, Silver	427	Pencil, Carpenter's	205
Paper, Steinbäch's	439	Pencil, Colored, F. & A. Co.	212
Paper, Strathmore	426, 440	Pencil, Colored, G. & K.	219
Paper, Tracing	430-432	Pencil, Colored, J. Faber's	214
Paper, Transfer	428	Pencil Compass	205
Paper, Universal Drawing and Sheets	425, 438	Pencil Compass, Excelsior	224
Paper, Vandyke	444	Pencil Compass, Faber's	224
Paper Weights	282	Pencil, Dixon's Round	219
Paper, Weston's	427	Pencil, Eagle Colored and Black	218
Paper, Whatman's Drawing	425, 439	Pencil, E. F. Commerce	211
Parabolas, Celluloid	297	Pencil, English Drawing	207
Parabolas, Pearwood	298	Pencil Files	282
Parabolas, Rubber	299	Pencil for China	91-96
Paragon Papers	439	Pencil for Drawing	220
Parallel Rules	598	Pencil for Writing on Glass	211
Parallel Attachments and Straight Edges	518	Pencil, Hardmuth's Negro	201
Passepartout Papers	463, 464	Pencil Holder	222
Passepartout Rings	465	Pencil Lengtheners, F. & A. Co.	224
Paste in Jars, Higgins'	180-182	Pencil Point Protectors	223
Paste in Tubes and Jars, Carter's	183	Pencil Sharpeners	225-227
Paste in Tubes and Jars, Day's	184	Pencil Sharpeners, Boston	225
Paste in Tubes, Weis'	183	Pencil Sharpeners, Excel- sior	225
Pastel Boards	428	Pencil Sharpeners, Jupiter	227
Pastel Canvas in Rolls	35		

PAGE	PAGE
Pencil Sticks and Hand	Picture Wire . . . 466
Rests . . . 32	Pins for Canvas . . . 32
Pencil, The Air . . . 195	Planimeters . . . 564-569
Pencils in Boxes, Colored . . . 216	Plaque, Composition or
Pencils in Sets, A. W. F. . . 206, 210	Leather Board . . . 56
Pencils in Sets, E. F. . . 212	Plaque Easels . . . 59
Pencils, Koh-i-noor . . . 195-200	Plaque Hangers . . . 57, 58
Pencils, Mephisto Copying . . . 201	Plaque, Porcelain . . . 56
Pencils, Mongol . . . 213	Plastelina, . . . 515
Pencils, Orloff . . . 218	Plasticine, Harbutt's . . . 513, 514
Pencils, Paper . . . 221	Plate Divider, Hasburg's . . . 103
Pencils, Round Gilt, Faber's . . . 206	Platinum Points . . . 259
Pencils, Rubber Tipped . . . 214	Pliers, Canvas . . . 32
Pencils, Siberian . . . 204	Pliers, Solidhead Eyelet . . . 571
Pencils, Siberian, J. Faber's . . . 214	Plumb Bobs . . . 637
Pencils, Solid Ink . . . 220	Plumb Bob Cord . . . 637
Pencils, Tubular . . . 200, 204, 215	Pocket Compasses, Mag-
Pencils, Venus Drawing . . . 217	netic . . . 665, 666
Penfilling Inkstands . . . 175	Pocket Leveling Rods . . . 634
Penholders, Gillott's . . . 189	Pocket Transit, Brunton's . . . 664
Penholders, Soennecken's . . . 190	Points, Needle . . . 323
Pens, Ball Pointed . . . 188	Points, Platinum . . . 259
Pens, Crow Quill . . . 188, 190	Polar Planimeters . . . 564-569
Pens, Gillott's . . . 189	Poles, Ranging . . . 634
Pens in Trays, F. & A. Co. . . 376	Pomeroy's White Inks . . . 170
Pens, Paysant Lettering . . . 375	Porcelain Panels . . . 56
Pens, Round Writing . . . 191	Porcelain Plaques . . . 56
Pens, Ruling, Alteneder's . . . 384-393	Portfolios . . . 472
Pens, Ruling, F. & A. Co. . .	Powders, Bronze . . . 63
377, 379, 381, 382	Prang's Outline Books . . . 500
Pens, Ruling, Kern's . . . 382, 383	Prismatic Compasses . . . 667
Pens, Ruling, Paragon . . . 394, 395	Profile Books . . . 451
Pens, Shading, Automatic . . . 194	Profile Papers . . . 445-448
Pens, Shepard Lettering . . . 375	Proportional Dividers . . . 382
Pens, Waterman . . . 192, 193	Protectors for Pencils . . . 228
Permatex Stencil Colors . . . 145	Protractors, Brass . . . 312
Pfleger's Stretchers . . . 30, 31	Protractors, Celluloid . . . 311
Photo Mount, Higgins' . . . 180	Protractors, German Silver . . . 312-314
Photo-Optican . . . 257	Protractors, Paper and Horn . . . 310
Picture Hooks . . . 470	Protractors, Rubber . . . 293

	PAGE
Protractors, Steel	315
Pulp Boards	461
Pulp Cases	442
Push Buttons, Hangers, Pins, Points, Tacks, Moore's	280, 281
Pyrography Outfits	258

Q

Queen's Levels	639
--------------------------	-----

R

Rack for Oil Colors	8
Raffaelli's Oil Colors	27
Ragged Edge Cards	54
Railroad Curves	305-308
Ranger Sketching Easel	76
Ranging Poles	634
Reading Glasses, Round and Oval	424
Receipts, Architects' Time	455
Reckoning Machines	557
Reconnaissance Transits	655
Rembrandt's Water Color Boxes, Fitted (large)	120
Rings, Passepartout	465
Roberson's Medium	26
Rochester Drawing Tables	540, 541
Roe's Tapes	590
Rolling Planimeters	568, 569
Ross' Stippled Paper	429
Round Writing Pens	191
Rowney's Crow Quill Pens	190
Rowney's Hand Books	409, 500
Rowney's Water Color Boxes, Fitted	131-134
Rubber Bands	271

	PAGE
Rubber Cabinet	220
Rubber Curves	300
Rubber Curves in Sets	306
Rubber Erasers	266-270, 272, 273
Rubber, F. & A. Co. Pliable	274
Rubber Ink Erasers	274, 275
Rubber, Kneaded	268
Rubber, Multiplex	270
Rubber, Nigrivorine	275
Rubber Protractors	293
Rubber Railroad Curves	306
Rubber Ruler and Protrac- tor, Transparent	600
Rubber Ship Curves	293
Rubber Splines	299
Rubber Strips	271
Rubber Triangles	293
Ruby Eraser	273
Rug Tacks	278
Ruler, Section Liner	628, 629
Rules, Parallel	598
Rules, Engineers' and Con- tractors'	599
Rules, School	592-597
Rules, Shrinkage	598
Rules, Slide	600-605, 607, 608
Rules, Transparent Flexible	600
Ruling Pens, Alteneder's	384-393
Ruling Pens, F. & A. Co.	377-379, 381, 382
Ruling Pens, Kern's	380-383
Ruling Pens, Paragon	394, 395
Ruling Pens, Trays, F. & A. Co.	376
Russell's Canvas Boards	55

S

Sand Paper Blocks	282
Saucers, Cabinet	111

	PAGE		PAGE
Saucers for Ink	111	Silver, Liquid Form for	
Saucers for Tinting	111	China	95
Scale Guards	609	Silver Paper	427
Scale, Flat	610-619	Sketch Blocks	473-476
Scale, Folding	599	Sketch Books	478-481
Scale, Paper	609	Sketch Books, French	479
Scale, Triangular	620-624	Sketch Boxes, Empty	49-53
Scales, Steel	624	Sketching Bags	477
Schoenfeld's Oil Colors	24, 25	Sketching Board, Water Col- or, W. & N.	460
Schoenfeld's Water Colors in Bottles	160, 163	Sketching Crayons	219
Schoenfeld's Whole Tubes Water Colors	160, 163	Sketching Easels 73-76, 79, 82, 85	
School Crayons	228	Sketching Seats	70-73
School Drawing Kits	480	Sketching Umbrellas	69, 70
School Instruments, Brass	408	Skins, Chamois	244
School Instruments, Nickel F. & A. Co.	407	Slabs, Glass	98
School Mixing Palettes	114	Slabs, India Ink, China	109
School Rules	592-597	Slabs, Ink	111
School Water Cups, Enam- eled	114	Slide Rules, 558, 600-605, 607, 608	
Scrapers	245	Soennecken's Penholders	190
Screw Eyes	468	Solidhead Eyelet Pliers	571
Section Liners, Booth	629	Solid Ink Pencils	220
Seldis Drawing Tables	532	Spiral Curve	299
Semple's White in Jars	165	Spline Weights	298
Shading Pens, Automatic	194	Splines, Celluloid	311
Shattuck's Iron Keys	31	Splines, Rubber	299
Sheet Wax	515	Splines, Wood	298
Sheets, Celluloid	56	Sponge Rubber	271
Sheets, Gold and Silver	139	Spring Clips	310
Sherratt's Gold for China Painting	99	Square Divided Tiles	110
Shields, Erasing	456	Staff and Tripods	636
Ship Curves	293, 301-303	Staff for Sketching	69
Shrinkage Rules	598	Staves for Umbrellas	69
Siccatis de Courtray, French	41	Stain for Varnishing	68
Sight Compasses	667	Stake Tacks	637
		Standard Steel Thumb Tacks	279
		Star Enamel	67
		Steel Arrows	563
		Steel Modeling Tools	510, 511

	PAGE		PAGE
Steel Protractors	315	Tacks, Stake	637
Steel Scales	624	Talen's Photographic Col- ors	167
Steinbach's Paper	439	Tallying Machines	563
Stencil Colors, Permatex	145	Tape, Crowell's	464
Stick Indian Ink	178, 179	Tape Menders	571
Sticks and Hand Rests	32	Tapes, Chesterman's	572
Sticks, Mahl	32	Tapes, Eddy's	587-589
Straight Edges	283, 284	Tapes, K. & E. Co.	580-586
Strathmore Illustration Boards	459	Tapes, Lufkin's	573-579
Strathmore Illustration Boards, W. & N.	459	Tapes, Roes	590
Strathmore Marble Mounts	459	Tapestry Colors	44
Strathmore Papers	426, 440	Taurine Mucilage	185
Strathmore Ripple Mounts	458	Templets and Triangles	294, 295
Strathmore Vellum Mounts	458	Thacher's Calculating In- struments	558, 559
Stretched Canvas, F. & A. Co.	38-40	Thayer & Chandler's Air Brushes	249, 250
Stretched Canvas, W. & N.	39	Three Color Water Color Boxes	123
Stretchers, Oval	31	Thumb Tack Lifters	278
Stretchers, Pfeleger's	30, 31	Thumb Tacks	276-279
Strips, Rubber	271	Thumb Tacks, School Steel	279
Student's Water Color Boxes	129	Thumb Tacks, Standard Steel	279
Student's Water Color Boxes, Tubes	129	Tiles, China	95
Studio Easels	72, 77, 78, 80-84	Time Receipts, Architects'	455
Studio Size Oil Colors in Tubes, W. & N.	11, 12	Tinting Saucers	111
Studio Size Water Colors in Tubes, W. & N.	157	Tin Tube Atomizers	244
Stumps	243, 244	Tin Tube for Blue Prints	443
Stylus	213	Tinware Sundries	112-114
Sundries for Slide Rules	605, 606	Tools for Leather Working	261-265
Surveying Compasses	662-668	Tracers, Ivory, Agate and Wood	103
Swivels for T Square	286	Tracing Cloth, Dowse	433
		Tracing Cloth Fluid, Inkoff	169
		Tracing Cloth, Imperial	433
		Tracing Cloth Powder	433
		Tracing Paper	430-432
		Tracing Paper, Wax	95

T

Tables for Drawing	520-544
Tacks, Rug	278

	PAGE
Trammel Points	423
Transfer Paper	428
Transfer Paper for China	95
Transparent Water Color Boxes (Acme)	144
Transits	654-661
Transits, Pocket, Brunton's	664
Trays, Zinc Bath	554
Trestles for Drawing Boards	519
Triangles, Celluloid	293, 295
Triangles, Celluloid Im- proved	296
Triangles, Celluloid, Opaque Edge, Trans- parent	294
Triangles, Pearwood	292
Triangles, Rubber	293
Triangles, Special Celluloid	297
Triangular Scales	620-624
Triangular Scales, White Edge	622
Tripods and Staffs	636
T Squares	284, 286-289
Tube Rack for Oil Colors	8
Tubes, Empty Collapsible	9
Tubes for Blue Prints	443
Typewriter Eraser	272

U

Umbrellas, Sketching	69, 70
Umbrella Staffs	69
Universal Drafting Ma- chines	321, 322
Universal Drawing Paper and Sheets	425, 438
Universal Water Colors in Jars	162

V

	PAGE
Vandyke Paper	444
Vandyke Solar Cloth	443
Varnishes, F. & A. Co.	41
Varnishes, Mussini's	43
Varnishes, Vibert's	42
Varnishes, W. & N.	42
Varnish Stain	68
Vellum Mounts, Strathmore	458
Venus Drawing Pencil	217
Vibert's Oils	42
Vibert's Varnishes	42
Virgin Rubber	272

W

Water Bottles, Japanned	113
Water Color, Albanine and Process Black, W & N.	167
Water Color Blocks, (var- ious)	474, 475
Water Color, Bourgeois	161
Water Color Boxes, Empty	115, 116
Water Color Boxes, Fitted	117-137
Water Color Boxes Fitted, F. & A. Co.	124
Water Color Boxes, Fitted, Murillo, French and Ger- man	121, 130
Water Color Boxes, Fitted, New English	126-128
Water Color Boxes, Fitted, Rembrandt's	120
Water Color Boxes, Fitted, Rembrandt's (large)	119
Water Color Boxes, Fitted, Rowney's	131-134

	PAGE		PAGE
Water Color Boxes, Fitted, Students'	122	Water Color in Tubes, F. & A. Co.	152
Water Color Boxes, Fitted, in Tubes, Students'	129	Water Color, Japanese Trans- parent	142, 143
Water Color Boxes, Fitted, Three Color	123	Water Color, Metallic	139
Water Color Boxes, Fitted, W. & N.	134-137	Water Color, Whole Pans, W. & N.	150, 151
Water Color Boxes, Trans- parent Acme	144	Water Color, Whole Tubes, Horadam's	159, 160
Water Color Cabinets	8	Water Color, Whole Tubes and Bottles Schoenfeld's	160, 163
Water Color Charts	146	Water Color, Whole Tubes, W. & N.	155, 156, 158
Water Color, Chinese White in Tubes and Bottles	166	Water Colors and Inks, W. & N.	168
Water Color Cups	112-114	Water Glasses	110
Water Color Cups, Enaml- ed	114	Waterman's Fountain Pens	192, 193
Water Color Frames	60-62	Waterproof Aprons	471
Water Color Gold and Sil- ver, Half Pans and Jars	138, 139	Wax Crayons	202
Water Color, Half Pans, F. & A. Co.	114, 147	Wax, Modeling	515
Water Color, Half Pans, W. & N.	148, 149	Wax, Sheet	515
Water Color in Bottles, Schoenfeld's	163	Wax, Tracing Paper	431, 432
Water Color in Half Tubes, W. & N.	153, 154	Weber's Section Liner	628
Water Color in Jars, Semple's, White	165	Weights, Paper	282
Water Color in Jars, Uni- versal	162	Weights, Spline	298, 299
Water Color, in Jars, Win- chester's	164	Weis' Paste in Tubes	183
Water Color in Round Saucers	139	Western Cement	187
Water Color in Tubes and Pots	161	Weston's Paper	427
Water Color, in Tubes, Dunne's	140, 141	Whatman's Blocks	473
		Whatman's Drawing Pa- pers	425, 439
		Winchester's Water Colors	164
		W. & N. Chinese White, in Tubes	166
		W. & N. Empty Half and Whole Pan Boxes	115
		W. & N. Hand Books	498
		W. & N. Illustration Boards	459

	PAGE
W. & N. Liquid Water	
Color and Inks	168
W. & N. Mediums	166
W. & N. Oils and Varnishes	42
W. & N. Oil Colors	12-15
W. & N. Rubber.	267
W. & N. Studio Size, Moist	
Water Color, in Tubes . . .	157
W. & N. Studio Size, Oil	
Color in Tubes	11, 12
W. & N. Varnishes	42
W. & N. Water Color Boxes,	
Fitted	134, 135
Wire Brads	467

	PAGE
Wire Easel Backs	465
Wire for Pictures	466
Wire Modeling Tools	509
Wood Manikins	504
Wood Palettes, Assorted . . .	29
Wood Splines	298
Wood Stains in Powder . . .	259
Wood Triangles	292

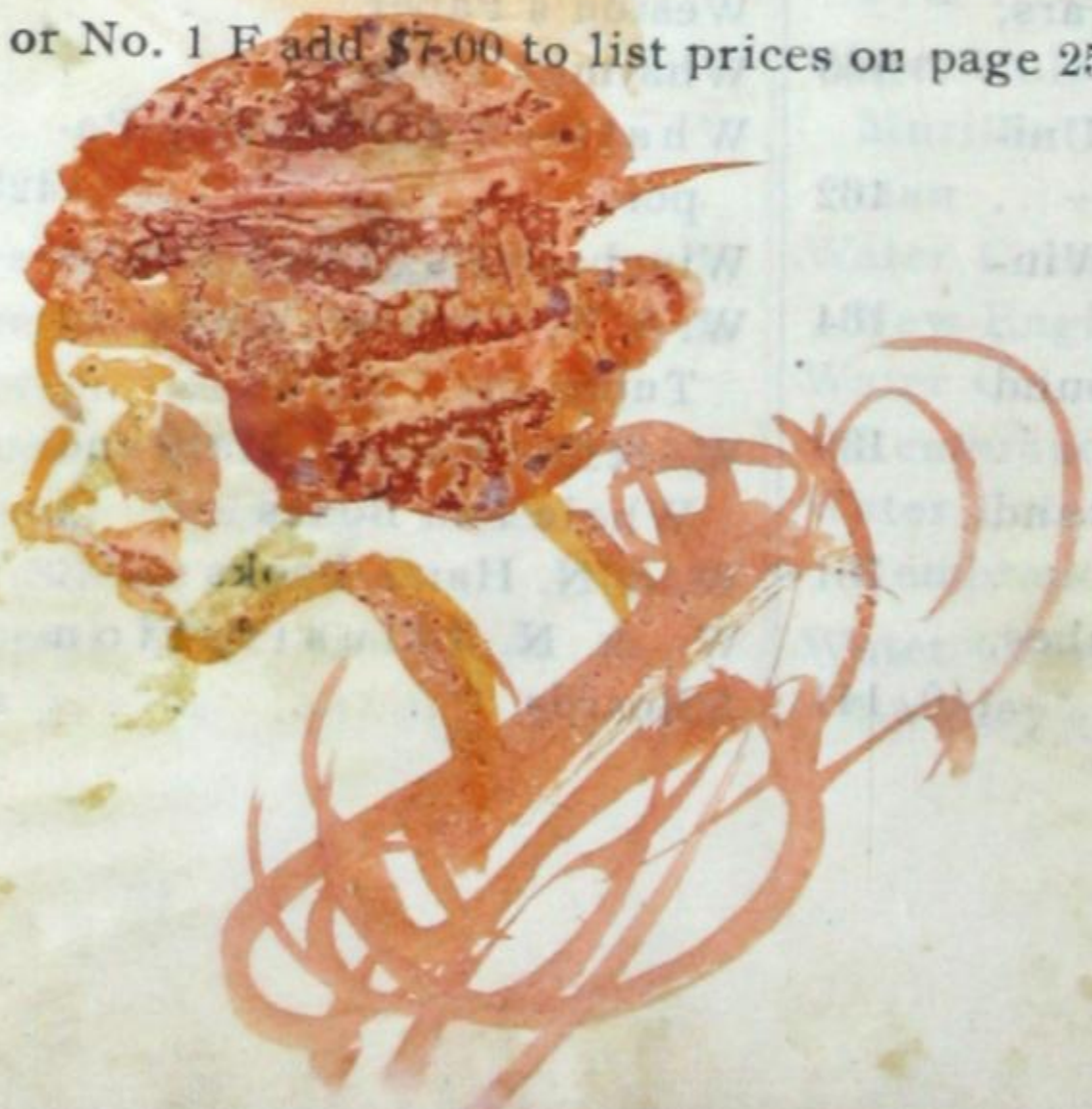
Y

Yankee Marking Pins	562
-------------------------------	-----

Katharine Higgins

CHANGE OF PRICES

Trojan Automatic Electric Air Compressing Outfit No. 1 A, No. 1 C, No. 1 E or No. 1 F add \$7.00 to list prices on page 254.



Art Hand Books

ON ALL SUBJECTS, INCLUDING

Oil Color

Water Color

China

Painting

Crayon

Perspective

Architectural

Mechanical

Drawing

Engineering, Surveying, Etc.

WE ALSO CARRY A COMPLETE LINE OF

Engineers' Level

and Field Books

STUDIES OF ALL KINDS



FULL LINE

PICTURE WIRE
PICTURE HOOKS
PORCELAIN KNOBS
PICTURE NAILS
PICTURE POINTS
WALL HOOKS
SCREW EYES
PASSEPARTOUT PAPERS
PASSEPARTOUT RINGS
PLAQUE HANGERS
PLAQUE EASELS
EASEL RESTS

**ILLUSTRATED CATALOGUE
OF WIRE GOODS FURNISHED**

MAT BOARDS
ALL COLORS CARD BOARDS ALL COLORS
POSTER BOARDS
PULP BOARDS MAT PAPERS
SAMPLES FURNISHED ON APPLICATION

FOR SALE BY
FROST & ADAMS CO.
37 CORNHILL
BOSTON, MASS.