

W.J. Young – The First American Transit

"We are desirous of obtaining the first Transit made, or the oldest existing Transit, and offer in exchange for same, a first-class new Instrument." This notice appeared in Wm. J. Young & Sons' *Price List of Engineering, Mining and Surveying Instruments* (1875-1883), and led to the discovery of this instrument, which is marked "W. J. Young / MAKER / Philadelphia." The Youngs then promoted this instrument as "The First American Transit," placing a photograph of it in the 1892 edition of their *Price List*, and displaying it at the Columbian Exposition held in Chicago in 1893. Keuffel & Esser acquired this historic instrument in 1923 when they bought the Young business, and gave it to the Smithsonian in 1970. This instrument is indeed early. It was made by William J. Young before the issuance of his patent (after January 17, 1832, Young added the word "Patent" to his signature). But whether it was the first transit is hard to say.

The horizontal circle is located inside the compass face, silvered, graduated every 1 degree, and read by vernier to 3 minutes. It is moved by tangent screw, while that on the first transit made for the Baltimore and Ohio Railroad was moved by rack and pinion. A circular level is at the north end of the compass, and an outkeeper is at the south. The face is darkened, and the needle ring silvered. The tripod head is the type that Young patented in 1858.

The tripod head that supports the transit conforms to Young's patent #20,915 of July 13, 1858. According to an early description, this head "was designed to facilitate the adjustment of the plumb line to any given point on the ground, without the operator having to resort to the usual tedious process of adjusting the legs of the tripod."

Ref.: D. J. Warner, "William J. Young. From Craft to Industry in a Skilled Trade," *Pennsylvania History* 52 (1985): 53-68.

Maker: Young, William J.

Measurements:

overall: 11 1/4 in; 28.575 cm
needle: 5 1/4 in; 13.335 cm
telescope: 9 1/4 in; 23.495 cm

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