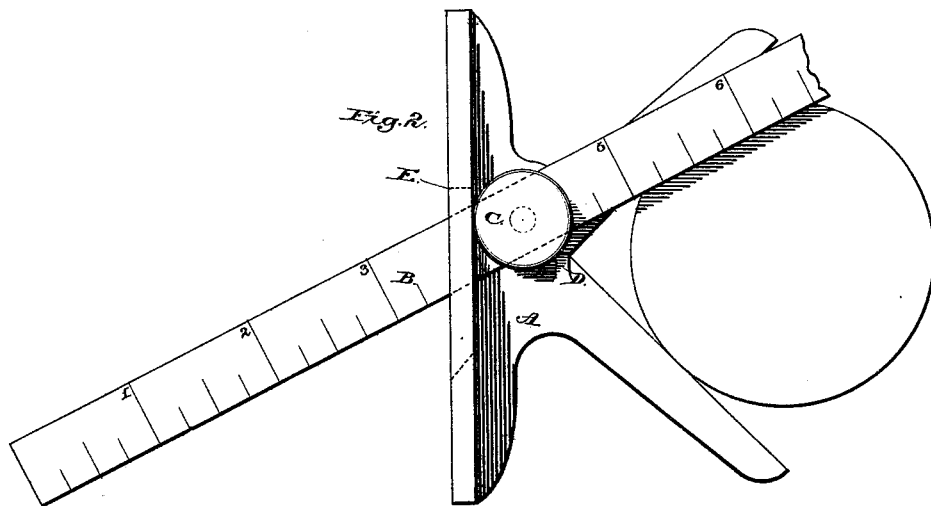
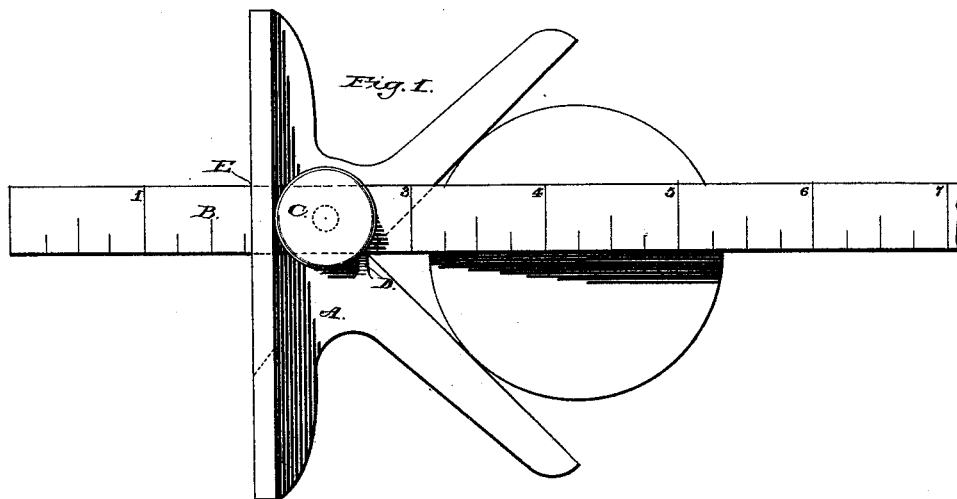


J. C. MARSHALL.

SQUARES.

No. 185,830.

Patented Jan. 2, 1877.



Attest:

W. M. Conkey
Charles C. Marshall.

Inventor:

Joseph C. Marshall.

UNITED STATES PATENT OFFICE.

JOSEPH C. MARSHALL, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN SQUARES.

Specification forming part of Letters Patent No. **185,830**, dated January 2, 1877; application filed August 28, 1876.

To all whom it may concern:

Be it known that I, JOSEPH C. MARSHALL, of Springfield, in the county of Hampden, State of Massachusetts, have invented a new and useful Improvement in Squares, and that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

My improvement consists in attaching to the head or beam of the square a blade which can be moved radially or longitudinally on the pivotal bolt, or can be removed from the head and used as a scale.

Figure 1 is a plan view of my invention, showing the blade in contact with the shoulder E and the projection D. Fig. 2 is a plan view of the same, showing the blade moved longitudinally and from the shoulder E and projection D on the pivotal bolt which secures it to the head.

In the drawing, A represents the head or beam with its angular arms, which project at an equal angle with the face of the head, but in opposite directions. This angle is preferably forty-five degrees, in which case the faces of the two arms would form an angle of ninety degrees. B represents the graduated blade, which is attached to the head by the bolt C, which is made with a slot in the head, through which the blade passes. D represents a pro-

jection on the side of the head, the face of which is coincident with the juncture of the faces of the angular arms. E represents a shoulder in the head the width of the blade, above the face of the projection D, so that when the blade is in position, with its lower edge in contact with the projection D, and its upper edge is in contact with the shoulder E, it will form an equal angle with the angular arms and a right angle with the face of the head.

The advantages of my invention are as follows: It can be used as a square of any length of blade. It can be used as a center-square for finding the center of circular work; also, by shortening the blade, radial lines can be drawn on circular work where there is a hub or other projection. It can also be used as a bevel, and to draw ratchet-teeth, &c., on circular work, and the blade, being detached, can be used as an ordinary scale.

I claim—

The head having arms at an equal angle with its base, and provided with the projection D and shoulder E, in combination with the slotted headed bolt and movable blade, substantially as described.

JOSEPH CLINTON MARSHALL.

Witnesses:

H. M. CONKEY,
CHARLES C. MARSHALL.