

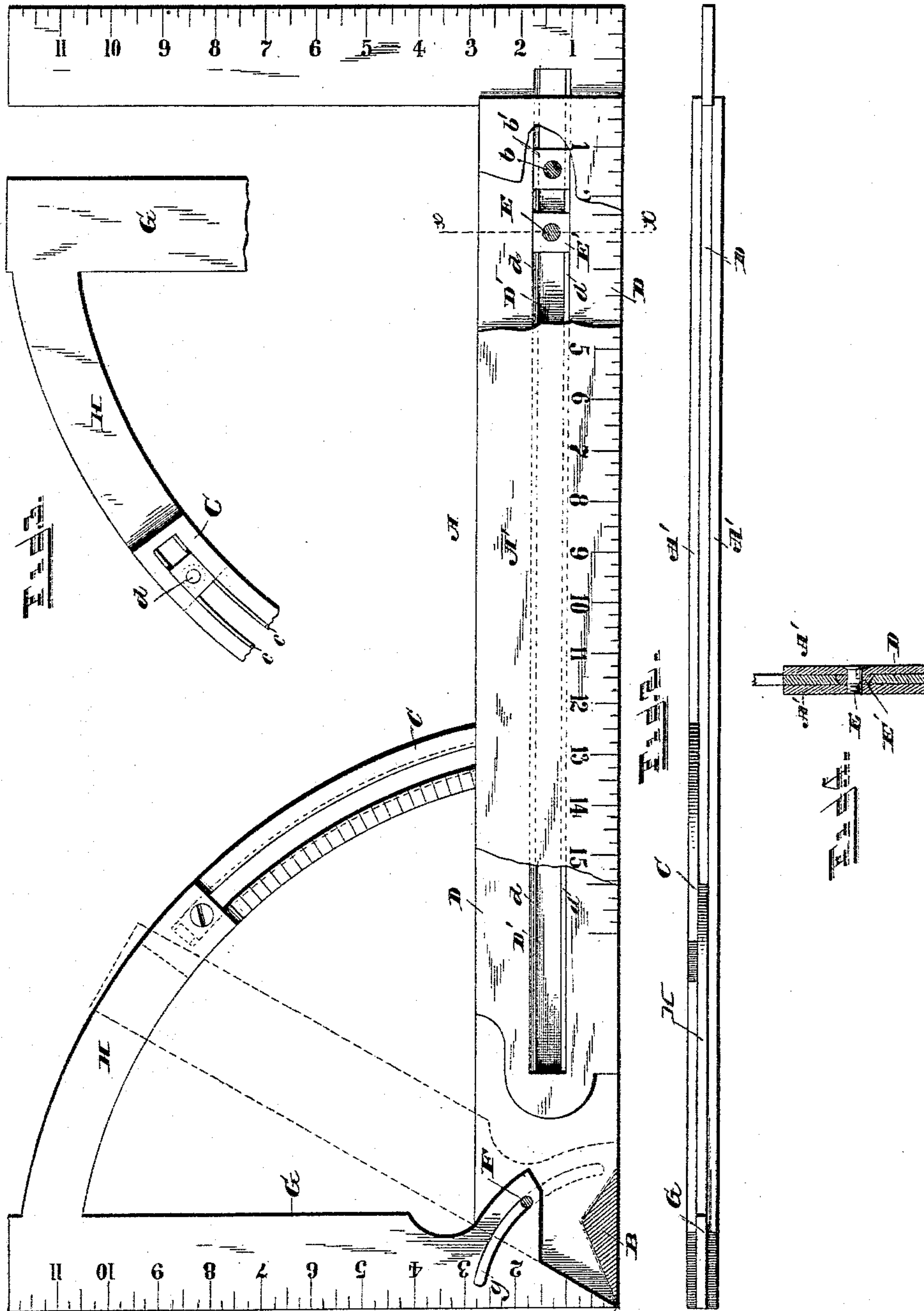
(No Model.)

J. D. SMITH.

COMBINED SQUARE AND PROTRACTOR.

No. 388,734.

Patented Aug. 28, 1888.



WITNESSES,

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COMBINED SQUARE AND PROTRACTOR.

SPECIFICATION forming part of Letters Patent No. 388,734, dated August 28, 1888.

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To all whom it may concern:

Be it known that I, JOSEPH D. SMITH, a citizen of the United States of America, residing at Rising City, in the county of Butler and State of Nebraska, have invented certain new and useful Improvements in Squares; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in carpenters' squares, the object of the same being to provide a square with an extensible portion which can be extended to increase the straight-edge and adjust the angle-arm thereof in and out from the body of the square; also, in providing such a square with an adjustable member for measuring or laying off angles; and it consists in the construction and combination of the parts, as will be hereinafter fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a side view of my improved try-square, showing the same partly broken away to better show the interior construction. Fig. 2 is an edge view. Fig. 3 is a detail view. Fig. 4 is a sectional view through line *x x*, Fig. 1.

A refers to the body portion of the square, which is made up of two plates rigidly connected to each other by an angle-block, B, and rivet *b*. One of the plates A' has rigidly connected thereto a slotted arc, C, provided with suitable graduations or marks. The edges of the slot are beveled, as shown at *c c*, so that the sliding nut *d* will engage therewith without extending above the edge thereof. The slot is closed at its upper end.

The sliding member D, which carries the arm at right angles therewith, is provided with a longitudinal slot, D', through which the rivet *b* passes, said rivet preferably maintaining in place a small block, *b'*, having beveled edges which engage with the beveled edges *d* of the slot D', and the set-screw E, which locks the sliding member in position, passes through one of the plates A', through

the perforation in the nut E', and engages with a screw-threaded perforation in the opposite plate A', thus permitting the member D to have a steady sliding movement between the plates. If desirable, there may be placed in the slot D', instead of the nuts E and *b'*, one of considerable length, through which the set-screw may pass.

To the end of the straight-edge A, by means of a single pin, F, is secured an adjustable arm, G, which has formed integral with its upper end a segmental or arc-shaped member, H, which is secured to the slot of the arc-shaped member C by a suitable set-screw. The lower portion of the arm G has a slot, *g*, through which the pin F passes, and when this arm G is adjusted the pin will move in the slot and the point *g'* will be held at the point of the square. The lower portion of the arm G is of such configuration that it will abut snugly against the angle-block B when placed at an angle of forty-five degrees, or thereabout, with the straight edge A.

Having thus described my invention, I claim—

1. The combination, in a carpenter's square having a slotted arc-shaped member, C, of the arm G, with a projecting arc-shaped member, H, adapted to be connected to the arm C by a set-screw, the lower end thereof having a slot, *g*, above its point, and a pin, F, connecting the parts to each other, substantially as shown, and for the purpose set forth.

2. The combination, in a carpenter's square of the side plates, A', connected to each other rigidly at one end by an angle-block, B, and near the opposite end by a rivet, a slotted L-square connected thereto so as to be longitudinally adjustable, one of the side plates A', having a slotted arc-shaped member, C, the arm G, having a curved member, H, means for connecting the same to the member C, and a segmental slot, *g*, through which a pin, F, passes, the parts being organized substantially as shown, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH D. SMITH.

Witnesses:

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