

(No Model.)

J. S. BROOKS.
BEVEL.

No. 432,367.

Patented July 15, 1890.

Fig. 1.

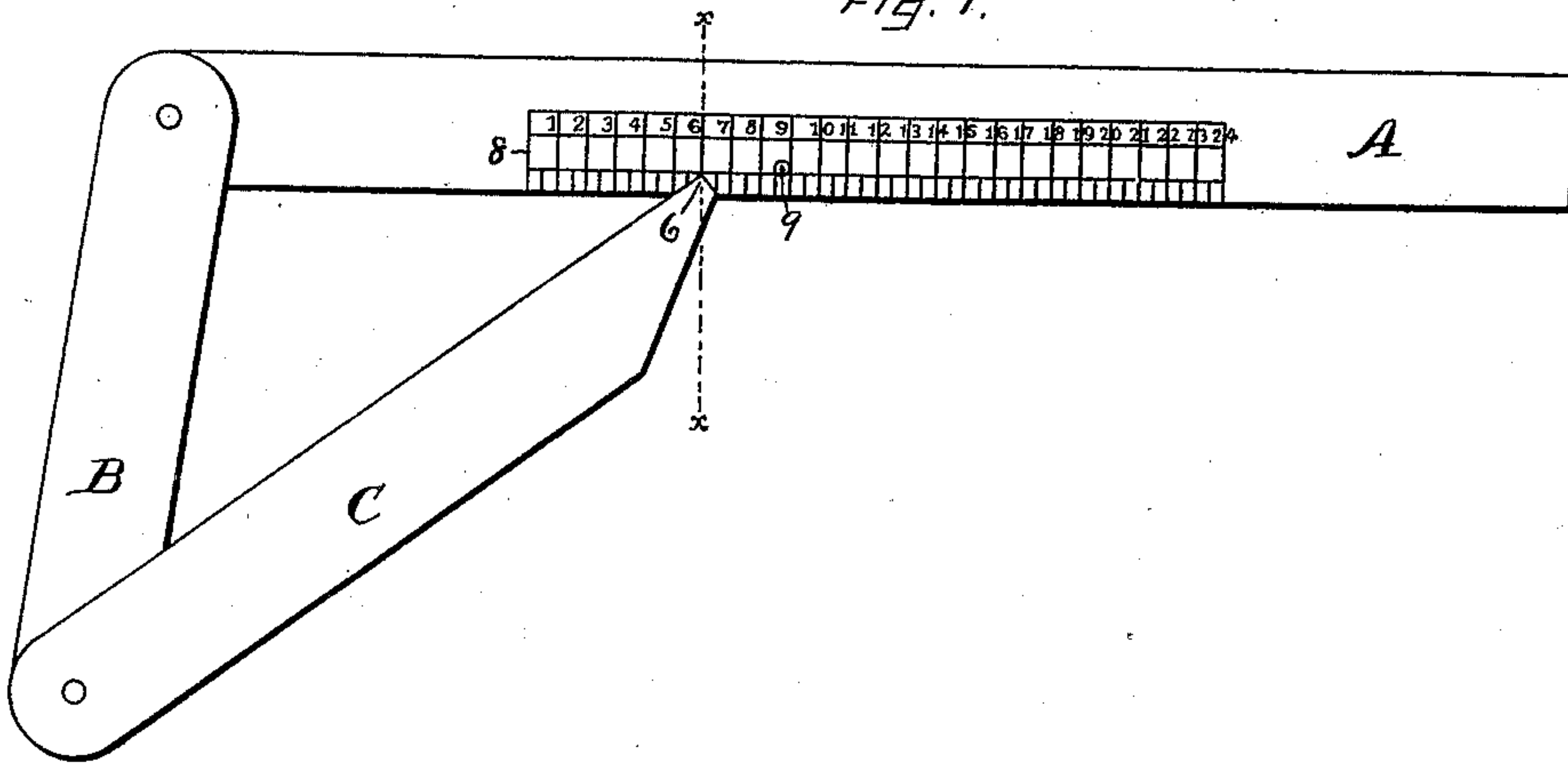


Fig. 2.

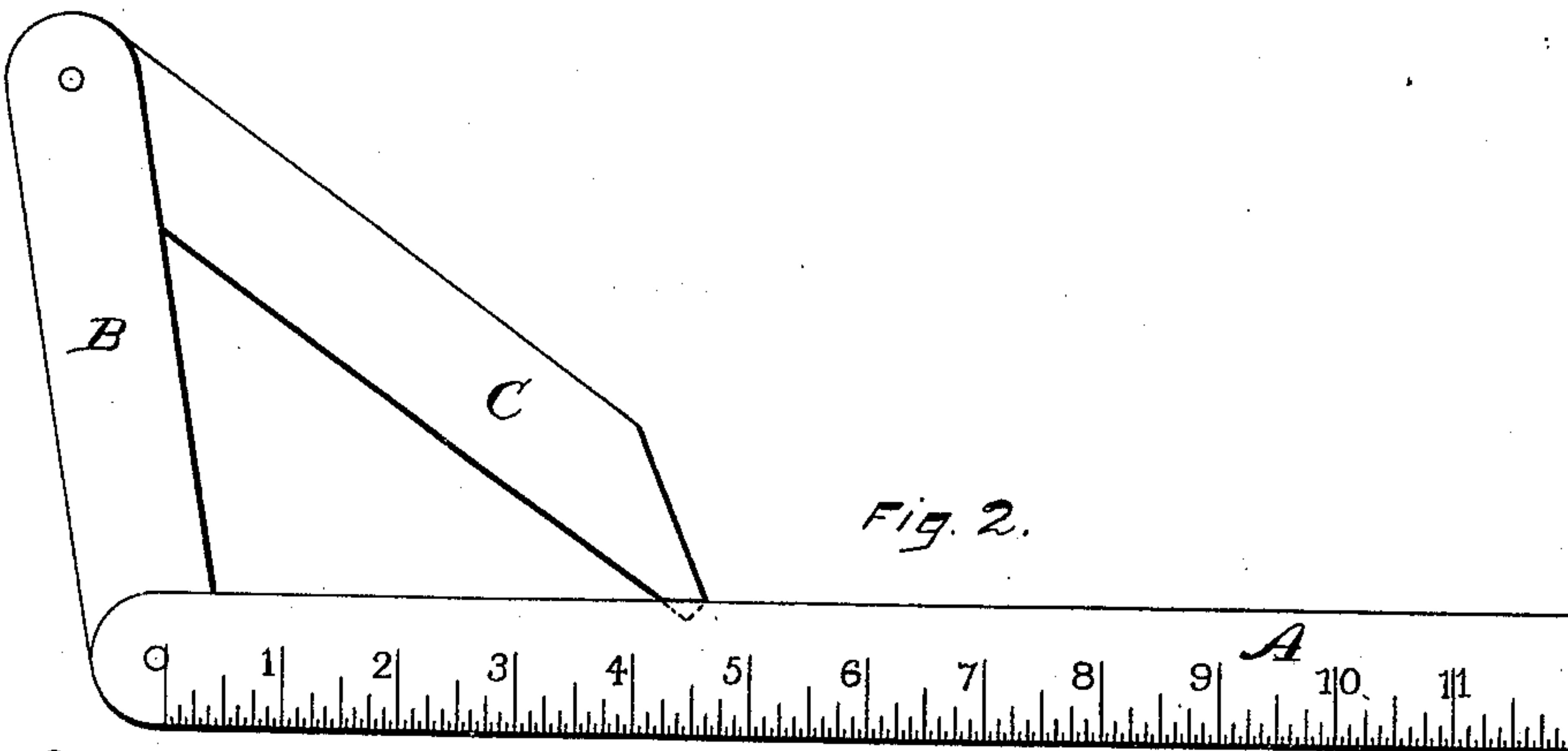


Fig. 3.



Fig. 4.

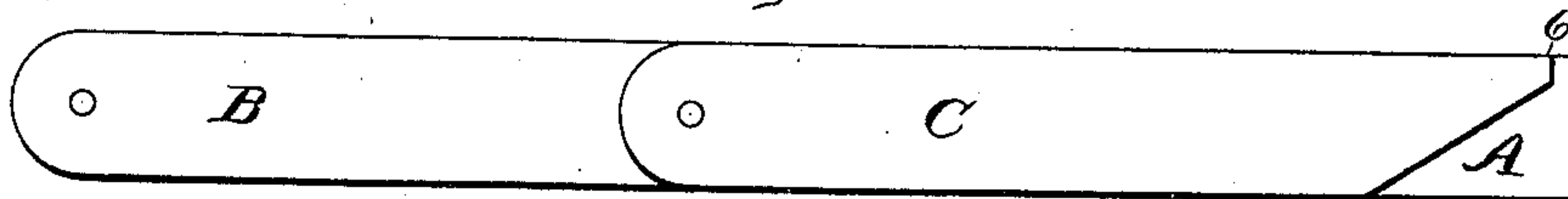
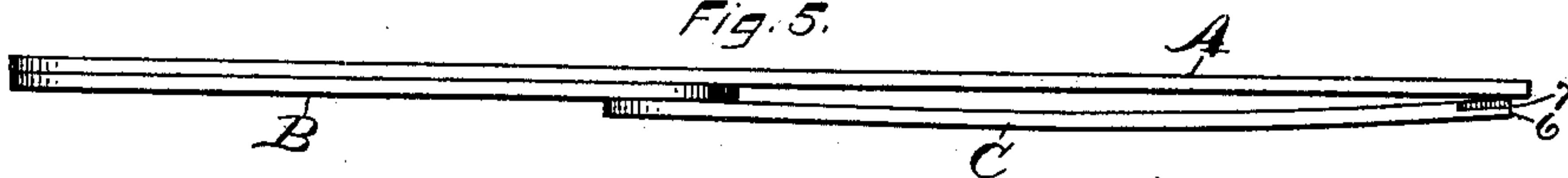


Fig. 5.



WITNESSES.

John Edwards Jr.
W. H. Whiting.

INVENTOR.

John S. Brooks.
James Shepard

ATTY.

UNITED STATES PATENT OFFICE.

JOHN S. BROOKS, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE PECK,
STOW & WILCOX COMPANY, OF SOUTHLINGTON, CONNECTICUT.

BEVEL.

SPECIFICATION forming part of Letters Patent No. 432,367, dated July 15, 1890.

Application filed October 14, 1889. Serial No. 326,997. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. BROOKS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Tinnerns' Bevels, of which the following is a specification.

My invention relates to improvements in tinnerns' bevels; and the objects of my invention are to produce a tool specially adapted for tinnerns' use in taking the angles or bevels for pipe-elbows and various other uses and to enable any particular bevel or angle to be easily recorded.

In the accompanying drawings, Figure 1 is a front elevation of my bevel in position for use. Fig. 2 is a rear elevation of the same. Fig. 3 is a vertical section on the line $x x$ of Fig. 1. Fig. 4 is a front elevation of the implement when folded, and Fig. 5 is a plan view of the same.

A designates the principal arm or base, which for convenience I prefer to make long enough to serve for a foot-rule and to graduate the back side thereof by inches and fractions of an inch, as shown in Fig. 2. To one end of this arm I pivot or hinge the angle-arm B. The joint should be stiff enough to create some friction, so that the arms A B will stay at whatever angle they are set until force or pressure is applied to change the angle. At the outer end of the angle-arm B, I pivot the index-arm C, the end of which arm C is curved a little, so as to bring it in contact with the inner edge of the principal arm A. The inner corner of the free end of this index-arm forms a pointer or index 6, and one side of this corner is cut off or rabbeted to produce the shoulder 7 for resting upon the inner edge of the arm A, so that the point or index 6 laps over on its face a given distance, as shown in Fig. 1. I also provide the front side of the arm A with a graduated scale 8, with any desired numbers or figures thereon. It is only necessary that this scale extend over the middle portion of the arm A; but it is evident that it may extend over a greater portion, if desired.

With the arms A B set at any angle that may be desired the index-arm C is brought

into position on the scale, and its pointer or index 6 will indicate the angle or bevel of the blades by the number of the graduation on the scale 8 or fraction thereof over which said index rests. In addition to the graduation-scale and its numbers I form a point or dot 9 on said blade at the point where the index 6 will rest when the arms A B are at right angles to each other.

When the arms A B are set with the index 6 at the point 9, the implement may be used as a square. In order to take the proper angle or bevel for a pipe-elbow, or the angle on which a pipe passes through a wall, or other angle that a tinner may have occasion to fit work for, the arms A B are moved on their joint until they match the angle desired, and then, with the index-arm in place, record the number indicated on the scale 8. The tinner can then fold the tool into the position shown in Figs. 4 and 5 and return to his work-bench, reset the implement on the same angle, and proceed with his work, thereby avoiding the liability of having the bevel move in carrying it from one point to another and change the angle, as is sometimes the case when an attempt is made to carry a tool that is set on a particular angle. The tinner may also, if he wishes, make a permanent record by number of the angle used in making any particular piece of work, and that angle can any time thereafter be reproduced with this implement by setting the index 6 at the corresponding position on the scale.

The combined length of the angle-arm B and index-arm C is only about equal to the length of the principal arm A, so that when folded the implement is about as convenient to carry or pack away as would be a single straight arm like the arm A.

I am aware that a prior patent shows and describes a common folding rule or yardstick with a spring-brace pivoted to one arm thereof and having a pin on one arm for engaging a series of holes in the other arm to lock said arms at different angles to each other. I am also aware of the thing shown and described in patent to Quayle, No. 390,705, dated October 9, 1888. All of said prior art is hereby disclaimed.

I claim as my invention—

1. The combination of the principal arm A, having the scale 8 along the middle portion on one side, the bevel-arm pivotally secured
5 by one end to said arm A on one side thereof, and the index-arm C, having a pointed end adapted to move over said scale 8, while its opposite end is pivotally connected to that end
10 of the bevel-arm which is farthest from the principal arm A, all adapted for being used and folded substantially as described.

2. The combination of the principal arm A, having the scale 8, the angle-arm B, pivotally secured to one end of said principal arm A,
15 and the index-arm C, pivotally secured by one end to the end of said angle-arm that is farthest from its pivotal connection with said principal arm, the free end of said index-arm being pointed to serve as an index and hav-

ing a rabbet or shoulder 7 just inside said point 20 for resting upon the inner edge of said principal arm, substantially as described, and for the purpose specified.

3. A bevel consisting of three arms, one longer and two shorter, pivotally connected 25 with one of the shorter arms in the middle, said middle shorter arm and longer arm being flat blades with their ends lapped, and the outer shorter arm being placed upon and secured to the outer side of said middle arm 30 and having its body bent to bring its free end opposite the edge of the longer arm, substantially as described, and for the purpose specified.

JOHN S. BROOKS.

Witnesses:

E. H. DARVILLE,
E. TYLER.