

975,581.

A. STEVENS.
JOINTED SQUARE.
APPLICATION FILED SEPT. 29, 1909.

Patented Nov. 15, 1910.

2 SHEETS—SHEET 1.

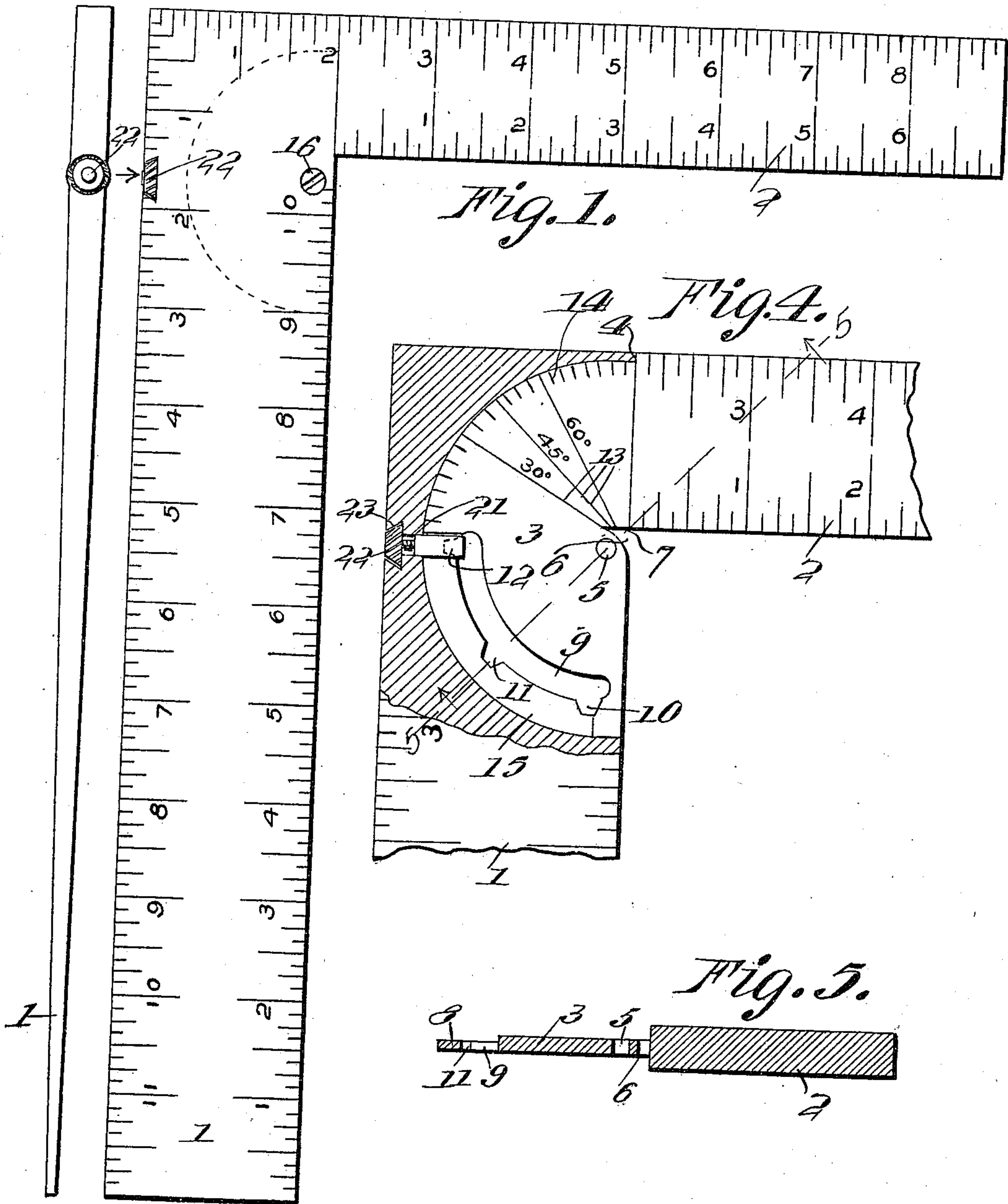


Fig. 2.

Witnesses

A. M. Whitmore.

J. C. Culver

Inventor

Arthur Stevens,

E. B. Whitmore,

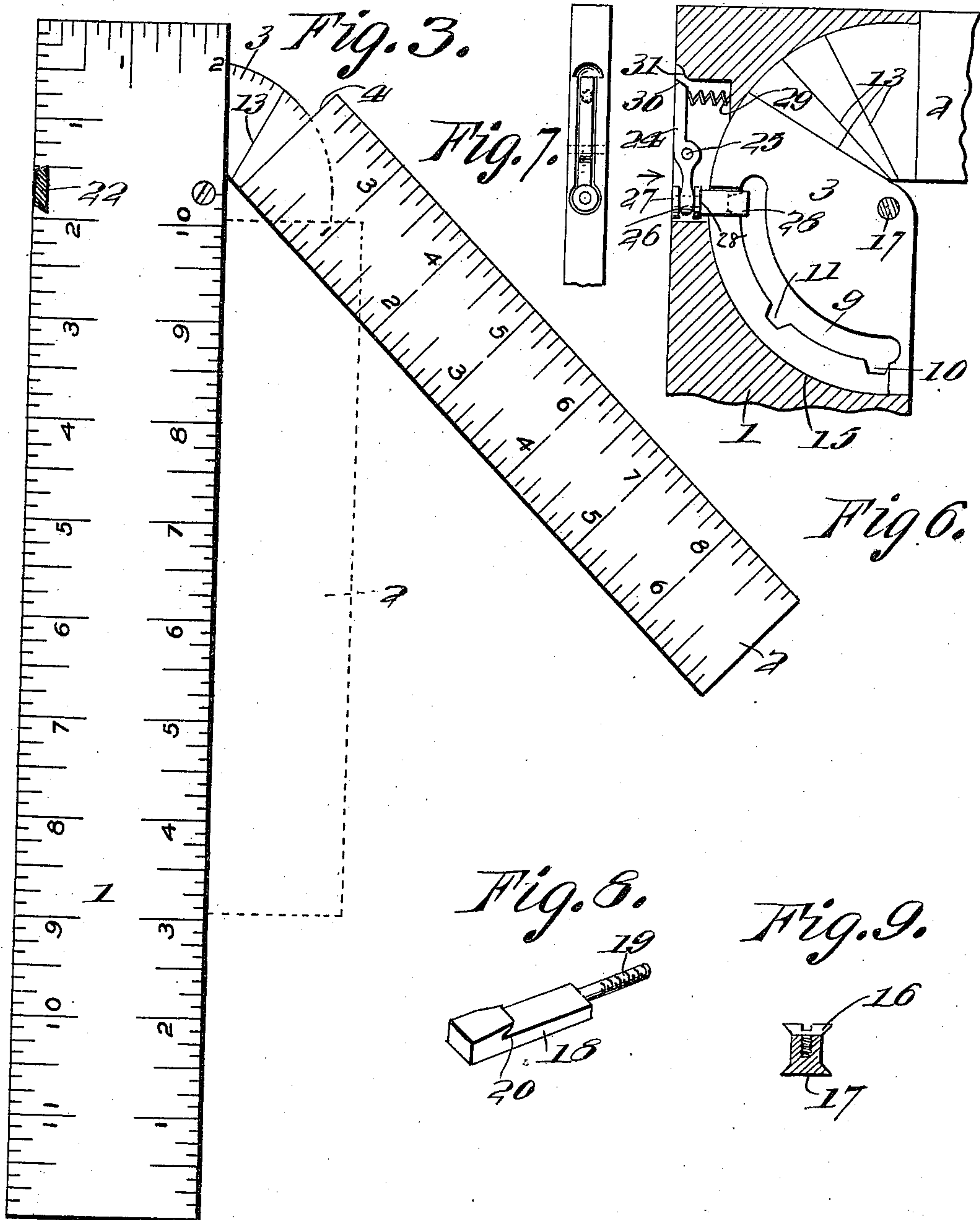
Attorney

975,581.

A. STEVENS.
JOINTED SQUARE.
APPLICATION FILED SEPT. 29, 1909.

Patented Nov. 15, 1910.

2 SHEETS-SHEET 2.



Witnesses
A. M. Whitmore.
J. C. Culver

Inventor
Arthur Stevens,
E. B. Whitmore,
Attorney

UNITED STATES PATENT OFFICE.

ARTHUR STEVENS, OF CLIFTON SPRINGS, NEW YORK.

JOINTED SQUARE.

975,581.

Specification of Letters Patent.

Patented Nov. 15, 1910.

Application filed September 29, 1909. Serial No. 520,223.

To all whom it may concern:

Be it known that I, ARTHUR STEVENS, of Clifton Springs, in the county of Ontario and State of New York, have invented a new and useful Improvement in Jointed Squares, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

This invention relates to certain new and useful improvements in squares, and it has for its objects among others to provide a simple, improved jointed square which can be made to serve as a carpenter's folding square and framing tool, or a try square and bevel.

It has for a further object to provide such a square with simple means for locking the movable member thereof in any desired position with relation to the other member.

I also make provision for the forming of a sharp angle when drawing lines as with a knife blade, along the two inner edges of the parts of the square, the one part being cut away so these lines can meet.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a face view showing the two members of the square locked at right angles to each other. Fig. 2 is an edge view, as looking in the direction of the arrow in Fig. 1. Fig. 3 is a view, similar to Fig. 1, showing the tongue at an angle of 45° to the other part. Fig. 4 is a view, partly in section and with a portion broken away, showing the joint and one form of lock. Fig. 5 is a section on the line 5—5 of Fig. 4. Fig. 6 is an enlarged detail showing the joint and a different form of locking mechanism. Fig. 7 is an edge view looking in the direction of the arrow in Fig. 6. Fig. 8 is a perspective view of the locking bolt. Fig. 9 is a view partly in section and partly in elevation, of the pivot bolt.

Like numerals of reference indicate like parts in the several views.

Referring to the drawings, 1 designates the main part or arm of the square, and 2 the tongue which is designed to have movement relative thereto, to turn through an arc of 90° , so that it may be brought to a

right angle therewith, or folded against said main part or arm 1.

The tongue 2 is formed with the substantially semi-circular part 3 which is thinner than the tongue, as seen best in Fig. 5, and extends from the same at its mid-thickness. This semi-circular part extends from the tongue from a point at a short distance from the outer edge of the tongue, as seen at 4 in Fig. 3. It is provided with a hole 5 for the pivot bolt, and at its junction with the inner edge of the tongue it is cut away, or back, as seen at 6 in Fig. 4, so that the angle at 7 will always be sharp or acute in all positions of the tongue 2. If this were not cut away, the said angle at 7 would be covered or crossed, more or less, by the material that would then occupy the place of the cut-away portion. But, by the construction shown, in drawing lines, or making indicating marks as with a knife blade along the two inner edges of the two parts of the square, as is often convenient in practical work, these lines can be made to meet and form a sharp, true angle, which is desirable.

The semi-circular part 3 has its outer portion made still thinner, as seen at 8 in Fig. 5, and in this portion is formed a curved slot 9, which is provided with notches 10, 11 and 12 in this instance shown as three in number, the one at one end of the slot to hold the tongue in its right angled position, that at the other end to hold the tongue in its folded position and the center one to hold the tongue in its intermediate position, at an angle of 45° for miter work. Other notches may be provided to hold the tongue at any other desired angle.

The semi-circular portion 3 is shown as provided with several lines 13, see Fig. 4, to indicate the different positions of the tongue, these lines bearing certain designating characters, and the periphery of this portion 3 is graduated into equal degrees or divisions, as seen at 14, the division marks being short tangential marks so as to meet the adjacent edge of the main part 1 as the tongue 2 is turned on its pivot. This will be found useful in laying off roof pitches, and the like.

The semi-circular part 3 is received within a correspondingly shaped chamber or socket 15 in the adjacent end of the part 1. It is pivoted on the pivot or swivel which consists of two parts 16 and 17, as seen in Fig. 9, the part 16 being threaded axially in the part 17 which passes through the hole 5 in the part

3, and through a hole in the part 1 coinciding therewith, the tongue turning upon said part 17. The outer ends of the parts 16 and 17 are beveled, as seen in Fig. 9, and fit corresponding countersinks or depressions in the opposite faces of the part 1.

Various means may be provided for holding the parts in any of their adjusted positions. In the present drawings, I have shown two simple and efficient forms of means for this purpose. In Figs. 1 and 4, this means comprises a bolt 18 having a threaded shank 19 at one end and a beveled undercut hook 20 at the other end. The intermediate or body portion is flat and rectangular, as seen in Fig. 8. The hooked end of the bolt projects into the slot 9, the threaded shank 19 extending through an opening 21 in the part 1 and out to the edge thereof. The thickness of the body portion of the bolt is equal to the difference in thickness between the thick and thin portions of the part 3 of the tongue 2. 22 is a knurled nut on the threaded shank 19 of the bolt. This nut is designed to control the locking bolt, and the said nut is made slightly conical, as shown in Figs. 1 and 4, and is received in a correspondingly shaped depression 23 at the outer end of the opening 21 in the part 1. By this means, the nut is prevented from becoming entirely unscrewed from the shank of the bolt and lost. The nut can be slipped sidewise into the said depression when assembling the parts. Screwing in of the nut draws the hooked end of the bolt into the proper notch of the slot 9, so as to hold the tongue in the desired position.

In Figs. 6 and 7 I have shown another means for locking the tongue in its different positions. In these views 24 is a lever pivoted at 25 within a recess in the edge of the main part 1, its forked end 26 engaging between collars 27 and 28 on the bolt, the collar 27 being preferably screwed to place on the threaded shank of the bolt. This lever occupies the cavity or recess in the main part 1, and when the lever is in its locked position it is flush with the outer face or edge of the said part as shown in Fig. 6 by full lines, a spring 29 serving to hold the lever in such closed position. The part 1 is formed with a semi-circular depression 31 as seen in Fig. 6 in which to insert the finger or thumb nail to catch the end of the lever to pull it outward for the purpose of unlocking the bolt and allowing of movement of the tongue 2, the upper end of the lever being beveled as seen at 30 to allow the thumb to get a better hold of it.

The notches 10, 11 and 12 are tapered and the projecting or hook part is correspondingly tapered so that the tongue will be held or drawn rigidly to place by means of the spring 29 at whatever angle it may be set with relation to the main part 1.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed as new is;—

1. In a jointed square, a main part, a tongue pivoted therein and having a semi-circular part of less thickness than the tongue and itself having a still thinner portion with a curved slot, and means held in the main part and coöperating with one wall of said slot to hold the tongue in adjusted positions.

2. In a jointed square, a main part, a tongue pivoted therein and having a semi-circular part of less thickness than the tongue and itself having a still thinner portion with a curved slot, means held in the main part and coöperating with one wall of said slot to hold the tongue in adjusted positions, and means for adjusting said means.

3. In a jointed square, a main part, a tongue pivoted therein and having a semi-circular part of less thickness than the tongue and itself having a still thinner portion with a curved slot, means held in the main part and coöperating with one wall of said slot to hold the tongue in adjusted positions, and means for adjusting said means, said adjusting means being confined within the main part.

4. In a jointed square, a main part and a tongue pivoted therein and having a semi-circular part of less thickness than the tongue and itself having a still thinner portion with a curved slot and notches, and means carried by the main part and engageable with said notches.

5. In a jointed square, a main part and a tongue pivoted therein and having a semi-circular part of less thickness than the tongue and itself having a thinner portion with a curved slot and notches, and a locking bolt having a member movable over said thinner portion and a hook to engage said notches.

In witness whereof, I have hereunto set my hand this 22nd day of September, 1909, in the presence of two subscribing witnesses.

ARTHUR STEVENS.

Witnesses:

GEO. F. LEWIS,
L. C. PARKER.