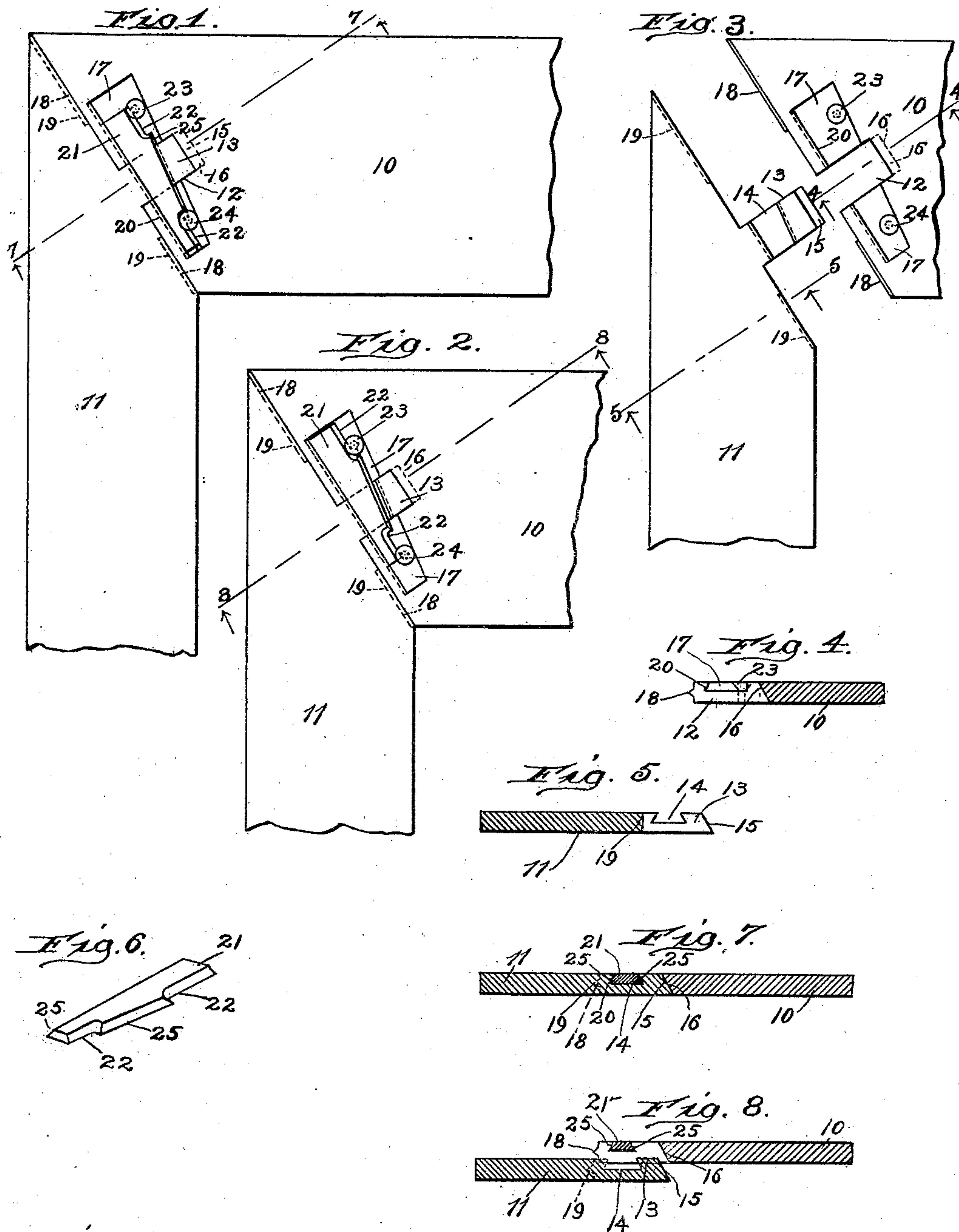


No. 842,433.

PATENTED JAN. 29, 1907.

J. SMITH.  
FOLDING SQUARE.  
APPLICATION FILED AUG. 6, 1906.



Witnesses:

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# UNITED STATES PATENT OFFICE.

JOHN SMITH, OF CHICAGO, ILLINOIS.

## FOLDING SQUARE.

No. 842,433.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed August 6, 1906, Serial No. 329,283.

*To all whom it may concern:*

Be it known that I, JOHN SMITH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Folding Squares, of which the following is a specification.

This invention relates to improvements in squares, and while it is more especially intended for use in what is known as "carpenters'" or "joiners'" squares, yet it may be used in connection with other kinds; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The principal object of the invention is to provide a square having detachable members which adapt it for being knocked down when not in use, thus rendering it convenient to handle and to pack in an ordinary tool-box.

Another object of the invention is to so construct the parts that the members of the square may be detached one from the other without entirely removing the locking-key, thus preventing its loss or accidental displacement.

A still further object is to so construct the device that there will be no projections from either of the surfaces of the square, thus enabling it to lie flatly on a plane or smooth surface.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a face view of a portion of a square embodying my invention, showing the members thereof locked in the positions they will occupy when the square is ready for use. Fig. 2 is a similar view of like parts, but showing the locking-key in the position it will occupy when the members of the square are to be separated. Fig. 3 is a view of portions of the members of the square, showing them detached and illustrating the locking-key omitted from its seat. Fig. 4 is a sectional view taken on line 4 4 of Fig. 3 looking in the direction indicated by the ar-

rows. Fig. 5 is a view, partly in section and partly in elevation, taken on line 5 5 of Fig. 3. Fig. 6 is a detached perspective view of the locking-key. Fig. 7 is a sectional view taken on line 7 7 of Fig. 1 looking in the direction indicated by the arrows and showing the members of the square locked together; and Fig. 8 is a sectional view taken on line 8 8 of Fig. 2, showing the members of the square in the act of being separated from one another or joined together.

Like numerals of reference refer to corresponding parts throughout the different views of the drawings.

The reference-numerals 10 and 11 designate the members of the square and may be provided with a scale or graduated marks of the ordinary or any preferred kind. As usual, one of the members—for instance, 11—is narrower and shorter than the other member; but this is not essential to the invention. Each of the members has its meeting edge mitered, as shown, and the member 10 is formed in its mitered edge with a rectangular recess 12 to receive a similarly-shaped tongue 13 on the mitered edge of the member 11 or other member. This tongue is provided with a dovetailed groove 14, which extends across the tongue and is contracted toward one of its ends, as is clearly shown in Fig. 3 of the drawings. The free end of the tongue is provided with a downwardly-beveled portion 15 for the purpose of meeting a beveled portion 16 on the wall of the opening 12 opposite the open end of said opening. The member 10 has in one of its surfaces a depressed recess 17, which extends diagonally with respect to the said member and has one of its edges in alinement with the mitered edge thereof, which mitered edge is provided with tongues or ribs 18 to fit in grooves 19 on the mitered edge of the other member. As shown in Figs. 3 and 4, one of the walls 20 of the depressed recess 17 is downwardly and outwardly inclined to engage the correspondingly-shaped edge of the locking-key 21, which is dovetailed, as shown in Figs. 6, 7, and 8, and has on one of its edges beveled recesses 22 for the reception of headed bolts or screws 23 and 24, which are located in the recess 17 of the member 10 near one of the walls of said recess and on each side of the opening 12 in said member. The heads of the screws or bolts 23 and 24 are downwardly tapered, and said bolts or screws are fixed in the member 10 so



that their ends will be flush with its surface, thus offering no projections on either side thereof. By forming one edge of the key 21 with the beveled-edged recesses 22 it is apparent that a lateral and longitudinal projection 25 will be produced on the key, and by reference to Fig. 6 it will be seen that its ends as well as its edge is downwardly beveled.

By placing the key 21 in the depression 17 of the member 10 it is evident that its outer edge will engage the dovetailed wall of the said depression and one of the dovetailed walls of the groove 14 in the tongue 13, while its recessed edge will engage the screws or bolts 23 and 24, which will hold the key movably in position in the recess of the member 10. When the key 21 occupies the position shown in Fig. 2, it is apparent that its reduced portion will not engage the walls of the groove 14 in the tongue 13, thus permitting the member 11 to be detached from the other member; but by placing the members in the position shown in Fig. 2 and moving the key 21 to the position shown in Fig. 1 of the drawings it is obvious that by reason of the wedge shape of the key it will engage both walls of the groove 14 in the tongue 13, as well as the dovetailed wall 20 of the recess 17 and the screws or bolts 23 and 24, thus firmly locking the members 10 and 11 together.

By reference to Figs. 4, 5, 7, and 8 of the drawings it will be seen that shoulders will be produced on each side of the ribs or tongues 18, which will abut against shoulders on each side of the grooves 19, respectively, so that when the key 21 is forced to the position

shown in Fig. 1 of the drawings the members 10 and 11 will be securely locked together and any movement thereof prevented.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A folding square consisting of two members each having its meeting edge mitered, one of said members having a rectangular opening in its mitered portion and a depressed recess intersecting said opening, the other member having on its mitered edge a rectangular-shaped tongue provided with a tapered dovetailed groove, and a wedge-shaped dovetailed key movably located in the depressed recess and said groove, substantially as described.

2. A folding square consisting of two members each having its meeting edge mitered, one of said members having in its mitered portion a rectangular opening and a depressed recess intersecting said opening, a headed bolt located at one side of the depressed recess on each side of said opening, a rectangular-shaped tongue on the mitered portion of the other member having a tapered and dovetailed transverse groove, and a tapered dovetailed and recessed key movably located in the said depressed recess and said groove of the tongue, substantially as described.

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