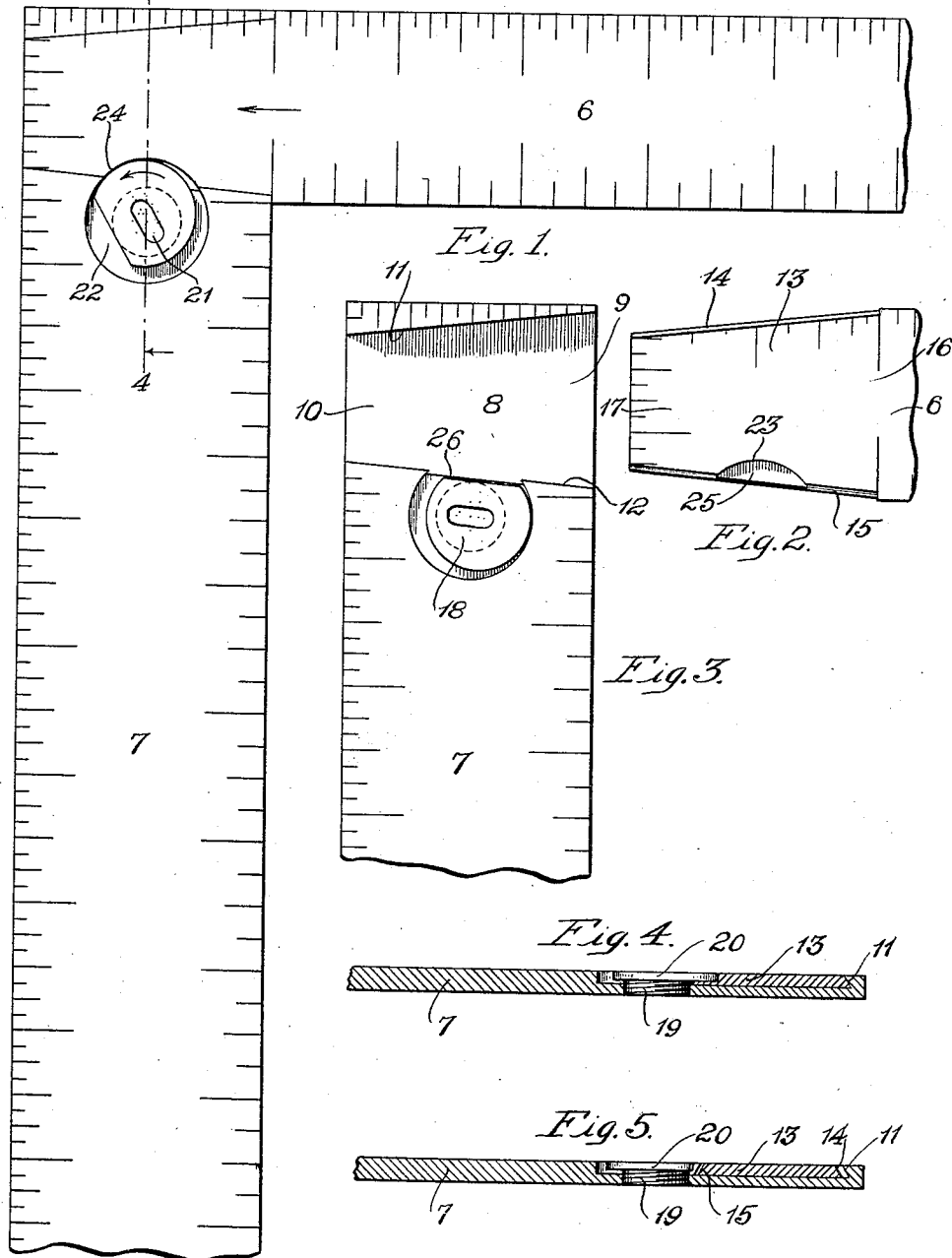


F. B. HARDSOCC.
 KNOCKDOWN CARPENTER'S SQUARE.
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1,065,242.

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UNITED STATES PATENT OFFICE.

FRED B. HARDOCG, OF OTTUMWA, IOWA.

KNOCKDOWN CARPENTER'S SQUARE.

1,065,242.

Specification of Letters Patent.

Patented June 17, 1913.

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To all whom it may concern:

Be it known that I, FRED B. HARDOCG, a citizen of the United States, residing at Ottumwa, in the county of Wapello and State of Iowa, have invented certain new and useful Improvements in Knockdown Carpenters' Squares, of which the following is a specification.

This invention relates to a new form of knockdown carpenter's square; that is a carpenter's square in which the tongue and blade are made separate, so that they can be taken apart.

The invention relates more particularly to a carpenter's square, in which the tongue and blade each constitute virtually a straight piece of material, so that they can be more easily packed into a kit or other carrier.

The invention relates more particularly to the locking means, whereby the two elements of the square are joined and secured together.

It is particularly intended to provide a square of such construction that a single screw or nut will serve to completely lock the elements together. This screw or nut is so formed and positioned with respect to the elements against which it presses that it tends to draw the tongue and blade together, and to improve the locking connection by a wedge action.

Other objects and uses will appear from a detailed description of the invention which consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawing, Figure 1 shows a face view of the corner of the square, the two elements being locked together; Fig. 2 shows a face view of the end of the tongue; Fig. 3 shows a face view of the end of the blade; Fig. 4 shows a section taken on the line 4-4 of Fig. 1, looking in the direction of the arrows; and Fig. 5 is a view similar to that of Fig. 4, except that the screw has been rotated around to unlock the parts, and the tongue has been partly withdrawn from the blade.

Referring to the drawing, the tongue and blade are designated by the numerals 6 and 7, respectively. One of the elements, preferably the blade, has provided across its end portion a wedge-shaped channel 8 which tapers from one end to the other. This channel tapers in width from the edge 9 of the blade to the edge 10, the edge 9 be-

ing adjacent to the tongue. Also the sides 11 and 12 of the channel are preferably undercut. The end 13 of the tongue is suitably formed to wedge tightly into the channel. For this purpose, its edges 14 and 15 draw together from the end 16 to the end 17, and are beveled to correspond with the undercutting of the edges 11 and 12 of the channel. Obviously, any means that will serve to force the end of the tongue into the channel will serve to lock the elements together. Therefore, I provide means for securing this forcing action. The means illustrated comprises an eccentric screw 18 having the shank portion 19 threaded into the blade and having the head portion 20 eccentrically formed so that by turning the screw in the direction of the arrow of Fig. 1, the head will tend to draw the end of the tongue into the channel. A slot 21 is adapted to receive a key for rotating the screw to draw the elements together. A recess 22 is suitably formed to permit the screw head to sweep in a complete revolution, so that the screw may be completely removed from the blade when necessary. Now the head of the screw is adapted to engage a notch 23 of the tongue. By properly proportioning the parts, the tongue and blade will be drawn tightly together when such engagement takes place substantially at the point 24 of the notch, at which point the eccentric action of the screw will be most effective to draw the tongue in the direction of the arrow, and thereby to secure the best wedging action. However, it is manifest that the tongue and blade will be drawn tightly together even after a certain amount of wear, because the screw can always be rotated a slight additional amount until the parts are tight.

It is preferred that the notch 23 should not be cut completely through the end of the tongue, but that the head of the screw should overlies the portion 25 of the tongue. Now inasmuch as the locking member illustrated is a screw, the same should serve not only to draw the tongue into the groove of the blade, but should also serve to create a pressure on the portion 24 of the tongue. Therefore, the screw threads should be left-handed, so that as the screw rotates in the direction of the arrow, its head will press down on the portion 24 of the tongue, as well as drawing the tongue into the blade. In other words, the screw performs two

functions in that it wedges the elements together, and in that it creates an additional friction between them. Now, of course, the tongue and blade could be disengaged by completely removing the screw. In order to obviate the necessity of such complete removal, I cut away the side 26 of the screw head, so that when the same lies in the position of Fig. 3, the tongue may be slid away from the blade, the necessary amount, and then lifted away from it. It will probably be found that the parts are best proportioned when the flat portion 25 of the screw head lies substantially parallel to the eccentric axis of the screw.

Obviously, the arrangement of the elements might be reversed, the channel and locking member being formed on the tongue, and the blade being arranged to lock into such channel. This, however, would be a mere reversal of parts, and in fact it might be considered for such purpose that the numeral 7 designates the tongue, while the numeral 6 designates the blade.

I claim:

1. In a knock down carpenter's square, the combination of a blade having a tapering channel formed in one of its faces, the taper of the channel extending from side to side of the blade, and the side walls of the channel being undercut, a tongue, the end portion of the tongue tapering longitudinally thereof and having its side faces beveled to engage the undercut side walls of the channel of the blade, there being a notch formed in one side of the tapered portion of the tongue and a locking member eccentrically mounted on the blade and eccentric to said notch when the tongue is seated in the channel of

the blade and adapted to engage the notch of the tongue, whereby the rotation of the locking member causes the same to engage the notch of the tongue for the purpose of drawing the tapered portion thereof firmly into the channel of the blade and whereby a side pressure is exerted on the tapered portion of the tongue, substantially as described.

2. In a knock down carpenter's square, the combination of a blade having a tapered channel formed in one of its faces, the taper of the channel extending from side to side of the blade and the side walls of the channel being undercut, a tongue having a tapered end portion adapted to engage the tapered channel of the blade, the side edges of the tapered portion of the tongue being beveled to engage the undercut side walls of the channel, there being a notch formed in one side of the upper face of the tongue, and a locking member eccentrically mounted on the blade adjacent one side of the channel, said locking member being adapted to engage the notch of the tongue for locking purposes, and said locking member being eccentric to said notch when the tongue is seated in the channel of the blade and having a flattened portion lying substantially parallel to its major axis, whereby when the locking member is rotated to bring its major axis substantially parallel to the tongue said flattened portion will permit disengagement of the tongue from the channel of the blade, substantially as described.

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Witnesses:

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