July 31, 1923. 1,463,375

W. A. SHIELDS

COMBINATION TOOL

Filed March 25, 1921

Fig. 1

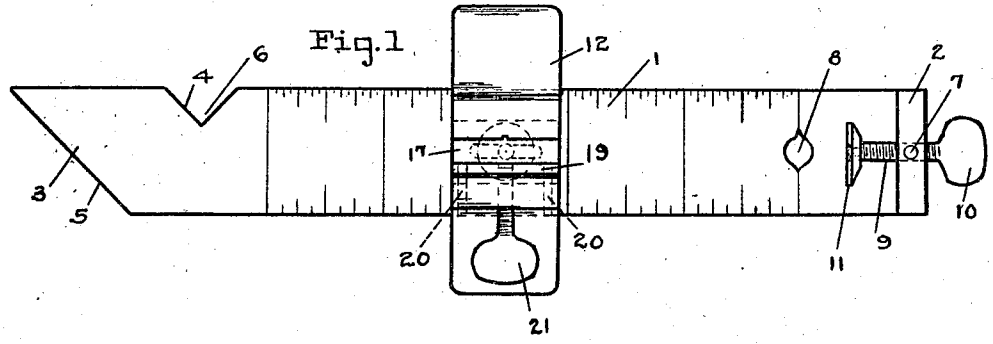


Fig. 2

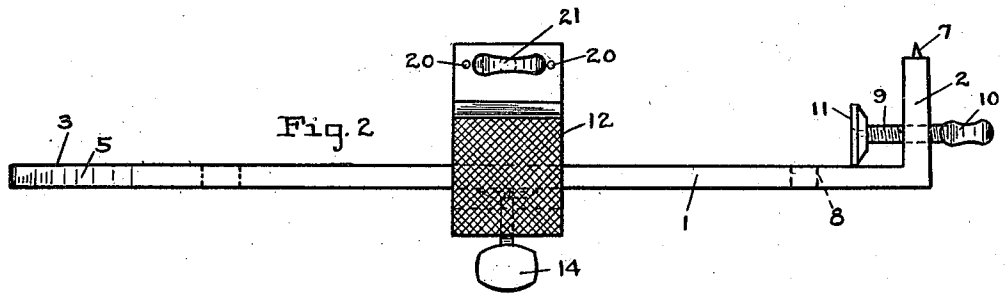


Fig. 3

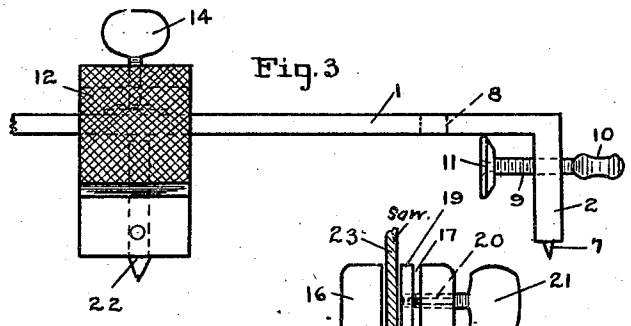


Fig. 4

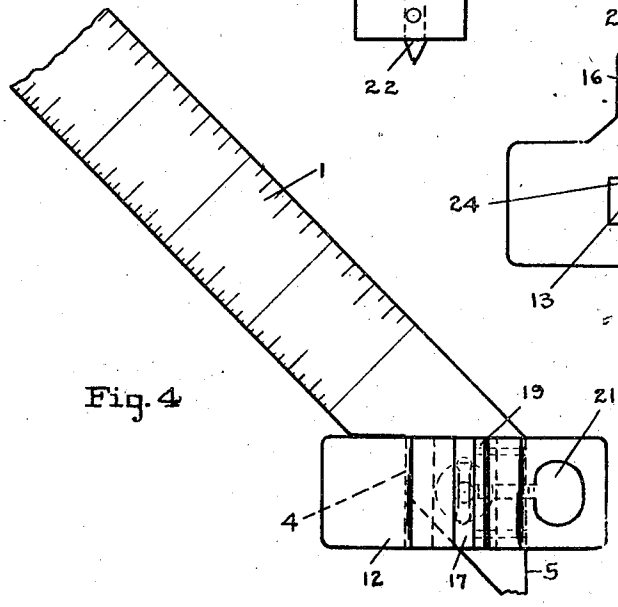
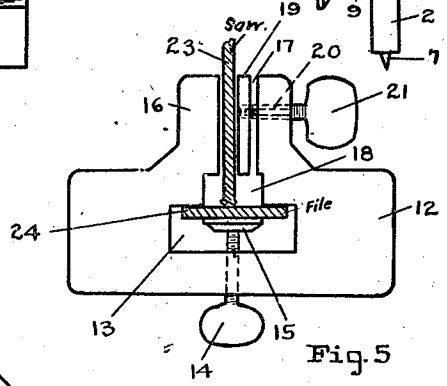


Fig. 5



INVENTOR
Willie A. Shields.

BY

ATTORNEY

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UNITED STATES PATENT OFFICE.

WILLIE ARTHUR SHIELDS, OF BIRMINGHAM, ALABAMA.

COMBINATION TOOL.

Application filed March 25, 1921. Serial No. 455,441.

To all whom it may concern:

Be it known that I, WILLIE A. SHIELDS, a citizen of the United States of America, residing at Birmingham, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Combination Tools, of which the following is a specification.

This invention relates to a combination tool adapted for use as a gage, T-square, compass, clamp, and saw-tooth striker or jointing file-holder, all of the various uses being performed by the joint action of the novel type of rule and clamp block adapted to co-operate therewith.

My invention will be best understood by reference to the accompanying drawings, which form a part of this specification, and in which:—

Figure 1 is a plan view of the tool as adapted for use as a gage;

Fig. 2 is a side view of Fig. 1;

Fig. 3 is a side view inverted showing the tool used as a compass;

Fig. 4 shows the manner of mounting the rule in the block to form a 45° angle rule; and

Fig. 5 shows the block as adapted for use as a clamp or saw striker.

Similar reference numerals refer to similar parts throughout the drawings.

As illustrated the tool comprises a rule 1 having any desired marginal scales for measurement and provided at one end with an upturned flange 2 and at the other end with an angle extension 3, the latter having its top and bottom edges in line with the top and bottom edges of the rule and having its upper and lower side walls 4 and 5 parallel with each other and at a 45° angle to the rule. The wall 4 is formed by a notch 6 in the upper edge of the rule. The width between the walls 4 and 5 preferably corresponds to the width of the rule. The flange 2 of the rule carries a pointer 7 on the center of its upper edge and in line with the commencement of the scale, and the rule is provided with an opening 8 suitable for the insertion of a ruling pencil. The flange 2 is provided with a threaded opening in its center through which I insert the screw 9, having at its outer end a grip portion 10 and at its inner end being reduced and swaged to hold rotatably thereon a clamp head 11.

I provide a slide block 12 to co-operate with the rule, and in this block I provide a slot 13 wide enough to permit the rule to be introduced therein as shown in Fig. 1, the block being clamped in any desired position on the rule by means of a set-screw 14 carrying a rotatable clamp head 15. This screw is introduced through the bottom of the block as it is normally used. The block has an extension 16 through which a slot 17 is formed which joins centrally with the slot 13 and is enlarged at its base portion 18 where it joins the slot 13. A clamp plate 19 is set in the slot 17 and provided with lateral guide pins 20 which prevent its rotation as it is adjusted transversely of the slot by means of a set-screw 21 having its end mounted to turn in the plate 19.

The various uses of my combination tool are as follows: To form a T-square, insert the rule 1 in the slot 13 of the slide block and tighten screw 14. For a 45° angle rule, place the rule extension 3 with its walls 4 and 5 engaging the side walls of the slot 13, then tighten the screw 14, thus setting the parts as shown in Fig. 4. For use as a gage, I set the block 12 at the desired point by measurement with reference to the rule scale, then place the point of a pencil 22 through the hole 8 and slide the block against the edge of the strip to be gaged. For use as a compass, I place a short piece of pencil 22 or marker in the slot 17 and clamp it in position by means of screw 21 and plate 19; I then invert the tool and press the pointer 7 into the wood and turn the block, as shown in Fig. 3, about the pointer, and the pencil or marker will make a circle. For gaging shingles or weatherboard, I set the block the desired distance from the pointer 7 and let the block engage the bottom edge of the board or shingle while the pointer 7 is pressed down on the shingle or board for making the impressions of nails or fastenings. For striking or jointing handsaws, I place the saw 23 in a saw clamp as if to file, I then place a flat file 24 in the slot 13 and clamp it in place by a screw 14, and I then insert the saw in slot 17 and tighten screw 21 until the plate 19 fits loosely against the side of the saw. The saw teeth will be disposed in the enlarged opening 18, the side walls of which will clear the sides of the teeth. By sliding the block back and forth, the file will strike or joint all of the teeth.

For clamping small articles, place the piece to be clamped on the rule 1, slide the

block 12 against it so as to press it between the block and the clamp head 11, then tighten screw 10 to clamp the article. The block itself may be used as a hand vise for small articles by inserting the articles in the slot 17, and tightening screw 21 to clamp them in place by means of the plate 19.

All of these various uses are obtained by the improved design of the rule and its co-operating slide block which are preferably designed to function in all of the various uses pointed out.

What I claim as new and desire to secure by Letters Patent, is:—

1. In combination, a straight rule having at one end a notch and a bevelled edge pro-viding between them an end extension disposed at an angle to the rule and lying in the same plane therewith, and a slide block adapted to be mounted on the rule or on its angled element to form a T-square or angled rule.

2. A combination tool as described in claim 1, in which the angle end extension corresponds in width with the rule and has its top and bottom edges lying in the projected lines of the top and bottom edges of the rule.

3. A combination tool comprising a slide block and a rule having a beveled end edge, and a notch in one lateral edge to provide an edge parallel with said beveled edge of the rule and forming an angled end extension on the rule adapted to be received in the block.

In testimony whereof I affix my signature.

WILLIE ARTHUR SHIELDS.

Witness:
NOMIE WELSH.