H. EWELER.

COMBINATION SAW.

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1,011,042. Patented Dec. 5, 1911.

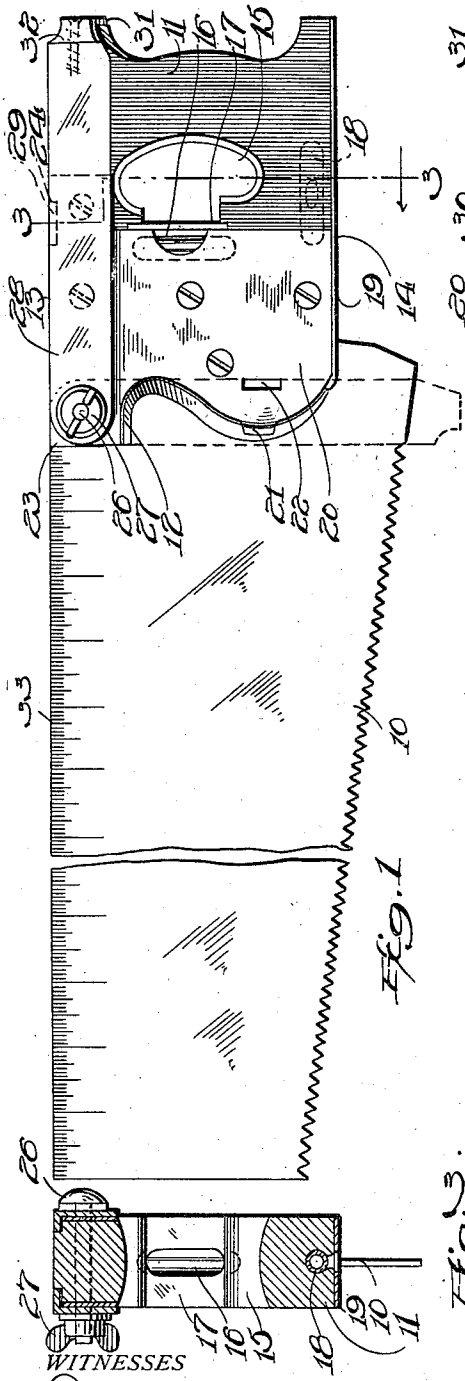


Fig. 1.

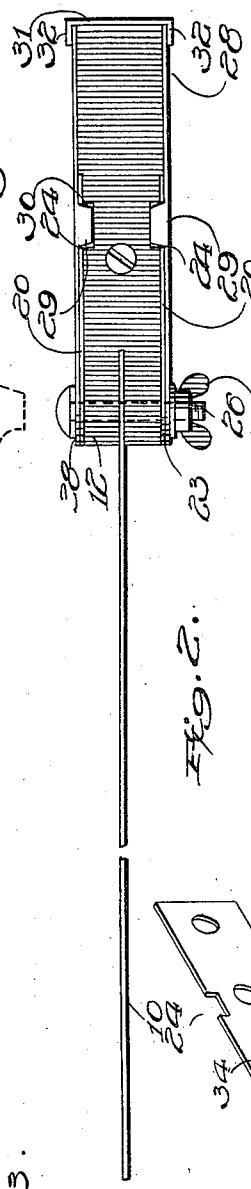


Fig. 2.

Fig. 3.

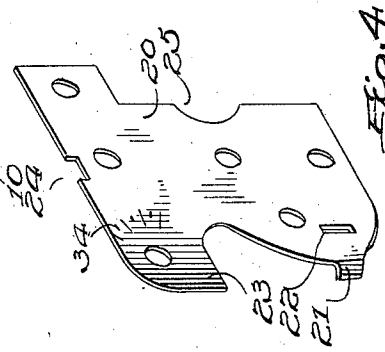


Fig. 4.

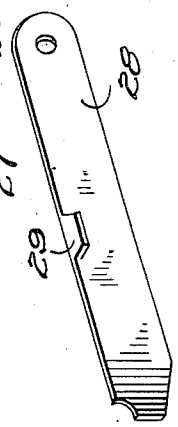


Fig. 5.

WITNESSES

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COMBINATION-SAW.

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To all whom it may concern:

Be it known that I, HENRY EWELER, 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 Combination-Saws, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to combination tools and has special reference to compound tools of the hand saw type.

The invention furthermore relates to a compound tool in which the hand saw is provided with a level, plumb and folding square.

The principal object of the invention is to improve the general construction of a hand saw provided with a square.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of certain novel arrangements of details and combinations of parts as will be hereinafter set forth, illustrated in the accompanying drawings, and specifically claimed.

In the accompanying drawings like characters of reference indicate like parts in the several views, and: Figure 1 is a side view of a saw provided with a handle constructed in accordance with this invention. Fig. 2 is a top view thereof. Fig. 3 is a section on the line 3—3, Fig. 1. Fig. 4 is a perspective view of one of the cover plates of the handle. Fig. 5 is a perspective view of one of the pivoted bars which form the square in connection with the saw blade.

This saw is provided with the usual toothed blade 10 whereto is fitted a handle having a grip 11. The upper part of the handle is provided with forwardly extending lug 12, while its upper and lower edges are straight as indicated respectively at 13 and 14. Just forward of the grip 11 there is provided the usual opening 15, and forward of this opening is a recess wherein is located a bubble or level vial 16 which is covered by a suitable plate 17 provided with a central slot so that the vial may be observed. The upper edge 13 is parallel with the lower edge 14 and forms a continuation of the back of the blade 10. The upper edge of the handle and back of the blade 10 thus constitute a straight edge. From the lower edge of the handle there extends inward a suitable recess wherein is mounted a level vial 18 and this lower edge is covered by a plate 19 provided with a suitable slot for the observation of the bubble in the vial 18. The vial 16 thus constitutes a plumb vial being at right angles to the back of the saw, while the vial 18 constitutes a level vial being parallel with the back of the saw.

Gained into each side of the saw handle forward of the opening 15 is a suitable recess for the reception of a cover plate 20, the handle being gained sufficiently so that the outer surface of the cover plate is flush with the rear portion of the handle 11. Each of these cover plates is provided at its forward edge with a downwardly and forwardly inclined lug 21 to the rear of which is a slot 22. Furthermore, each of these plates is provided with a forwardly extending lug 23 at its upper edge which corresponds with the forwardly extending lug 12, and each plate also has a recess 24 in its upper edge for purposes hereinafter to be described, and a niche in its rear edge for the observation of the bubble in the vial 16. Through the lugs 23 and the saw blade 10 passes a pivoted bolt 26, which is provided on one side with a wing nut 27. On the pivoted bolt is positioned a pair of swinging arms 28, one of these arms resting on one of the plates 20 while the other arm rests on the plate 20. Each of these arms is provided on one edge with a lug 29 which is of such size as to readily fit the slot 22 when the arm is turned to the position shown in dotted lines in Fig. 1. The recess 24 is so positioned that when the arm is turned as shown in full lines in Fig. 1, this lug 29 will engage in this recess. For the purpose of permitting the arm to lie flush with the grip 11, the upper end of the strip is gained and the upper side of the handle is also provided with suitable notches 30 which register with the recesses 24 when the cover plates are applied. For the purpose of preventing the free ends of the members 28 from springing outward, there is provided at the rear of the handle a clip 31 having ends 32 which overlap the sides of the handle in spaced relation thereto so that the ends of the bars 13 may be received between the handle and the ends 32.

In the operation of the device, when it is desired to use the implement as a plumb, the back of the saw is placed against the article to be plumbed and the bubble in the vial 16 observed. When it is desired to use

the implement as a level the back of the saw is laid on the object to be leveled and the bubble in the vial 18 observed. When it is wished to use the device as a square, the wing nut 27 is loosened slightly, and one or the other of the arms swung around, the arm being moved upwardly so that as it swings forward into position the lug 29 will strike the lug 21, thus bringing the arm slightly upward and permitting the arm to slide over the forward edge of the plate 20 and the lug 29 to engage in the recess or slot 22. When it is wished to use the device as a square it being observed that the recess and the opening for the bolt 26 are so positioned that when the arm is in position, as shown in dotted lines in Fig. 1, the forward edge thereof will be at right angles to the back of the saw. Of course, it will be obvious that the reason for employing two of these arms is that in some instances it is necessary to turn a square over so that it is essential that there be two arms instead of one. The device may also be used to lay off bevels by swinging one of the arms 28 around to a suitable position and locking the same with the nut 27. It is preferred that the saw be equipped with a scale as indicated at 33 and that each plate be provided with a suitable scale of angles 34.

There has thus been provided a simple and efficient device of the kind described, and for the purpose specified.

It is obvious that many minor changes may be made in the form and construction of the invention without departing from the material principles thereof. It is not, therefore, desired to confine the invention to the exact form herein shown and described, but it is wished to include all such as properly come within the scope of the appended claims.

Having thus described the invention, what I claim as new, is:—

1. In a compound tool of the class described, the combination of a blade, a handle therefor, said handle being provided with a recess therein adjacent its forward edge, and a second recess adjacent its upper edge, a bar pivoted to the handle above the first and forward of the second recess, and provided with a lug adapted to fit either of said recesses, and a clamping nut for securing said bar in adjusted position.

2. The combination with a saw handle, of a cover plate therefor provided with a slot adjacent its forward edge, and a downwardly and forwardly extending lug in alinement with said slot and depending from the forward edge, said plate furthermore having a recess in its upper edge, a pivot bolt extending through the handle and plate, an arm pivoted on said pivot bolt and provided with a lug fitting said recess and slot, a clamping nut on said pivot bolt for securing said bar in adjusted position, and a clip having an end for engagement with the end of the bar opposite the pivot.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

HENRY EWELER.

Witnesses:
L. N. GILLIS,
JOSEPH SMOLINSKI.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."