Sept. 19, 1939. C. I. WELCH 2,173,348

SAW

Filed Sept. 3, 1937

Fig. 1

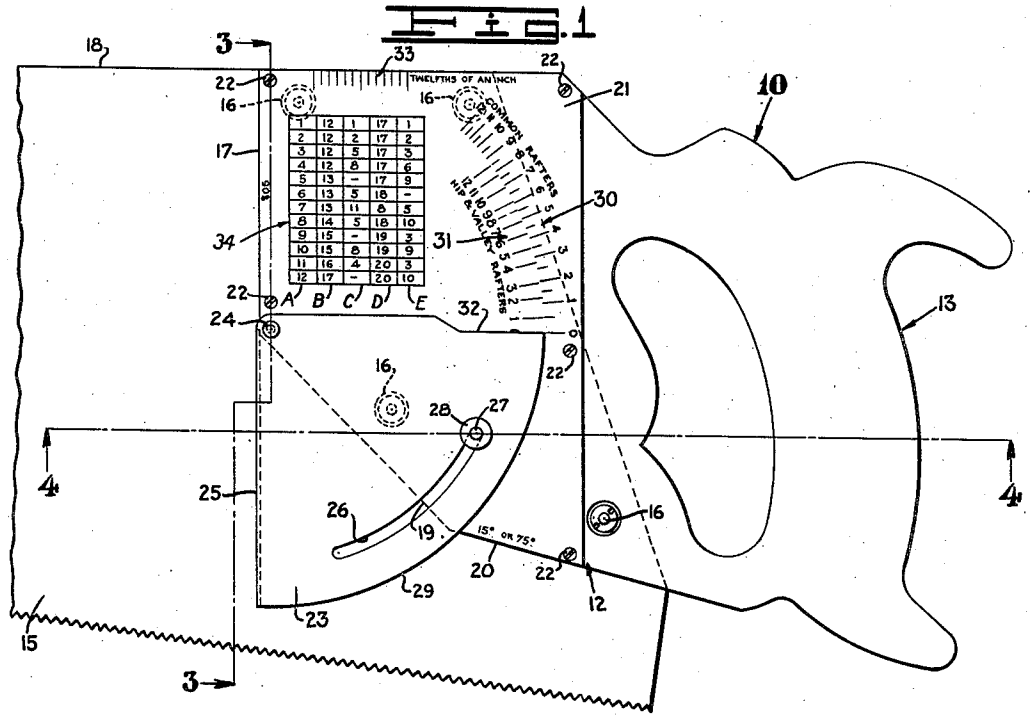


Fig. 3

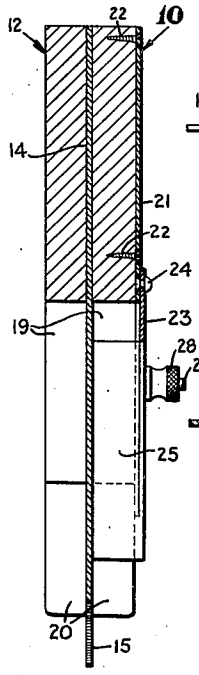


Fig. 2

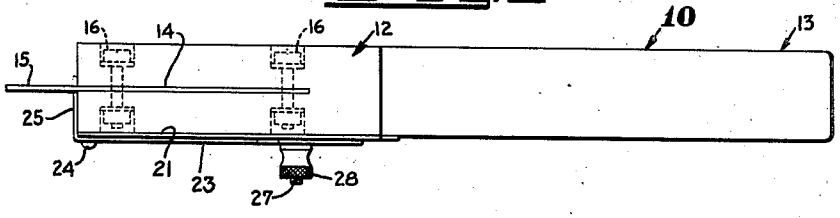
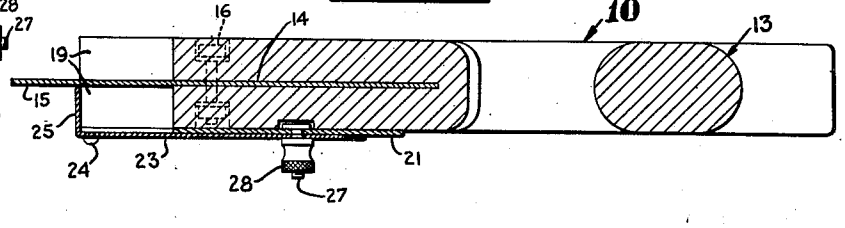


Fig. 4



INVENTOR.
C. I. WELCH

BY

ATTORNEY.

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2,173,348

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SAW

Clyde I. Welch, Pasadena, Calif.

Application September 3, 1937, Serial No. 162,318

1 Claim. (Cl. 33—75)

This invention relates to improvements in saw handles.

The general object of the invention is to provide an improved saw handle having means thereon whereby the back of the saw may be used as a straight edge for marking various angles on pitches.

Another object of the invention is to provide an improved saw handle having thereon a pivoted angle plate and coacting pitch scales whereby when the angle plate is set to various indicia on the scale the back of the saw may be used to mark off plumb cuts on common rafters, hip and valley rafters, and plumb and check marks on jack and valley rafters.

Other objects and the advantages of this invention will be apparent from the following description taken in connection with the accompanying drawing, wherein:

Fig. 1 is a fragmentary side elevation of a saw having my improved handle construction thereon;

Fig. 2 is a top plan view of the device shown in Fig. 1;

Fig. 3 is a section taken on line 3—3 Fig. 1; and

Fig. 4 is a section taken on line 4—4 Fig. 1.

Referring to the drawing by reference characters I have indicated my improved saw handle generally at 10. As shown the handle 10 includes a body portion 12 and a grip portion 13 which are of conventional design.

The body portion 12 has a slot 14 therein to receive a saw blade 15 which is secured to the handle 10 by the usual countersunk bolts 16. The front face of the body 12 is divided into two surfaces, one surface 17 being formed at 90° to the back or edge 18 of the blade 15 and the other surface 19 being formed at 45° to the blade back 18. Similarly the bottom surface 20 may be formed at an angle to the blade back 18 and in the drawing it is shown as at an angle of 15° to the blade back.

Mounted on one side of the body 12 I provide a metal plate 21 which is shown as secured to the body 12 by a plurality of screws 22. The plate 21 is shaped to conform to the angle faces 17, 19 and 20 of the body 12.

Mounted on the plate 21 I provide a quadrant or angle plate 23 which is pivotally secured to the plate 21 as at 24 adjacent the intersection of the angle faces 17 and 19. The quadrant plate 23 includes an inwardly extending flange 25 which in one extreme position of the quadrant plate 23 is in a position at 90° to the blade back 18 (as shown in Fig. 1) and in the other extreme position engages the 45° face 19 of the body 12. The quadrant plate 23 has an elongated arcuate slot 26 therein which is coaxial with the pivot 24.

Mounted on the plate 21 I provide a bolt 27 which may be immovably secured to the plate 21 as by welding, brazing or otherwise securing it thereto. The bolt 27 is positioned in the elongated aperture 27 of the plate 23 and has a clamping nut 28 positioned thereon.

On the plate 21 and coaxial with the edge 29 I provide an outer indicia table 30 and an inner indicia table 31. The outer indicia table 30 is divided into a plurality of degrees to indicate the pitches of plumb cuts for common and jack rafters from naught to twelve pitch and the inner table 31 is similarly divided to indicate the pitches of plumb cuts for hip and valley rafters.

The portion 32 of the upper edge of the quadrant plate 23 is used as a gauge to be set at the various pitch indicia of the tables 30 and 31 to set the flange 25 at the desired degree to the blade back 18.

In operation when the operator desires to mark a line on a plank at right angles to one edge thereof he places the 90° face 17 against the edge of the plank and draws a line along the blade back 18. When the operator desires to mark a line at 45° to one edge he places the 45° face 19 of the body on the side opposite the plate 21 against the edge of the plank and draws a line along the blade back 18. Or he may swing the quadrant plate 23 to its innermost position and place the flange 25 thereof against the edge of the plank. If the operator desires to mark a 15° or 75° line on a plank he places the 15° face 20 against the edge of the plank and draws a line along the blade back 18.

When the operator desires to mark a plumb cut pitch on a common rafter he swings the quadrant to a position wherein the edge 32 thereof is in line with the desired pitch mark on the table 30, he then tightens the nut 28 to firmly clamp the quadrant plate 23 in the adjusted position. Thereafter the operator places the quadrant flange 25 against the side of the rafter and draws a line along the blade back 18.

When the operator desires to mark a plumb cut pitch on a hip or valley rafter he swings the quadrant to a position wherein the edge 32 thereof is in line with the desired pitch mark on the table 31, he then tightens the nut 28 to firmly clamp the quadrant plate 23 in the adjusted position, thereafter the operator places the quadrant flange 25 against the side of the rafter and draws a line along the blade back 18.

The plate 21 adjacent to the open edge thereof

is provided with a scale **33** shown as divided into twelfths of an inch and which may be used for general scaling purposes.

The outer face of the plate is provided with a data table **34**. This table includes a number of columns. Column A designates the roof pitch or rise in inches per foot of run. Columns B and C indicate the diagonal lengths in inches and twelfths of an inch, respectively, for common and jack rafters while Columns D and E give the length in inches and twelfths of an inch, respectively, of hip and valley rafters. The table may be used for determining the rafter lengths and may also be used in figuring brace lengths and may be used for such other purposes as foundation layouts, etc.

From the foregoing description it will be apparent that I have provided a novel saw handle including angle finding means thereon and other data which is simple in construction and highly efficient in use.

I claim:

In a device of the class described, a blade having a straight edge thereon, a supporting body secured to and extending above the blade, said body having a first straight edge thereon arranged at right angles to the said straight edge of the blade, said body having a second straight edge thereon intersecting the first body straight edge and inclined to the first body straight edge, said body having a third straight edge thereon inclined at an angle to the second body straight edge, a plate member secured to said body, said plate member having straight edges aligned with the said first, second and third body straight edges, a quadrant member mounted on said plate member to pivot over the plate member about an axis disposed adjacent to the intersection of the first and second body straight edges, said quadrant member having a flange thereon directed towards said blade and adapted in one position to engage the second body straight edge to limit the movement of the member, said flange in another position being in alignment with the first mentioned body straight edge, said plate member having a data table thereon, said table including common and hip and valley rafter lengths for various pitches, said quadrant member including a portion alignable with said data table and means to hold said quadrant member in adjusted position.

CLYDE I. WELCH.