

Feb. 7, 1928.

1,658,175

A. L. SEARLE

COMBINATION SAW AND SQUARE

Filed Nov. 10, 1925

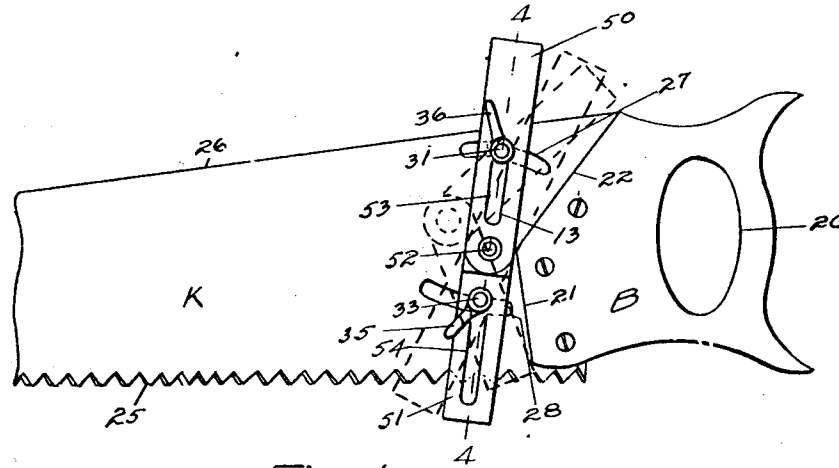


Fig. 1.

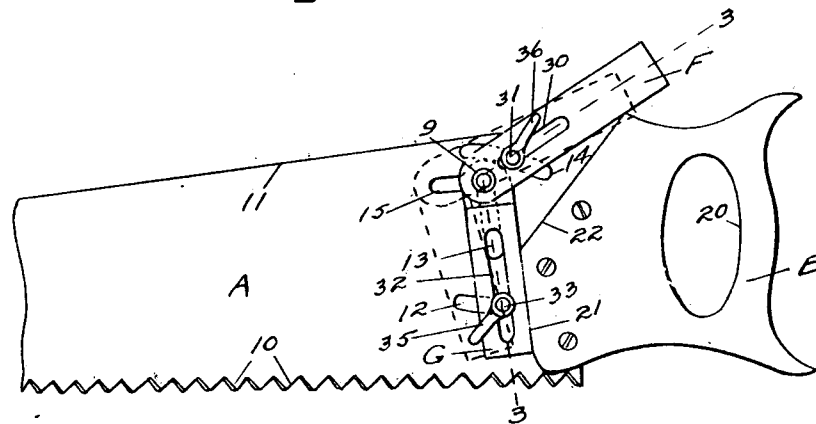
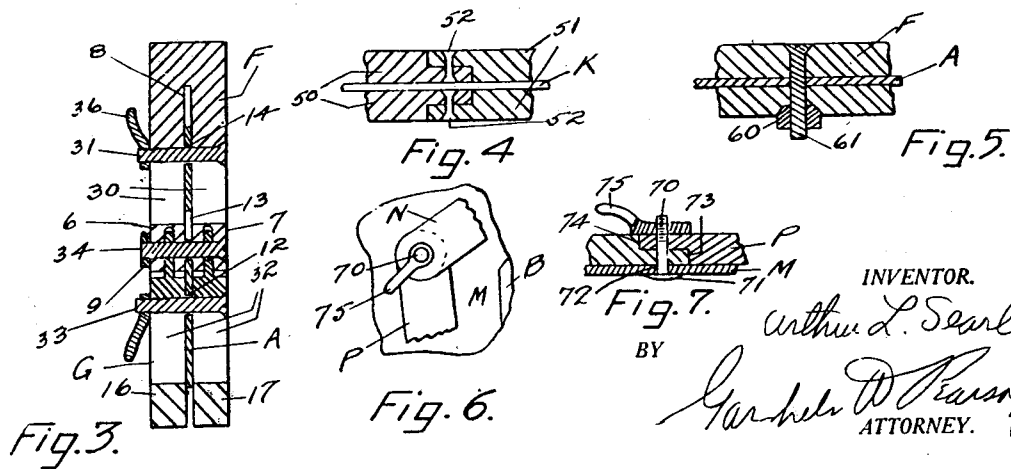


Fig. 2.



INVENTOR.

Arthur L. Searle

BY

Garth W. Pearson
ATTORNEY.

UNITED STATES PATENT OFFICE.

ARTHUR L. SEARLE, OF METHUEN, MASSACHUSETTS.

COMBINATION SAW AND SQUARE.

Application filed November 10, 1925. Serial No. 68,103.

This invention relates to attachments for carpenters' saws.

It is substantially a double-angle bevel square combined with a wood saw.

6 The device is particularly useful for cutting roofing timbers, as when the angles for the plumb cut and scarf cut of a hip roof have been determined, both can be set on the saw and can be used either for a right or
10 left pitch without the necessity of putting aside the saw or bringing out a bevel square.

In the drawings, Fig. 1 is an elevation showing a saw with my device attached and set at one angle;

15 Fig. 2 shows a similar saw with a slight modification of the device set at two different angles;

Fig. 3 is a section on line 3—3 of Fig. 2;

20 Fig. 4 is a partial detail in section showing the pivot construction as on line 4—4 of Fig. 1;

Fig. 5 is a detail in section showing a modification of the setting means;

25 Fig. 6 is an elevation of a modification; and

Fig. 7 is a sectional view of Fig. 6.

In Figs. 2 and 3, A represents the blade of a saw having opposite the teeth 10 the
30 straight edge 11.

30 B is the handle which has the usual handle hole 20. Where the handle adjoins the blade it has an abutment the side edges of which are preferably cut at the top 22 at an angle of 45° with straight edge 11, and at
35 the bottom 21 at an angle of 90° with straight edge 11.

Through the saw blade A are pierced the two curved setting slots 12 and 14, and, as shown in Figs 2 and 3, between these is a
40 straight pivot slot 13 from which at an angle is also an extension slot 15.

The main feature of my device is the pivoted double-angle arm comprising two straight-edged sections F and G, each of
45 which straddles the saw blade A. Section F has two legs 6 and 7 one on each side of a slot 8 as shown in Fig. 3. Section G is formed of two strips 16 and 17 one on each side of blade A. The legs or strips of each
50 section are of sufficient length to allow great freedom of movement from the pivot 34 which passes through pivot slot 13, and joins the two sections together. As shown in Fig. 3, I may use the round nut 9 on the end of
55 pivot 34.

Through each leg of section F passes a

longitudinal slot 30, and through section G passes a longitudinal slot 32.

Through slots 30 and 14 passes an adjusting bolt 31, on the end of which is a locking
60 lever 36 which works on the principle of those used in a bevel square, by turning which the pivot is locked in position, and through slots 32 and 12 passes an adjusting
65 bolt 33, on the end of which is a locking lever 35.

It will be readily seen that if a forty-five degree cut and a ninety degree cut are desired, the members F and G can be moved
70 back against 22 and 21, and locked by 36 and 35, and thus these angles can be used.

If a 90° angle and another angle is desired, the parts can be adjusted as shown in Fig. 2. If a single angle is desired, the parts can be adjusted as shown in Fig. 1.
75 If an angle of extreme acuteness is desired, the pivot 34 can be pushed up, over and back into slot 15, and such an angle can be obtained. As a rule however, the radius of
80 action is not so extreme but what section G can be set for one cut, and F for a different cut.

As shown in Figs. 1 and 4, instead of using a locking lever on the pivot, I can connect
85 the two sections 50 and 51, which correspond with F and G, by two headed rivets 52, 52, entirely omitting the pivot slot 13. Slots 53 and 54 correspond with 30 and 32, and slots 27 and 28 correspond with 14 and 12. Saw blade K has teeth 25 and a straight
90 edge 26. Handle B is the same as in Fig. 2.

Instead of a locking lever I may, as shown in Fig. 5, in place of either 35 or 36 or nut 9, have a bolt 61 on which screws the nurl
95 nut 60 which may be partly countersunk as shown. This may be used in place of 34.

By having my sections straddle the saw blade, I can use either of the angles at which they are set for a right-hand cut or a left-hand cut.
100

The principal feature of my device is the double-angle arm which may be applied in several ways. It may preferably straddle the blade, but as shown in Figs. 6 and 7,
105 may be on one side only.

In this construction M is the saw blade with a straight edge not shown, while N and P are the two sections which are mortised together at 73 and 74; and through these parts, and also through hole 72 in blade M,
110 passes a bolt 70 having a head 71 and the locking lever 75.

With this construction any two angles can be set, but it cannot be used for right and left cuts, as can the straddle construction. The only hole through the saw blade is at 5 72, the setting slots such as 27, 28, or 12 and 14, being entirely omitted.

I claim:

1. The combination with a saw having a blade with one straight edge and a handle 10 having on each side an abutment part of which is at an angle of ninety degrees and the other part forty-five degrees with the straight edge, said blade having two curved setting slots, and a pivot slot between them; 15 of a double-angle arm comprising two straight-edge sections, each of which straddles the saw blade, said sections being pivoted together by a pivot which passes through and is slidable in the pivot slot 20 and can be fixed in position therein, each arm having a longitudinal slot; and adjusting bolts each of which passes through an arm slot and through a setting slot whereby the arms can be fixed in adjusted position. 25
2. The combination with a saw having a blade with one straight edge, said blade having two curved setting slots; of a double-

angle arm comprising two straight-edge sections, each of which straddles the saw blade, said sections being pivoted together, 30 each arm having a longitudinal slot; and adjusting bolts each of which passes through an arm slot and through a setting slot whereby the arms can be fixed in adjusted position. 35

3. The combination with a saw having a blade with one straight edge; of a double-angle arm comprising two straight-edge sections, each of which straddles the saw blade, said sections being pivoted together; 40 and means whereby the arms can be fixed in adjusted position whereby four angles may be formed between the respective straight-edge sections and the straight edge of the saw blade. 45

4. The combination with a saw having a blade with one straight edge; of a double-angle arm comprising two straight-edge sections; and means whereby the arms can be fixed in adjusted position whereby a plu- 50 rality of angles may be formed between the straight-edge sections and the straight edge of the saw blade.

ARTHUR L. SEARLE.