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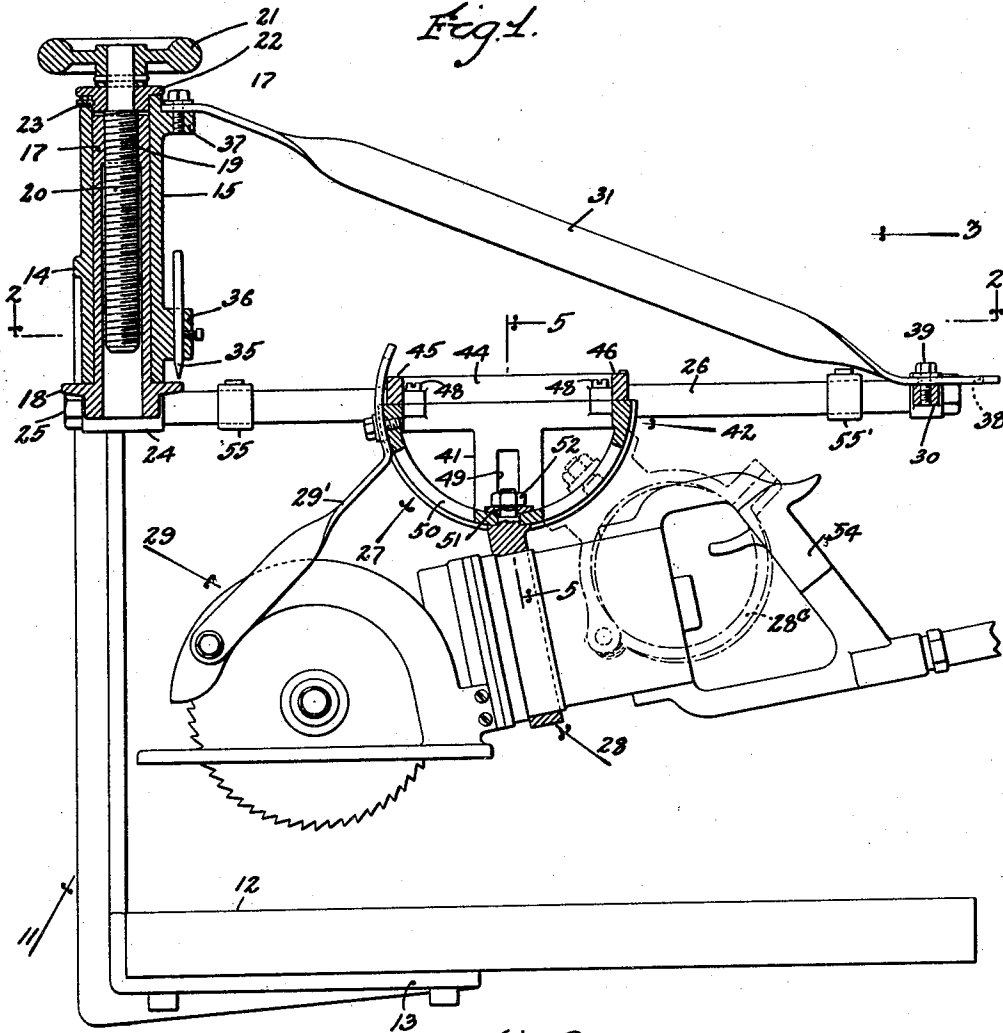
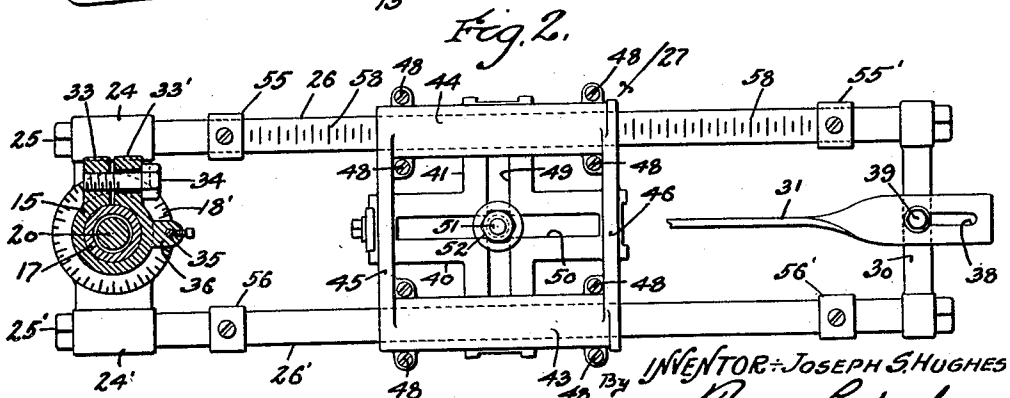
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PORTABLE SAW SUPPORT

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2 Sheets-Sheet 1



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PORTABLE SAW SUPPORT

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This invention has to do with portable, power driven saws, and is more particularly related to supporting devices, whereby saws of this character may be held in predetermined positions to form what is, in effect, a bench or table saw, which may be adjusted for use, either as a cross cut saw or a rip saw.

The portable saws to which this invention relate ordinarily consist of a motor, which is mounted in a frame and which is associated with a circular saw. The entire device is made of such proportions that it can be conveniently handled by hand.

It is a primary object of this invention to produce a saw support of the class described, which is of simple form and construction, can be economically manufactured, is light in weight so that it can be conveniently carried from place to place, and is so constructed that it may be easily assembled and disassembled.

It is frequently desirable, in cutting lumber for large jobs, to cut numerous pieces on a fixed bevel, and it is, therefore, an object of this invention to produce a support of the class described, whereby the saw may be adjusted and held in various angular positions to obtain miter cuts during either ripping or cross cutting operations.

The general construction of the device contemplated by this invention comprises an upright frame, a substantially horizontal arm, which is mounted upon the frame, and a cradle which is slidably mounted upon the arm. The cradle is so constructed as to receive a clamp which, in turn, supports the portable saw. The arm which carries the cradle is attached to the frame in a manner such that it may be adjusted both vertically and angularly, and the cradle is so constructed that the saw may be rotated to various angular positions.

Details in the construction of a preferred form of my invention, together with other objects attending its production, will be best

understood from the following description of the accompanying drawings, in which

Fig. 1 is an elevational view, partly in section, showing a preferred form of my invention, which is equipped with a standard form of portable saw.

Fig. 2 is a partial plan section, which may be considered as having been taken substantially in a plane represented by the line 2—2 in Fig. 1.

Fig. 3 is an end elevation, which may be considered as having been taken substantially in the direction of the arrow 3 in Fig. 1.

Fig. 4 is an inverted plan view of the cradle used to support the saw, and may be considered as having been taken substantially in a plane represented by the line 4—4 in Fig. 3, and

Fig. 5 is a sectional elevation, which may be considered as having been taken substantially in a plane represented by the line 5—5 in Fig. 1.

More particularly describing the invention as herein illustrated, reference numeral 11 indicates an upright frame which is clamped upon a base member 12 by means such as an angular bracket or brackets indicated at 13.

The frame 11 is preferably made in the form of an inverted U or an open A, having a substantially horizontal top cross member 14. The cross member 14 is provided with a vertical sleeve 15, which may be cast integrally with the frame 11, and is shown as extending partly above and partly below the cross member 14. The sleeve 15 is shown as having mounted therein an intermediate sleeve 17, the lower end of which is provided with a collar 18, which is adapted to engage the bottom of the sleeve member 15. This intermediate sleeve member 17 is internally threaded, as indicated at 19, so as to receive a downwardly threaded shank or pin 20, the upper end of which is provided with a hand wheel 21. A smooth bushing 22 is interposed

between the hub of the hand wheel 21 and the upper end portion of the sleeve 15, and is held in a fixed position within the sleeve 15 by means of a set screw 23.

It will be seen from the construction so far described that the hand wheel 21 and the pin 20 associated therewith may be used to raise and lower the intermediate sleeve 17.

The collar member 18, which is formed on the lower end of the intermediate sleeve 17, is provided with two oppositely extending arm supporting sleeve members 24 and 24'. These members receive the inner ends 25 and 25' of horizontal arms 26 and 26'.

The horizontal arms 26 and 26', which will be hereinafter referred to as cooperating to form an arm member, support a cradle 27 which, in turn, supports a clamp member 28. The clamp member 28 is adapted to receive and hold a portable saw, generally indicated by reference numeral 29, and an adjustable saw brace 29' is mounted upon the cradle member, as shown in Fig. 1, to assure rigid support of the saw.

The outer ends of the arms 26 and 26' are attached to each other by means of a yoke 30, and the yoke is, in turn, connected at its midpoint to the upper end of the outer sleeve or standard 15 by means of a brace 31.

It has been previously mentioned herein that the arm member, consisting of the arms 26 and 26', was adapted to swing in a horizontal plane, and in order that the unit may be held rigidly in any predetermined angular position following such swinging movement, I prefer to make the outer sleeve 15 in the form of a clamp, as indicated in section in Fig. 2. This is done simply by providing a slot or split in the sleeve 15, and equipping the lower end of the sleeve with a pair of cooperating ears 33 and 33', which are adapted to receive a bolt or pin 34.

For the purpose of facilitating the angular adjustment of the arm member, I provide the collar member 18 with graduations, as indicated at 18', which cooperate with a pointer 35, mounted in a boss 36, formed upon the front of the sleeve 15.

To obviate the possibility of binding between the brace 31 and the arm member during the swinging movement thereof, I show the upper end of the brace as being pivotally mounted upon an outwardly extending boss, as indicated at 37, and the lower end of the brace is provided with a slot 38, which receives a retaining pin 39 that engages the yoke 30 at its mid-point.

The cradle member 27, which carries the saw supporting clamp 28, is made in the form of two crossed and downwardly extending arcuate members 40 and 41. These members are mounted or cast upon the lower edge of a head frame 42, which comprises sleeves 43 and 44 and transverse brace members 45 and 46.

For convenience in assembling the unit, I prefer to make the sleeves 43 and 44 in two sections, as is perhaps most clearly illustrated in Fig. 5. These sections are shown as being connected by means of bolts, generally indicated by reference numeral 48.

The two arcuate members 40 and 41 are provided with intersecting slots 49 and 50, and the saw supporting clamp 28 is supported from the arcuate member by means of a bolt 51, which extends upwardly through the slots in the arcuate member and is provided with a nut 52, which engages the upper surface of the arcuate member from which the clamp is supported.

In the use of this saw supporting unit as a cross cut saw, the saw is supported in the manner indicated in the full line position shown in Fig. 1, with the clamping bolt 51 situated at the center of the two intersecting arcs 40 and 41. The timber to be sawed is placed upon the base member 12, and the saw is advanced therethrough by sliding the cradle 27 upon the arm member which comprises the two extending arms 26 and 26'.

The portable saws used in connection with my invention are ordinarily provided with a handle, as indicated at 54, but it is to be understood that this sliding movement can be conveniently effected by grasping the cradle 27.

It is frequently desirable to use a saw of this character in dado work, in which event the vertical adjustment comes into play for adjusting the position of the saw unit so as to obtain the desired depth of dado cut.

It is also frequently desirable to provide cuts or dados which extend only partially through the width of the timber, and for the purpose of gaging the width of such cuts, I provide the arm members 26 and 26' with opposite disposed adjustable stops, indicated by reference numerals 55, 55' and 56, 56'.

For the purpose of obviating the necessity of measuring the width of a cut of the latter class described above, I provide one of the arm members 26 with a series of graduations, as indicated at 58, and by using these graduations in cooperation with the stop members 55, 55', it will be seen that the width of the cut can be easily governed without the use of a rule or other measuring device.

It is sometimes necessary or desirable in sawing timber to provide a compound miter cut, and in making such cut, the clamp member 28 is swung to an angular position, as indicated at 28a in dot and dash lines in Fig. 3, and the arm member is also swung about its vertical pivot point to the desired angle. It will be apparent, therefore, that the saw support contemplated by this invention may be used in making any desired type of cross cut.

In using the saw support for ripping timber, the clamp 28 is adjusted to the position 28b as shown in dot and dash lines in Fig. 3,

where the saw is held in vertical plane which is parallel to the longitudinal axis of the timber supported upon the base plate 12. In operating the saw in this manner, cradle 27 is clamped in a predetermined fixed position by means of the stop members 55, 55' and 56, 56', and the timber is advanced below the saw. In making a bevel rip cut, the clamping member is swung in the arcuate member 40 to a position such as is indicated in the dot and dash lines at 28c in Fig. 1, and the arms may be vertically adjusted to obtain the desired depth of a miter rip cut.

It will be seen from the above description that this invention provides a saw support in which the saw may be readily adjusted for use, either as a rip saw or a cross cut saw, and that the cradle member 27, consisting of two slotted arcuate members 40 and 41, provides means whereby the saw can be conveniently set to cut at any desired vertical or horizontal angle. The support itself comprises very few parts and its manufacture and assembly are very simple.

It is to be understood that, while I have herein described and illustrated one preferred embodiment of the invention, the invention is not limited to the precise construction set forth above, but includes within its scope whatever changes fairly come within the spirit of the appended claims.

I claim as my invention:

1. For use in combination with a portable power saw, a support embodying: a frame; an arm member mounted on said frame; a cradle slidably mounted on said arm member said cradle embodying curved intersecting slots; and a clamp adapted to travel in said slots and support said saw, said clamp being adapted for angular adjustment in said slots in two intersecting vertical planes.

2. For use in combination with a portable power saw, a support embodying: a frame; an arm member rotatably mounted on said frame; a cradle slidably mounted on said arm member, said cradle embodying intersecting arcuate slots; and a clamp adapted to travel in said slots and support said saw, said clamp being adapted for angular adjustment in said slots in two intersecting vertical planes which are normal to each other.

3. For use in combination with a portable power saw, a support embodying: a frame; an arm member mounted on said frame; a cradle mounted on said arm member, said cradle comprising two intersecting arc members; and a clamp adjustably mounted on said arc members for receiving said saw.

4. For use in combination with a portable power saw, a support embodying: a frame; an arm member mounted on said frame; a depending cradle provided with an arcuate slot mounted on said arm member; a clamp for supporting said saw; and means in said slot for adjustably supporting said clamp.

5. For use in combination with a portable power saw, a support embodying: a frame; an arm member mounted on said frame; a depending cradle provided with intersecting arcuate slots mounted on said arm member; a clamp for supporting said saw; and cooperative means in said clamp and said slots for adjustably supporting said clamp upon said cradle.

6. For use in combination with a portable power saw, a support embodying: a frame; an arm member mounted on said frame; a depending concave slotted cradle mounted on said arm; a clamp for supporting said saw; and means in the slot in said cradle for supporting said clamp.

7. For use in combination with a portable power saw, a support embodying: a frame; an arm member mounted on said frame; a downwardly concave cradle provided with intersecting slots mounted on said arm member; a clamp for supporting said saw; and means adapted for reception in the slots for supporting said clamp.

8. For use in combination with a portable power saw, a support embodying: a frame; a set of parallel arms mounted on said frame; a cradle comprising two intersecting arc members mounted between and extending downwardly from said arms; a clamp adapted to support said saw; and means for supporting said clamp from either of said arc members.

9. For use in combination with a portable power saw, a support embodying: a frame; a set of parallel arms mounted on said frame; a cradle comprising two intersecting slotted arc members mounted between and extending downwardly from said arms; a clamp adapted to support said saw; and means adapted to be received in said slots for supporting said clamp from either of said arc members.

10. For use in combination with a portable power saw, a support embodying: a frame; a set of parallel arms mounted on said frame; a cradle comprising two intersecting arc members slidably mounted between and extending downwardly from said arms; a clamp adapted to support said saw; and means for supporting said clamp from either of said arc members.

11. For use in combination with a portable power saw, a support embodying: a frame; a set of parallel arms mounted on said frame; a cradle comprising a head frame slidably mounted on said arms; two downwardly extending intersecting arc members mounted on said head frame; a clamp adapted to support said saw; and means for supporting said clamp from either of said arc members.

12. For use in combination with a portable power saw, a support embodying: a frame; a set of parallel arms mounted on said frame;

a cradle comprising a head frame slidably mounted on said arms; two downwardly extending slotted intersecting arc members mounted on said head frame; a clamp adapted to support said saw; and means adapted to be received in said slots for supporting said clamp from either of said arc members.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 28th day of September, 1929.

JOSEPH S. HUGHES.

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