Sept. 9, 1958 S. E. HUGHES 2,851,070

MACHINE FOR EDGE-TRIMMING IRREGULAR SURFACES IN BOARDS

Filed July 19, 1957 2 Sheets-Sheet 1

Fig. 1

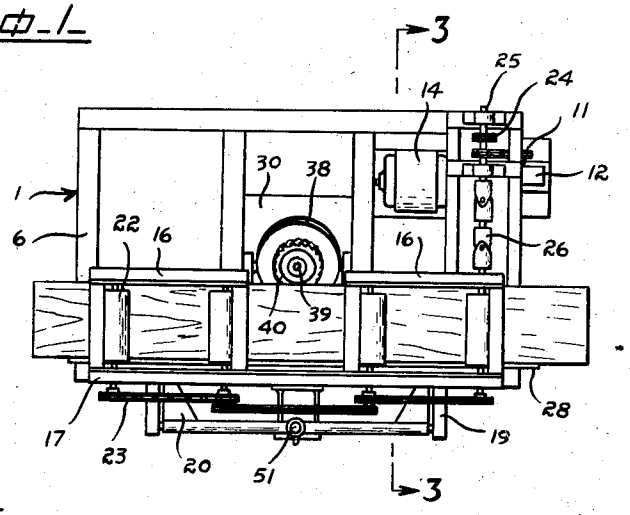


Fig. 3

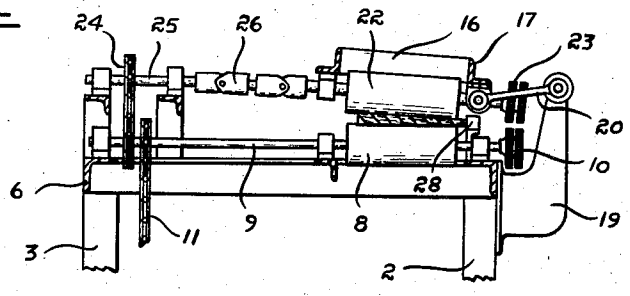
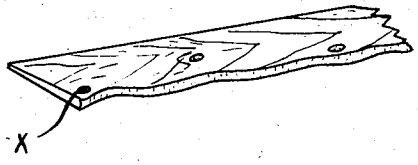


Fig. 5



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FIG. 2.

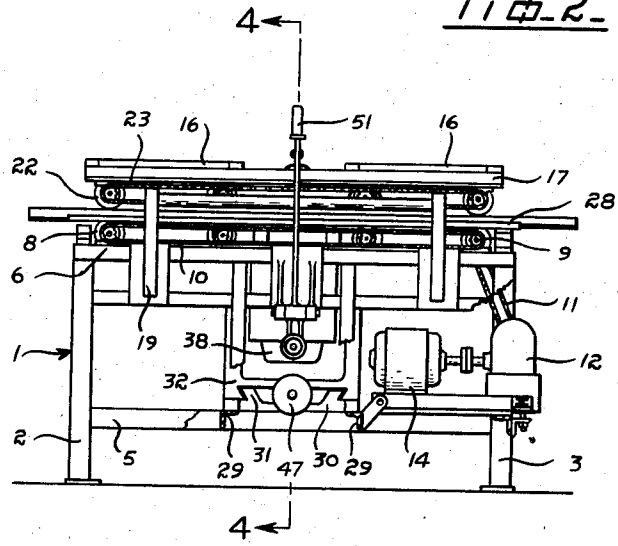
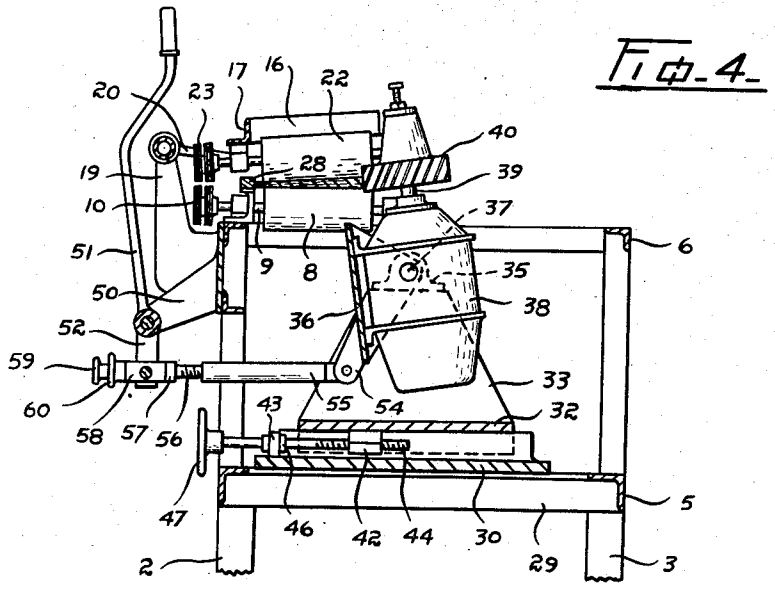


FIG. 4.



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MACHINE FOR EDGE-TRIMMING IRREGULAR SURFACES IN BOARDS

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Application July 19, 1957, Serial No. 672,969

7 Claims. (Cl. 144—117)

My invention relates to improvements in rustic siding edge trimming machines.

The object of the device is to provide means for trimming and beveling the lower edge of a length of siding to an irregular line, such as that of a board cut from a log wherein the lower edge of the board is a portion of the original outer face of the log or the cambium layer.

In order to present a most pleasing effect to such siding it is desirable first to use knotty pine or other wood species where tight knots are visible, second to so trim the wood that no knot close to the lower edge of the board shall be cut into but to be able to leave a margin of natural wood between any knot and the said lower edge of said board.

A further object is to provide operable means whereby the line cut along the lower edge can be varied at will to suit the knot disposition in each board and also to suit the desires of the operator.

The invention will be more fully described in the following specification and shown in the accompanying drawings, in which:

Figure 1 is a plan view of the invention.

Figure 2 is a longitudinal elevation.

Figure 3 is a transverse section taken on the line 3—3 of Figure 1.

Figure 4 is a transvesre section taken on the line 4—4 of Figure 2.

Figure 5 is a perspective view of a length of beveled siding having a lower edge trimmed by the trimming machine.

In the drawings like characters of reference indicate corresponding parts in each figure.

The numeral 1 indicates generally a frame having front legs 2 and rear legs 3. The legs are connemted together to form a base frame 5 and an upper frame 6. On the upper frame 6 two spaced sets of bed rolls respectively indicated by the numeral 8 are provided, the rolls of each set being fitted on shafts 9 which are collectively coupled by chains 10 and are severally driven by a drive chain 11 from the reduction gear 12 of a motor 14. Mounted directly above the bed roll sets 8 are two spaced frames 16 which are connected together at the front by a horizontal angle iron 17 and are hingedly coupled to a pair of forwardly and upwardly extending brackets 19 by floating links 20.

Press rolls 22 are journaled in the frames 16 and are operatively coupled together by chain and sprocket drives 23. The press rolls 22 are primarily driven from one of the shafts 9 by a chain and sprocket drive 24 to a shaft 25 which is provided with a flexible shaft portion 26, which allows the press rolls to rise and fall and assume such an angle from the horizontal as to allow siding which has parallel sides, or beveled siding of any particular bevel angle to be held down upon the bed rolls and conveyed lengthwise of the frame without slippage. A fence 28 extends lengthwise of the upper frame 6 and is slidably engaged by the front edge of the siding as said siding is being conveyed through the machine by the rolls.

A pair of transverse members 29, see Figure 4, support a bed plate 30 having inverted V-guides 31, and

slidably mounted within the guides is a traverse member 32 having side plates 33. The side plates 33 carry a pair of trunnion bearings 35 in which a cradle 36 is rockingly mounted on trunnions 37. The cradle 36 supports a motor 38 having a shaft 39 upon which is fitted a cutter head 40 of appropriate type for cutting the lower edge of siding lengths fed between the bed rolls 8 and the press rolls 22.

The traverse member 32 is provided with a depending nut 42 and the bed plate 30 is provided with an apertured lug 43 in which a feed screw 44 is rotatably journalled and collars 46 are fitted on the feed screw to prevent any endwise movement of said screw. The feed screw is fitted at its outer end with a hand wheel 47 by which the traverse member 32 and its motor may be moved transversely to adjust the cutter 40 generally to different widths of siding lengths.

A forked bracket 50 projects forwardly of the frame 1 and in said bracket is an upstanding hand lever 51 having at its lower end a fork 52.

A lug 54 is mounted near the lower edge of the cradle 36 and pivotally connected to said lug is a pull rod 55 which is internally threaded at its outer end and is fitted with an elongated screw extension 56. The threaded extension 56 is fitted with a stop collar 57 and extends through a trunnion nut 58 which is engaged by the fork 52 of the hand lever 51. The extreme outer end of the screw extension is non-rotatably fitted with a hand knob 59 by which the screw may be advanced into or retracted from the pull rod 55, and between said knob and the trunnion nut 58 a nut 60 is provided for the purpose of locking the threaded extension against rotation in the trunnion nut and in the pull rod 55.

In operation, the operator sits facing the machine where he can see the cutter head 40 and the interspace between the inner pair of press rolls 22. Lengths of siding are progressively fed between the bed rolls 8 and the press rolls 22 which are switched on to run continuously. The siding, if beveled, is so placed that its broad or bottom edge is facing the cutter 40 and the operator will, by manipulating the hand lever 51, draw the cutter to engage the adjacent edge of the board and cause said edge to become irregular and assume the appearance of a board cut from a log in which one edge of said board was as the natural line of the log. As the depth of the cut by the cutter 40 is increased, the motor shaft 39 will swing in a vertical plane and increase the angle of the bevel formed by the cutter.

In use the operator will normally watch closely the disposition of any knots in a board and where a knot is close to the edge to be trimmed he will cause the cutter to skirt around the knot as indicated at X in Figure 5, thus adding materially to the artistic appearance of the finished product.

If wide boards are to be treated, it may be desirable to move the motor 38 and its cutter 40 rearwardly by manipulation of the hand wheel 47 and the feed screw 44 and to readjust the position of the threaded extension 56 of the pull rod 55 to dispose the hand lever 51 in a suitable position for convenient use.

Obviously if narrow boards are to be trimmed the above adjustment movements would be reversed.

What I claim as my invention is:

1. An edge trimming woodworking machine comprising a frame having a bed for receiving a board to be trimmed, means for moving the board along the bed, a motor having a vertical shaft mounted below the bed, a cutter upon the motor shaft, said motor being mounted for free swinging movement below the bed to present the cutter to an edge of the board as it is moved lengthwise through the machine, and manual means for instantly and

selectively rocking the motor to cause engagement of the board by the cutter.

2. An edge trimming woodworking machine as claimed in claim 1 wherein the motor is mounted on a traverse member movable within the frame and means are provided for moving said transverse member transversely of said frame whereby its rocking movement is confined to different desired transverse positions to trim boards of any desired widths.

3. An edge trimming woodworking machine comprising a frame, bed and press roll means mounted on the frame for moving a board to be trimmed lengthwise of said frame, a traverse member mounted within the frame, a motor having a trunnion mounted upon the traverse member, said motor having a shaft and a cutter thereon, a manually operable lever swingably mounted on a part of the frame, a pull rod extending between the motor and the lever, said lever serving to rock the motor and move the cutter into and out of engagement with an edge of the board to trim it.

4. An edge trimming woodworking machine as claimed in claim 3 wherein the motor is capable of being moved transversely of the frame to different operating positions and said pull rod is extensible to leave the mounting of the manually operable lever in its normal swingable position regardless of the position of said motor transversely of the frame.

5. An edge trimming woodworking machine as claimed in claim 3, wherein the pull rod includes a threaded extension member threadedly engaging the pull rod to effect a desired change in the operating length of the pull rod.

6. An edge trimming woodworking machine as claimed in claim 1, wherein the bed upon which the board is adapted to be fed is provided with a plurality of bed rolls and a plurality of press rolls, said bed rolls and press rolls being driven by mechanical means and at least one of said press rolls being driven through a flexible shaft.

7. An edge trimming woodworking machine as claimed in claim 1, wherein the bed upon which the board is adapted to be fed is provided with a plurality of bed rolls and a plurality of press rolls, said bed and press rolls being driven by mechanical means, said press rolls being pivotally mounted at one end to swing in a vertical plane and at least one of said press rolls being driven through a flexible shaft.

References Cited in the file of this patent

UNITED STATES PATENTS

396,513	Saucier	Jan. 22, 1889
944,489	Linderman	Dec. 28, 1909
1,335,547	Bartholomew et al.	Mar. 30, 1920
1,853,554	Dennis	Apr. 12, 1932
2,252,112	Bailey	Aug. 12, 1941
2,725,084	Carlson	Nov. 29, 1955

FOREIGN PATENTS

616,952	Germany	Aug. 9, 1955
636,506	France	Jan. 12, 1928