

F. G. PRICE.
MACHINE FOR FINISHING LUMBER.
APPLICATION FILED DEC. 28, 1908.

967,054.

Patented Aug. 9, 1910.

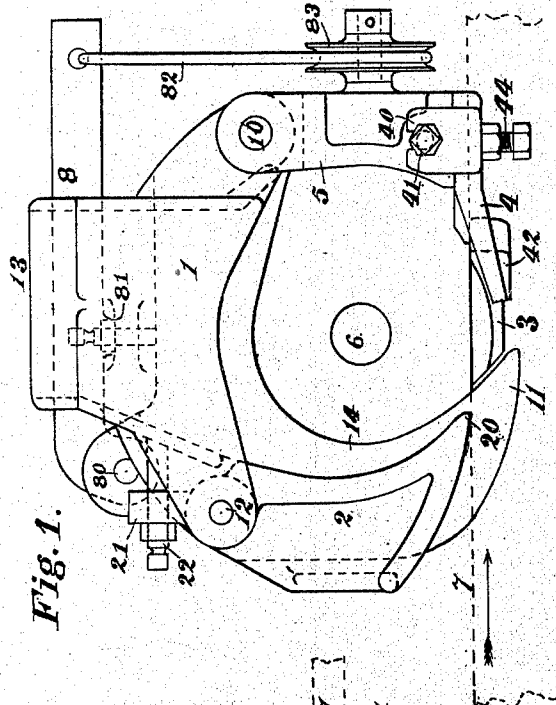


Fig. 1.

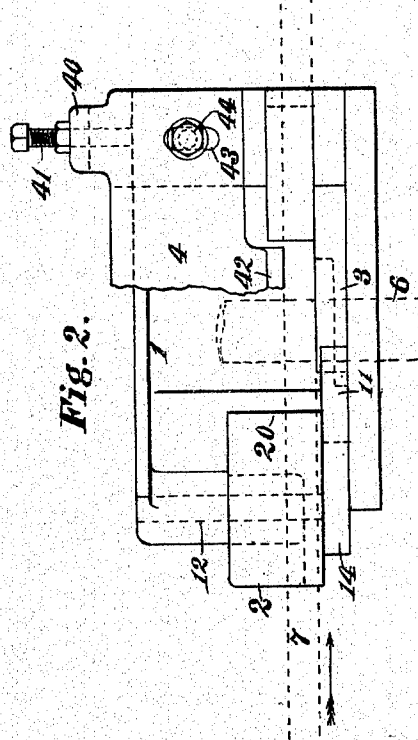


Fig. 2.

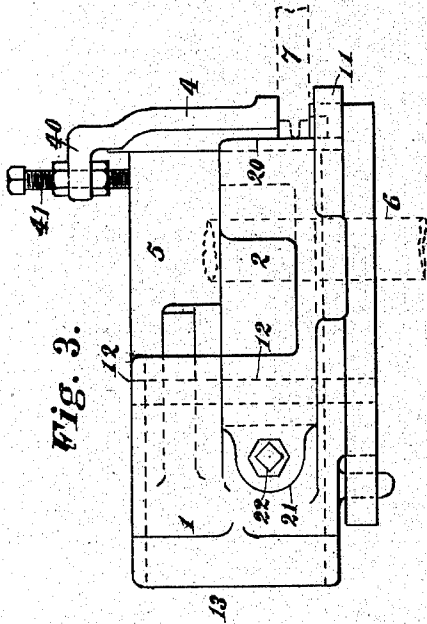


Fig. 3.

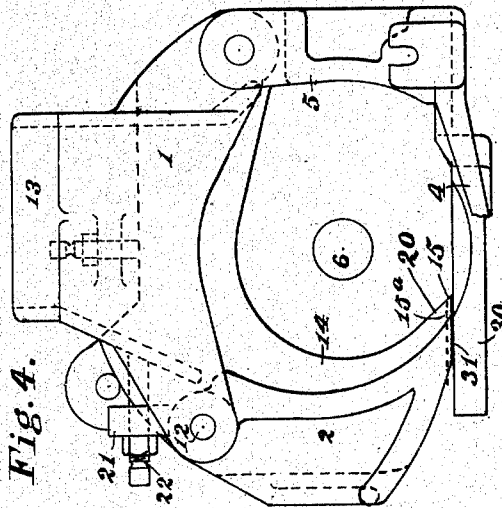


Fig. 4.

WITNESSES.

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UNITED STATES PATENT OFFICE.

FRANK G. PRICE, OF SEATTLE, WASHINGTON.

MACHINE FOR FINISHING LUMBER.

967,054.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed December 28, 1909. Serial No. 535,356.

To all whom it may concern:

Be it known that I, FRANK G. PRICE, a citizen of the United States, and resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Machines for Finishing Lumber, of which the following is a specification.

My invention relates to improvements in certain devices which are employed as auxiliary or supplemental to cutter heads in finishing lumber.

My invention relates particularly to improvements in the construction of the guides or chip-breakers which engage the edge of the lumber which is being dressed, and to the support which lies beneath the lumber at this point.

The object of my invention is to provide these devices of a design and construction such that they will act more perfectly than analogous devices now in use.

Broadly stated the object of my invention is to improve the efficiency and perfection of operation of said devices.

My invention comprises the novel parts and combinations of parts which will be hereinafter described and more particularly defined by the claims terminating this specification.

In the drawings I have shown my invention embodied in the form which is now preferred by me.

Figure 1 is a plan view of a hood employed in connection with cutter heads and having my invention thereon. Fig. 2 is an elevation of the same parts taken from the side of Fig. 1 which is toward Fig. 2. Fig. 3 is an elevation taken from the side of Fig. 1 which is toward Fig. 3. Fig. 4 is a plan view showing the old form of construction.

In connection with the use of cutter heads, particularly those which are mounted to turn upon a vertical shaft, it is common to employ a hood which closely encircles the cutter head and catches all the chips, discharging them at one side so that they may be conveniently removed and taken care of so as not to inconvenience the work being done. I have shown my invention as applied to such a hood, although its use is not limited to such a construction. I will first describe

such a hood and the application of my invention thereto.

The location of the shaft which carries the cutter head is shown at 6, this being dotted in Figs. 2 and 3. I have not shown the cutter head, as this hardly constitutes a part of my invention and is not essential to a proper understanding of my invention by any person having any acquaintance with the art.

At one side of the cutter head is a fixed member 5, which closely approaches the path of the knives and extends upward high enough to reach well above the knives. To this at 10 is pivoted the body of a hood 1 so that it may swing horizontally. This hood carries a guide or chip-breaker 2, which engages the edge of the board being dressed and by such engagement is moved backward or forward as necessitated by the varying widths of boards being dressed. The outward or backward movement is caused by the surplus width of the board and the return movement and the pressure upon the board, by a lever 8 which is hinged at 80 to a fixed pivot and engages the hood at 81. A cord or chain 82 secured to this lever passes over a guide wheel 83 and has a weight or spring attached thereto.

At 13 the hood is hollow and open to the rear, through which opening the chips are discharged as they leave the cutters. At the lower part of the hood is a plate or arm 14, which lies below the level of the lumber being dressed and partly encircles the bottom of the cutter head, being of a hook-like shape. In the old form of construction this member was as shown in Fig. 4, its end being cut off so that it closely approached or contacted with the vertical surface 31 of the member 30 which constitutes the supporting guide for the board being dressed. The position of the board while passing through the machine is shown by the dotted lines at 7 and its direction of movement by the arrow. In this old construction the vertical surface 15 of the movable member 14, is opposed to the vertical surface 31 of the fixed guide and support 30. The guide and chip breaker 2 which engages by its tip with the edge of the board being dressed, is pushed back by such an amount as the

board exceeds its finished width, or to such a point as will open a gap between the vertical surfaces 15 and 31, or say to the point represented by the dotted line 15^a. Into this gap small chips are very likely to fall and prevent the complete return of the chip-breaker and guide 21. As a consequence, the edge of a board may be imperfectly supported or engaged by said chip breaker, and as a consequence of this the finished edge may be badly splintered and roughened, thus injuring the quality and possibly causing its rejection. It also necessitates stopping operations long enough to clean out these chips, which, if occurring frequently amounts to much loss of time and product.

In my form of construction the guide and chip breaker 2 is essentially the same as in the old construction, the change lying in the cutting away of the part 3 and the extension of the hook or arm 14 as the point 11, in this way getting rid of the opposed faces of the parts 15 and 31 of the old construction. By this slight change in construction I insure the constant and proper operation of the chip breaker 20, holding it securely against the surface of the board being dressed, thereby preventing the splintering and roughening of the board edge and lowering the high class of work done. I also eliminate the delays incident to clearing out the chips from between the surfaces 15 and 31. The final result of all this is the elimination of a considerable percentage of inferior product and an addition in the amount of the product.

While I have shown my invention as mounted upon a hood it is evident that such connection is not essential.

The lumber in passing the cutter head rests upon the upper surface of the part 3 and is held down thereon by a foot 42 which is carried by a plate 4, which in turn is secured to the side face of the part 5 by a bolt 44 which extends through a slot 43, whereby this plate may be adjusted in vertical position. The vertical adjustment is by means of a bolt 41 which passes through a hori-

zontally extending arm 40 and enters the part 5, being provided with locking nuts above and below the arm 40.

What I claim as my invention is:

1. In a machine for finishing the edge of lumber, the combination with a yielding edge guide and chip breaker, of an arm lying beneath said guide and extending beneath the board said arm having a slight clearance with the board.

2. In a machine for finishing the edge of lumber, the combination with a yielding edge guide and chip breaker, of an arm lying beneath and movable with said guide and extending beneath the board being dressed.

3. In a machine for dressing the edge of lumber, the combination with a yielding edge guide, of a supporting member therefor extending beneath the board being dressed and with its upper surface slightly beneath the lower surface of the board.

4. A swinging hood for cutter heads having a lip or arm extending under the board being dressed.

5. A swinging hood for cutter heads having a lip or arm extending beneath the board being dressed at a point opposite the edge guide.

6. In a machine for finishing lumber, the combination with a yielding edge guide, of a supporting member therefor extending beneath the board being dressed at a point opposite said edge guide, said parts being connected to swing together.

7. The combination with a swinging hood for cutter heads, having a lip or arm extending beneath the board in all operative positions, of an edge guide carried by said hood and engaging the edge of the board just ahead of the cutters.

In testimony whereof I have hereunto affixed my signature at Seattle, Washington, this 20 day of December, 1909.

FRANK G. PRICE.

Witnesses:

HENRY L. REYNOLDS,
G. A. SPENCER.