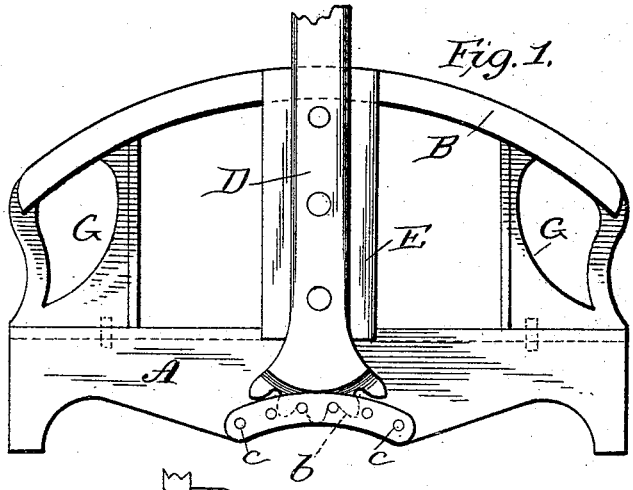
(No Model.)

W. T. HESS.

TRIMMING MACHINE.

No. 490,848. Patented Jan. 31, 1893.

Fig. 1.



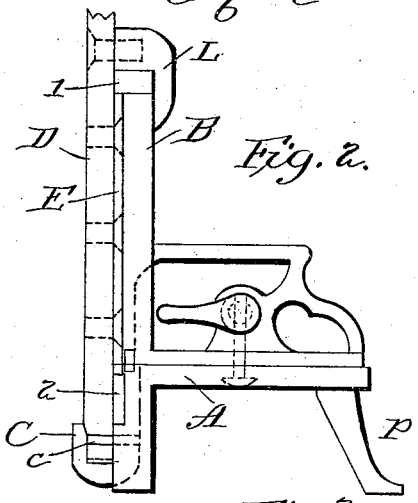
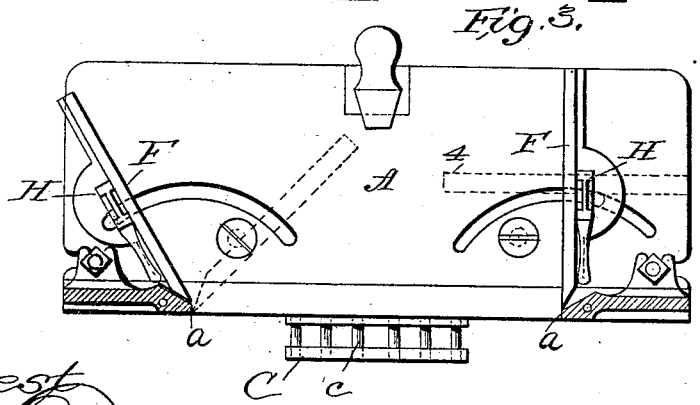


Fig. 2.

Fig. 3.



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WILLIAM T. HESS, OF GRAND RAPIDS, MICHIGAN.

TRIMMING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 490,848, dated January 31, 1893.

Application filed March 25, 1892. Serial No. 426,340. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. HESS, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Trimming-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention is a wood trimming machine and it relates to that class in which a lever is used carrying the cutting knives, the lever being pivotally supported at its lower end and operating against a plane face of the bed and frame and making a shear and draw cut against a vertical post or the edge of an adjustable gage.

My invention consists in the details of construction which tend to simplify the machine and increase its efficiency without adding to its complexity or cost.

I have shown in the accompanying drawings: In Figure 1 a rear view of my improved trimmer; an end elevation in Fig. 2 and in Fig. 3 a plan view.

The bed A, is supported by a depending leg *p* on the front and two legs on the rear, these being formed by an angular extension of the bed in vertical plane and providing a support for the operating lever as hereinafter described. To this bed is bolted an upper frame B, which is preferably made in one piece, being cast, and consists of posts G and an arched intermediate portion between the posts connecting their upper ends. These posts G are arranged with their outer faces in the same plane as the vertical face of the bed which also indicates the line of travel of the cutter so that with the post as a support for the work the cutter will make a shear cut in connection with the said post. These posts have a plain vertical face at right angles to the outer face which is on the line of the track, and this face *a*, serves as a bearing for the work in certain positions of the gage as hereinafter more fully set forth.

The knife E has a double edge and is removably secured to the lever D, so that it may be removed and replaced when worn. The lever D has its lower end made flaring and provided with teeth as *b*, and this end of the lever is supported in a curved rack the teeth of which are open and formed by pins *c*. The lever pivots on this rack and the cut may be shortened or lengthened by adjusting the lever to the rack in relation to the center of the trimmer, and this may be very easily done as the toothed end of the lever simply engages the pins of the rack and may be removed by simply lifting the lever upwardly.

In order to insure the action of the cutters in close proximity to the plane of the outer face of the bed and the frame B I make the outer plate C of the rack slightly flaring or beveled and bevel or flare the lower end of the lever D in like manner so that when the lever is inserted into the rack the tendency is to force the knife closely against the frame at the lower part and the same result is attained at the upper part by an overhanging lug L which fits over the upper edge of the arched part of the frame and thus the knives are kept close to their work and are prevented from springing.

If desired the lever at top and bottom may bear against projecting parts 1. 2. of the frame and the knife fit within a recessed portion as shown in Fig. 2 which will give a firmer bearing for the lever.

The inner faces of the posts G recede at an angle as shown in Fig. 2 and allow me to use a gage F in several positions and specially to throw it back beyond a line at right angles to the line of cut as shown on the left of Fig. 3 as the post may be utilized in this position of the gage to sustain the work. This gage I have shown in several positions: as thrown forward in Fig. 3 in dotted lines on the left, in which position it serves to support the work operated upon, and in full lines as thrown back leaving the post to support the work, and on the right of Fig. 3 as in line with the post so as to serve partially to support the work in connection with the post. This gage is of substantially the shape shown in Fig. 2 its upper edge being practically parallel with its lower so that when the gage is shifted to a position shown at 4 in dotted lines on the right of Fig. 3 parallel to the line of cut the work may be placed over the upper edge and thus enable me to secure not only the bevel but also an angular cut from the lower to the upper edge of the piece to be trimmed. The gage moves in a slot in the bed being held by

a pin and it is clamped by means of an eccentric H operated by a handle and thus it may be securely fastened to the bed in any position.

I claim as my invention:

1. In combination, the frame the rack thereon, the lever extending alongside the frame and having its lower end toothed and engaging the rack to turn or fulcrum thereon and the knife secured to the lever and extending approximately parallel therewith, said knife being arranged entirely above the turning point of the lever, substantially as described.

2. In combination the bed, the knife, the lever carrying the same and having a toothed end, the upper guide on the frame for the lever, and the fulcrum for the lower end of the lever consisting of the rack arranged on the frame below the lower toothed end of the lever and engaging the same, said lever being vertically movable in relation to the said rack, whereby it may be adjusted thereon, substantially as described.

3. In combination, the bed, the knife, the lever extending alongside the bed and carrying the knife, said lever having a lower toothed end, the rack on the bed having a wall along its outer edge only whereby the lever and knife may move freely toward the bed, the said outer wall and the face of the lever being beveled substantially as described.

4. In combination the bed, the knife, the lever carrying the same, and having its lower end curved and provided with teeth, the curved guide way for the lever and the fulcrum for its lower end, consisting of the rack curving downwardly from the center to the ends whereby the bearing point of the lever is constantly falling as the lever is swung aside substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM T. HESS.

Witnesses:
ELMER R. THOMPSON,
C. VAN CLEVE GANSON.