(No Model.) 2 Sheets—Sheet 1.

W. E. FROST.

MACHINE FOR STRIPPING LEATHER BOARD.

No. 384,032. Patented June 5, 1888.

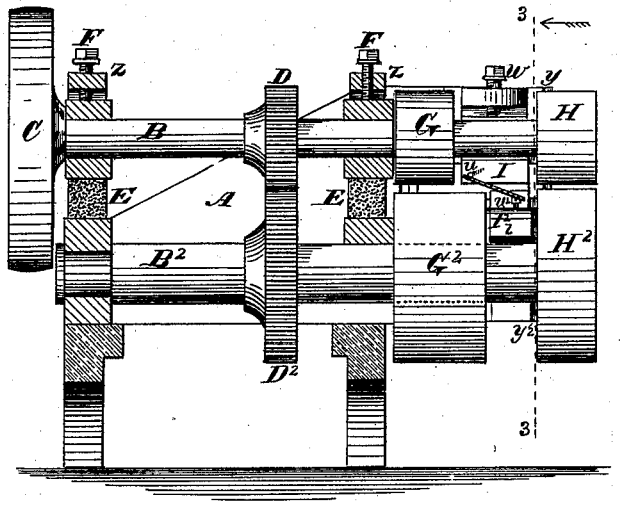

Fig. 1.

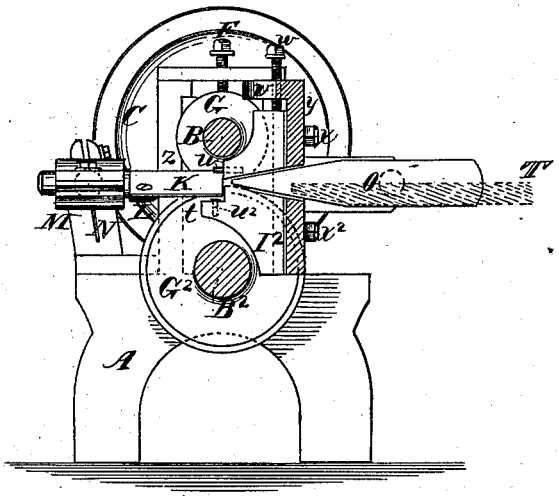

Fig. 2.

Witnesses.
J. E. Hoss.
James H. Williams.

Inventor.
Walter E. Frost.
by Stephen Moore.
attorney.

(No Model.) 2 Sheets—Sheet 2.

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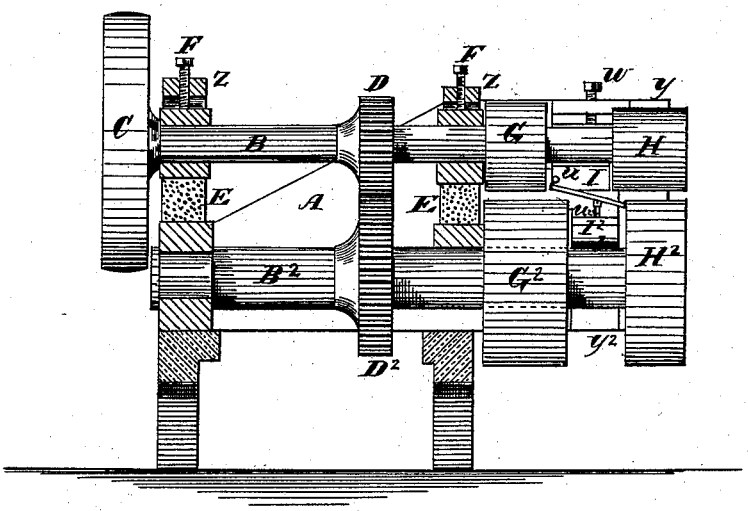

Fig. 3.

Witnesses,
James H. Williams.
J. E. Horn,

Inventor,
Walter E. Frost,
by Stephen Moore,
Attorney.

UNITED STATES PATENT OFFICE.

WALTER E. FROST, OF LEWISTON, MAINE, ASSIGNOR TO THE MOUSAM MANUFACTURING COMPANY, OF MAINE.

MACHINE FOR STRIPPING LEATHER-BOARD.

SPECIFICATION forming part of Letters Patent No. 384,032, dated June 5, 1888.

Application filed September 23, 1887. Serial No. 250,524. (No model.)

To all whom it may concern:

Be it known that I, WALTER E. FROST, of Lewiston, in the county of Androscoggin and State of Maine, have invented a new and useful Improvement in Machines for Stripping Leather-Board, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to apparatus for cutting leather-board or similar material into beveled strips for manufacture into heel-stiffeners for boots or shoes, and is an improvement on the machine described in Letters Patent of the United States, No. 166,837, dated August 17, 1875, granted to Emery Andrews, of Maine. The machine described in said patent consists of two sets of feeding-rolls with a knife and guides arranged between their inner ends and independently of them. While this machine was a great improvement over those that had preceded it, yet it has been found that a still further improvement might be made by relieving the friction between the board and the guides as it passes between them to the knife, so that it may not be torn and clog the machine. This is the object of my invention, which consists of the combination, with a knife and guides for properly presenting the board to the edge of said knife, of a double set of feeding-rolls, one of which extends inward beyond the edge of the knife, and thus forms a moving support for the board beneath a part of the cutting-edge of the knife; and, further, of the combination, with a knife and guides arranged as above stated, of a double set of feed-rolls, one of each set being made to extend inward beyond the cutting-edge of said knife; and, further, of the combination, with such an arrangement of knife and guides, of a double set of feed-rolls, one roll of each set (preferably the lower ones) being considerably enlarged, and one of such enlarged rolls extending inward beyond the cutting-edge of the knife, as is set forth in the following description, referring also to the drawings, of which—

Figure 1 is an elevation, partly in section; Fig. 2, an end view, partly in section; and Fig. 3, an elevation, partly in section, showing a modification of the machine shown in Fig. 1.

Similar letters of reference indicate like parts.

As my improvement relates solely to the guides and rolls in their relation to the knife, I refer to the patent above mentioned for a more detailed description of other parts of the machine which may be used in connection with my improvement.

A frame, A, supports in housings *z z* a pair of horizontal shafts, B B^2, and to the outer end of one of these shafts, B, a driving-pulley, C, is attached. These shafts are made to revolve in opposite directions by the spur-gears D D^2, which are held apart by elastic cushions of rubber, E E, between the journal-boxes and pressed together by the vertical screws F F, which are threaded in the caps of the housings and press upon the boxes of the upper shaft.

Outside of the frame the shafts B B^2 carry two sets of rolls, G G^2 and H H^2, the distance of the shafts from each other being so adjusted that the peripheries of the rolls on the one shall be separated from the others by a distance somewhat less than the thickness of the material to be stripped, so that by the pressure of the rolls on its opposite sides it will be carried past the knife as they are revolved. Attached to the frame A, or forming a part thereof, is a face-plate, *y* y^2, which extends in front of the rolls, but has an opening or slit opposite the line where the peripheries of the rolls approach each other to allow the material to be fed to the rolls. This plate *y* y^2 supports two guides, I I^2, between the sets of rolls, the screws *x* x^2 serving to hold them to the plate. The holes in the plate through which the screws pass may be slotted to allow for vertical adjustment, and a screw, *w*, tapped into a projection on the top of the plate, serves to make delicate adjustment of the upper guide, I.

The knife K is a rectangular blade with a sharpened end, and is supported so that its cutting-edge is behind the guides and between the ends of the rolls, so as to cross the horizontal line between the rolls diagonally. The cutting end of the knife is held in position by the guides, a pin, *u*, in the upper one holding one side, and a screw, u^2, in a projection from the lower one serving to hold and adjust the other.

It will be noticed that the roll G^2 is wider than its partner G, and extends beneath the knife for nearly one-half its width, and the guide I^2 is correspondingly narrower than the other guide I. This is a feature of my invention. The roll G^2, by extending beneath the knife, (where there is much pressure, by reason of the leather-board being forced apart by the knife,) forms a moving support, instead of the guide being full width, as in the patent referred to.

If desired, the top roll, H, may be extended in the same manner toward G and the guide I correspondingly narrowed, as shown in Fig. 3. It will be observed, also, that the lower rolls, G^2 H^2, are much larger in diameter than the upper ones. This gives a larger surface to support the leather-board being stripped, because of the less curvature of the periphery. The changes thus made in the mechanism shown in the patent referred to are such as to make the machine practical on stock that could not be used on the former machine.

I claim—

1. The combination of the knife K, supported by the guides I I^2, with the feed-rolls G G^2 H H^2, one of which rolls, G^2, extends inwardly beyond the cutting-edge of the knife K, arranged and to operate substantially as and for the purpose set forth.

2. The combination of the knife K and the guides I I^2 with two sets of rolls, between which the said knife and guides are arranged, one of the rolls on each set—viz., G^2 and H—extending inward beyond the cutting-edge of the knife, substantially as described.

3. The knife K and the guides I I^2, in combination with the feed-rolls G H and the enlarged rolls G^2 H^2, one of which extends inward beyond the cutting-edge of the knife, substantially as specified.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 2d day of June, A. D. 1887.

WALTER E. FROST.

Witnesses:
HERBERT J. PEARSON,
F. O. WATSON.