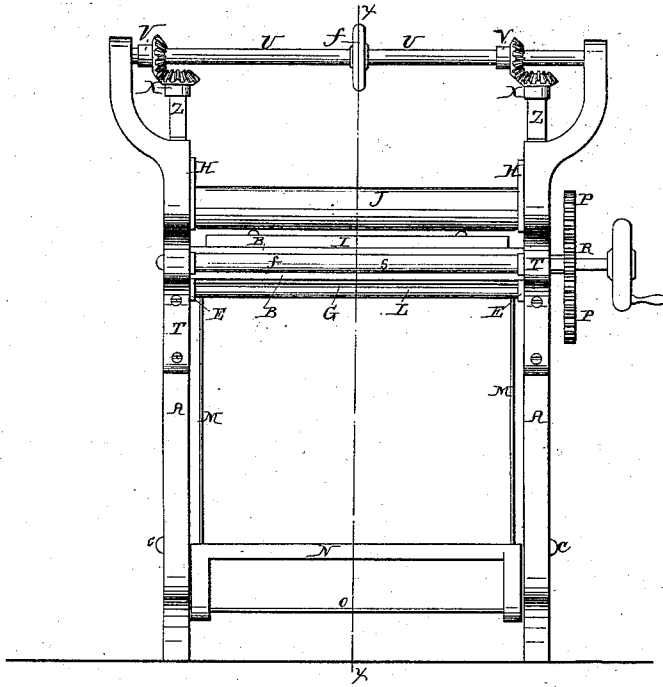


# J. A. Safford Splitting Leather.

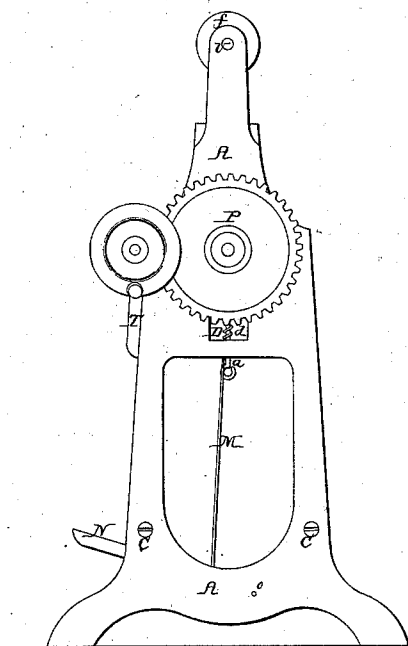
N<sup>o</sup> 31746.

Fig; 1.

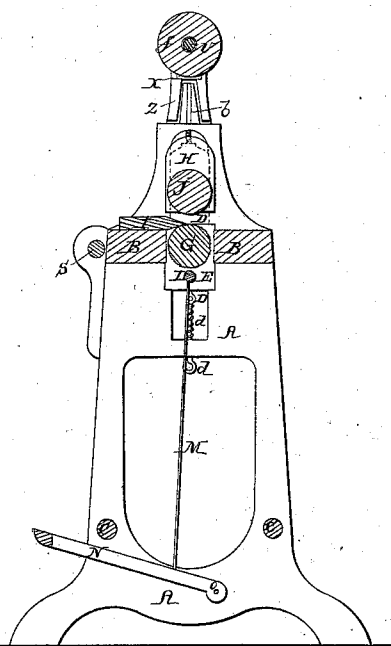
Patented Mar. 19, 1861.



Fig; 2.



Fig; 3.



Witnesses;  
Darius  
John P. Jacobs

Inventor;  
O. Hannay  
Atty for J. A. Safford

# UNITED STATES PATENT OFFICE.

J. A. SAFFORD, OF BOSTON, MASSACHUSETTS.

## MACHINE FOR SPLITTING LEATHER.

Specification forming part of Letters Patent No. 31,746, dated March 19, 1861; Reissued December 5, 1865, No. 2,123.

*To all whom it may concern:*

Be it known that I, J. A. SAFFORD, of Boston, in the county of Essex and Commonwealth of Massachusetts, have invented a certain new and useful Improvement in Machines for Skiving or Splitting Leather, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing of the same, making part of this specification, in which—

Figure 1, represents a front elevation of a machine having my improvements applied thereto; and Fig. 2, an end elevation of the same. Fig. 3, represents a vertical transverse section of the machine, taken through the line *x x* of Fig. 1, and looking toward the left side of the machine as represented in the drawing.

My invention consists in combining with a gage roll, (for regulating the thickness of the leather to be split) whose ends are simultaneously adjusted by the same means, a feed roll, susceptible of being depressed in a line parallel with the axis of the gage roll, either by the action of the operator, or the inequalities of the leather as they pass between the feed and gage rolls, so as to prevent choking or clogging of the machine, a thing of frequent occurrence in other machines.

To enable others skilled in the art to make, construct and use my invention, I will now proceed to describe it in detail, omitting a particular description of such parts as are not essential to a full understanding of my present improvement.

In the drawing, the working parts of the machine are represented as being mounted on a frame, consisting of two pieces or standards (A), connected together at or near their upper end by two cross beams (B), and at their lower end by two others (C). In each standard (A) is cut an opening (D) into which are fitted bearings (E), in which are mounted the two ends of the shaft (F) of the feed roll (G); and the bearings (H) of the two ends of the shaft (I) of the gage roll (J). These slots (D) in the standards form slides or guideways in which the bearings (E and H) are slid up and down as their respective rolls G and J are adjusted or regulated, for their individual purposes.

The lower or feed roll (G) has its periphery fluted or roughened, to prevent slippage on the leather, and to insure its being fed up

regularly and evenly to be split; and is mounted on bearings (E), which rest on spiral or other suitably shaped springs (*d*), the lower end of which rests or bears against the bottom of the slot, and their upper end against the underside of the bearings (E).

Through a mortise or an opening cut in that part of the standard which forms the underside of the openings (D), and through the center of the spiral springs (*d*) is passed a thumb screw (*a*), which takes into a female screw cut in the underside of the bearings (E), to prevent the displacement of the springs. Immediately below the feed roll is arranged a rod (L) which is secured to the side of its bearings (E). At each end of this rod are fastened the ends of two wire rods or connecting links (M), the lower ends of which are attached to the treadle (N), which in turn is mounted on a pivot rod (O) made fast to the lower ends of the standards (A), thus constructed by simply depressing the treadle (N) the feed roll (G) may be drawn down for a distance sufficient to clear the machine without varying, in any degree, the relative position of the gage roll (J) with respect to the knife; and therefore, while clearing the hide being split, when the machine is choked, prevents any waving of the leather being cut, or deviation in the thickness of the skiver or split part, as would be the case in other machines.

On the end of the shaft of the feed roll (G) is mounted and secured a cog wheel (P) which meshes into and receives motion from a small driving wheel (R) mounted on the driving shaft (S) from which motion is imparted to the machine, suitable bearings (T), for the support of the latter, being firmly bolted and secured to the standards (A) that constitute the frame work of the machine. On the upper end of these standards are formed lugs or horns, which curve outward and upward; in the ends of which are formed bearings for the support of the shaft (U). On this shaft are secured two beveled pinions (V) one at either end, which mesh into similar pinions (X) mounted on a screw shaft (*b*), the lower or screw end of which takes into a female screw cut in the upper side of the bearings (H) of the gage roll (J); standards (Z) for the support of the upper end of the screw shaft (*b*) being erected on and secured to the upper ends or heads of the

standards (A). By means of this arrangement of devices the two ends of the gage roll (J) are raised simultaneously together and in a line parallel with the plane of the knife (I), thus rendering it easy to adjust the machine to skive or split the leather to any required thickness, and, if necessary, to bevel or chamfer the leather.

The operation of the machine is as follows: The shaft (U) is first turned by means of the hand wheel (f) until the gage roll (J) is set to the required distance from the knife (I) to split the leather of the necessary thickness; motion is then communicated to the machine, on which, the feed roll (G) is slightly depressed, to permit the leather intended to be split to be inserted between it and the gage roll. Once inserted, the treadle is released from the pressure of the foot, so as to allow the springs (d) to act, and force or press the feed roll (G) firmly against the underside of the leather, on which the latter is fed forward against the cutting edge of the knife by the rotation of the feed rolls, when a skiver will be cut off of a thickness equal to the distance between the gage roll and knife. Or the gage roll may be raised and the leather inserted and the gage roll then depressed so as to cut the skiver of the required thickness.

In the event of the leather being of unequal thickness, the springs (d) that support the feed roll yield and allow the roll to

descend or ascend to a distance sufficient to compensate for the inequalities where the inequalities are not of too gross a nature, in which event the roll must be depressed by the operator until the obstacle has been overcome, otherwise the machine would choke. By this simple arrangement, difficulties are immediately overcome, which consumes much time and creates much labor and trouble to obviate in other machines.

Having thus described my improvement what I claim as new in leather splitting machines is—

Combining with the gage roll (J) whose ends are simultaneously adjusted by one operation, a feed-roll (G), so mounted on springs (d) that either end may be depressed to a distance sufficient to compensate for such inequalities in the leather being skived, as are not sufficient to choke the machine, when such arrangement is combined with a rod (L) or its equivalent, connecting links M, and treadle N, for the purpose of depressing both ends of the feed roll simultaneously to free the machine when choked, the whole being arranged, constructed and operated in the manner substantially as described.

In testimony whereof, I have hereunto set my hand to this specification.

J. A. SAFFORD.

Witnesses:

J. H. H. WILLIAMS,  
S. E. IRWIN.