

J. Edson,
Splitting Leather.

N^o 26,977.

Patented Jan. 31, 1860.

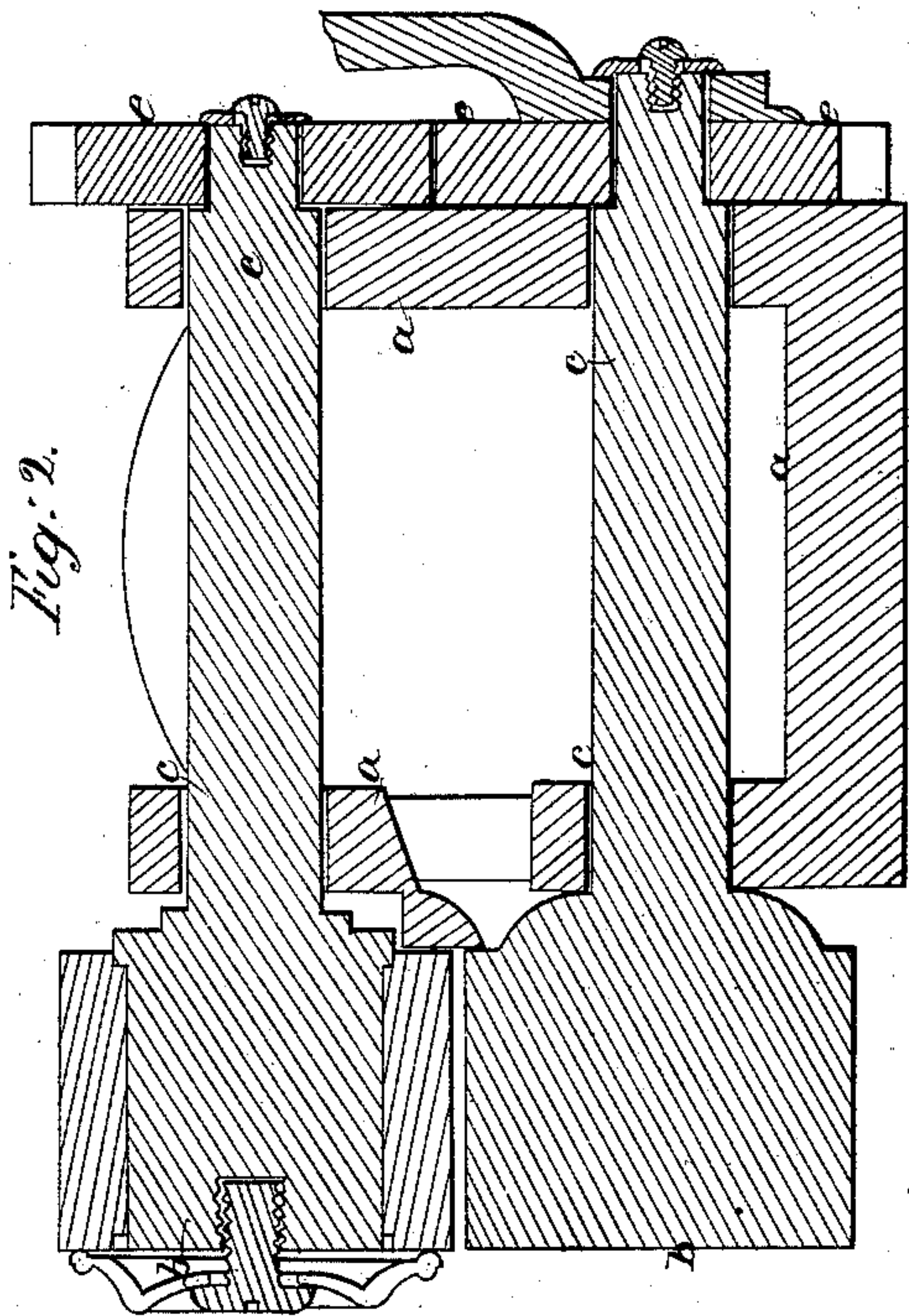


Fig. 3.

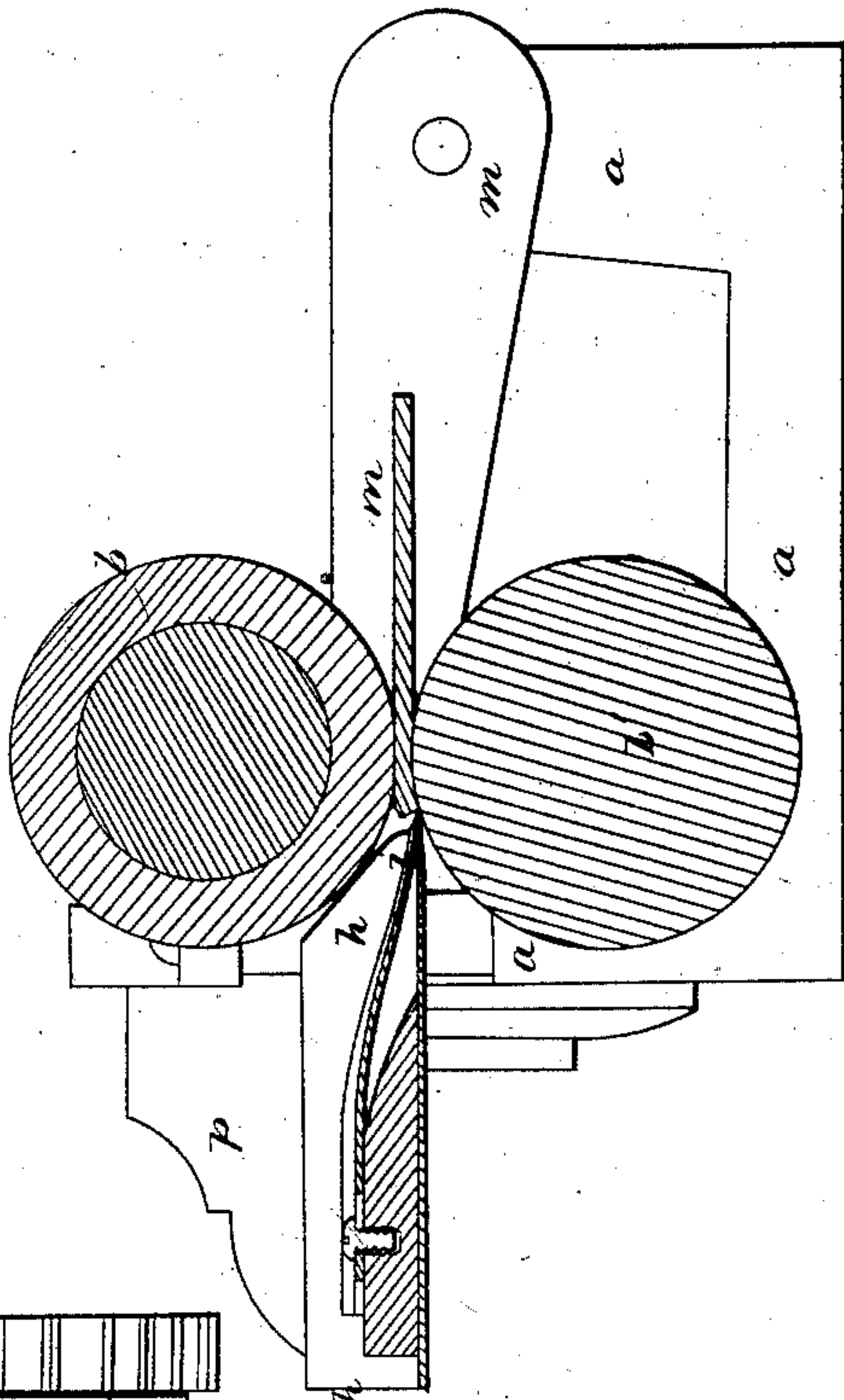
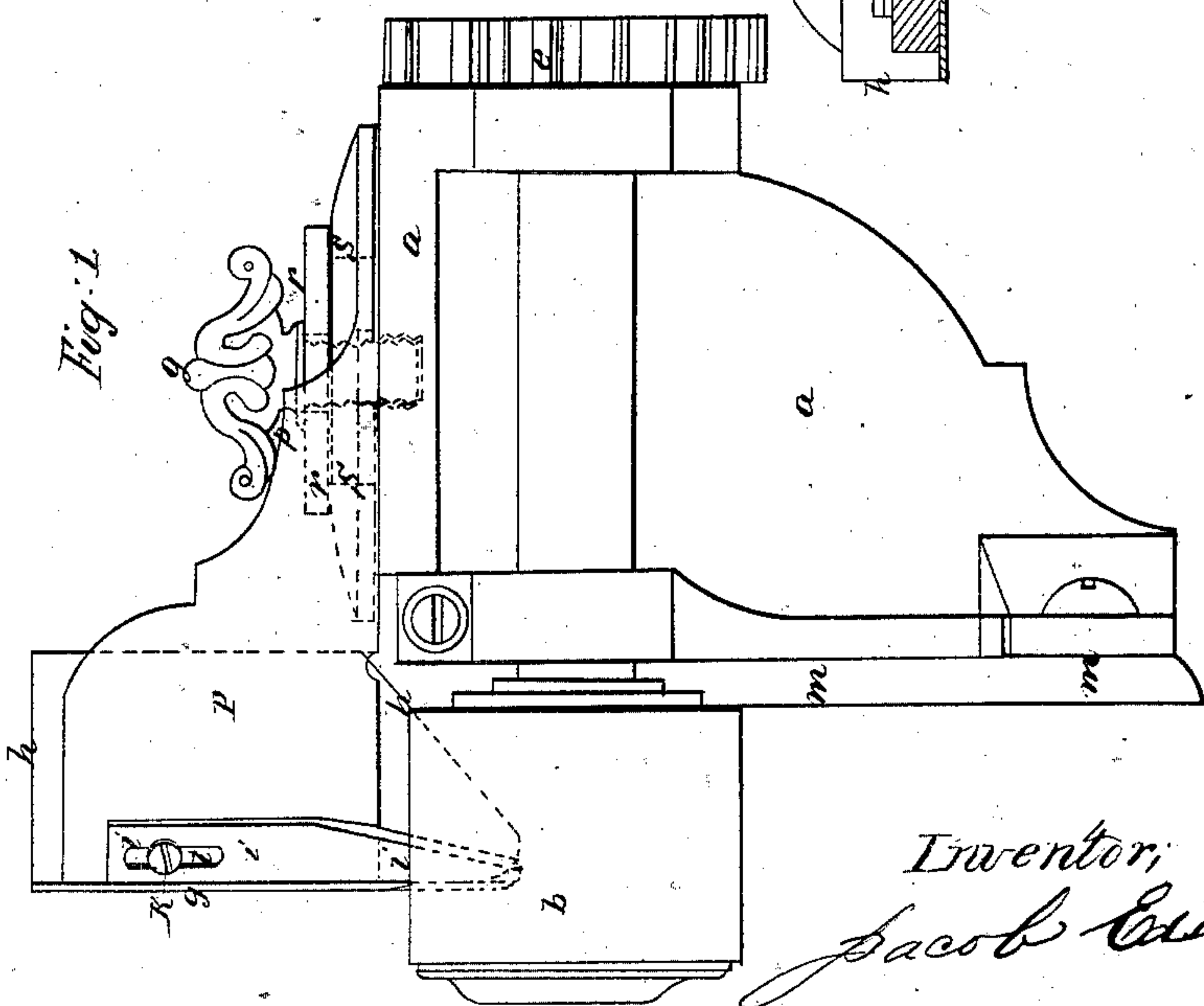


Fig. 1.



Witnesses;

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UNITED STATES PATENT OFFICE.

JACOB EDSON, OF BOSTON, MASSACHUSETTS.

MACHINE FOR CUTTING AND SPLITTING LEATHER.

Specification of Letters Patent No. 26,977, dated January 31, 1860.

To all whom it may concern:

Be it known that I, JACOB EDSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Leather Splitting and Cutting Machines, and that the following description, taken in connection with the accompanying drawings hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements by which my invention may be distinguished from all others of a similar class, together with said parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plate of drawings represent my improvements.

Figure 1 is a plan or top view of my machine. Fig. 2 is a vertical section taken in the plane of the line A B Fig. 1. Fig. 3 is a vertical section taken in plane of the line C D Fig. 1.

I feed the leather to be operated upon to the knife by means of an elastic roller composed either in part or wholly of india rubber or gutta percha, the leather being fed in between the elastic surface of this roller and that of a metallic or other roller. The ordinary mode of feeding leather by means of and between metallic rollers, has the disadvantage—(as they produce a hard, unyielding bearing upon the same),—of compressing the thicker portions of the inequalities of the hide, and rendering them harder and more compact than the other portions thereof, so that the knife cannot cut through them readily and evenly or without tearing. The use of an elastic feed-roller overcomes this difficulty, as it yields to the inequalities of the material to be cut and thus bears equally upon all portions of the hide whether thick or thin. Moreover this elastic roller, by its yielding a little, presents a longer bearing surface, or a bearing in a straight line, upon the leather, and thus gives a stronger feeding power than other feeding rollers which bear upon the material to be fed along only in one point of their circumference. I have also made an improvement in the cutter used by which the leather can be split either to any desired thickness or cut to a bevel for welts &c, and cut to a width at the same time. I effect this by the use of a bent knife, one edge or side of which stands in a verti-

cal direction or nearly so while the other edge forms any desired angle thereto, the two edges or sides being formed in one piece. This peculiar form of the knife, gives it great strength and stiffness, qualities very much desired in knives for splitting and cutting leather and enables me to perform two operations at a time upon the leather as above stated. I have also made an improvement which consists in using a tongue which is peculiarly applicable to my improved knife, and bears the leather upward against the feeding roller just in advance of the cutting edge, thereby holding the leather firmly at that point and preventing the liability of cutting the hide to varying widths, when a hard place occurs or of cutting the strip, by an upper or cross cut, entirely off, as otherwise might occur.

My last improvement consists in attaching the cutting tool to an adjustable stock, which can be so adjusted by one set screw as to change or set the cutters so as to be in a position to cut any desired width or split any desired thickness or bevel, at the same time.

a a a in the drawings represent the supporting framework of the machine.

b b' are the feeding rollers on shafts *c c*, put in motion by gears *e e*. The lower roller *b'* is a metallic one while the upper one *b* is covered with india rubber or gutta-percha or may be made entirely of either of these materials.

The leather *f* is fed between the rollers as shown in Fig. 3 to a bent knife *g—h*, the vertical portion *g* being that which cuts any desired width off the leather while the portion *h* is represented as cutting the beveled part of the leather for forming welts, &c. The part *h* of the knife instead of being at an acute angle with the part *g* can be made at a right angle thereto, so as to split leather instead of making a beveled cut, as will be readily apparent. The elastic roller *b* it will be seen by the drawings presents a longer bearing upon the leather than an unyielding one would, with the advantages herein above stated. The bent knife *g—h* by its peculiar form cuts the leather in two directions at the same time, viz; in width and in thickness or at any bevel, and this form also gives great strength and stiffness to the knife and thus produces true and even work. *i i* is a bent tongue, which bears the leather upward

upon the roll *b* just in advance of the cutting point and affords a rigid bearing thereto, so as to keep the leather to be operated upon, moving in its proper plane and direction. This tongue can be moved forward as fast as it becomes worn, by means of a set-screw *h* and groove or slot *l*.

In order that the cutter *g—h* may be set at any desired angle and also so as to cut off any desired width of strip, (*m m* being the guide bar against which the leather is fed along) I attach it by means of a set-screw passing through a slot or groove, (whereby it can be moved forward when worn, or removed for sharpening) to a stock *p p* attached to the framework *a a a* by means of a set screw *q* passing through a washer *r* and a sufficiently large aperture *s*—shown by dotted lines in Fig. 1,—to allow the said stock and consequently the cutters that are attached thereto, to be moved laterally for cutting different widths of strips or set at any desired angle for cutting different bevels for welts &c, the set-screw *q* and the washer *r* firmly holding the stock in any desired position.

Having thus described my improvements I shall state my claim as follows:

What I claim as my invention and desire to have secured to me by Letters Patent, is—

1. In machines for cutting and splitting leather, the bent knife so constructed as to cut the leather both to a width and a thickness—either in a horizontal or beveled line—at the same time, and whereby a cutter of great strength and stiffness is obtained, as set forth.

2. I claim the use of the tongue *i* operating upon the leather as described and for the purpose specified.

3. I claim attaching the cutter or cutters to a stock made adjustable so as to vary, according to the position in which the said stock is set, the width of the strip cut, and its bevel or angle, by means substantially as described.

JACOB EDSON.

Witnesses.

JOSEPH GAVETT,
ALBERT W. BROWN.