A. Keith,

Cutting Leather.

No. 112,353. Patented Mar. 7. 1871.

Fig 1.

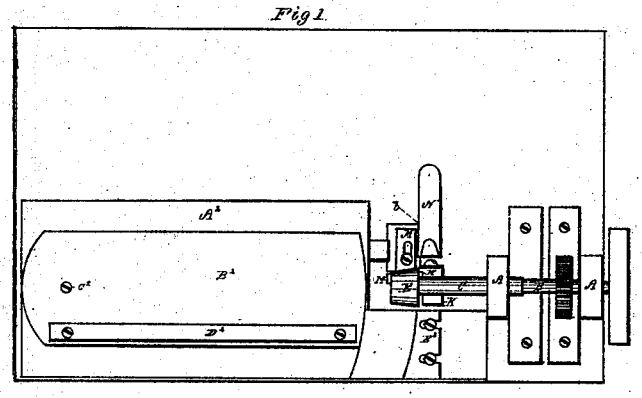


Fig 2.

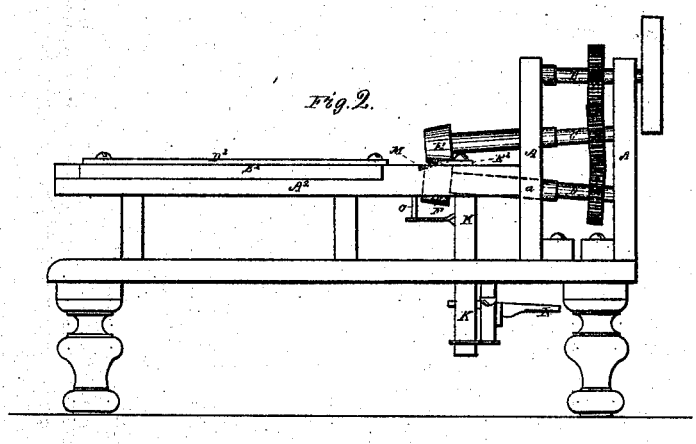


Fig 3.

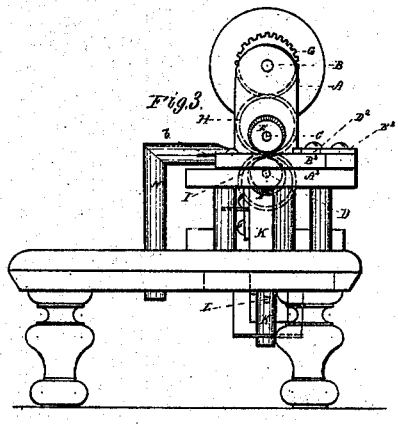


Fig 5.

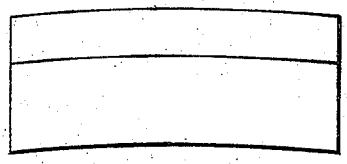
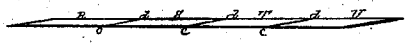


Fig 4.



Witnesses.

S. N. Piper

L. N. Moller

Aberdeen Keith

by his attorney.

R. H. Eddy

United States Patent Office.

ABERDEEN KEITH, OF NORTH BRIDGEWATER, MASSACHUSETTS.

Letters Patent No. 112,353, dated March 7, 1871.

IMPROVEMENT IN MACHINES FOR CUTTING LEATHER.

The Schedule referred to in these Letters Patent and making part of the same.

To all persons to whom these presents may come:

Be it known that I, ABERDEEN KEITH, of North Bridgewater, in the county of Plymouth and State of Massachusetts, have invented a new and useful Improved Machine for Cutting Leather into Counters for Boots and Shoes; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 denotes a top view;

Figure 2, a front elevation; and

Figure 3, an end elevation of such machine.

In the said drawing—

A denotes the frame for supporting the main operative parts.

Within the said frame are three shafts, B C D, which are disposed with respect to each other as seen in fig. 2.

Two of the said shafts, viz., C and D, are out of parallelism with one another and with the third shaft D, and carry or have fixed on their adjacent ends two tapering feed-rollers, E F, there being one of such rollers to each of the said shafts C D.

The three shafts are connected by a train of gears, G H I, there being one of such gears to each of the shafts, the same being in order that rotary motion may be transmitted from the driving-shaft B to each of the other shafts whenever such shaft B may be put in revolution.

The lower shaft not only has one of its journals supported in a bearing made in the part *a* of the frame, but has the other journal supported in a bearing in a post or standard, K, which is separate from the frame A, and at its lower end is sustained in and jointed to the inferior arm of a lever, L, which is arranged underneath the frame, and when the machine is in operation is to have a weight suspended from its superior arm, the object of such weight, lever, and standard being to force the lower feed-roller toward the upper feed-roller, and allow the former to move or be moved away from the latter in order to accommodate the rollers to the leather to be reduced to counters, as such leather may vary in thickness.

In advance of the bite of the two feed-rollers there is a splitting-knife, M, fastened by a set-screw upon a metallic plate, one edge of which is supported in the groove *b* made in a stationary bracket or rail, N.

The opposite edge of the knife-supporting-plate is similarly sustained in a bracket, O, projecting from the movable standard K, the whole being in such manner that any vertical movement of such standard and the lower feed-roller, whether such movement be upward or downward, shall cause the knife to be moved with the bracket O, and so as to vary the declination of the cutting-edge of the knife.

The said cutting-edge of the knife is arranged diagonally with respect to the bite of the rollers, in order that, while cutting through a strip of leather in order to separate a counter therefrom, it may make such cut at an inclination with the opposite flat surfaces of the leather, in manner as shown at *c d c d* in Figure 4, which represents an edge view of a strip of leather and the lines of cuts for the counters R S T U.

In consequence of the rollers being tapering, they will cause each cut through the leather to be made in a curve, which will impart to each counter the form as represented in Figure 5, the transverse section of such counter being a parallelogram, as shown in fig. 4.

In order to guide the leather properly between the rollers, I employ a table or platform, A^2, arranged aside of or with respect to them in manner as represented, such table being provided with a feed-board, B^2, pivoted to the table, or capable of turning horizontally on a center, C^2, the radius of the circle of motion of such board corresponding with that of the curve of the knife-cut caused by the action of the feed-rollers.

Such feed-board I also provide with a ledge, D^2, for the edge of the piece of leather to rest against; and furthermore, there is a ledge or gauge, E^2, for the end of the strip to abut against, the said ledge being arranged as represented.

In operating with the machine a strip of leather to be reduced to counters is to be laid on the pivoted feed-board B^2, one end of the said piece being pressed against the gauge E^2. One edge of the piece is also to be pressed against the inner edge of the ledge D^2. By means of these devices the leather is to be presented to and between the feed-rollers, they being supposed to be in revolution in directions which will cause them to seize on the leather and force it against the cutting-edge of the knife.

As the thickness of the leather may increase more or less, so will the lower feed-roller be pressed away from the upper one, and at the same time will move downward one edge of the knife, so as to impart a greater declination of the cutting-edge of such knife.

As the thickness of the leather may decrease the lower feed-roller will rise, the knife also being raised at one and the same edge. Thus it will be seen that the cutting-edge of the knife will be always in the diagonal of the bite of the rollers, however that bite may increase or diminish in width.

I make no claim to the invention of a knife and cylindrical feed-rollers for the purpose of splitting a piece of leather; nor do I herein make any claim to the matters, combinations, or devices set forth in the two claims of Letters Patent No. 44,318, dated the 20th day of September, A. D. 1864, and granted to me.

What I herein claim as my invention is as follows:

1. The arrangement and combination of the pivoted feed-board B^2 with the conical rollers E F and the cutting-knife M, arranged with them as specified.

2. The arrangement and combination of the pivoted feed-board B^2 with the conical rollers E F, the cutting-knife M, and mechanism as described, or its equivalent, for adjusting, substantially as and for the purpose as explained, the declination of the knife in accordance with the variation of the distanee between the feed-rollers.

3. The arrangement and combination of the ledge D^2 and the gauge E^2 with the pivoted feed-board B^2, the table or platform A^2, the conical rollers E F and their operative mechanism, and the knife M.

4. The arrangement and combination of the ledge D^2 and the gauge E^2 with the pivoted feed-board B^2, the table or platform A^2, the conical rollers E F and their operative mechanism, and the knife M and mechanism as described, or its equivalent, for adjusting, substantially as and for the purpose as explained, the declination of the knife in accordance with the variation of the distance between the feed-rollers down to the varying thickness of the leather while passing between them.

ABERDEEN KEITH.

Witnesses:
R. H. EDDY,
S. N. PIPER.