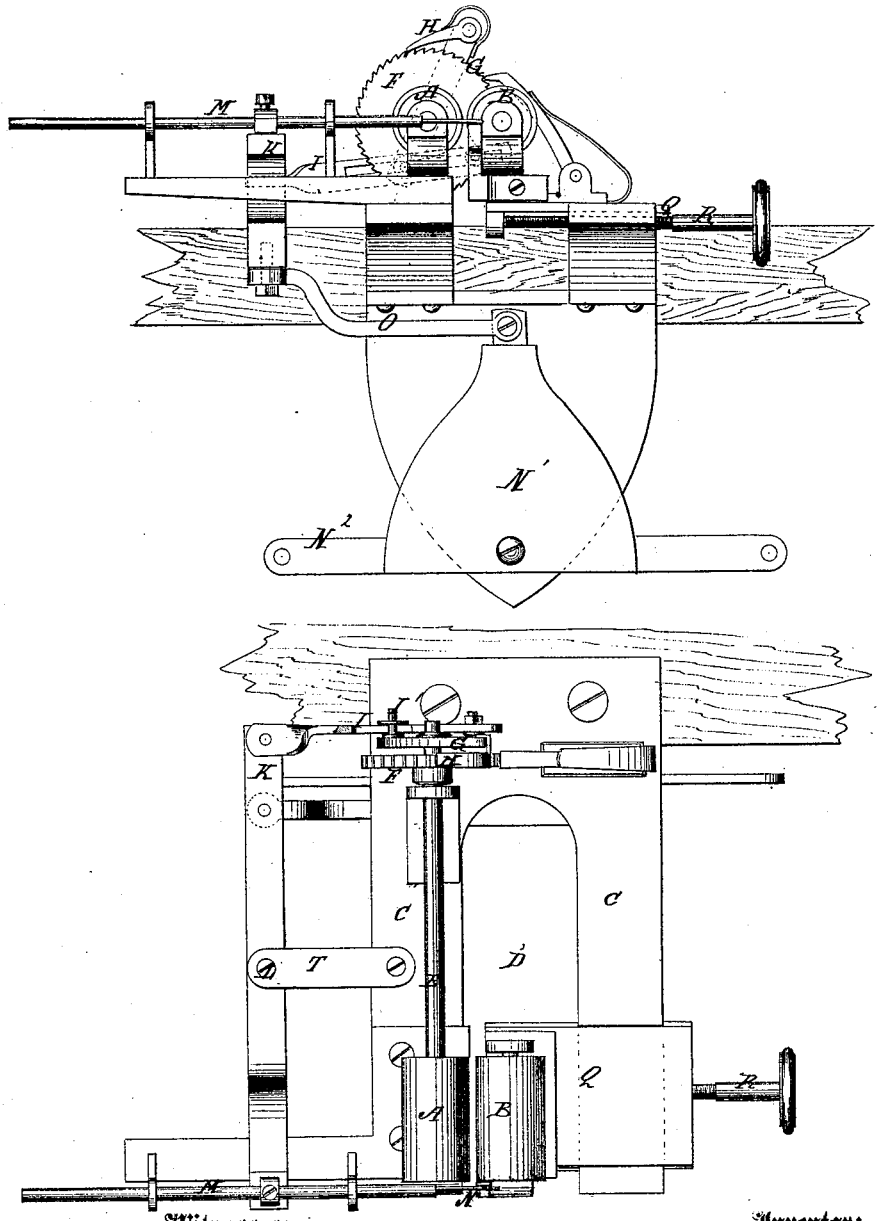
W. Barry,

Leather Cutter.

No. 111,719. Patented Feb. 14. 1871.



Witnesses:

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WILLIAM BARRY, OF CARTHAGE, NEW YORK.

Letters Patent No. 111,719, dated February 14, 1871.

IMPROVEMENT IN LEATHER-PUNCHING AND FEEDING MACHINES.

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

To all whom it may concern:

Be it known that I, WILLIAM BARRY, of Carthage, in the county of Jefferson, and State of New York, have invented a new and Improved Leather-Punching and Feeding Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention relates to mechanism for holding, feeding, and punching leather, so as to prepare it for receiving the thread, and the purpose is to supersede the necessity of doing it by hand.

The principle of my invention consists in clamping leather between rotating surfaces, feeding it intermittently the length of one stitch to a perforating instrument, and then holding it in a convenient position for the insertion of the thread.

The means which I employ to embody this principle will be first described in connection with suitable operative mechanism, and then clearly specified in the claim.

Figure 1 is a side elevation of my improved machine, and

Figure 2 is a plan view of the same.

Similar letters of reference indicate corresponding parts.

A B is a pair of smooth feed-rollers, mounted on a suitable bed-plate, C, side by side, with the ends extending to one side of the bed-plate, which has a long open space, D, below the space between the rollers and extending rearward from them.

The roller A has a long shaft, E, mounted in fixed bearings, and the end opposite the roller has a ratchet-wheel, F, upon it, also a pawl-lever, G, the upper end of which carries a pawl, H, to work the said wheel. The other end below the shaft E is connected by a pin with a slotted connecting-rod, I, to the lever K, pivoted at L on a support, T, connected to the bed-plate C.

The other end of this lever K is connected to a needle or punch-bar, M, carrying a punching-needle, N, which, by the action of the said lever is made to move forward and back in front of the ends of the rollers.

Said lever K is connected to the vibrator N′, pivoted to the pendent support P by the rod O, and the vibrator is arranged to be connected to any suitable foot-treadle or foot-power motion for working back and forth, or it may be worked one way by the foot and the other by a spring; for instance, a foot-treadle or lever having a central fulcrum may be connected to each end of bar N′ by a cord or rod, each end being alternately forced down to operate the vibrator.

The bearings of the roller B are in a slide, Q, made capable of being moved to and from the roller A, to vary the width of the space between them according to the work in hand, and a screw, R, is provided for moving the slide.

I also propose to arrange the slide Q, or the bearings of the roller thereon, so as to be held up by the action of a spring which will admit of feeding leather of unequally thick parts, the screw also being used for varying the position of the roller B with A for leather of different grades of thickness.

The leather pieces to be punched and sewed are placed side and side with the edges even, and arranged between the rollers with the said edges projecting at the upper end of the leather pieces in front of the punch, and on a vertical line if the said edges be straight, but if curved, then as near the vertical line as may be, so that the turning of the rollers upward on the sides gripping the leather will raise the leather up past the needle, the leather being shifted in the rollers by hand to cause it to feed properly.

The foot being now placed on the treadle, and the latter actuated to move the vibrator N to the left, the punch N will be forced through the projecting edges of the two pieces of leather. At the same time, the slotted bar I will be drawn back on the pin I′, connecting it with the pawl-lever G, so that the end wall of the slot in said bar will strike the pin just before the end of the movement of the punch, and throw the pawl H back on the ratchet-wheel one or more teeth.

The return movement of the foot-treadle and the vibrator cause a corresponding reverse movement of the punch and the pawl-operating bar I. The latter, as before, slides on the pin I′ until the other end-wall of the slot strikes said pin at the time the punch-bar arrives near the end of the backward movement, and is entirely disengaged from the leather, and causes a forward movement of the ratchet-wheel, which turns the rollers and feeds up the leather the length of one stitch, raising the hole punched up so that the threads may be passed through by the hands for sewing.

These operations being repeated the work goes on to completion, and is done much more rapidly than the ordinary hand-sewing is done by punching the holes with a hand-awl, which is laid down after each operation, and must be taken up at the beginning of the next; also, the thread, or as is practiced by some workmen, both are carried in the hands, each being shifted from one position to another at each operation. This latter plan is difficult of operation, and the former very wasteful of time, and the awl is very liable to be mislaid. The feed may be varied by shifting the pin I′ up or down on the pawl-lever, or by any other approved arrangement.

If the edges to be stitched together be straight, the leather will not require any guiding by hand, but if curved, then it must be adjusted between the rollers to vary the course as required.

The machine may be fastened to any suitable table or bench, *x*, by screwing the bed-plate C thereon as here indicated, or it may be done in any other way.

The rollers may be arranged to feed the leather horizontally, and the punch to work vertically, if preferred, but I prefer this arrangement.

The rollers may be turned for feeding by any other suitable arrangement of feeding-gear, and I do not limit myself to the arrangement here shown.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The intermittently-rotating rolls A B, allowing the edge of leather to be sewed to project beyond one end thereof, combined with an awl, N, arranged to move across said end, and perforate said edge at intervals, all in the manner described.

WILLIAM BARRY.

Witnesses:

MARCUS BICKFORD,

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