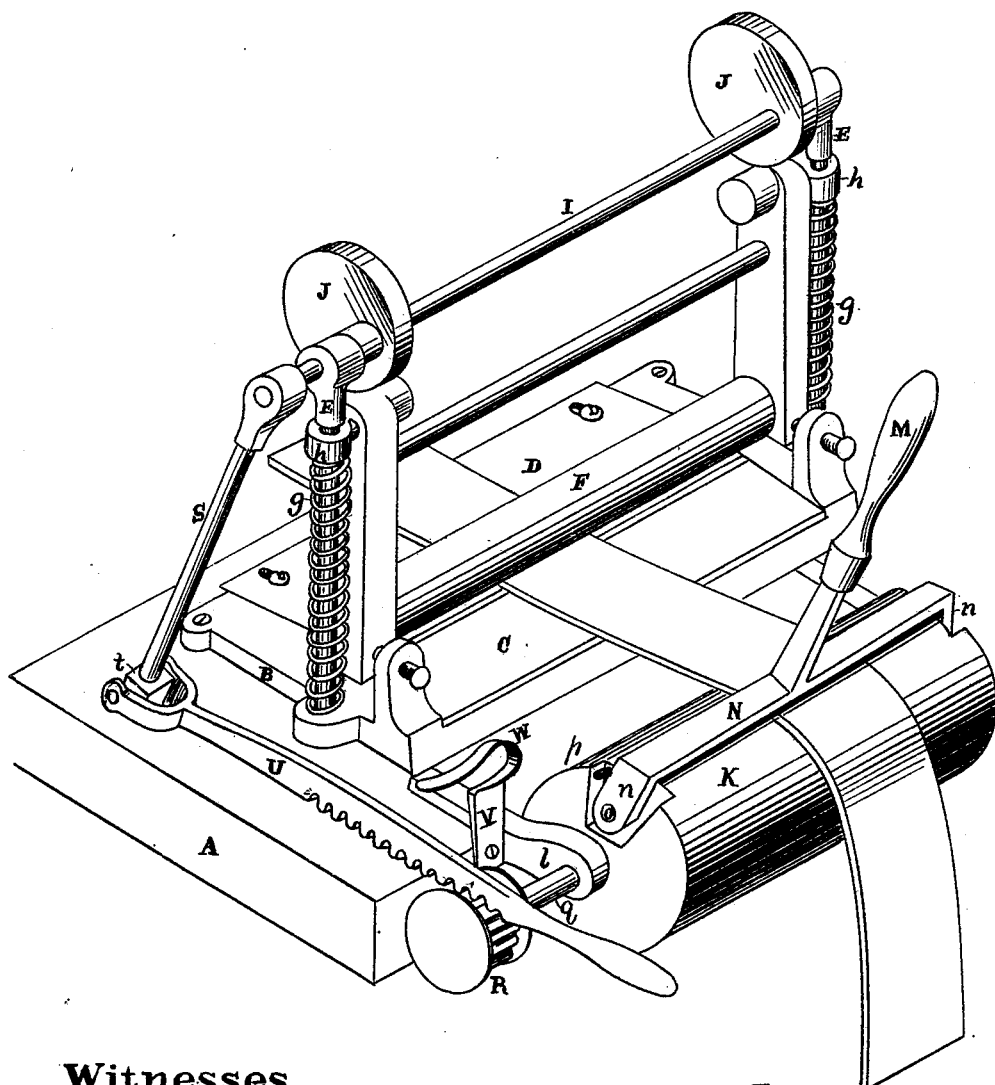


H. N. COOK.
Leather Splitting-Machine.

No. 197,098.

Patented Nov. 13, 1877.



Witnesses
Geo. H. Strong.
Olegor T. Stacy.

Inventor
Horatio N. Cook
By *Raney & Co.*

UNITED STATES PATENT OFFICE.

HORATIO N. COOK, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN LEATHER-SPLITTING MACHINES.

Specification forming part of Letters Patent No. **197,098**, dated November 13, 1877; application filed June 1, 1877.

To all whom it may concern:

Be it known that I, HORATIO N. COOK, of the city and county of San Francisco, and State of California, have invented an Improved Leather Splitting and Tapering Machine; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to certain improvements in leather splitting and tapering machines; and it consists, first, in a simple arrangement for grasping the piece of leather and drawing it through between the knife and pressure-roller; and, secondly, of an attachment to the shaft which carries the eccentrics, by means of which I am enabled to rotate said shaft through the same power and motion that draws the leather through the machine, so that the operation of drawing the leather and depressing the pressure-roller to regulate the taper of the cut are produced by power applied to a single lever.

Referring to the accompanying drawing, A is a wooden base, upon which the machine is secured, and B is the metal base, along one edge of which the knife C is secured in an inclined or angular position. D is the angular adjustable plate, which is secured opposite the edge of the knife C, and which can be shifted to or from the knife to regulate the space between them. E E are the side standards, between which the swinging frame which carries the pressure-roller F is suspended, by means of the spiral springs *g* and collars *h*. The shaft I, upon which the eccentrics J are mounted, is supported in the upper ends of the standards E. These devices, however, as far as at present explained, and their arrangement, I do not claim to have invented.

My invention consists in combining with the machine, as above described, the following devices for drawing the leather through the machine and regulating the taper: K is a roller, which I mount between two arms, *ll*, opposite the edge of the base A, toward which the rear edge of the knife C stands. These arms or bearings are so adjusted that the top of the roller is about level with the edge of the knife.

The handle M is secured to the middle of a bar, N. This bar extends longitudinally across the whole length of the roller, and its ends *n* are bent at right angles, so as to extend a short distance across the ends of the roller. A hole is made in the extremity of each bent end, and a pin or bearing, O, passes through this hole into the ends of the roller, at some point between the outer edge of the roller and its center, so that when the handle M is moved forward and back, the eccentrically-pivoted bar N will describe the arc of a circle, and strike the face of the roller upon each side of the center. A stop-pin, *p*, serves to prevent the bar N from passing the radial line when the handle is thrown forward. This bar N will then serve as a clamp-bar to gripe the strip of leather against the face of the roller, while the rotation of the roller will permit a further downward pressure upon the handle to draw the leather outward, as hereinafter more fully described. This operation can be repeated indefinitely, and any length drawn through without the operator changing the position of the leather.

The journal *q*, at one end of the roller, I extend as represented, and secure a toothed wheel, R, to its extremity, so that when the roller rotates the toothed wheel will also be rotated.

To the extremity of the shaft I, which carries the eccentrics J, I secure an arm, S, rigidly, the entire length or a portion of which is formed into a screw. *t* is a nut which turns upon the screw, so that it can be adjusted to any part of the length of the arm S. U is a lever-handle, one end of which is attached by journals to the nut *t*, so that it can be shifted up or down or to either side, as desired, thus practically forming a universal-joint attachment. This lever-handle is long enough to extend back to the toothed wheel R, and its under edge is toothed to correspond with the teeth of the roller. The extremity of this lever is formed into a handle, which can be grasped by the left hand of the person who operates the handle M of the clamp.

My object in using this open rack and pinion in place of a closed automatic gearing is not only to facilitate the operation, but to en-

able the operator to prevent instantly its cutting in too deep, or gouging, by simply lifting the toothed rack from the pinion.

The end of the leather strip to be tapered is first passed between the clamp-bar N and roller K, and pushed forward until a sufficient length of its end has been passed between the pressure-roller F and the knife-edge. The handle M is then lowered until the bar N clamps the leather against the roller K. The operator then grasps the handle of the lever U, and draws the arm S back, so as to rotate the shaft I and eccentrics J, and press the pressure-roller down upon the leather. He then drops the lever upon the toothed wheel R, and engages its teeth with the teeth of the roller. A downward pressure now exerted upon the handle M will draw the leather through between the roller and knife, and at the same time press the roller down upon the upper side of the leather, so as to cause the knife to gradually cut deeper into it. If a single stroke of the lever M is not sufficient to draw the leather away from the knife, it can be thrown back to a vertical position and drawn downward again, thus acting like a pawl, to take a new and closer hold and draw out another length. Meantime the pressure-roller is continually pressed downward as long as the rack of the lever-handle engages with the teeth of the wheel R.

If the piece of leather is to be simply split, I employ an upright plate, V, for retaining the lever U after the pressure-roller has been depressed to the desired point. This plate is narrow enough to pass between the teeth on the under side of the lever, and a guard, W, extends over it to prevent the lever from lifting and disengaging from the plate after it is once set.

When the piece of leather has been adjusted to the knife and clamp-roller, I engage the lever U with the toothed wheel R, as before described, and draw upon the leather until the desired depth of split is made. I then transfer the lever U from the wheel R to the plate V,

which will hold the pressure-roller to the proper place. The leather can then be drawn through the machine and split to a uniform thickness. The piece of leather is then reversed, and the opposite end split in a similar manner.

This machine is quite simple and easily operated. It enables me to make a perfect taper on the end of a piece of leather, or to split it easily to any length. The work is necessarily done with great uniformity and precision, and with very little trouble.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with leather splitting or cutting mechanism, of the roller K, eccentrically-pivoted clutch-bar N, and lever-handle M, substantially as and for the purpose specified.

2. The toothed wheel R, attached to and rotated by the roller K, pivoted clutch-bar N, and lever-handle M, which draws the leather through a leather splitting and tapering machine, in combination with a lever-arm, S, attached to the eccentric-shaft I and toothed lever-handle U, by means of which the same motion and power that draws the leather will cause the pressure-roller F to be forced downward upon it, substantially as and for the purpose described.

3. The clutch-bar N, with its lever-handle M, attached to a roller, K, which is provided with a toothed wheel, R, in combination with the lever-arm S, attached to the shaft I, adjustable nut t, and lever-handle U, the under side of which is formed into a rack, and the upright plate V, with its guard W, for retaining the pressure-roller at a given point, substantially as and for the purpose described.

In witness whereof I have hereunto set my hand and seal.

HORATIO N. COOK. [L. s.]

Witnesses:

OLWYN T. STACY,
FRANK A. BROOKS.