(No Model.)

2 Sheets—Sheet 1.

M. A. HOLTON.

MACHINE FOR FORMING BLANKS FOR SHOE TIPS.

No. 271,848. Patented Feb. 6, 1883.

Fig. 1.

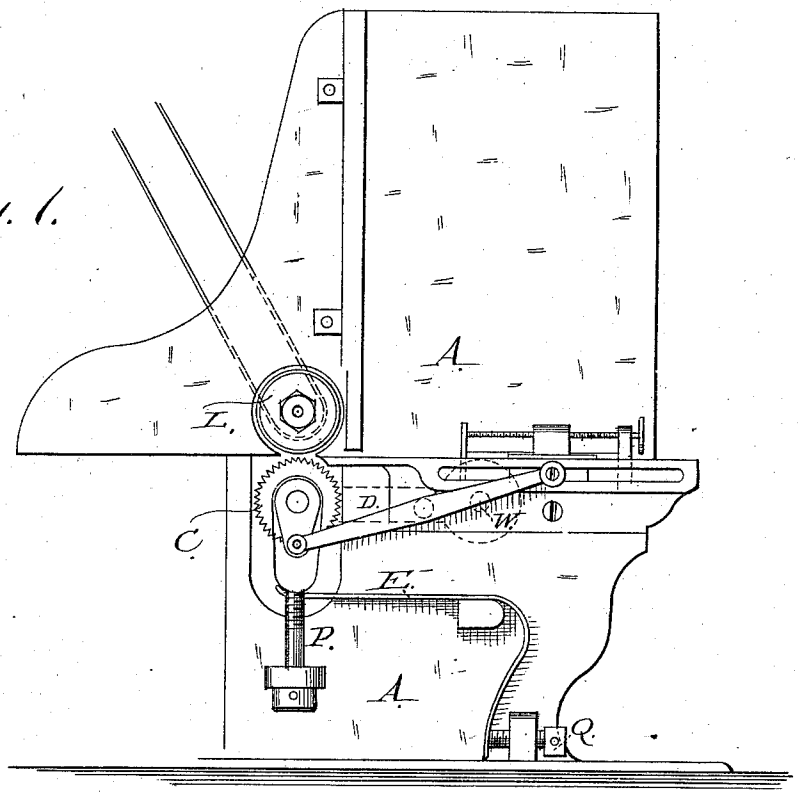


Fig. 3

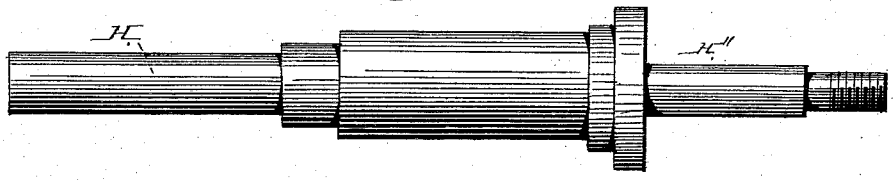
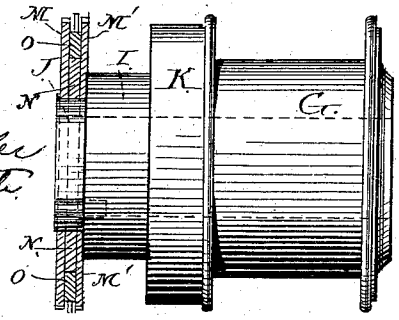


Fig. 5.



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(No Model.) 2 Sheets—Sheet 2.

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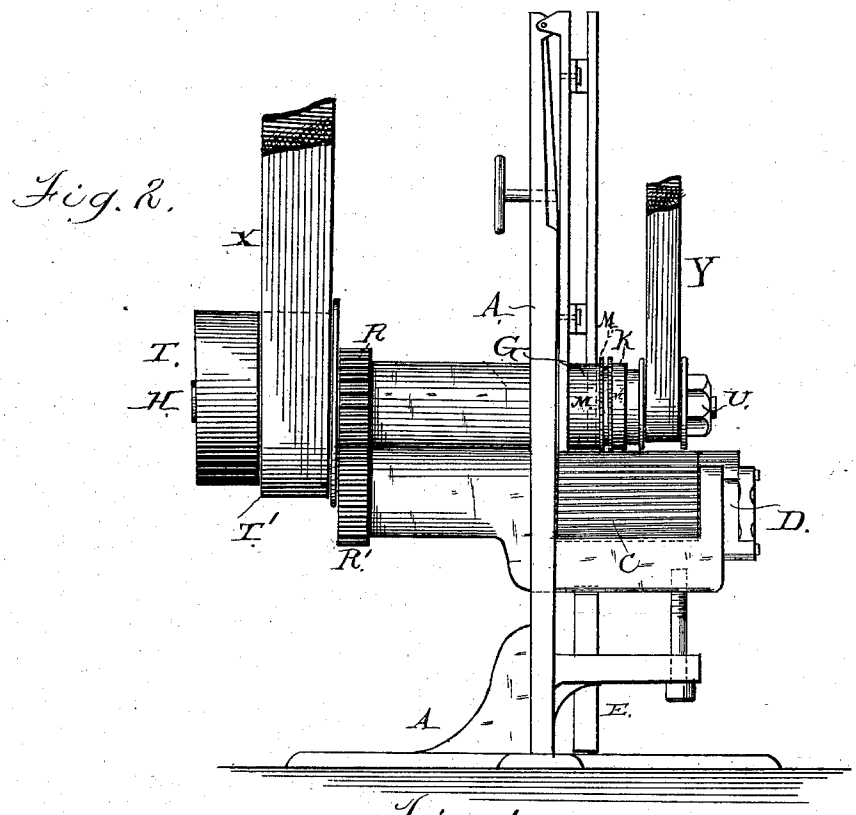
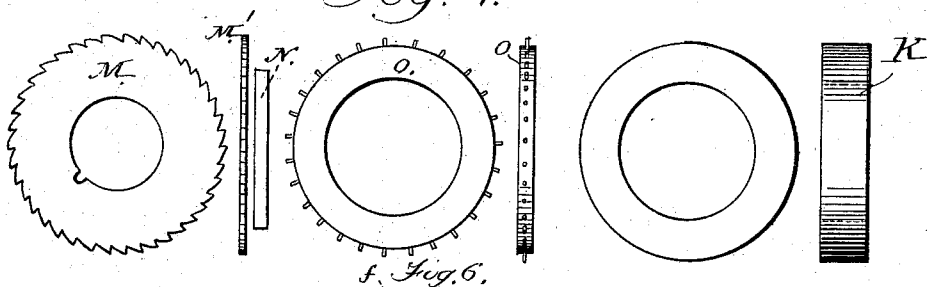
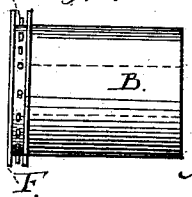


Fig. 4.



f. Fig. 6.



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UNITED STATES PATENT OFFICE.

MERRITT A. HOLTON, OF FITCHBURG, MASSACHUSETTS.

MACHINE FOR FORMING BLANKS FOR SHOE-TIPS.

SPECIFICATION forming part of Letters Patent No. 271,848, dated February 6, 1883.

Application filed October 24, 1882. (No model.)

To all whom it may concern:

Be it known that I, MERRITT A. HOLTON, of Fitchburg, Worcester county, State of Massachusetts, have invented a new and Improved Machine for Forming Blanks for Shoe-Tips; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of the machine. Fig. 2 is a front elevation of the same. Figs. 3 to 6, inclusive, are details to be referred to.

The object of my invention is to provide a machine which will with facility mark, channel, and perforate blanks for shoe-tips; and my invention consists of sundry details of construction, as hereinafter fully described, and specifically pointed out in the claims.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents the frame to which the rolls L and C are attached. The roll L is journaled in the frame A, while the roll C is journaled in the cradle D, which is attached to the frame A by means of a screw, W, at the back of the frame, (shown in dotted lines, Fig. 1,) which will allow the roll C to rock or fall away from the roll L, thus providing for irregularities in stock passed between them.

The spring E is to hold the cradle up, so that the roll C will run close to the roll L, but is prevented from touching by means of the screw P, which passes through a lug on the frame, and is threaded into the cradle D, the spring E yielding as stock is passing between the rolls. The pressure of the spring E is regulated by means of the screw Q.

The roll L is driven by means of the pulleys T T′, and the roll C is driven by the roll L by means of the gears R R′.

I use substantially the same table, automatic feeding device, and spring, and the same swinging gage-plate, as described in my Patents No. 230,280, dated July 20, 1880, and No. 250,734, dated December 13, 1881, except that I contemplate that the gage-plate may be made either straight or curved, and that the feeding device may be run straight or on a curve, according to the work to be done.

When work is to be channeled I use on the upper roll, L, a sleeve or pulley constructed as follows: (See Fig. 5.) The pulley G is provided at one end with spaces or shoulders I and J. Upon the space I, I place the loose collar K, whose outside diameter is the same as the roll L. Upon the space J, I provide one or more saws, M M′, which are prevented from turning independent of the pulley by means of a small lug on the surface of the space J. If it is necessary to use more than one saw, they are separated the required distance by means of the washer N, which is also secured by means of the small lug. If it is desirable to perforate between the lines of the saws, I place upon the washer N the loose collar O, which has projecting from its outer edge small punches set in any desired pattern. The saws M M′ and the punches on the collar O must project a little beyond the surface of the roll L and the loose collar K. The saws M M′ may be made in the form of any revolving cutter. This combination of pulleys, loose collars, and saws is journaled upon the shaft H at the space H″, and is prevented from slipping off by means of the nut U. It is given a high speed by means of a belt running in the space adapted for it on the pulley. This motion is independent of that of the shaft H.

The operation is as follows: If the shaft H, which is driven by the belt X, is run, say, about two hundred revolutions per minute, the rolls L and C will take the same speed, while the pulley G, carrying the saws M M′, is run by means of the belt Y at a speed, say, of five thousand revolutions per minute. Now, if leather or any other soft material is passed between the rolls L and C, it will be carried forward at a speed equal to that of the rolls, while the saws M M′ will cut channels as they proceed. The collar K holds the stock against the roll C, and is made loose so as not to interfere with the progress of the leather as it is carried forward by the rolls. The collar O would, when armed with punches, perforate between the grooves, and is made loose for the same reasons as those given for K. When I wish to mark and perforate without cutting channels I remove the pulley G, which carries the collars K and O and the saws M M′, and substitute the sleeve B, which is not journaled, but is held fast by means of the nut U and becomes a part of the roll L, and has no inde-

pendent motion. The sleeve is provided with ribs F or with punches *f*, or with both, in any desired pattern.

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

1. In a machine for forming blanks for shoe-tips, the roller C in swinging adjustable bearings, and shaft H, driven by pulleys and gears, in combination with the removable cutter carrying head or pulley G, and means, substantially as described, for driving it at a higher rate of speed, substantially as set forth.

2. In a machine for forming blanks for shoe-tips, the scoring and punching rings M and O, in combination with the loosely-journaled carrying-collar K, substantially as described, for the purpose herein specified.

MERRITT A. HOLTON.

Witnesses:
CHARLES F. BAKER,
HARRIS C. HARTWELL.