

(No Model.)

2 Sheets—Sheet 1.

P. W. MINOR.
UPPER MACHINE.

No. 469,582.

Patented Feb. 23, 1892.

Fig. 1.

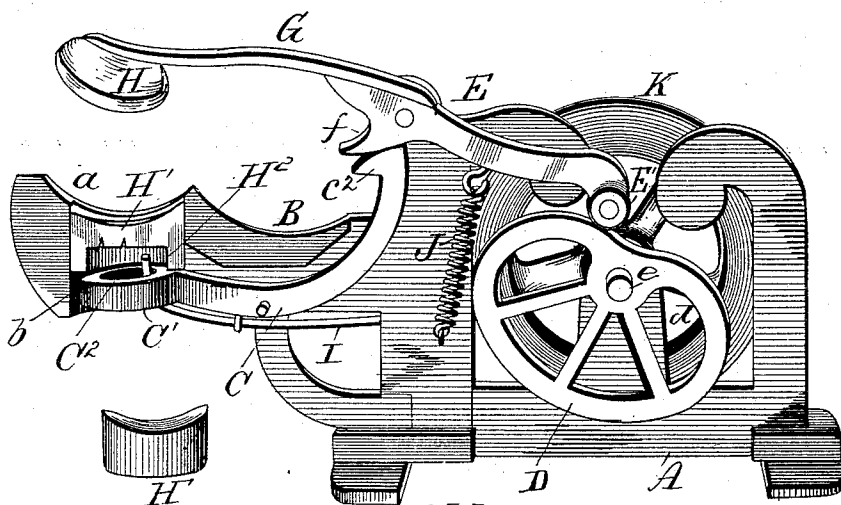
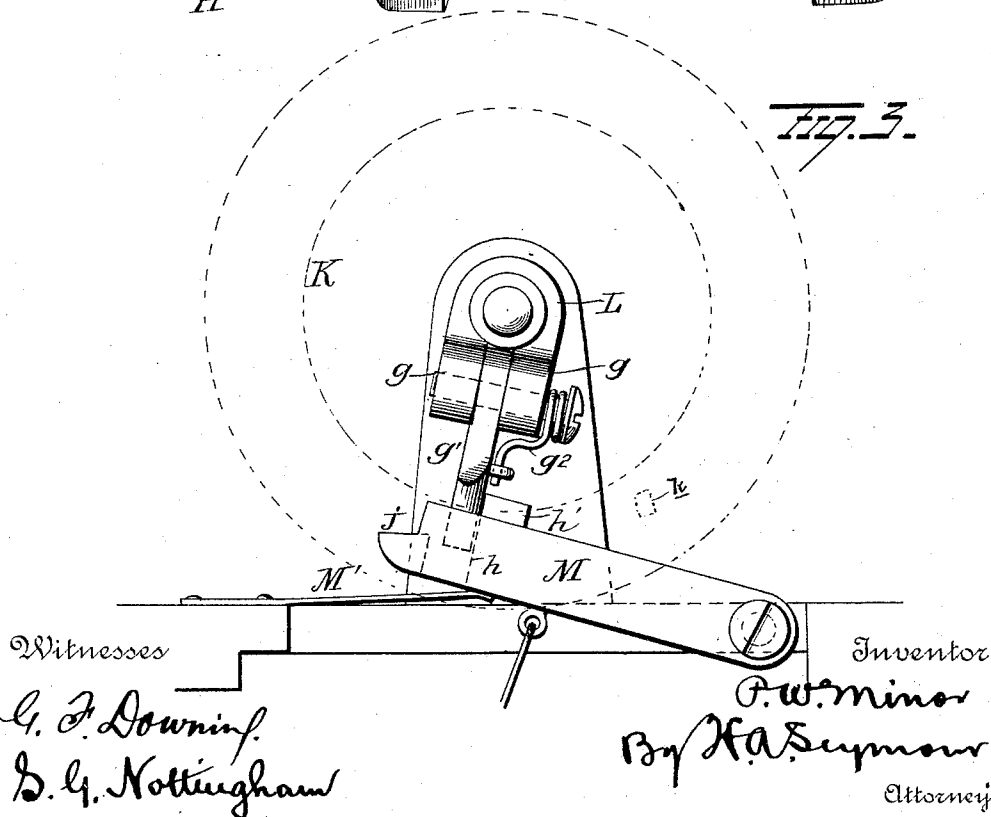


Fig. 3.



Witnesses

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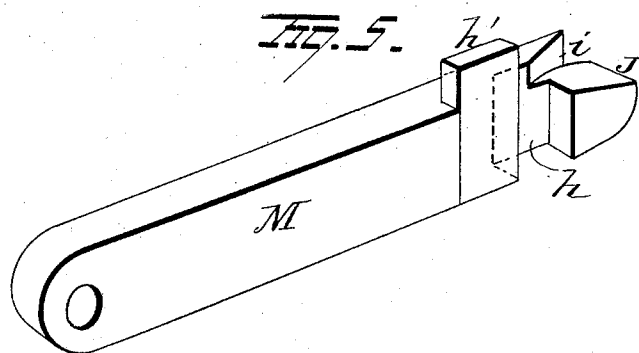
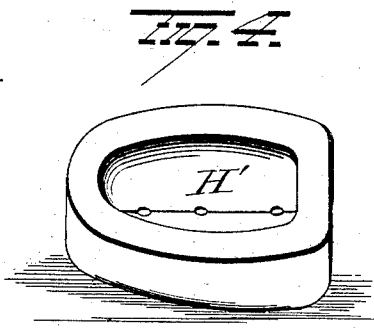
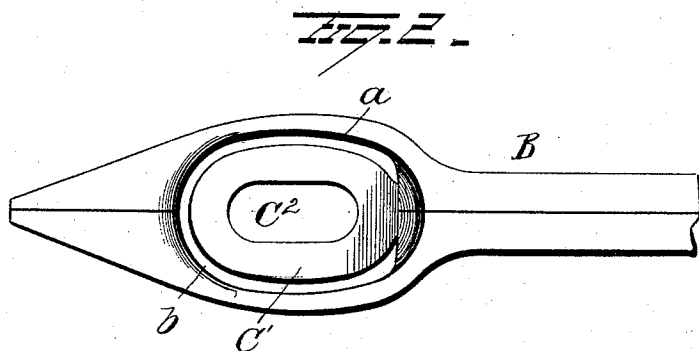
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

PETER W. MINOR, OF SPRINGVILLE, NEW YORK.

UPPER-MACHINE.

SPECIFICATION forming part of Letters Patent No. 469,582, dated February 23, 1892.

Application filed June 12, 1891. Serial No. 396,000. (No model.)

To all whom it may concern:

Be it known that I, PETER W. MINOR, a citizen of Springville, in the county of Erie and State of New York, have invented certain new and useful Improvements in Upper-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in machines for operating on shoe-uppers, and more particularly to such as are adapted for operating upon that part of the upper immediately above the heel of the shoe.

It is well known that the weak point of a shoe (so called because being subjected to the greater strain and harder wear it gives out first) is the bend of the ankle just above the heel, and there being an inward curve in the foot at this point makes it necessary to locate a seam there, which makes it still more difficult to make it strong enough to wear equal with other parts of the shoe. So far as I am aware as yet nothing has been devised to accomplish this result that would be suitable to use on a fine shoe. I accomplish this result with an extra piece of material (preferably of the same material as the upper) adapted in shape to cover this weak part of the shoe and cementing it thereto on the inside by a strong leather cement, which must be applied under a suitable pressure and at a required temperature; and it is the object of my present invention to produce a machine for the accomplishment of this purpose—that is to say, to produce a machine for the attachment to a shoe-upper immediately above the heel of the shoe of an extra piece of material to act as a brace or stiffening for that portion of the shoe-upper.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of the machine with a part of the frame-work removed. Fig. 2 is a plan view of the arms, and Fig. 3 is a view of the stop mechanism. Figs. 4 and 5 are detail views.

A represents a suitable frame in which to

mount the various parts of the machine, and from this frame an arm B projects forwardly, said arm being provided at its forward end with a curved recess or depression *a* and an opening *b*, communicating with said recess or depression. The arm B is cut away, and pivotally connected in said arm is a lever C, provided at its forward end with an enlargement or head *C'*, having a perforation *C''*, and adapted to lie normally in the opening *b* of the arm B. The rearwardly-extending arm *c* of the lever C is curved upwardly and provided at its upper end with a curved bearing or rocker *c'*. Mounted in suitable uprights *d* of the frame is a shaft *e*, on which an eccentric D is secured. A lever E is pivotally connected in the frame A at a point above the bearing or rocker *c'* and provided at a point in proximity to its center with a depending bearing or rocker *f*, adapted to bear on the rocker *c'* and vibrate the lever E, as hereinafter explained. In the rear end of the lever E a roller *E'* is mounted and adapted to ride upon the periphery of the eccentric D.

The lever E is preferably made of two parts, the forwardly-projecting part G being made of spring metal and has secured to its free end a form, die, or block H of rubber or other suitable material and of a shape to conform to the curve of the part of the shoe-upper to be operated upon.

Placed loosely in the opening *b* of the arm B is a concave block, die, or form *H'*, adapted to rest on the enlargement or head *C'* of the lever C, said block, die, or form *H'* being provided with a curved upper face to conform to the shape of the lower face of the form or block H. The block or form *H'* is also preferably made in its bottom with a depression *H''*.

In order to warm the block or form *H'*, so that the reinforcing-piece will be made to adhere to the upper, a pipe I is made to project through the opening in the head or enlargement *C'* of the lever C and into the recess or depression *H''* of the block or form *H'*, said pipe being connected with any suitable gas-supply.

In order to cause the roller *E'* to be maintained in contact with the eccentric D and always run smoothly thereon, a spring J is connected at one end to the lever E and at the other end to the frame A.

Mounted loosely on the shaft *e* is a band-

wheel K, over which a strap is adapted to pass and impart motion thereto from any suitable source of power. Secured to the shaft *e* in close proximity to the wheel K is a collar L, 5 having ears *g*, between which an arm or latch *g'* operates, said arm or latch being forced normally toward the wheel K by means of a spring *g*². The edge of the frame A is recessed beneath the wheel K, and in this recess an arm or bar M is pivoted and forced 10 normally upwardly by a spring M'. One face of the arm or bar M is provided with a recess *h*, in rear of which an arm *h'* is secured. The free end of the bar M is beveled or inclined, as at *i j*, against which the lower end 15 of the arm *g'* is adapted to strike and be guided into the recess *h*. The wheel K is provided on its inner face with a projection *k*, adapted to engage the arm or latch *g'* when 20 said latch or arm is moved in its path. A wire or cord is connected to the arm or bar M, by which to operate said bar by a foot-treadle or in any other suitable manner. The lower end of the arm or latch *g'* normally rests in 25 the recess *h*; but when the arm or bar M is pulled down by the wire or cord said arm or latch *g'* will be forced by the spring *g*² into contact with the wheel K and in the path of the projection *k*, so that said arm or latch 30 will be engaged by the projection and thus rotate the shaft *e*. When the shaft shall have made one revolution the arm or latch *g'* will engage the free end of the arm or bar M and be guided by the inclined faces *i j* 35 into the recess *h* and out of the path of the projection *k*. The block, die, or form H' being heated to the proper extent by a flame from the gas-pipe I, the reinforcing-piece is placed on the block, die, or form H' and the 40 stop mechanism is operated to cause the band-wheel to be locked with the shaft *e* and rotate the latter.

The form or die H' drops below the upper edge of the opening of the arm to receive the 45 piece and hold it out of the way of the upper until ready to apply it and then rises just enough above the upper edge of the opening *b* to give the form or block H chance to press the piece on, the entire space through which 50 it moves being about a half-inch, while the form H is raised about four inches to give ample room to put the shoe in position. When the device is operated, the cam D will operate to bring the forms H H' together, and the 55 cam D is made of such shape as to hold the pressure on the shoe long enough to properly stick the reinforcing-piece to it.

It is evident that instead of being adapted to apply a reinforcing-piece to the back of the 60 shoe-upper said machine may be adapted to secure a reinforcing-piece to any other part of the shoe-upper by simply changing the shape of the forms or blocks H H'.

With a reinforcing-piece on the inside of 65 the back of the shoe-upper over the seam it

is impossible for the seam to pull apart and the kid surrounding it will be so braced up that it will stand as long as any part of the shoe.

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

1. The combination, with a frame having a form loosely connected therewith, said form having a recess or aperture in its lower surface, and means for applying heat to this recess or aperture, of a pair of levers located in proximity to each other, one adapted to support and operate the form and the other 75 carrying a form and adapted to operate the former lever, and means for actuating the operating-lever, substantially as set forth. 80

2. The combination, with a frame and a form or block connected therewith, of a pair 85 of levers, one adapted to operate this form or block and the other carrying a form or block and constructed to operate the first lever, and means for actuating the operating-lever, substantially as set forth.

3. In an upper-machine, the combination, 90 with a frame and an arm projecting therefrom, of a movable form carried by said arm, a pivoted lever adapted to support said form, a pivoted lever carrying another form adapted to act in conjunction with the first-mentioned form, said levers being adapted to bear 95 on each other, so that one will be operated by the other, a shaft, and an eccentric mounted on said shaft, on the periphery of which one of said levers is adapted to bear, substantially 100 as set forth.

4. In an upper-machine, the combination, with a frame and an arm projecting therefrom, of a movable form carried by said arm, a pivoted lever adapted to support said form, 105 a pivoted lever, another form carried by said last-mentioned lever and adapted to operate the first-mentioned lever, an eccentric, a roller mounted in one end of one of said levers and adapted to bear on said eccentric, and a spring 110 for maintaining said roller in contact with the eccentric, substantially as set forth.

5. In an upper-machine, the combination, with a frame and an arm projecting therefrom, of a movable form carried by said arm, 115 a pivoted lever for supporting said form, a pivoted lever adapted to bear against and operate the first-mentioned lever, a form carried by said last-mentioned lever, a shaft, an eccentric carried by said shaft and adapted to operate said last-mentioned lever, and a stop 120 mechanism, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

PETER W. MINOR.

Witnesses:

F. W. LELAND,
H. W. TANNER.