

(No Model.)

E. E. WINKLEY.  
DIE OR FORMER FOR SOLE MACHINES.

No. 579,207.

Patented Mar. 23, 1897.

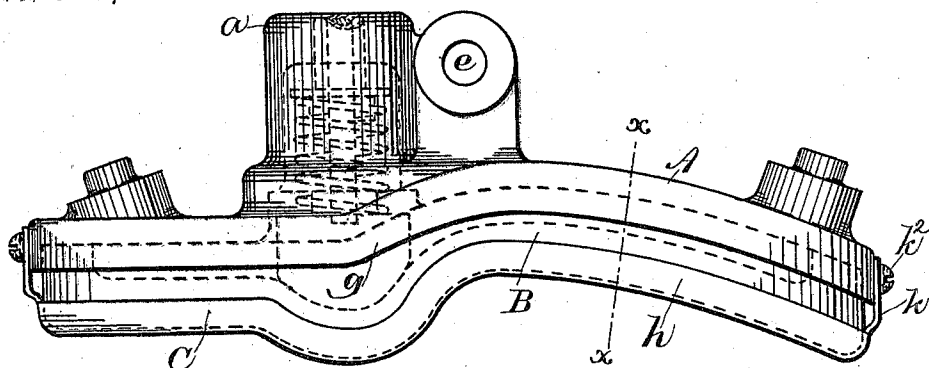


FIG. 1.

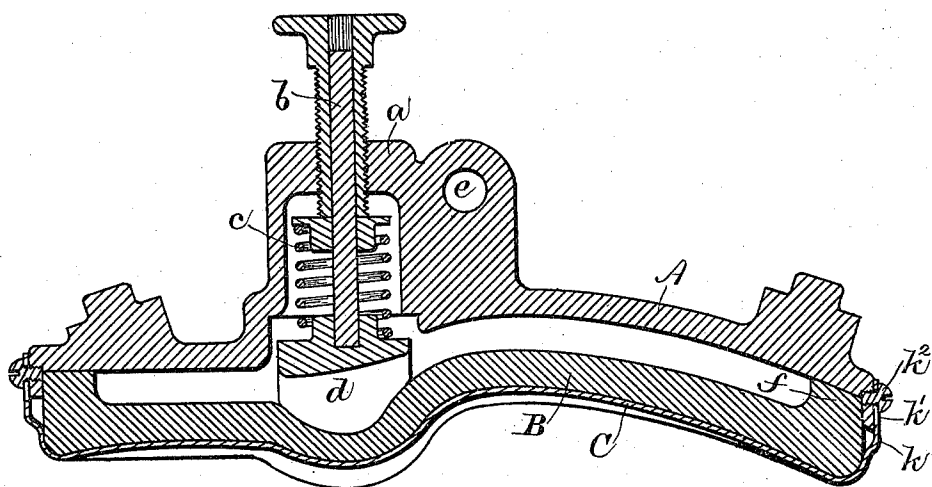


FIG. 2.

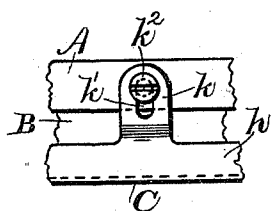


FIG. 3.

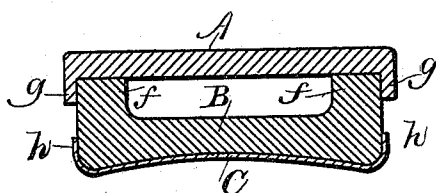


FIG. 4.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

ERASTUS E. WINKLEY, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE GOOD-YEAR SHOE MACHINERY COMPANY, OF PORTLAND MAINE.

## DIE OR FORMER FOR SOLE-MACHINES.

SPECIFICATION forming part of Letters Patent No. 579,207, dated March 23, 1897.

Application filed September 18, 1896. Serial No. 606,277. (No model.)

### *To all whom it may concern:*

Be it known that I, ERASTUS E. WINKLEY, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Dies or Formers for Sole-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.

In several types of sole-machines, particularly sole-leveling, as now constructed, it is common to employ rubber-faced pressing formers or dies to shape and set the sole to the contour of the bottom of the last and during the leveling operation to subject the sole to a comparatively great pressure between such rubber-faced formers or dies and the bottom of a last or form. It has been found in practice that dies or formers having a rubber face will not always press out the inequalities or bunches which exist in some soles, nor will they press and smooth out the ridges in the sole caused by the stitches which unite the sole to the upper, for the reason that said bunches or ridges will embed themselves in the rubber face thereof, and the sole will therefore not be given that smooth and even surface which is very much to be desired in the finished shoe. While it is to be desired that these pressing dies or formers shall possess a certain amount of yield or elasticity, so that they will conform to the shape of the bottom of the last, it is necessary that the pressing and shaping face thereof shall be of such a character as to prevent the embedding therein under pressure of the inequalities, bunches, or ridges existing in the sole and to be capable of pressing out and flattening down the same and to impart to the sole the set and shape desired and to the surface thereof that smooth and even finish which is necessary in the finished shoe.

The present invention has for its object to overcome the objections noted and to produce a die or former which will possess the property of yielding and conforming to the sole under pressure, and yet the pressing-face of which will operate to smooth out and properly finish the surface of the sole.

To this end the present invention consists of the devices and combination of devices which will be hereinafter described and 55 claimed.

The present invention is illustrated in the accompanying drawings, in which—

Figure 1 shows in side elevation the die or former. Fig. 2 shows a longitudinal section thereof; Fig. 3, a detail showing a convenient way of attaching the pressing-face; and Fig. 4, a transverse section on line X X, Fig. 1.

In the drawings, A represents the form 65 plate or carrier, B the elastic pressing-pad, and C the pressing plate or face of the die or former.

The form-plate A may be of any suitable construction, that shown being an integral 70 casting of any suitable metal and having the general outlines of the contour of the bottom of a last and somewhat larger than the sole which it operates upon.

Upon the form-plate A is a hollow boss *a*, 75 in which is fitted the stem *b*, spring *c*, and adjusting means of the shank-block *d*, all of which may be of the form and arrangement well known in the art.

The form-plate A is provided with any 80 suitable means for attaching it to the lever or other device which carries and actuates the same in the machine, the means shown being an eye or aperture *e*, through which passes a sustaining bolt or pin.

The elastic pressing-pad B may be of rubber or any other suitable elastic material and of the general shape of the form plate or carrier A, the under surface conforming to the shape of the bottom of a last. 90

The pressing-pad B may be of the construction shown, wherein a recess or cavity is provided upon its upper side by the reinforced edge-pressing portions *f*, or it may be formed of a solid block of elastic material, as desired. 95

The pressing-pad B is fitted to the form plate or carrier A within the marginal flange *g*, formed thereon, and it is retained in place by the pressing plate or face C, for which it forms a yielding cushion, as shown. 100

The pressing plate or face C is formed from any suitable sheet metal, conveniently copper, zinc, or brass, and it is shaped, as shown, by suitable dies and rests against and con-

forms to the surface of the pressing-pad B, which forms an elastic backing for the same.

The plate C is preferably turned up at its edge, as shown at *h*, to embrace the edge of the pressing-pad B, and it is secured in place by any suitable means.

As shown in the drawings, the pressing-plate C has at each end an ear or lug *k*, in which is formed a slot *k'*, through which passes a screw or stud *k*<sup>2</sup>, set in the edge of the form-plate A, the arrangement being such that in operation when pressing-pad B yields under compression the ears or lugs *k* may have a slight vertical movement on the screws or studs *k*<sup>2</sup>, and thereby permit the bending of the plate C without strain on its connections with carrier A and without liability of buckling the plate C.

If desired, the pressing-pad B may be secured by screws or rivets to the form plate or carrier A and the pressing-plate C be attached by some suitable adhesive cement to the pad B.

In operation the die or former is brought down upon the sole of the shoe with considerable pressure, and the pressing plate or face C will press and smooth out the sole and accurately shape and set the same, the pad B

meantime lending a sufficient elasticity to cause the die or former to conform to the shape of the last.

Having fully described my invention and its mode of operation, I claim as new and desire to protect by Letters Patent of the United States—

1. A die or former for sole-machines, comprising a metallic pressing plate or face, and an elastic pad or cushion backing the same, substantially as described.

2. In a die or former for sole-machines the combination with a suitable supporting-plate, of an elastic cushion and a flexible metallic pressing-plate sustained thereby, substantially as described.

3. In a die or former for sole-machines, the combination with a suitable form-plate, of an elastic cushion and a metallic pressing-plate, and movable connections between said pressing-plate and form-plate, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ERASTUS E. WINKLEY.

Witnesses:

T. HART ANDERSON,  
A. E. WHYTE.