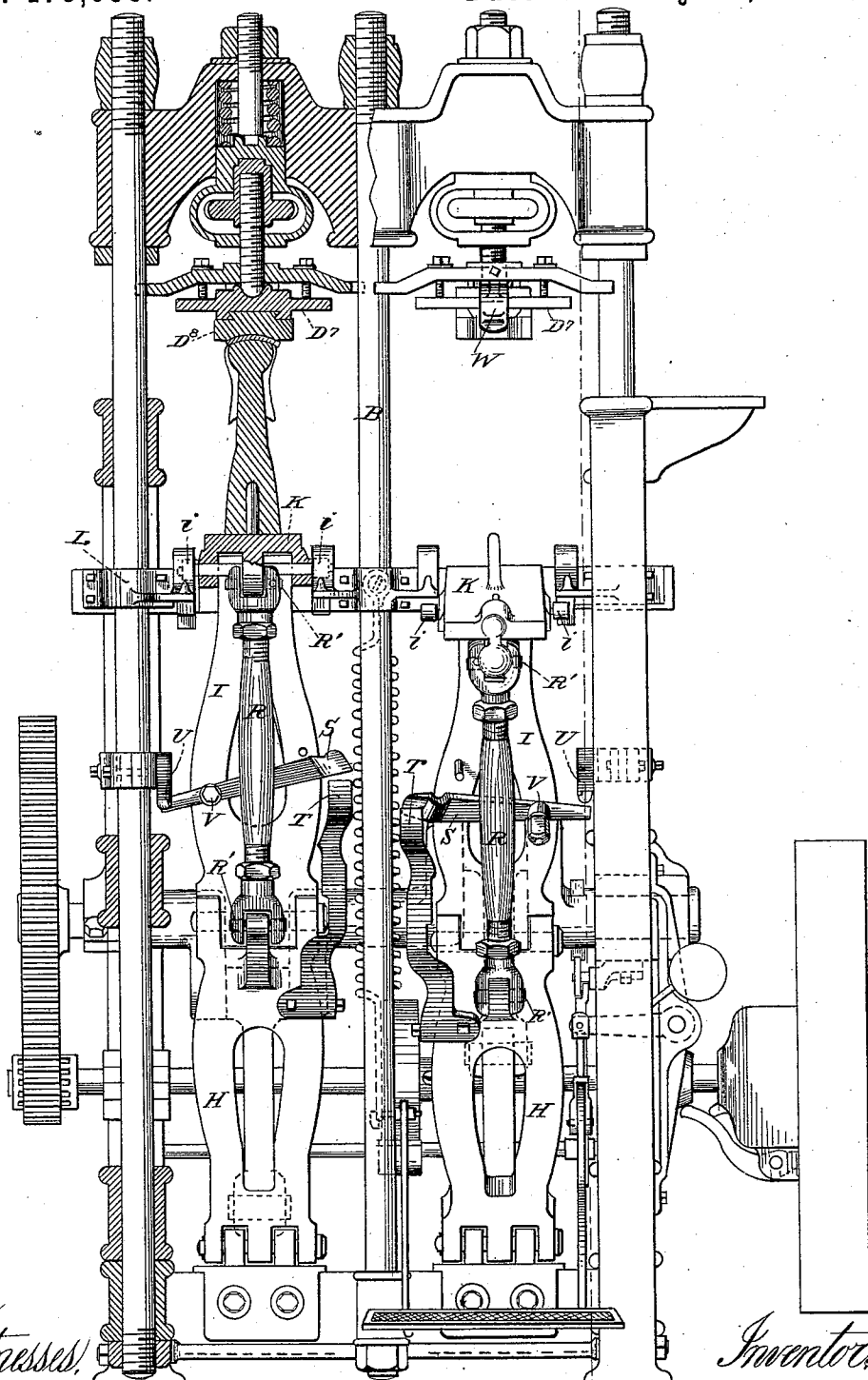


2 Sheets—Sheet 1:

SOLE MACHINE.

Patented July 19, 1892.



Witnesses,

Kellie M. Silva
Joseph P. Hurley Fig. 1.

Inventors.

← Maurice T. Brennan
and John J. Heys
by their Attorney
Chas. Allen Taber.

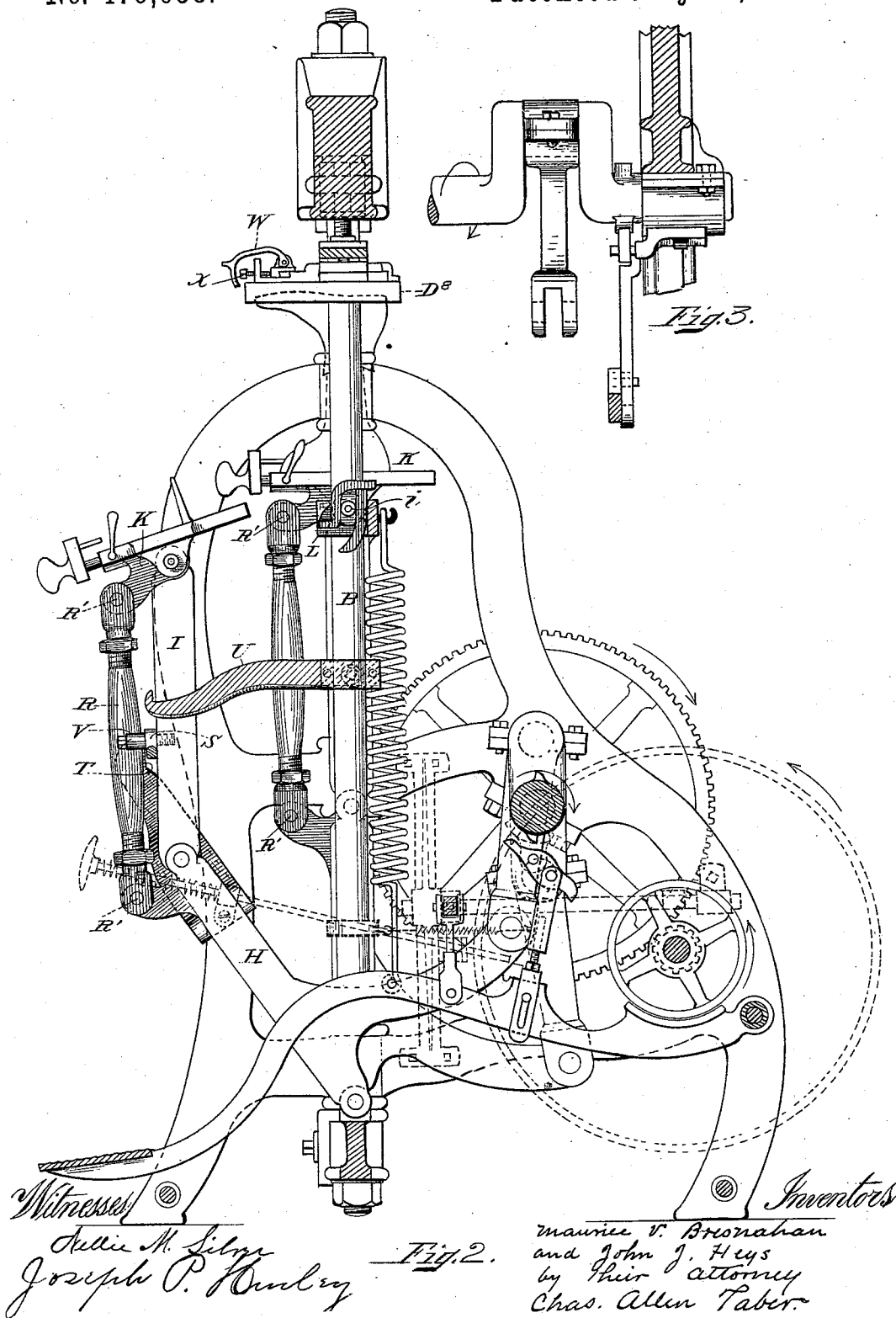
(No Model.)

2 Sheets—Sheet 2.

M. V. BRESNAHAN & J. J. HEYS.
SOLE MACHINE.

No. 479,053.

Patented July 19, 1892.



UNITED STATES PATENT OFFICE.

MAURICE V. BRESNAHAN AND JOHN J. HEYS, OF LYNN, MASSACHUSETTS.

SOLE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 479,053, dated July 19, 1892.

Application filed February 27, 1892. Serial No. 423,091. (No model.)

To all whom it may concern:

Be it known that we, MAURICE V. BRESNAHAN, a citizen of the United States, and JOHN J. HEYS, a citizen of Great Britain, residents of Lynn, in the county of Essex and State of Massachusetts, have jointly invented new and useful Improvements in Sole Shaping or Leveling Machines for Boots and Shoes, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements made in the machine patented by us and dated July 21, 1891, No. 456,413, whereby said machine is simplified and made more practical. By the introduction of parts S, T, U, R, and V numerous small parts are removed and the movements made more simple.

The mode of operation and principle is as described in Letters Patent No. 456,413. The object of the following claims is to cover new combinations so introduced.

Wherever reference is made to Letters Patent No. 456,413, the same names and letters will be used as in that patent. The new parts will bear different names and marks.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

Below are given the names and marks used in Letters Patent No. 456,413 of the parts removed from the machine; also the names and marks to be used on new parts introduced, which will be given hereinafter with full explanation.

The parts removed from the machine built under Letters Patent No. 456,413 are the forcing spring I' between the last-block K and toggle I, (shown in Figure 6,) the projection-cam k'', that comes in contact with the roller or projection l on the middle brace L, (shown in Fig. 4,) projection k on the under side of last-block K, (shown in Fig. 4,) the front brace A', that is secured to the front of the frames, (shown in Figs. 3, 4, and 8,) the arm or rod O and the projection-cam o, (shown in Fig. 3,) the toggle-tripper I'', and roller I⁵ I⁴ I³ and yielding spring I⁶ and I⁷, (shown in Fig. 4,) the pin and roll g; also, P, P', P'', P³, and H."

The new parts introduced to accomplish the results, as before, are a latch S, a catch T, an

incline plane or longitudinal cam U, an adjustable connection R, a stud V, and pins R' R'.

Fig. 1 of the accompanying drawings represents a front elevation of the machine, parts of which are drawn in section and other parts shaded. The shaded parts bearing letters represent the new parts introduced into the machine. Fig. 1 also represents the latch S and catch T locked, making the toggles, as they travel outward, to be held rigidly together and both to come out as though one lever. The other half or section in Fig. 1 represents the latch S to be released from the catch T by means of the longitudinal cam U, thus allowing the toggles to straighten as the rolls i, attached to the last-block K, enter the forked grooves on brace L. (Shown in Fig. 2 in section-drawings.) Fig. 2 represents a side elevation. The outward half or section of the machine shows the latch S, that is controlled by the cam U, to have dropped, which it does by gravitation, between the catch T and the top toggle I, thus locking the toggles H and I, so that they move as one body until the latch S has come in contact with the cam U again, which occurs on the return movement just as the rolls i enter the forked groove, as stated above. Fig. 3 is a detail sectional view.

The bottom toggle H has securely fastened to its side a catch T, said catch standing in a vertical position. The top toggle I has a latch S mounted upon it by means of a stud V, upon which the said latch plays loosely, said latch being weighted so as to drop by gravitation at all times when not opposed by cam U, so that when the toggles H and I come out, as hitherto described, the latch S drops between the toggle I and catch T, thus securely locking the toggles together for the purpose of presenting the last and shoe in a solid and rigid position for the operator to work upon, as described in Letters Patent No. 456,413 from line 110 on page 3 to line 10 on page 4.

On the toggle H a projection is cast. A similar projection, but of greater length, is cast on the last-block K. From these two points an adjustable connection R is attached by means of pins R' R', by which means the face of the last-block K is controlled, so as to travel at right angles to the rods B B during the vertical motion, or any desired angle may

be obtained by increasing or diminishing their centers. This is for the purpose of presenting the sole of the shoe on the last correctly to the mold D^s.

5 Upon the rod B is tightly mounted an incline plane or longitudinal cam U. This is for the purpose of releasing the latch S, so as to allow the toggles to straighten at the time the rolls *i* enter the forked grooves, as before
10 stated.

In practical operation of the machine we have found that the mold D^s often sticks to the shoe, caused by the wax or otherwise, and it is moved from its place to the injury of the
15 work and sometimes to the machine. To remedy this trouble, we now attach to mold-carrier D in the head of the machine a pivoted hook or catch W for the purpose of preventing any forward motion of the mold in the
20 operation of the machine. The mold is also provided with an adjustable screw X, which regulates the position of the mold in the mold-carrier. The catch W holds the mold at the screw-head, which always maintains
25 one position, the mold being moved by the screw.

Having thus fully described the nature, construction, and operation of our invention, we wish to secure by Letters Patent, and claim—

30 1. In a machine for shaping the soles of boots and shoes, the combination of a mold or form D^s, a last and last-carrier, two toggle-levers,

and the adjustable connection R, substantially as shown and described.

2. In a machine for shaping the soles of boots 35 and shoes, the combination of a pair of toggle-levers, a latch and a catch for locking said toggles, and an incline plane or longitudinal cam for releasing said latch from the catch, substantially as described, and for the purpose 40 set forth.

3. In a machine for shaping the soles of boots and shoes, the combination of a pair of toggle-levers, a last-block mounted on one of said toggles, a latch and a catch, a longitudinal 45 cam, an adjustable connection connected from lower toggle to said last-block, a crank-shaft, and a connection from said crank to said toggles, substantially as described, and for the purpose set forth. 50

4. In a machine for shaping the soles of boots and shoes, the combination of a mold-carrier, a pivoted hook mounted on said mold-carrier, and an adjustable screw mounted on mold D^s, said pivoted hook arranged to drop over 55 the head of the adjusting-screw at any part of said adjustment, for the purpose set forth, and substantially as described.

MAURICE V. BRESNAHAN.
JOHN J. HEYS.

Witnesses:

HANORAH J. BRESNAHAN,
CHAS. ALLEN TABER.