

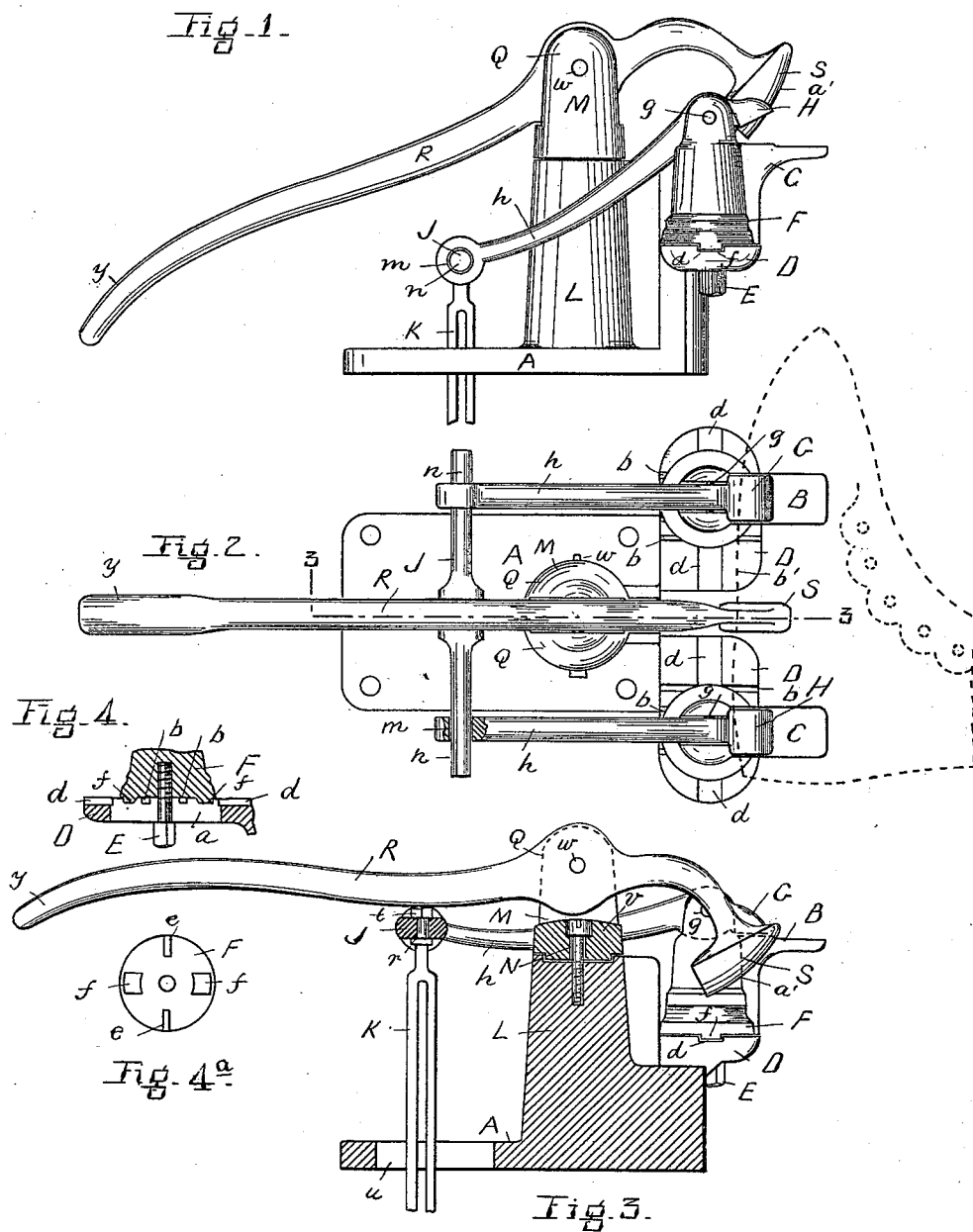
(No Model.)

2 Sheets—Sheet 1.

F. A. & I. F. PECK.
SHOE UPPER STRETCHING MACHINE.

No. 461,368.

Patented Oct. 13, 1891.



WITNESSES.

Percy Bryant
L. E. Nichols.

INVENTORS.

Fred A. Peck & Ira F. Peck.

per Edwin M. Brown
Attorney.

(No Model.)

2 Sheets—Sheet 2.

F. A. & I. F. PECK.
SHOE UPPER STRETCHING MACHINE.

No. 461,368.

Patented Oct. 13, 1891.

Fig. 5.

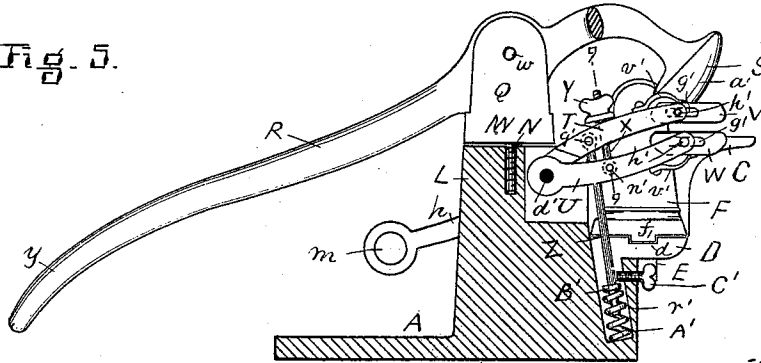


Fig. 6

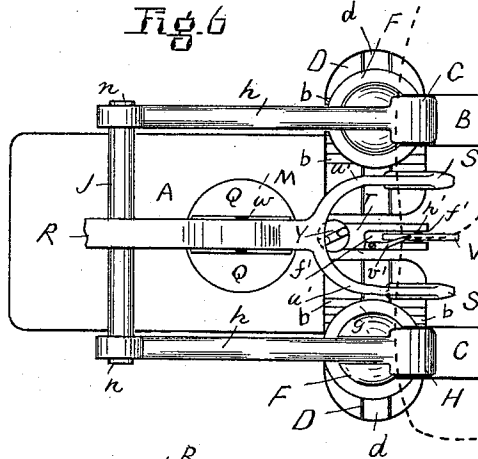


Fig-7.

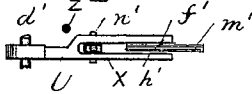
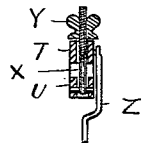


Fig-9-



WITNESSES
Percy Bryant
C. C. Nichols.

Fig. 8.

INVENTORS
Fred A. Peck & Ira F. Peck
per Edwin W. Brown.
Attorney

UNITED STATES PATENT OFFICE.

FREDERICK A. PECK AND IRA F. PECK, OF PROVIDENCE, RHODE ISLAND,
ASSIGNORS TO THE PRESTON MACHINE COMPANY, OF BOSTON, MASSA-
CHUSETTS.

SHOE-UPPER-STRETCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 461,368, dated October 13, 1891.

Application filed August 29, 1887. Renewed March 21, 1891. Serial No. 385,872. (No model.)

To all whom it may concern:

Be it known that we, FREDERICK A. PECK and IRA F. PECK, of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Machines for Stretching Up-
pers of Boots or Shoes, of which the follow-
ing is a full, clear, and exact description.

This invention consists of a certain construc-
tion and arrangement of parts in a machine
for the purpose, more particularly, of stretch-
ing the shank portion of the upper of a boot
or shoe for the better fit of the upper to the
last in lasting the boot or shoe and the foot
of the wearer at such portion of the boot, all
substantially as hereinafter fully described
and shown, reference being had to the accom-
panying plate of drawings, in which—

Figure 1 is a side view. Fig. 2 is a plan
view. Fig. 3 is a vertical longitudinal section
on line 3 3, Fig. 2. Fig. 4 is a detail sectional
view of the base and its support. Fig. 4^a is a
detail inverted plan view of the base. Figs. 5
and 6 are respectively side and plan views
showing other parts from that shown in Fig.
1, and Fig. 7 is a detail plan view. Fig. 8 is
a front view of Fig. 6; and Fig. 9 is a detail
sectional view on line 9 9, Fig. 5.

In the drawings, A represents a bed-plate
adapted to be secured to any suitable table
or support in any suitable manner.

B C are two jaws secured each to a sepa-
rate rest or support D of the bed-plate A on
each side of the central longitudinal line of
the machine and on the same horizontal
plane. Each of these jaws B C is secured to
its support D by a screw E, which passes up
through a transverse slot *a* in such support
and screws into the base F of the jaw. On
the upper side of each support are a series of
longitudinal grooves *b* and a central trans-
verse groove *d*, and on the under face of
the base of each jaw B C is a corresponding
series of projections *e f* to fit, respectively,
the grooves *b* and *d*, by which the jaws B C
can be set in any desired position laterally on
their supports within given limits nearer to
or from each other and there secured by the
screws E firmly to the supports, the projec-

tions and grooves preventing the swiveling
of the jaws.

Pivoted to and above and back of each jaw
B C at *g* are respectively jaws G H, each
arranged to swing up and down on its pivot
and close upon and open from its respective
jaw B C. Each upper jaw G H has an ex-
tension or arm back of its pivot, as at *h*, and
each extension in its outer end has a hole or
opening *m* through it laterally, in which is
inserted the ends *n*, respectively, of a hori-
zontal cross-bar J, which cross-bar is connected
at its central portion by a rod K, passing
through an opening *r* therein and secured by
a nut *t*, the rod extending down through an
opening *u* in the bed-plate for connection
with any suitable treadle for operation thereof.

L is a central standard of the bed-plate, and
M is a block arranged to swivel on the top of
the standard L, being secured thereto by a
central screw N passing freely through the
portion *v* of the block M and screwing into
the standard L, which allows free rotary or
swiveling movement of the block M thereon
in a horizontal plane and yet holds it in place.
Pivoted at *w*, between two upright arms Q of
this block M, is a horizontal lever R, adapted
to swing up and down thereon, operated by
its handle portion *y*. The end of this lever
has a head S, shaped as shown, its outer and
working surface *a'* being longitudinally sub-
stantially in the line of a flat curve and trans-
versely more or less of a round curve or semi-
circle.

The operation of the machine is substan-
tially as follows: The upper to be stretched
is placed on the upper surface of the jaws B
C and between them and the jaws G H, so
that the portion of the edge of the upper re-
quiring the most stretching shall be about
midway between the two series of jaws, as
shown in dotted lines in Fig. 2. The opera-
tion of the treadle pushes up the arms *h* of
the jaws G H, which closes these jaws tightly
upon the upper between them and the lower
jaws B C, securely holding it between them.
The arm *y* of the lever is then operated by
raising it, which causes its end or head S to
bear upon the unclamped portion of the up-

per between the jaws, and as it is pressed firmly thereon the lever at the same time is also caused to move horizontally, swiveling on its block-pivot N, so that the head S moves back and forth between the two sets of jaws and bearing upon the unclamped portion of the upper between such jaws until the material of which the upper is made at such place is stretched, as desired, when the treadle is operated to move the upper jaws G H from the lower ones, which unclamps or releases the boot-upper, which can then be removed and another inserted and stretched, as before, and so on. The longitudinal line or curve of the face of the head S in relation to its movements and the horizontal plane of the faces of the jaws is such that the upper when placed therein to be stretched will be stretched the most nearest the edge b' and diminishing therefrom toward the middle or central portion thereof.

When desirous of putting larger or smaller uppers between the jaws to stretch the same, the jaws B C can be moved toward or from each other on their respective supports and set by the grooves or notches and secured by the set-screws, as described.

The working face a' of the burnisher-head or stretcher S can be of any desired curve or shape to suit the amount and kind of stretch desired for the upper.

The parts so far described are constructed and arranged for operation more particularly on an upper of a boot or shoe made of one piece of leather, &c.; but in the views from Figs. 5 to 8, inclusive, is shown an arrangement of parts for stretching an upper of a boot or shoe which is made in two parts and secured together by stitches, the object being to hold the upper firmly at the seam, so that when the material is stretched the seam will not be injured or broken.

T and U are two arms pivoted at their ends together and to the standard L of the bed-plate A at d' , so that they can swing on said pivot as one or to and from each other. In a longitudinal vertical slot f' in end of each arm T U is a thin blade or jaw V W, respectively, each having a longitudinal transverse slot g' engaging with a pin h' in end of each arm. The jaw V is above the jaw W and in the same vertical plane, and their contiguous edges are grooved longitudinally, as at m' . Connected to the arm U by a pivot n' is a bolt X, its other end passing up freely through the arm U and having a screw-thread on its outer end, on which is a thumb-screw Y, engaging therewith. Screwing up this screw brings the arms T U together and with anything placed between their jaws V and W will clamp and securely hold the same. Attached to the upper arm T by a pivot q' is a rod Z, which extends downward into a socket r' in the standard, having a spiral spring A' encircling the same, which bears against the

bottom of the opening r' and against a collar B', adjustably secured to and on the rod Z by a set-screw t' .

C' is a screw screwing through the side of the standard and projecting into the opening r' sufficiently for the collar B' of the rod Z to abut against and prevent any farther upward movement of the rod Z than the position of the collar thereon will allow.

The lever R is divided at its front end into two arms u' , each having a head S, like the head S shown in Figs. 1 to 5, the arms u' straddling the arms T U for their heads S to be respectively between the set of jaws V W and sets of jaws B G and C H. In this construction and arrangement of parts the upper to be stretched, which is made of two pieces having a seam secured by stitches, as usual, is placed between the several jaws for the seam to be between the two jaws V W, with the stitches along the grooves m' , and then the treadle is operated to clasp the upper between the jaws B G C H, as before, the jaws V W being moved to firmly clasp and hold the seam by screwing up the screw Y on the connecting-bolt X, after which the lever R is operated as before, the two heads S pressing upon and stretching the unclamped portions of the upper between the jaws, which, when stretched sufficiently, the jaws are all opened and the upper removed and another inserted for operation thereon, as before. The jaws V W can be firmly closed upon each other by other means than the nut Y and bolt X—as, for instance, the lower arm U can be rigidly secured to the standard, being arranged at the proper height for its jaw W to be in suitable position in relation to the lower jaws C B and the upper arm T, pivoted to the arm U and connected to the operating-treadle in any suitable manner for operating the same, for its jaw W to bear upon the jaw V. The height of the jaws V W is arranged by the adjustment of the collar B' upon the rod Z, such collar preventing, when secured on the rod, by its abutment against the screw E, any farther upward movement of the arm T.

Obviously, although this invention is especially described for use in stretching an upper of a boot or shoe, it can be applied to stretching any suitable material and for any other purpose.

The swiveling of the lever R enables its head S to be moved back and forth upon the material being stretched, and thus not only stretches the same by pressure, but also by rubbing it, whereby the proper amount of stretch required will be the better, quicker, and easier accomplished.

The groove m' in the jaws V W allows for the stitches of the seam of the upper to lay therein and not be pressed or injured, the jaws holding the seam along and outside of the line of stitches.

v' are springs, one secured to each arm T

U in its upper and under side, respectively, its free end bearing against its respective jaw to hold it in its proper positions.

The handle of the lever R, instead of extending back, as shown, can be bent upward and extend over and by the head in the opposite direction and operated thereat, or it can extend direct from the portion of the lever near the head or in any direction for convenient operation of the head on the upper; also the working faces of the head can be arranged at any angle in relation to its pivot and the plane in which the upper is held by the jaws.

Having thus described our invention, what we claim is—

1. In the above-described machine, the combination, with the jaws B, C, G, and H, adapted to grasp and hold the upper of a boot or shoe between them, of a head S, attached to a suitable operating-arm R, arranged to swivel or rotate upon its support and to press and bear upon the unclamped portion of the upper between the two sets of jaws, for the purpose specified.

2. In the above-described machine, the combination, with the jaws B C, of jaws G H, respectively pivoted thereto, the jaws G H having arms *h* engaging with a cross-bar J, connected to a suitable operating-treadle.

3. In the above-described machine, a jaw B, having projections *ef* on its base arranged to engage with grooves *b d* on its support and secured thereto, for the purpose specified.

4. In the above-described machine, a jaw B,

having projections *ef* arranged to engage with grooves *b d* in its support and secured thereto by a screw-bolt E passing through an elongated slot in the support, for the purpose specified.

5. In the above-described machine, the combination, with the jaws B C G H, of intermediate jaws V W, respectively pivoted to arms T U, adapted to move to and from each other, for the purpose specified.

6. In the above-described machine, the combination of the arms T U, provided each with elongated slots *g'* and engaging with a pivot *h'* on its respective jaws V W, said arms being arranged to move to and from each other and to be secured together, for the purpose specified.

7. The combination, with jaws suitably arranged to grasp and hold the upper of a boot or shoe at the seam and a suitable distance each side thereof, of a lever pivoted to a suitable support and having two heads S S suitably arranged and adapted by operating the lever to press and bear upon and stretch the unclamped portion of the upper between the sets of jaws, for the purpose specified.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

FREDERICK A. PECK.
IRA F. PECK.

Witnesses:

C. C. HICKS,
H. W. RANDALL.