J. B. CLAIR.

CRIMPING-FORMS FOR BOOT-UPPERS.

No. 192,111. Patented June 19, 1877.

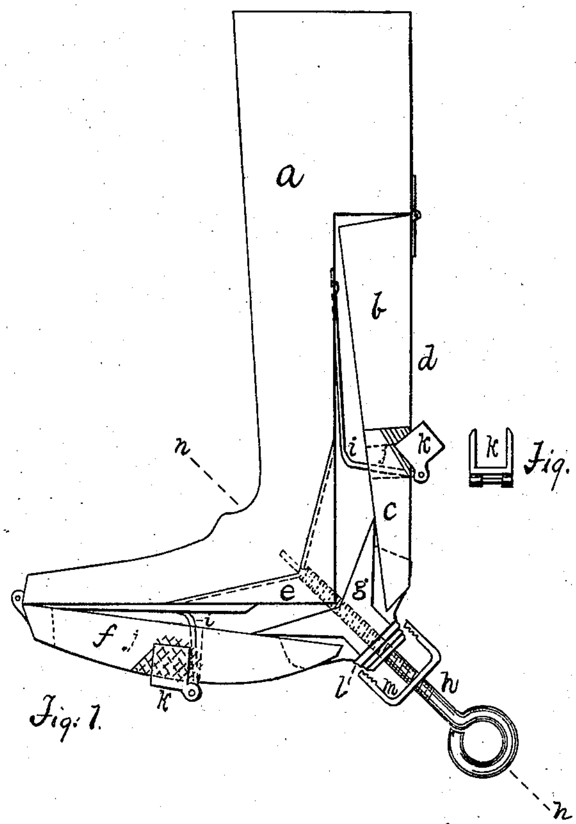

Fig. 1.

Fig. 2.

Witness
John R. Mason
Wm. H. S. Simmons

Inventor
John B Clair
Per Wm Franklin Seavey Atty

UNITED STATES PATENT OFFICE.

JOHN B. CLAIR, OF OLDTOWN, MAINE, ASSIGNOR OF ONE-HALF HIS RIGHT TO JAMES W. WALDRON, OF SAME PLACE.

IMPROVEMENT IN CRIMPING-FORMS FOR BOOT-UPPERS.

Specification forming part of Letters Patent No. **192,111**, dated June 19, 1877; application filed November 2, 1876.

To all whom it may concern:

Be it known that I, JOHN B. CLAIR, of Oldtown, in the county of Penobscot and State of Maine, have invented certain new and useful Improvements in Crimping-Form for the Uppers of Boots; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 shows a side view of my invention; Fig. 2, detail, showing clamp *k*.

The same letters show like parts.

The object of my invention is the production of a crimping-form for the uppers of boots, which shall do its work with less danger of wrinkling or tearing the leather, and with greater rapidity and certainty, than those now in use.

My invention will be readily understood by reference to the accompanying drawings, in which—

a shows a form of the ordinary shape, having a portion, *b*, at its back cut out and attached by a hinge. To this part *b* is attached a metal extension, *c*, the whole forming one jaw, *d*, of the machine. To the under side of the foot part of the form is attached a metal guard, *e*, to which, at the toe end, is hinged a metal jaw, *f*, the two jaws *d f* meeting at and opening from the heel. These jaws are grooved upon their inner sides, as is also the guard *c*, so as to inclose an angle-iron, *g*, through the angle of which passes a screw, *h*, into a bearing in the guard *c*, so that by turning the screw the angle-iron is forced outwardly, drawing with it the jaws *d f*, which slide upon its inclined sides. At *i i* are springs secured to the stationary part of the form, and passing through slots *j j* in the jaws *d f*, respectively, and acting on said jaws in such a manner as to create a tendency to close. To the ends of these springs projecting through the slots, or to the jaws themselves, if preferred, are pivoted the clamps for holding the leather. These clamps are peculiar in construction, shutting over each side of the jaws *d f*, which are suitably roughened to hold the leather. The pivot upon which they turn is placed at the upper corner nearest the heel of the machine, causing the clamp to act as a cam. The upper part *l* of the angle-iron *g* is so formed as to act as the center or heel clamp in conjunction with a cap. It is rectangular in horizontal section, and is largest at the bottom, having its sides grooved or corrugated. Above this, on the screw, slides the cap *m*, roughened upon its inner surface, and shutting down over the part *l* of the angle-iron, securing the leather between the roughened surfaces.

The operation of my machine is as follows: The boot-front taken from the breaker is placed over the form, and the clamps *k k* turned down over the leather, pinching it between the jaws and the clamp. The heel part is also drawn into place over the part *l* of the angle-iron, and the clamp *m* pressed over it. The front is now secured in place, and, the screw *h* being turned, the angle-iron *g* is forced out, opening the jaws and stretching the leather to the form. As the stretching proceeds the leather is drawn down into the angle *n* of the form, and also from the clamps *k k* toward the center clamp *l m*, the line of the greatest stretch being on the line *n n*, and decreasing on either side, causing a tendency to wrinkle. This is obviated by the method of attaching the clamps *k k*, which, operating as cams, give slightly as the stretching proceeds, holding the leather firmly, but not rigidly. This, moreover, greatly lessens the danger of tearing of the leather. This effect of the clamps is increased if they are pivoted to the ends of the springs *i i*, which give an elasticity to the fastening.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a crimping-form for the uppers of boots, the combination of the form *a*, spring-jaws *d f*, angle-iron *g*, screw *h*, and clamps *l m* and *k k*, all operating as set forth, for the purposes specified.

2. In a crimping-form for the uppers of boots, substantially as herein described, the eccentrically-pivoted leg and foot clamps *k k*, as and for the purposes set forth.

3. The springs *i i*, in combination with the

leg and foot clamps *k k* eccentrically pivoted thereto, as and for the purposes described.

4. A crimping-form for the uppers of boots in which the leg and foot portions of said front are retained in place on the form by elastic fastenings, substantially as described, for the purposes specified.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of October, 1876.

JOHN B. CLAIR.

Witnesses:
JOHN R. MASON,
WM. FRANKLIN SEAVEY.