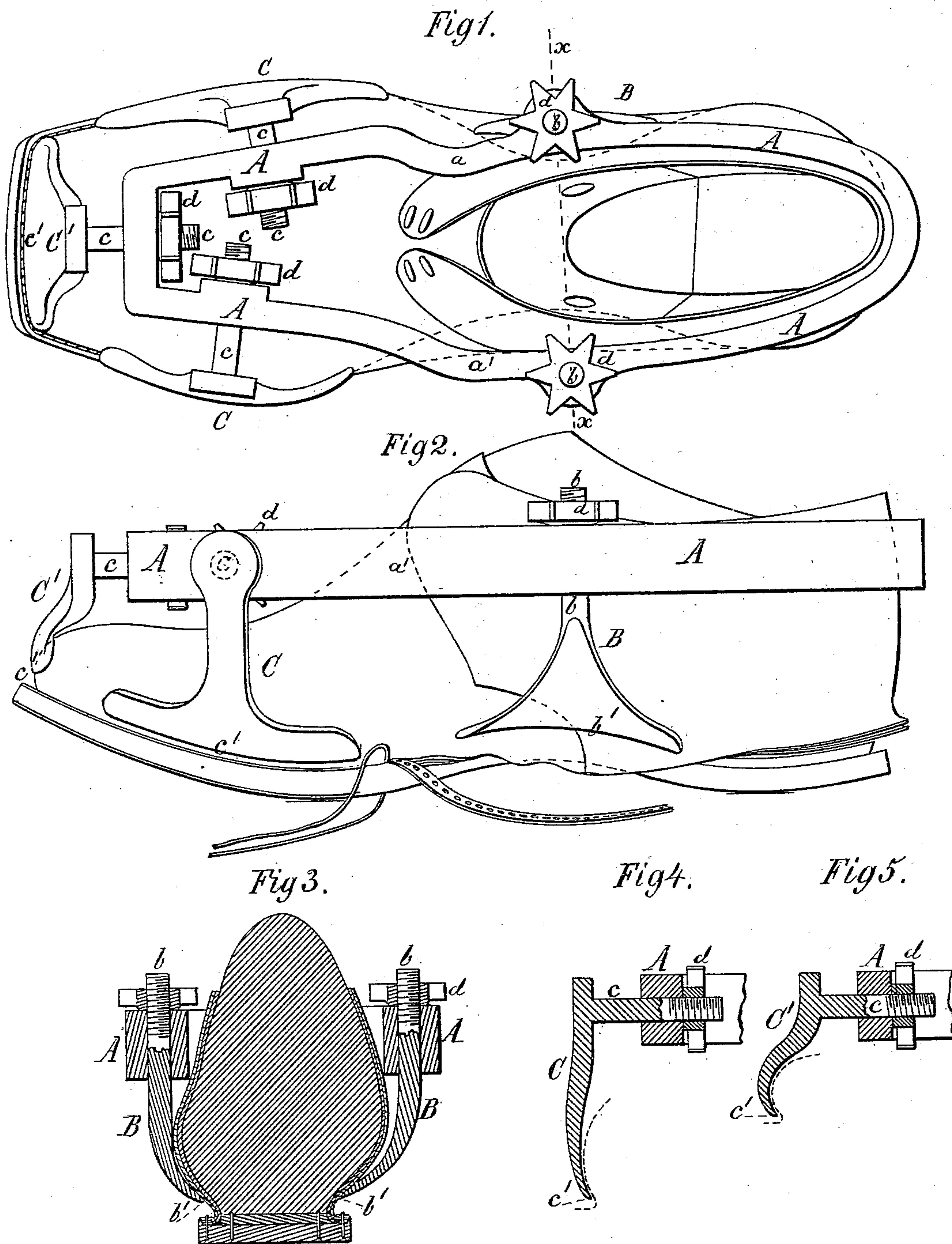


E. S. PRATT.  
Clamp for Holding the Uppers of Boots and Shoes.  
No. 226,191                      Patented April 6, 1880.



Witnesses:  
J. P. H. Lang  
Rufell Barr

Inventor:  
Elbridge S. Pratt  
by  
Mason, Fenwick & Lawrence  
Attorneys



# UNITED STATES PATENT OFFICE.

ELBRIDGE S. PRATT, OF CHICAGO, ILLINOIS.

## CLAMP FOR HOLDING THE UPPERS OF BOOTS AND SHOES.

SPECIFICATION forming part of Letters Patent No. 226,191, dated April 6, 1880.

Application filed January 15, 1880.

*To all whom it may concern:*

Be it known that I, ELBRIDGE S. PRATT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Clamps for Holding the Uppers of Boots and Shoes while being sewed to soles, of which the following is a specification.

My invention relates to an improved clamp by which the uppers of boots and shoes are clamped upon lasts and held firmly while they are being sewed to soles.

The object of my clamp is to facilitate the sewing of soles and uppers by securing the uppers, at their shank, ball, and toe portions, snugly to the last, and also holding them firmly, by means of adjustable clamp-jaws of proper form applied upon a skeleton-frame of an outline which conforms generally to the outline of a boot or shoe, and is of a diameter longitudinally and transversely less than that of the last through its longest and thickest or widest portions, thus avoiding the labor and inconvenience, as well as delay, of fitting and adjusting the uppers by hand while the sewing of the same to their soles is being proceeded with.

I obtain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a top view of my improved clamp applied to a lasted shoe, said shoe being shown with its sole partly sewed on. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical transverse section in the line  $xx$  of Fig. 1. Figs. 4 and 5 are detail sections of the horizontally-adjustable clamping-jaws of the clamp.

Similar letters refer to similar parts throughout the several views.

A is an oblong skeleton-frame, of less diameter transversely and longitudinally than the last upon which it is used—that is to say, the frame, while it can be fitted around and upon the highest part of the last, so as to bear against its heel and instep portions and against the sides of the last which are between the instep and the heel, cannot descend below the points where it bears against the heel and instep of the last. This frame conforms generally to the outlines of the last between the in-

step and heel, and is contracted by means of inward and outward bends,  $a$   $a'$ , above the front part of the last, so as to bear against the respective sides of the upper part of the instep of the last, and thus be kept from descending too far while the clamping operation is being performed. Forward of this contraction the frame is made slightly tapering, its center being as nearly as possible in line with the longitudinal center-line of the last. The form of the frame may be varied from that described without departing from my invention.

To the frame A a number of clamp-jaws, B C C', are attached, their shanks  $b$  and  $c$  being respectively screw-threaded, fitted into the guide-holes of the frame, and provided with thumb-nuts  $d$ , which bear against the frame.

The clamp-jaws B have upright shanks  $b$  passed vertically through the frame A, and their lower ends are flared and curved to fit the sides of the shank of the last. They are drawn tight upon the uppers and last by the thumb-nuts  $d$ . The clamp-jaws C have horizontal shanks  $c$ , with thumb-nuts  $d$ , and their lower ends,  $c'$ , are flared and curved to fit the ball of the last, and the jaw C' has a horizontal shank,  $c$ , and a thumb-nut,  $d$ . This jaw is also flared and curved to fit the toe of the last.

The clamp-jaws C and C' are drawn tight upon the lower parts of the uppers, by means of the thumb-nuts  $d$ , in a horizontal direction.

The clamp-jaws B, C, and C' are gradually reduced in thickness in a downward direction, and they terminate with almost a knife-edge, as shown in Figs. 3, 4, and 5, and thus sufficient room outside of the jaws for the manipulation of an awl is afforded all around the seam-surface of the boot or shoe.

Operation: The uppers are drawn over the last and secured to the bottom edge of the same by tacks, as usual. The clamp-jaws B for the shank of the shoe are removed and the clamp-jaws C C' set out far enough to clear the ball and toe portions of the shoe or boot. The jaws B are first placed upon the shank sides of the upper, and being held by hand or otherwise in their proper position, the frame A is passed down over the top portion of the uppers and last, and in this act the shanks  $b$  are caused to enter guide-holes in the frame A. This done, the thumb-nuts  $d$  are screwed



again upon the threaded ends of the shanks until they bear against the frame. Next the clamp-jaws C C' are drawn up by thumb-nuts *d* until they bear respectively against the ball and toe portions of the shoe or boot. The frame A is next firmly pressed down and adjusted to a horizontal position, and the clamp-jaws finally tightened upon the shank, ball sides, and toe of the shoe, and thus the uppers are securely clamped to the last, ready for being sewed or otherwise united to the sole. When the sewing operation is begun the tacks holding the lower edges of the uppers to the bottom edge of the last are removed, and the edges of the uppers, which hang loosely, are turned outward away from the last, and a finished or prepared sole (which may be composed of two or more soles of different widths joined together) is tacked upon the last so as to hold it during the operation of sewing, and the turned-out edges of the uppers placed upon the grooved or channeled seam-surface of the outer sole, and a prepared welt then placed upon the turned-out edges of the uppers, and the sewing operation performed by sewing through the welt, uppers, and sole.

In the drawings the above-described mode of manufacturing boots and shoes by sewing through the welt, uppers, (and outside of the last,) and through the outer sole is illustrated, also a stitch gage welt is shown; but neither of these things is claimed under this patent, they being shown here for the purpose of illustrating my improved clamp, which is well adapted for use in connection with the same, and for all kinds of work where the sole and uppers are united outside of the jaws of the clamp.

What I claim is—

1. The portable skeleton-frame adapted for fitting upon and around a lasted shoe or boot

upper when fitted upon a last, in combination with adjustable jaws for pressing the edges of the uppers down upon the sole, having their support upon said frame, substantially in the manner and for the purpose described.

2. The combination of the portable skeleton-frame, adapted for fitting upon and around a lasted shoe or boot upper, and the shank-clamping jaws B, having vertical portions *b* and nuts *d*, substantially as and for the purpose described.

3. The combination of the portable skeleton-frame A, adapted to fit upon and around a lasted upper of a shoe, and the ball-clamping jaws C, having horizontal portions *c* and nuts *d*, substantially as and for the purpose described.

4. The combination of the portable skeleton-frame A, adapted to be fitted upon and around a lasted upper of a shoe, and the toe-clamping jaw C', having a horizontal shank, *c*, and nut *d*, substantially as and for the purpose described.

5. The combination of the portable skeleton-frame A, adapted to be fitted upon and around a lasted upper of a shoe, and the jaws B and C, having, respectively, appropriate shanks and nuts, substantially as and for the purpose described.

6. The skeleton clamp-frame A, of an outline conforming generally to that of the last upon which it is used, of less diameter than the thickest and longest parts of the last, and contracted at the instep portion of the last, as at *a*, substantially as and for the purpose set forth.

ELBRIDGE S. PRATT.

Witnesses:

ALEXANDER PORTER,  
DAVID A. CLARK.