

(No Model.)

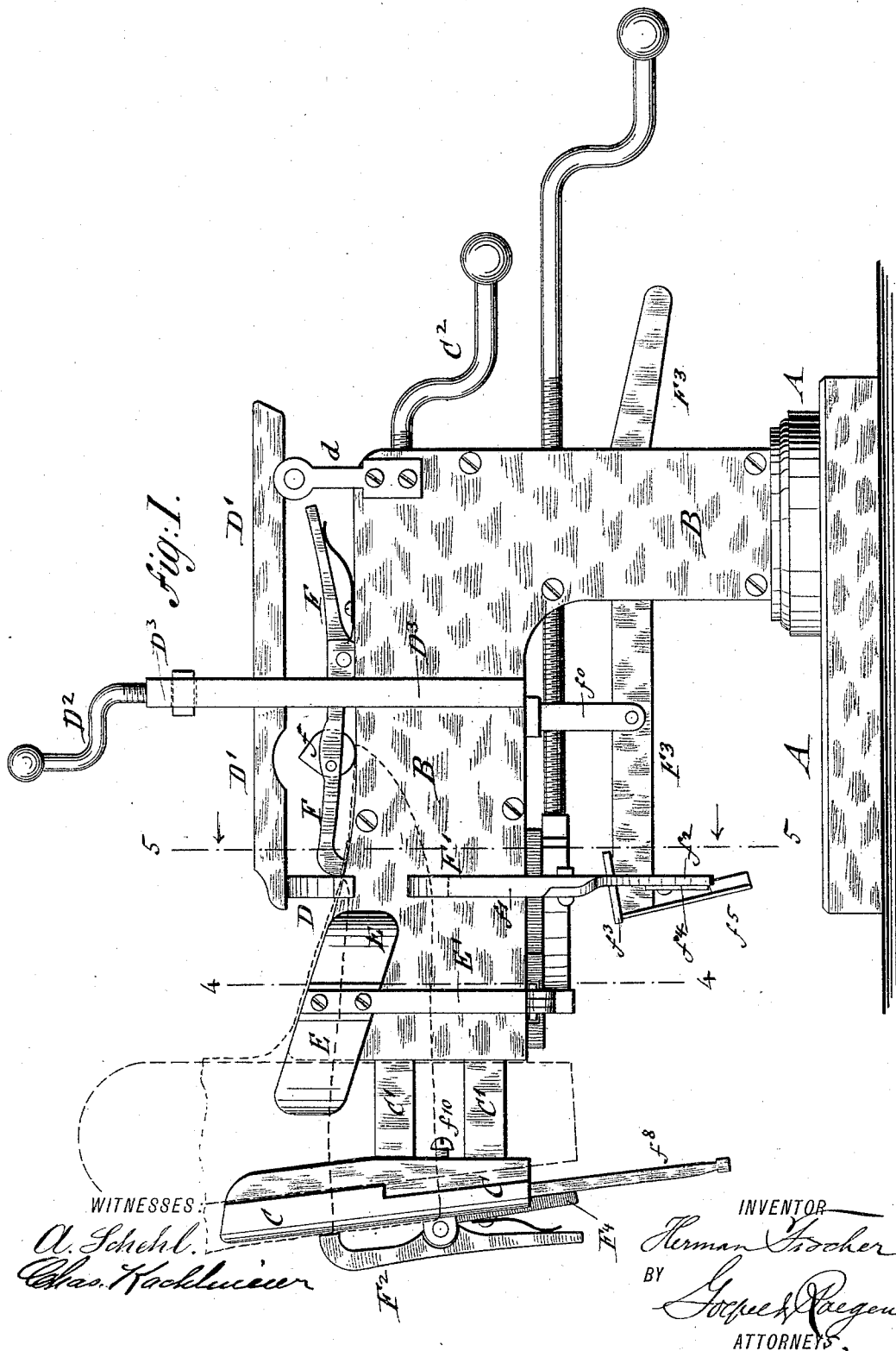
3 Sheets—Sheet 1.

H. FISCHER.

MACHINE FOR PASTING VAMPS TO UPPERS.

No. 487,388.

Patented Dec. 6, 1892.



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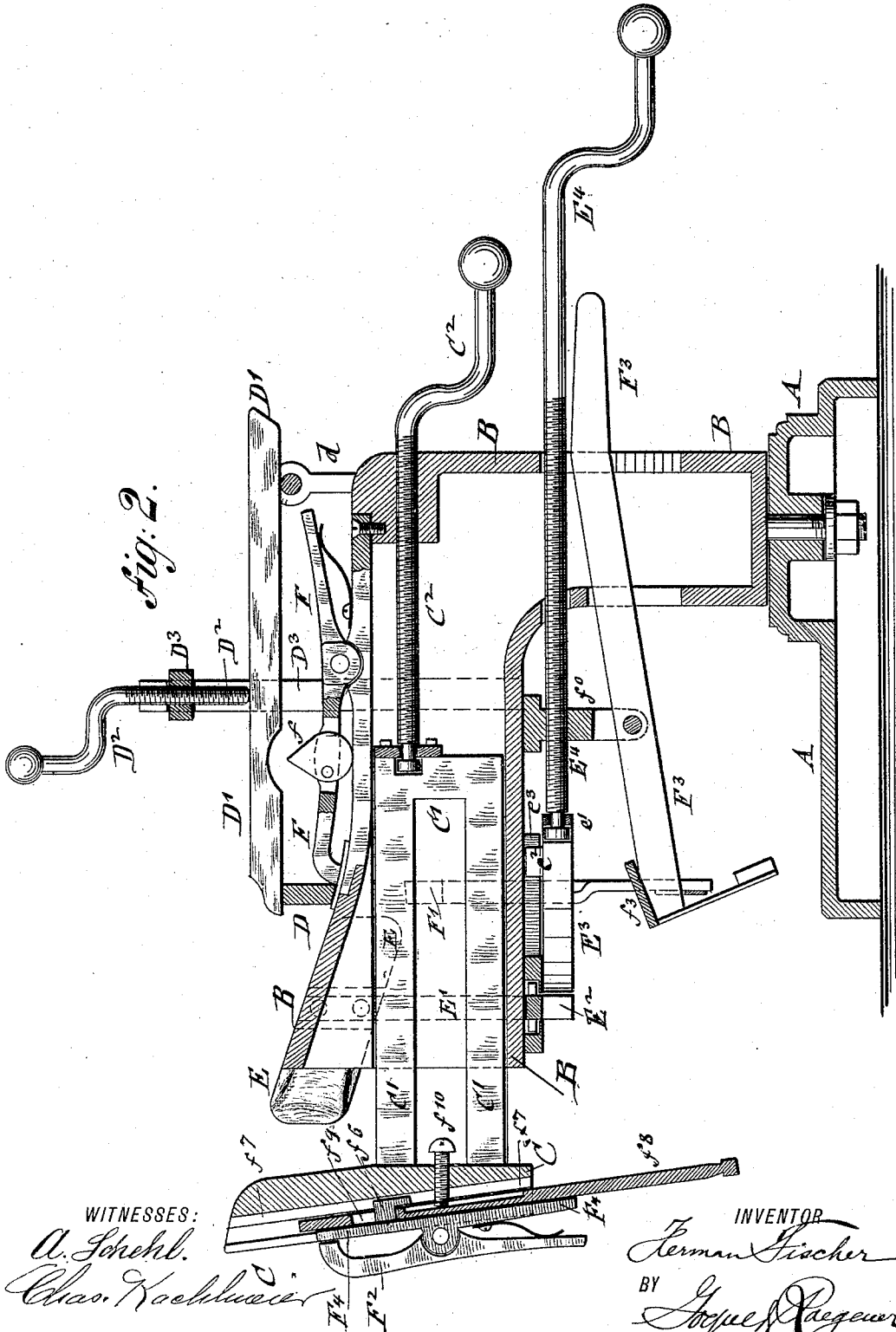
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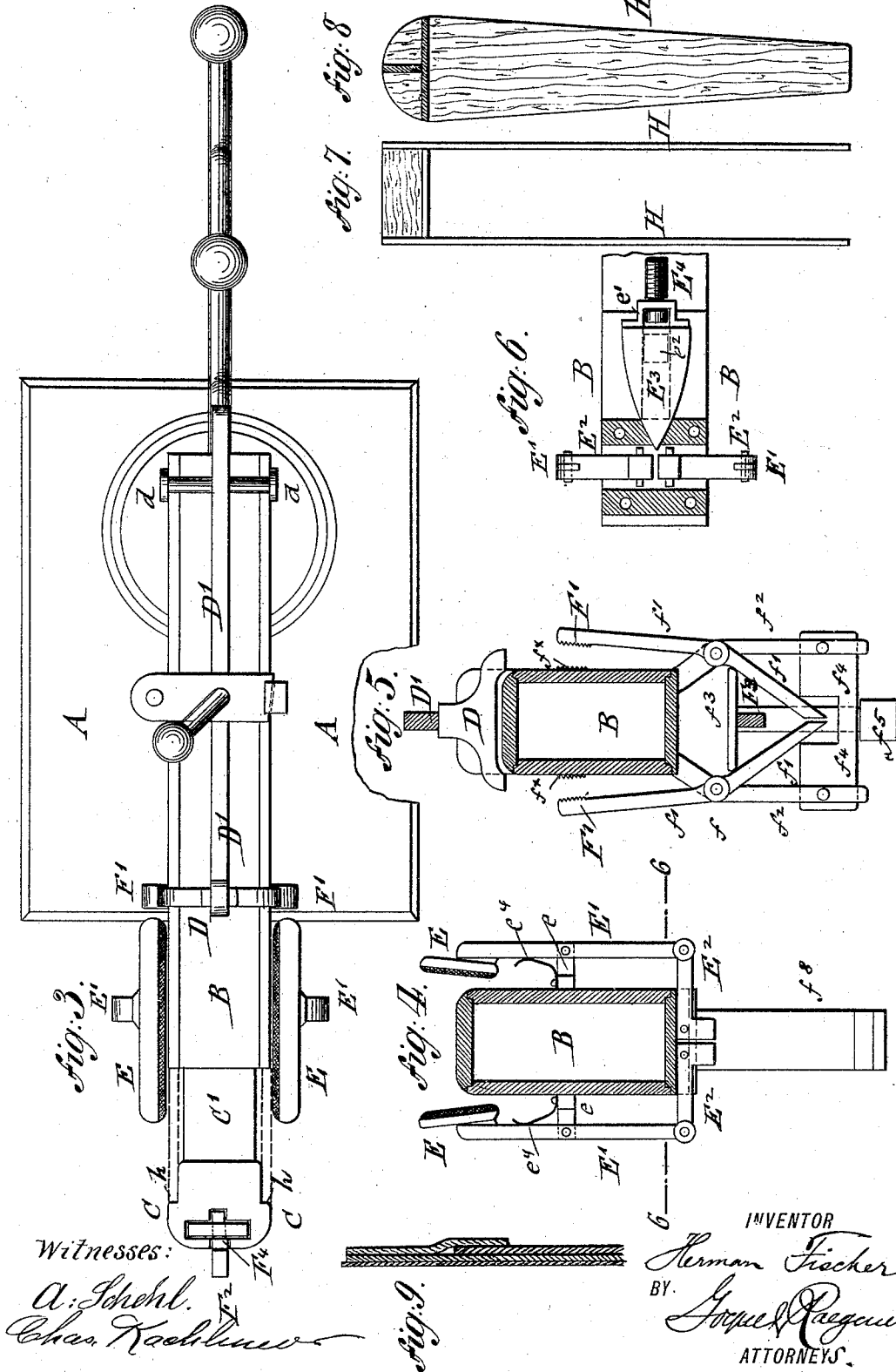
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UNITED STATES PATENT OFFICE.

HERMAN FISCHER, OF BROOKLYN, NEW YORK.

MACHINE FOR PASTING VAMPS TO UPPERS.

SPECIFICATION forming part of Letters Patent No. 487,388, dated December 6, 1892.

Application filed November 21, 1891. Serial No. 412,645. (No model.)

To all whom it may concern:

Be it known that I, HERMAN FISCHER, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in a Machine for Pasting Vamps to Uppers, of which the following is a specification.

This invention relates to an improved machine for pasting vamps to shoe-uppers in such a manner that a uniform connection of the vamp with the upper and shaping of the same preparatory to stitching is obtained, whereby an upper of good shape and fit is produced; and the invention consists of a machine for pasting vamps to shoe-uppers, which comprises a supporting-arm with upwardly-curved outer ends, a stretcher-piece, and a number of independently-adjustable clamping devices, which are applied for a sufficient length of time to the overlapping parts of the vamp and upper until the parts are pasted together, after which the upper is ready for being stitched along the vamp in the usual manner.

The invention consists, further, of certain details of construction and combination of parts, which will be fully described hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation of my improved machine for pasting vamps to uppers. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a plan view. Figs. 4 and 5 are vertical transverse sections, respectively, on lines 4 4 and 5 5 of Fig. 1. Fig. 6 is a detail horizontal section on the line 6 6, Fig. 4. Figs. 7 and 8 are details of the key that is used in connection with the machine for stretching the heel portion of the upper; and Fig. 9 is a detail vertical transverse section of a shoe-upper, showing the connection of the vamp and upper after they are pasted together, but before stitching.

Similar letters of reference indicate corresponding parts in all the figures.

Referring to the drawings, A represents a suitable base, to which is swiveled a bent or angular arm B, on which the different parts for supporting and clamping the vamp and upper are supported. The outer end of the bent or angular arm B is upwardly inclined

at its upper part, so as to correspond to the general inclination of the front part of the upper. In interior ways of the horizontal portion of the arm B is guided the shank C' of a stretcher-piece C, which is supported at the outer end of the shank and made adjustable in the arm B by means of a screw-rod C², which takes into a screw-tap of the arm and is swiveled at its inner end to the shank C', as shown in Fig. 2, so as to move the stretcher-piece C on the turning of the screw-rod C² by its crank-shaped handle away from or toward the arm B. The vamp is placed in position on the stretcher-piece and on the upwardly-inclined end of the arm B, as shown in dotted lines in Fig. 1, and then firmly secured in position on the top and sides of the arm B and on the stretcher-piece C by means of retaining-jaws F F' F². The retaining-jaw F is fulcrumed to the top part of the arm B and provided with a pointed cam f, that is applied to the outer end of the vamp, so as to hold it in position until the side and heel jaws F' and F² are applied. The outer end of the jaw F is spring-actuated, so that the cam f is tightly pressed on the end of the vamp. When the side and heel retaining jaws F' and F² are applied, the cam f is turned in its pivot, so that the outer end of the jaw F is applied to the vamp close to its connection with the upper, as shown in Fig. 1. The side jaws F' are arranged at the upper ends of levers f', that are fulcrumed to bracket-arms f² at the lower part of the arm B and the lower ends of which are acted upon by a plate f³, that is attached to the end of a fulcrumed lever F³, the opposite end of which passes through the slotted vertical portion of the arm B, as shown in Fig. 2. The rear end of the lever F³ forms a handle by which it is moved in raised or lowered position, according as the side jaws F' are to be removed from or applied to the arm B. The sides of the arm B opposite the jaws F' are serrated, as shown at f, Fig. 5, so as to permit the firm holding of the vamp by the serrated faces of the jaws F'. When the jaws F are applied to the opposite sides of the arm B by the action of the push-plate f³, the lever F³ enters between the lower ends of the jaw-levers f' and holds the jaws thereby rigidly in position, as shown in Fig. 2.

The lower ends of the bracket-arms f² are

connected by a transverse centrally-recessed plate f^4 , which serves as a stop for the lever F^3 when it is moved in downward direction. When the side jaws F' are to be released, the lever F^3 is lowered and the plate f^3 and lever F^3 withdrawn from the levers f' , so that the side jaws can drop off by their own weight. A weighted arm f^5 is attached to the front end of the lever F^3 , so as to balance the latter and facilitate the working of the same.

The lever of the heel-retaining jaw F^2 is fulcrumed to a guide-piece F^4 , which is inserted into a guide-groove of the stretching-piece C, the lower or handle end of the jaw-lever being acted upon by a spring, so that the upper end is firmly pressed against the stretching-piece C, as shown in Figs. 1 and 2.

The guide-piece F^4 of the jaw F^2 is provided with a hook f^6 , that projects into a longitudinal center groove f^2 of the stretcher-piece C, said hook hooking over a slide-piece f^8 , that is guided in a groove f^9 of the stretcher-piece C and rigidly held in position by a set-screw f^{10} , which takes into a depression of the slide-piece f^8 . By adjusting the slide-piece f^8 higher or lower in the stretcher-piece the position of the heel-retaining jaw F^2 can also be readily adjusted to the exact point where it is required, according to the sizes of uppers and vamps that are to be pasted together on the machine.

When the vamp is placed on the inclined end of the arm B and around the stretcher-piece C, it is retained in position by the eccentric f and the jaws $F' F^2$, which are applied to the vamps. The upper edge of the vamp is next supplied with paste and the upper placed in position, so as to overlap the vamp. The clamping-jaws D and E are next applied, and thereby the upper pressed firmly on the vamp. The clamping-jaw D is located in front of the instep-retaining jaw F and made of yoke shape, it being attached to the front end of an arm D' , that is pivoted at its rear end to bracket-arms d of the arm B, said jaw being retained in position on the upper and vamp by means of a set-screw D^2 , that turns in a threaded opening of a fixed transverse yoke D^3 , attached to the arm B, so that the arm D' of the clamping-jaw is firmly held in position after the screw D^2 is applied thereto. The jaws E are located at opposite sides of the upper and are provided with faces of felt or similar material. The shanks E' of the clamping-jaws E are fulcrumed to short lateral bracket-arms e of the arm B, as shown in Fig. 4, and connected at their lower ends with pivot-arms E^2 , which are guided in transverse ways at the under side of the arm B, the inner downwardly-projecting ends of said pivot-arms being acted upon by a tapering cam E^3 , that is swiveled by a keeper e' at its rear end to the grooved front end of a screw-rod E^4 , which turns in a threaded opening of the bracket-arm f^0 of the lever F^3 and passes through

openings in the lower vertical portions of the arm B, as shown in Fig. 2. The cam E^3 is guided by a lug e^2 in a longitudinal groove e^3 at the under side of the arm B, as shown in Fig. 2. On turning the screw in one direction the tapering cam E^3 moves the horizontally-guided pivot-arms E^2 of the clamping-jaws E in a lateral direction, so as to apply the clamps firmly to the upper, while on turning the screw E^4 in the opposite direction the tapering cam E^3 is withdrawn, and thereby the clamping-jaws E moved away from the upper by suitable springs e^4 , applied to the upper parts of their shanks, as will be readily understood in connection with Figs. 4 and 6 of the drawings.

When it is desired to paste large-sized uppers and vamps or impart an extra degree of stretching and fullness to the upper, a forked wedge-piece H (shown in Figs. 7 and 8) is inserted between side shoulders h of the stretcher-piece C and the end of the arm B, as shown in dotted lines in Figs. 1 and 3, in which position the wedge-piece H stretches the sides of the upper and secures the connection of the upper with the vamp along the entire length of their overlapping parts in a firm and reliable manner.

When the upper is pasted to the vamp and both securely held in position by the clamping-jaws, the reliable connection of the upper with the vamp is produced and at the same time the upper held firmly in position during the drying of the paste, so that no drawing or warping of the upper can take place, whereby it furnishes a better fit when worked into shoes and forms no wrinkles when the shoe is placed on the foot. This reliable connection of vamp and upper cannot be produced by hand at all, while by my improved machine it can be accomplished in a quick and reliable manner and in a far superior manner than by hand, so that the machine performs an important function in producing uppers of superior quality, smoothness, and shape.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a supporting-arm having an upwardly-inclined outer end, of a horizontally-adjustable stretcher-piece moving in said arm, a vertical heel-retaining jaw applied to said stretcher-piece, an instep-retaining jaw applied to the top part of the supporting-arm, side jaws at opposite sides of the arm, and means for adjusting the latter to the vamp, substantially as set forth.

2. The combination, with a supporting-arm having an upwardly-inclined outer end, of a stretcher-piece guided in said arm, means for adjusting the stretcher-piece, retaining-jaws fulcrumed, respectively, to the top and sides of the supporting-arm and to the stretcher-piece, means for operating the side jaws, a top clamping-jaw and side clamping-jaws ap-

plied to the instep and sides of the upper, and means for actuating the side clamping-jaws, substantially as set forth.

3. The combination, with the supporting-arm a' and stretcher-piece guided in said arm and having guide-grooves, of a guide-piece inserted in said groove, a spring-actuated retaining-jaw fulcrumed to said guide-piece, a slide-piece guided in the stretcher-piece, a clamping-screw for said slide-piece, and a locking device for attaching the guide-piece to the slide-piece, substantially as set forth.

4. The combination of a supporting-arm having an upwardly-inclined outer end, a horizontal lever connected to said arm, a yoke-shaped clamping-jaw attached to said lever for the instep of the upper, means for applying the clamping-jaw firmly to the upper, side clamping-jaws fulcrumed to the supporting-arm, means for actuating said jaws, a stretcher-piece guided in the supporting-arm, and a spring-actuated jaw fulcrumed to the stretcher-piece and applied to the upper after the same is in position, substantially as set forth.

5. The combination, with a supporting-arm having an upwardly-inclined outer end and a stretcher-piece guided in said arm, of a spring-actuated retaining-jaw fulcrumed to the top part of the arm and provided with a pivoted and pointed cam, substantially as set forth.

6. The combination of a supporting-arm

having serrated side cheeks, fulcrumed jaws for the sides of the vamp, a centrally-recessed transverse stop-plate, and a fulcrumed operating-lever having a transverse plate for engaging the lower ends of the jaw-levers, substantially as set forth.

7. The combination, with a supporting-arm having an upwardly-inclined outer end, of clamping-jaws for the sides of the uppers, fulcrumed and spring-actuated levers for said jaws, transverse pivot-arms connected with the lower ends of the jaw-levers, transverse ways for guiding the pivot-arms, a tapering cam adapted to engage the projecting ends of the pivot-arms, and an actuating screw-rod for said arms, substantially as set forth.

8. The combination, with a supporting-arm having an upwardly-inclined outer end, of a stretcher-piece guided in said arms, retaining-jaws for the vamp, clamping-jaws for the upper, and a wedge-key inserted between the end of the arm and the stretcher-piece, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

HERMAN FISCHER.

Witnesses:

PAUL GOEPEL,
CHARLES SCHROEDER.