

C. GLANTZ.

Crimpers for Boots and Shoes.

No. 137,543.

Patented April 8, 1873.

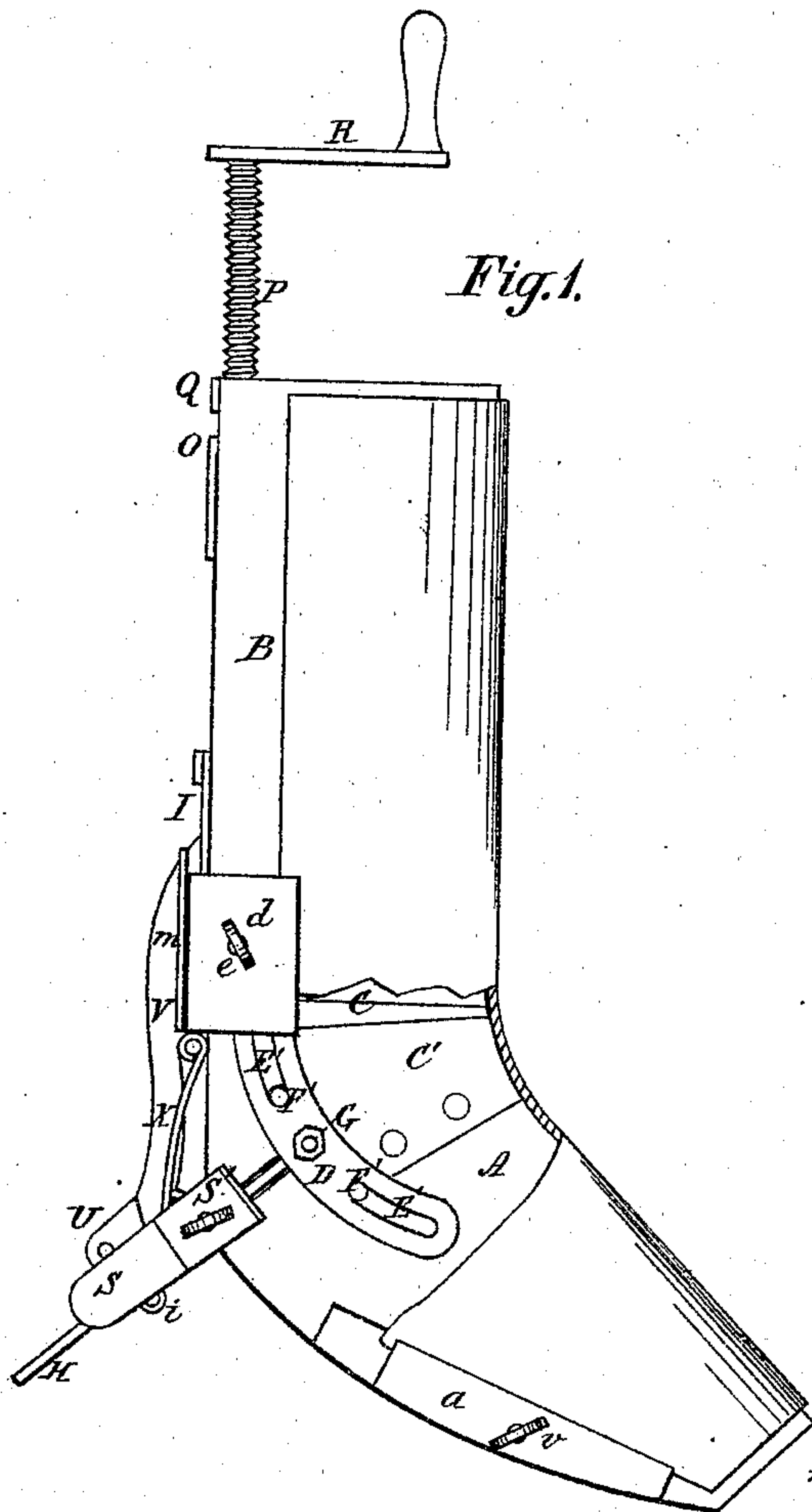
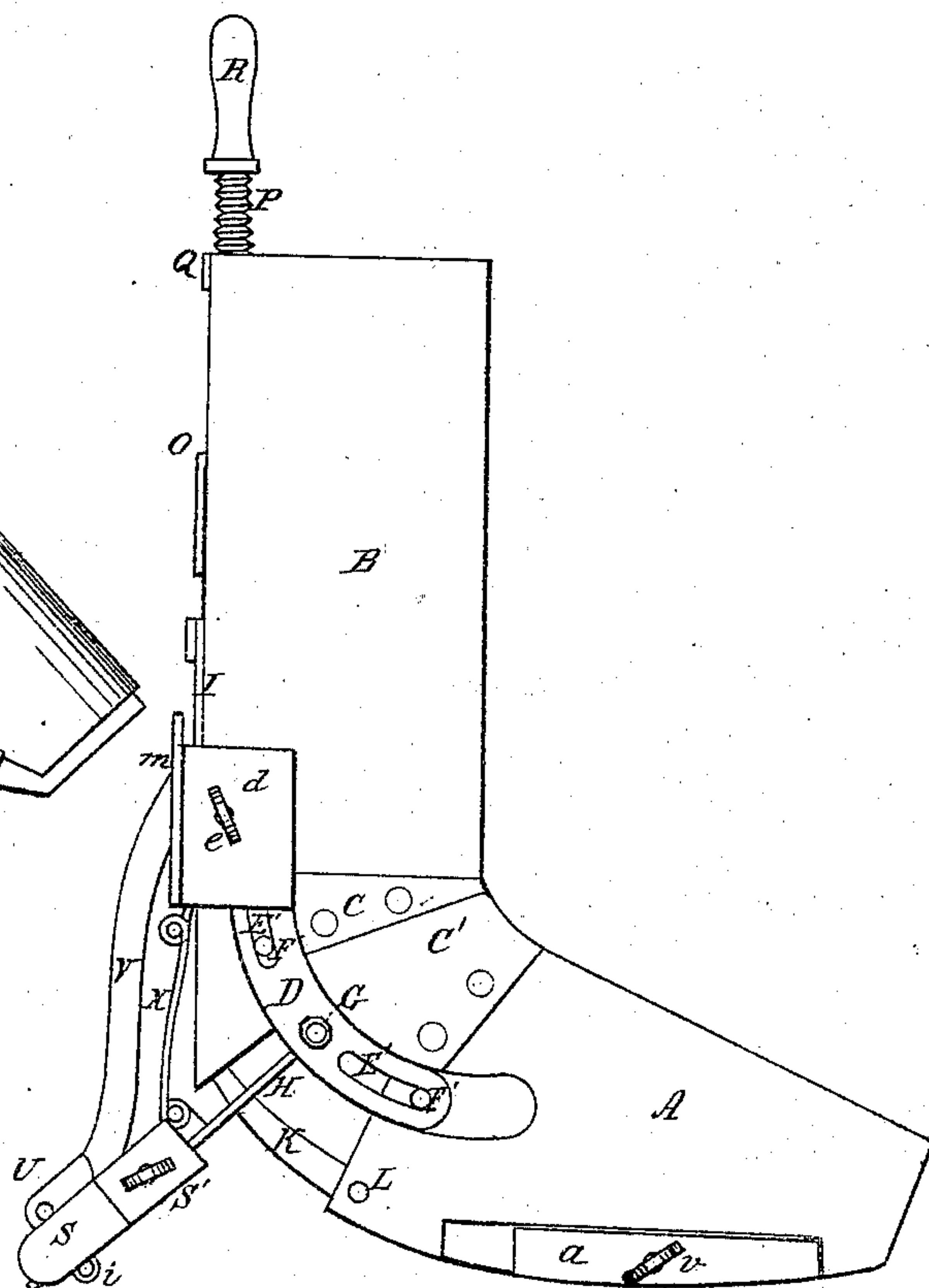


Fig. 2.



Witnesses:

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W. A. Baynard

Inventor:

Christian Glantz

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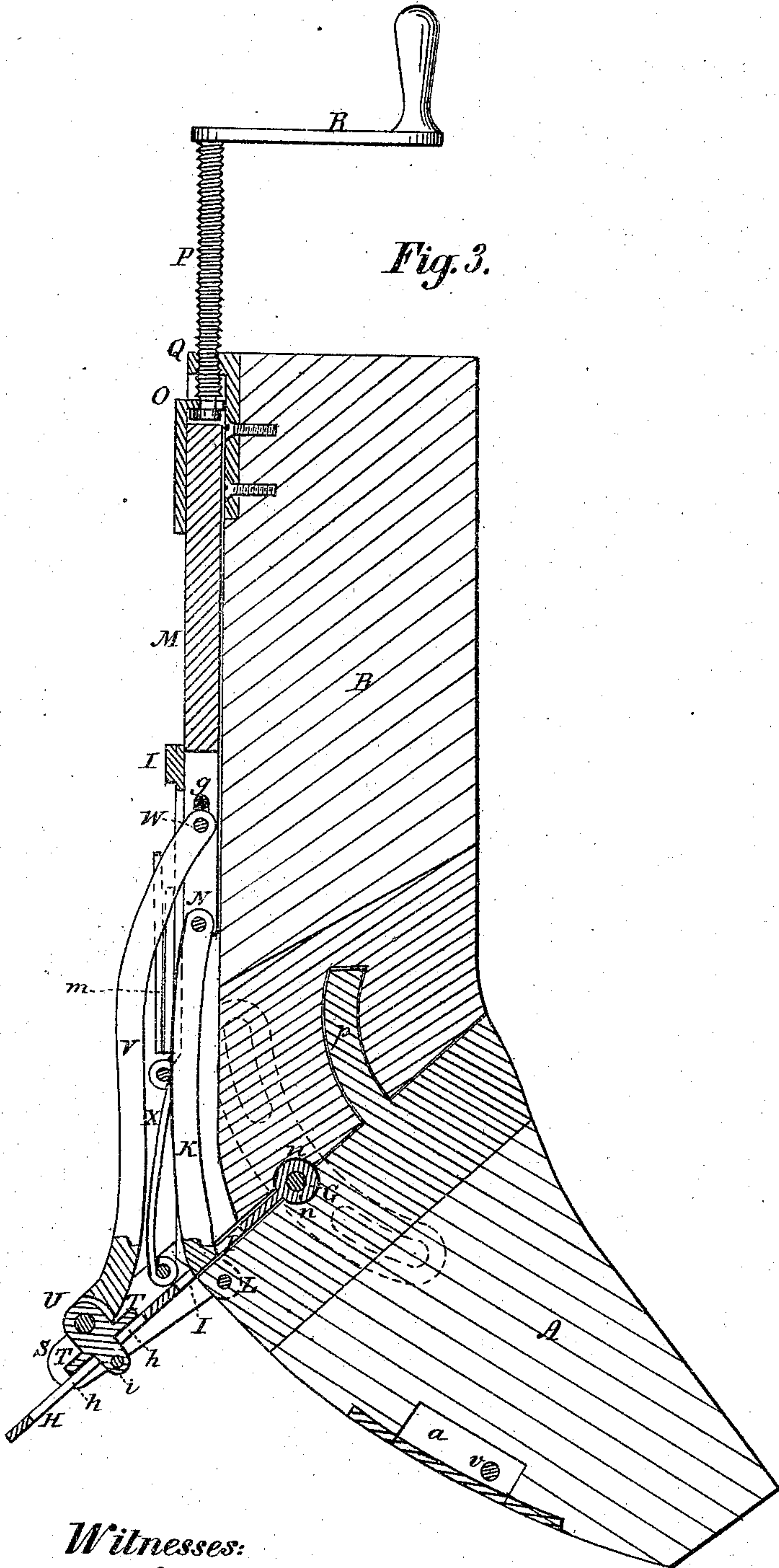


Fig. 3.

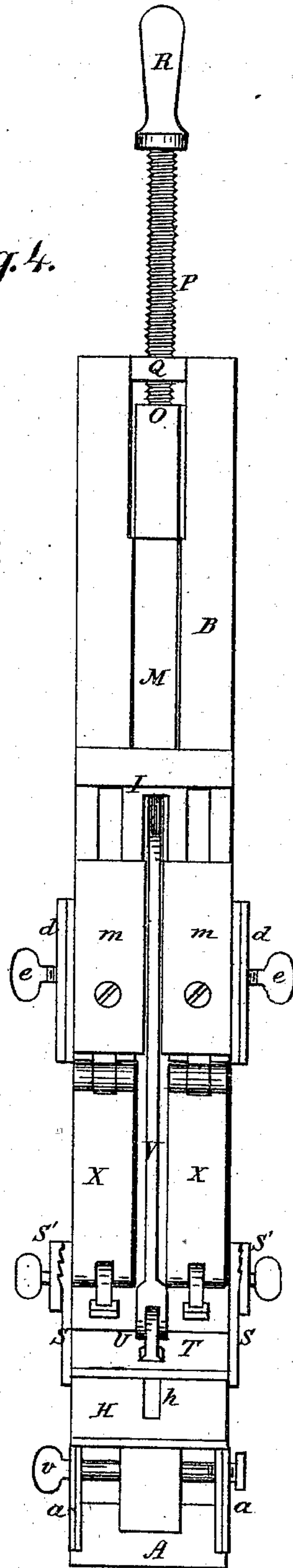


Fig. 4.

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# UNITED STATES PATENT OFFICE.

CHRISTIAN GLANTZ, OF BALTIMORE, MARYLAND.

## IMPROVEMENT IN CRIMPERS FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. **137,543**, dated April 8, 1873; application filed February 21, 1873.

*To all whom it may concern:*

Be it known that I, CHRISTIAN GLANTZ, of Baltimore city and State of Maryland, have invented a new and useful Improvement in Boot and Shoe Crimpers, of which the following is a specification:

This invention has for its object to furnish a boot and shoe crimper which shall be perfect and effective in operation. This invention consists primarily of an extensible or movable foot-section, which is connected to the upper or leg portion of the boot-tree by means of a jointed arm and arc-shaped or curved side plates attached to the two sections of the boot-tree and provided with slots for permitting the sections to be moved from each other in the crimping operation, and the covering of the junction of the two by arched plates, which overlap each other and form, as it were, a hinge-joint, admitting of a contracting and an extensible action. The invention also consists in the employment of sliding clamps or jaw-gripes, in combination with a hinged carrying-plate arranged between the sections, which jaw-gripes are brought into operation to draw the leather directly to the heel portion of the boot for insuring a perfect crimping or shaping of the upper at the instep or junction of the foot and leg, said clamps being operated through the medium of a jointed connecting-arm, which is slotted at its upper end for receiving a horizontal pin or stud on the main or central stem, so that when the foot and leg portions of the tree are moved in opposite directions the sliding clamps will be brought into action for crimping or removing the wrinkles or superfluous leather from the instep or ankle portion of the boot. The invention further consists of a guide frame or plate located and arranged between the leg and foot sections for carrying the sliding clamps, said frame being hung on a transverse fulcrum-pin connecting the two segmental slotted guides applied to the boot or leg portion of the tree.

In the accompanying drawing, Figure 1 represents an elevation of a crimp embracing my invention, and showing the parts in position previous to commencing the operation. Fig. 2 is a similar view, showing the parts in the position they occupy after the crimping is

completed; Fig. 3, a vertical section of Fig. 2; and Fig. 4, a rear elevation of the same, the two latter figures being enlarged.

The boot tree or form proper is composed of two separate or independent sections, A B, constituting, respectively, the foot and leg portions of the tree. The two sections at the junction of their crimping-surface are provided with curved or arched cap-plates C C', the cap C' of the foot-section overlapping that of the leg-section of the tree so as to form a cover for the joint and an uninterrupted curved line of the crimping-surface. The two sections A B are connected by means of arc-shaped or curved plates D, one on each side, which have their seats in grooves or channels formed in the side faces of the two tree-sections. Curved slots E E' are formed on both sides of the center of said arc-plates, through which extend studs or pins F F' secured to the two sections A B. A bolt or pin, G, is secured to the arc-plates D transversely between the adjacent ends of the foot and leg portions and through a sleeve, *n*, on the inner end of a metallic frame or plate, H, which swings upon said bolt G as a hinge. Said plate is provided with a slot, I, for the passage of a curved arm, K, pivoted at its lower end to the foot-section, as shown at L, and at its upper end is connected to a sliding stem or bar, M, by a similar hinge or knuckle joint, N. The stem M is arranged or fitted in a recess or groove formed in the rear side of the leg-section B, and is provided at its upper end with a horizontal bifurcated tongue or extension, O, which embraces the neck of a vertical screw-shaft, P, passing through a nut, Q, at the top of the leg-section and carrying an operating-handle, R.

The boot or gaiter upper to be crimped or shaped is applied to the tree when the two sections are nearly straight or at an obtuse angle to each other, as shown in Fig. 1, and is secured in position by clamping the front edges of the foot portion between jaws or clamping-plates *a a*, which are disposed near the front of the foot-section, and provided with a transverse screw-bolt, *v*, for drawing the clamping-plates together in order to securely hold the upper. The edges of the leg portion are secured to the tree-section B by means of clamping plates or jaws *d d* and



thumb-screws *e* passing through the same and into angled plates which embrace the rear and sides of said leg-sections.

In order to impart the desired tension to the boot upper or pattern it is only necessary to turn the screw-shaft to the right when the sliding bar or stem *M* is formed downward, thus extending the foot-section, or causing it to approach a right angle in relation to the upper section *B*. This operation is permitted by the jointed curved arm *J* connected with the stem *M* and the foot-section, while the side curved plates *D* and the arched instep overlapping plates *C C'* render the movement steady and firm. The studs *F'* on the foot portion travel from the upper to the lower ends of the slots *E'* in the segmental guide-plates *D* when the foot-block is being extended or turned toward a right-angle position to the leg-section. Simultaneously with the movement of the foot-section for bending or curving the instep of the foot, there is brought into action a pair of sliding clamps, consisting of two side-plates, *S S'*, traveling on the edges of the hinged plate *H*, and connected by a plate, *T*, moving on the rear face of said plate *H*, being united thereto by a pin and slot, *h i*. To said connecting-plate *T* is attached, by a hinge or pivot joint, *U*, an arm or bar, *V*, which extends upward, and is connected by a pin, *W*, at its upper end within a slot, *g*, in the stem *M*, to allow the latter to have a slight vertical movement independent of the curved connecting-arm *V*. When the two sections are in their normal position said pin *W* is at the upper end of the slot *g*, but when the sliding stem *M*, in the crimping operation, is moved downward for expanding the foot-section, the stud *W* will come in contact with the top of said slot *g*, thus imparting a downward movement to the hinged bar *V*, which will effect the outward movement of the clamps *S S'* on their guide-plate, a slot, *h*, in the latter and a pin, *i*, on the connecting-plate *T* of the clamps *S* steady-ing and allowing the movement of the parts. The sliding clamps *S S'*, as heretofore stated, are brought into operation simultaneously with the movement of the foot-block, thus causing a draft or tension upon the leather in a direction toward the heel for perfectly removing all wrinkles from the instep or ankle portion of the boot, and imparting the desired contour to the same while the boot is being crimped. When the studs *F'* on the foot-section are at their lowest point in the slots *E'* of the arc-

shaped guides, they will exert a force or act as a point of resistance for forcing the leg portion of the tree away from the foot, thus causing the latter to move upward together with its attached clamps and upper for insuring the perfect crimping of the latter. The movement of the leg portion is permitted without interfering with the sliding clamps *S S'* and carrying-plate *H*, by providing the latter with links *X*, which are jointed to the hinged plate *H* of the clamps *S*, and to a slotted plate, *I*, arranged on the rear side of the leg-section between clamps *m m*, which are held in place by retaining-screws entering the slots in said plate *I*. The proper movement and connection of the two tree-sections are further effected by a guide arm or tongue, *p*, attached to one of the sections, and entering a slot in the opposite one near their curved crimping-lines, which acts in harmony with the arched cap-plates, thus joining the two sections so as to open and close in curved lines by a movement of the one from and toward the other without a hinge-joint, each moving upon separate and independent curves, and yet held at the crimping or instep point as though by a hinge-joint.

Having thus described my invention, I claim—

1. In a boot and shoe crimper, the foot-section *A* thereof, connected to the leg-section *B* by means of the arc-shaped slotted side plates *D*, studs *F F'*, and hinged arm *V* to produce an extensible foot-piece, substantially as described.

2. The arched overlapping instep cap-plates *C C'*, in combination with the leg and foot sections *A B* to produce a closed extensible joint at the junction of said sections, substantially as described.

3. In a boot and shoe crimper having an extensible foot-section, the combination therewith of the adjusting-screw *P*, sliding stem *M*, and hinged arm *V* connected with said screw and the movable foot-section, substantially as described.

4. The sliding clamps *S S'*, hinged slotted arm *V*, and pin *W* with the sliding stem *M*, substantially as and for the purpose described.

5. The combination, with the sliding clamps *S S'*, of the guide-frame *H* hinged as described, the connecting-arm *V*, hinged link *X*, and slotted plate *I*, substantially as described.

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Witnesses:

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