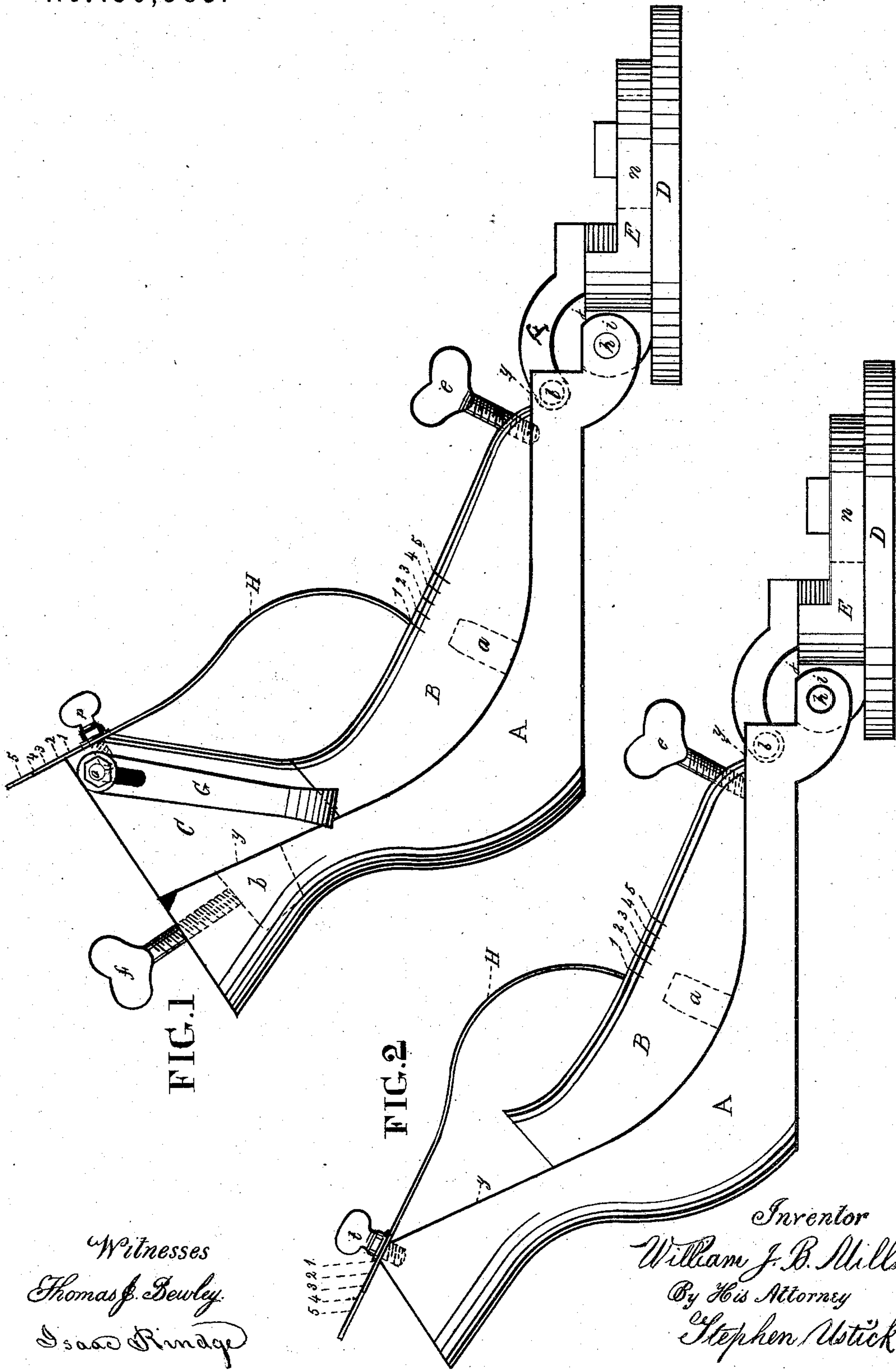


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Forms for Fitting Shoe-Uppers.

No. 156,935.

Patented Nov. 17, 1874.



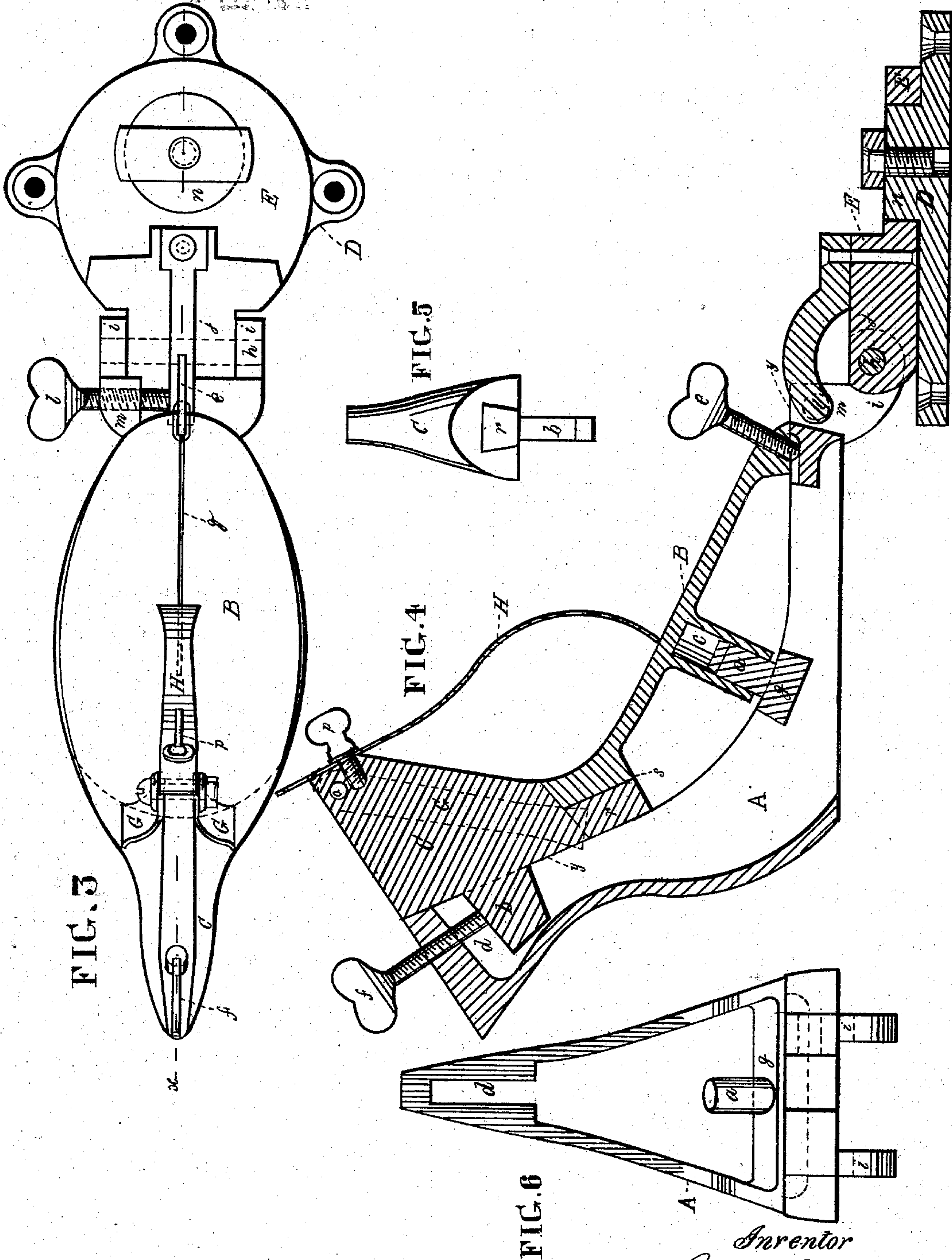
Witnesses
Thomas J. Dewley
Isaac Rindge

Inventor
William J. B. Mills
By His Attorney
Stephen Ustick

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UNITED STATES PATENT OFFICE.

WILLIAM J. B. MILLS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN FORMS FOR FITTING SHOE-UPPERS.

Specification forming part of Letters Patent No. 156,935, dated November 17, 1874; application filed October 27, 1874.

To all whom it may concern:

Be it known that I, WILLIAM J. B. MILLS, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a Form for Fitting and Pasting Shoe-Uppers, of which the following is a specification:

My invention relates to a form for fitting and pasting the uppers preparatory to stitching, whereby great accuracy is attained, and the work is performed expeditiously. This is a great desideratum, as it is well known to manufacturers that none but experienced hands can fit the parts together with any degree of accuracy, and that even with the best of operators the work is imperfectly fitted and pasted together, in consequence of having to bring the parts together upon a flat table; but, in the use of my invention, no difficulty whatever occurs, as they lie smoothly upon the form, and, consequently, even inexperienced hands, with but little instruction, cannot fail to perform the work correctly, and with dispatch; and as the parts all come together accurately upon the form the uppers may be cut a half-size less than when fitted by the old method. Hence there is a saving of a large amount of leather.

For the purpose of adapting the form to different sizes of shoes it is divided longitudinally, and by suitable devices, hereinafter described, is expanded and contracted, so as to correspond with either of the sizes within its range; and to cover the joint, if desired, there may be thin flanges of one division to overlap the other.

The upper piece is divided at the neck for the purpose of removing the part above the division, when the vamps are connected with the quarters, so as to give practicability to the removal of the uppers from the form when the parts are fitted and pasted.

I use a spring-clasp in front for confining the parts of the uppers to the form, and also as a guard for placing the vamp accurately upon the quarters to give the proper lap. I also use side clasps as auxiliary to the front clasp.

The form is combined with a jack in such a manner as to be capable of being placed in any desired position for examining the work in its progress.

In the accompanying drawings, Figure 1 is a side elevation of the form and jack with which it is connected. Fig. 2 is a like view with the cap-piece C removed therefrom for vamping. Fig. 3, Sheet No. 2, is a plan view of the form and jack. Fig. 4 is a vertical section at the line *x x* of Fig. 3. Fig. 5 is a front elevation of the cap-piece C detached from the form. Fig. 6 is a front elevation of the lower and rear part A of the form and the jack with which it is connected, the pieces B C of the form being removed from the piece A.

Like letters of reference in all the figures indicate the same parts.

A is the lower and rear part of the form, having the front piece B and cap piece C fitted thereto, at the line *y y*, and connected by means of the pins *a* and *b*, which fit, respectively, in the socket *c* and mortise *d*, so as to be capable of expansion and contraction to suit different sizes or variations in measurement, the pieces being held in their adjusted position by means of the screws *e f*. The pin *a*, instead of being projected upward from the cross-piece *g*, may project from the under side of the piece B into said cross-piece *g*, to admit of a nut or pin at its end coming against the lower side of said cross-piece when the piece B is raised, to prevent the piece B being removed from the piece A. The form is connected with a jack, having a bed-plate, D, and swivel-plate E, by means of the joint-pin *h*, which passes through the cheeks *i i* of the piece A of the form and the projection *j* of the swivel-plate E of the jack, whereby the form, by turning on the joint pin *h*, may be elevated to any desired height. It is held securely in its adjusted position by means of the screw *l* in the lug *m*, the end of the screw being pressed against the strip F, which is concentric for a part of its length with the said joint-pin *h*.

The form may be turned around to bring any part in front, the swivel-plate turning on the projection *n* of the bed-plate D.

For assisting in adjusting and pasting the linings and quarters together accurately, they are held on the form by means of the side clasps G G and front clasps H, the side clasps being connected to the cap-piece C by means of the screw-bolt *o*. The clasp H is held by means of the screw *p*. The clasp H serves also as a

guard for fitting or placing the vamp on the quarters, there being a slot in its upper end which admits of its longitudinal adjustment.

The lines 1 2 3 4 5 on the form are guides for fitting the quarters of different sizes.

The operation of the device is as follows: For the smallest size shoes to which the form is adapted the pieces B and C rest against the flat face of the piece A, along the line *y y*, as seen in Fig. 1, and when the linings are being fitted and pasted to the quarters the spring-clasps G G and H are used, as may be found desirable. For what are termed machine-shoes, the lining of the quarters of a shoe is placed upon the form, the spring-clasps being used to hold the parts in place upon the form, as may be necessary, taking care to have the front seam even with the groove *q*. (Seen in Fig. 3.) Then the quarters are fitted and pasted to the lining, and removed from the form for the purpose of stitching. A rubber stick may be used for pressing down the seam, lining, and the quarters, as may be found necessary to make a perfect fit to the form. After any desirable number of quarters have thus been prepared for vamping the cap-piece C is removed from the piece B, the dovetail *r* in its lower end being slipped out of the groove *s* of said piece. It is necessary to remove the cap-piece in order to remove the uppers from the form after vamping. A spring-clasp and guard, H, is then connected with the upper end of the piece A of the form, by means of the fastening-screw *t*, as seen in Fig. 2, and so adjusted as to be a guard for

setting the edge of the vamp to give the proper amount of lap. For this purpose a scale of sizes is arranged on the upper end of the guard.

The operation above described applies to the classes of shoes termed machine and welted shoes. In fitting the uppers of turned shoes the same process is pursued, with the exception that the quarters are first placed on the form with their insides out, and the linings fitted and pasted on them. Then they must be turned before they are vamped.

I claim as my invention—

1. A form for fitting and holding shoe-uppers, consisting of the sectional parts A, B, and C, relatively adjustable, and provided with spring-clasps G G and guard H, all arranged substantially as and for the purpose described.

2. The sectional form A, provided with cheeks *i i* and thumb-screw *l*, in combination with the removable cap-piece C, substantially as and for the purpose described.

3. The adjustable front piece B, in combination with the cap-piece C, clasps G G, and guard H, substantially as and for the purpose described.

4. The removable cap-piece C, provided with clasps G G and guard H, in combination with the back piece A and adjustable front piece B, substantially as and for the purpose described.

WILLIAM J. B. MILLS.

Witnesses:

THOMAS J. BEWLEY,

STEPHEN USTICK.