

No. 702,196.

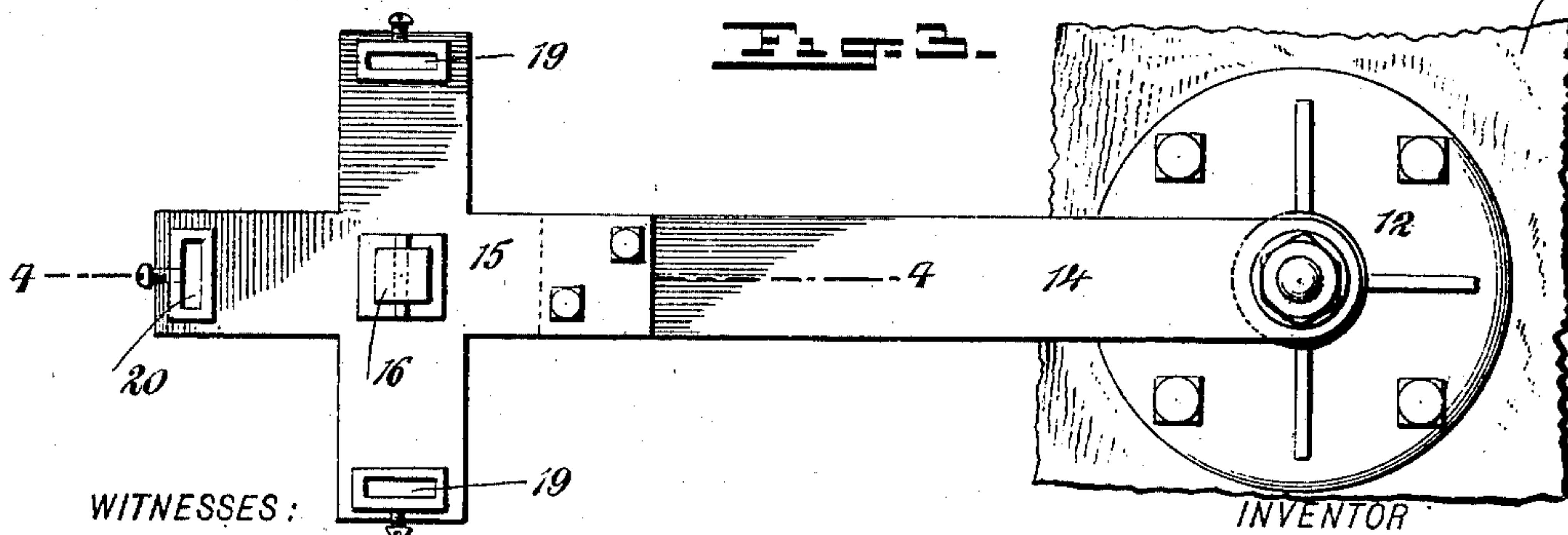
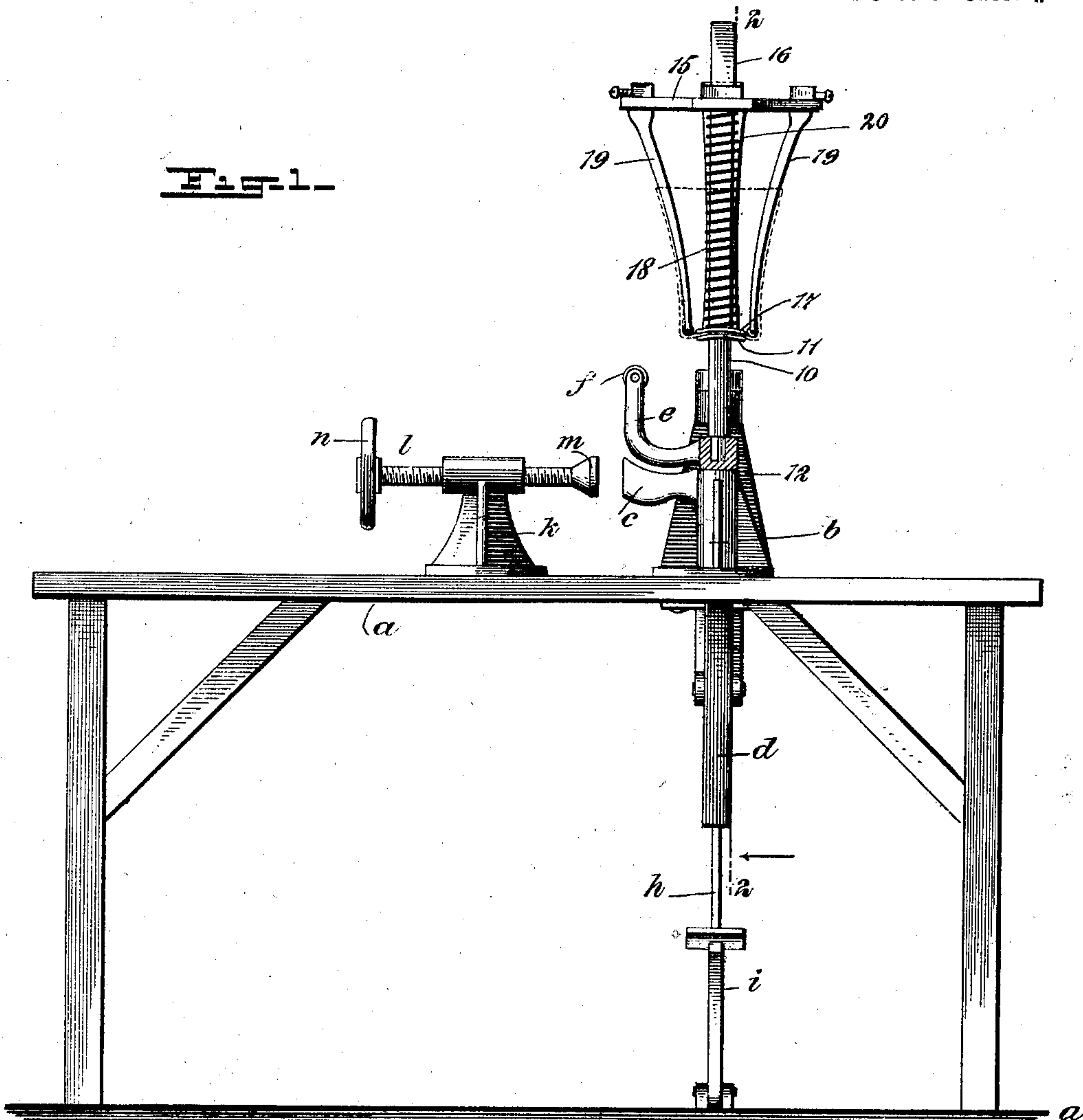
Patented June 10, 1902.

G. B. GARDNER.
SHOE TURNING DEVICE.

(Application filed Oct. 16, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE B. GARDNER, OF HAVERHILL, MASSACHUSETTS, ASSIGNOR OF
ONE-HALF TO FRED J. HASTINGS, OF HAVERHILL, MASSACHUSETTS.

SHOE-TURNING DEVICE.

SPECIFICATION forming part of Letters Patent No. 702,196, dated June 10, 1902.

Application filed October 16, 1901. Serial No. 78,836. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. GARDNER, a citizen of the United States, and a resident of Haverhill, in the county of Essex and State
5 of Massachusetts, have invented a new and Improved Shoe-Turning Device, of which the following is a full, clear, and exact description.

This invention relates to a device for turning
10 ing the heel or counter of a shoe. It is adapted to be used in connection with the device covered in my previous patent, No. 675,725, granted June 4, 1901, such previously-patented device being for turning the toe or front
15 part of the shoe, so that when the two devices are placed together on a single bench they will provide an apparatus on which all necessary turning operations may be performed.

This specification is a specific description
20 of one form of the invention, while the claims are definitions of the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side view of the device shown in Figs. 1 and 2 of my previous patent and showing the present improvements applied. Fig. 2 is a section on the line 2 2 of Fig. 1.
30 Fig. 3 is a plan view of a swinging bracket employed. Fig. 4 is a section on the line 4 4 of Fig. 3, and Figs. 5 and 6 are details of the turning-arms.

In Figs. 1 and 2 the parts lettered from *a*
35 to *n* are the same as described in my previous patent. In my present invention these parts are not changed, except that the bar *d* is provided with a socket in its top, in which is seated removably a vertical rod 10, with a concave plate 11 at its upper end.
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Mounted on the bench *a* in transverse line with the column *b* is a stand 12, which carries a vertically-disposed swinging bracket 14, the end of the horizontal part of which is arranged to lie over the rod 10 when the bracket is swung to transverse position. (See Fig. 2.) This bracket 14 carries at its free end a cruciform plate 15, (see Fig. 3,) one arm of which is bolted firmly to the bracket. In the center
50 of the plate 15 is arranged a vertically-dis-

posed bar 16, having a knee-plate 17 at its lower end, this plate being capable of lying over the plate 11 of the rod 10 to clamp between the two plates the heel part of the shoe. (See Fig. 4.) The bar 16 is movable vertically in the plate 15 and is pressed downward
55 by a stout spring 18, while its downward movement is limited by a pin or other like device adjustably engaged with the rod. Fastened to the three sides of the plate 15, which sides
60 are removed from the bracket 14, are the side turning-arms 19 and the back turning-arm 20, the arms 19 being arranged at the sides of the plate 15, opposite each other, and the arm 20 being arranged at the side of the plate
65 opposite the bracket and longitudinally concaved to fit the shape of the shoe at this point. The arms 19 and 20 are fastened in place by any suitable means—for example, the set-screws shown. The turning-arms incline inward and lie with the lower ends sufficiently
70 far apart to permit the plate 17 to pass easily upward between them. The side arms 19 carry each a roller 21 at its lower end, and the back arm 20 carries two rollers 22. The
75 various corners and edges of these parts 19 and 20 are rounded well off to prevent tearing or in any way injuring the shoes.

Now in order to turn the counterpart of either a boot or shoe around the heel part or
80 "heel seat" the shoe, being inside out, should be placed on the plate 11 and the bracket 14 swung over the shoe, the bar 16 being first raised and then allowed to descend, placing its heel-plate 17 on the inside of the shoe and
85 firmly pressing the same against the plate 11. The turning-arms will now lie within the shoe, with their lower ends at the sides of the plates 11 and 17, but clear of the same. Then the treadle *i* should be operated to raise
90 the bar *d*, which will push upward the shoe and also the bar 16 against the pressure of the spring 18. The turning-arms, however, remain stationary, and this causes the heel of the shoe to be pushed upward between the
95 arms, thus turning downward the counter of the shoe and reversing the whole. This done the pressure on the treadle should be released and the parts 16 and 10 allowed to fall. The bracket 14 should now be thrown to one side
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out of the way, and then the operations described in my previous patent should be performed.

In connection with this apparatus it should be observed that the plates 11 and 17 press the heel part or "seat" of the shoe firmly between them during the turning operation, and therefore there is no danger of the strain of the turning-arms pulling apart the stitchings or other fastenings at the heel.

Various changes in the form, proportions, and minor details of my invention may be resorted to without departing from the spirit and scope of my invention. Hence I consider myself entitled to all such variations as may lie within the scope of my claims.

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

1. The combination of two members adapted to hold between them the heel of a shoe, said members being reciprocal together in a fixed path, and a turning-arm held stationary with respect to said members and disposed longitudinally of the direction of movement of the said heel-holding members.

2. The combination of means for holding the heel of a shoe, said means comprising opposing members bearing on the top and bottom of the heel and side and rear turning-arms projected into the shoe, the heel-holding means and turning-arms being relatively

movable and the turning-arms being disposed longitudinally of the direction of such movement.

3. The combination of a bracket, a heel-plate yieldingly sustained thereon, a second heel-plate movable against the first heel-plate to clamp and move the heel of a shoe, and a turning-arm carried by the bracket stationary with respect to the heel-plate thereof.

4. The combination with the vertically-movable bar *d*, of the heel-plate removably carried thereby, the bracket arranged to swing over said bar, the heel-plate yieldingly carried by the bracket opposite the first heel-plate, to arrange the heel of a shoe between said plates, and the turning-arm carried on the bracket stationary with respect to the heel-plates.

5. The combination of a support, a heel-plate held yieldingly thereby, a second heel-plate movable against the first heel-plate to clamp and move the heel of the shoe, and a turning-arm held stationary with respect to the heel-plates and adjacent thereto, for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE B. GARDNER.

Witnesses:

FRED J. GOGGINS,
FRED J. HASTINGS.