

H. A. HALVORSEN.
 FOOTWEAR STRETCHER.
 APPLICATION FILED MAY 18, 1908.

959,932.

Patented May 31, 1910.
 2 SHEETS—SHEET 1.

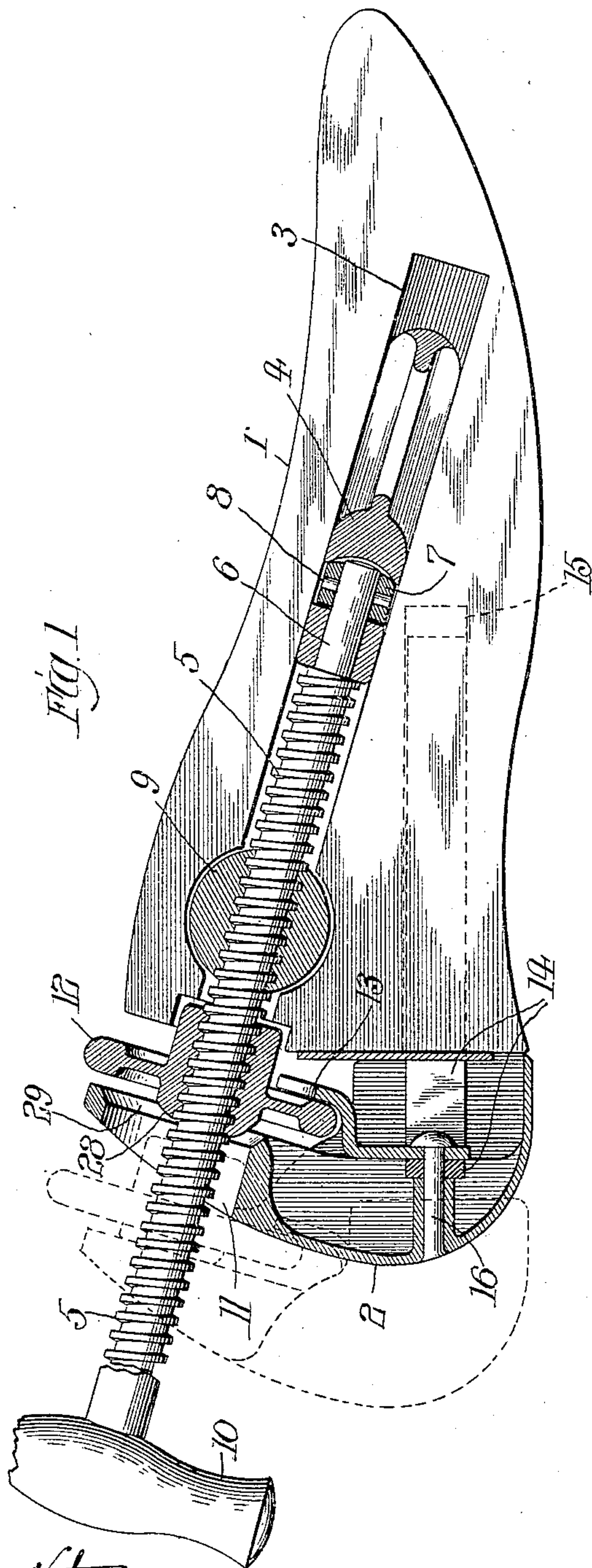


Fig. 1

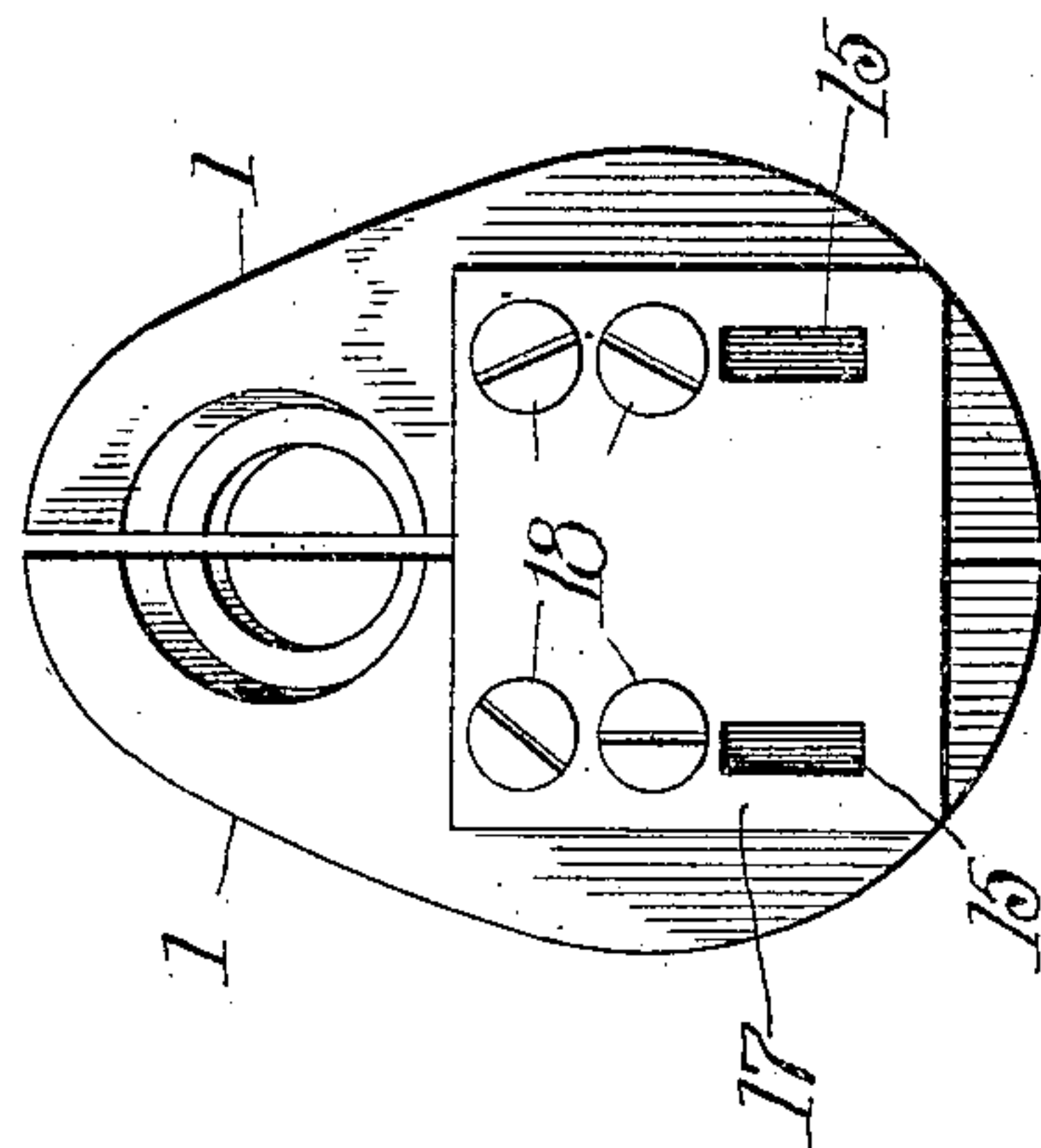


Fig. 3

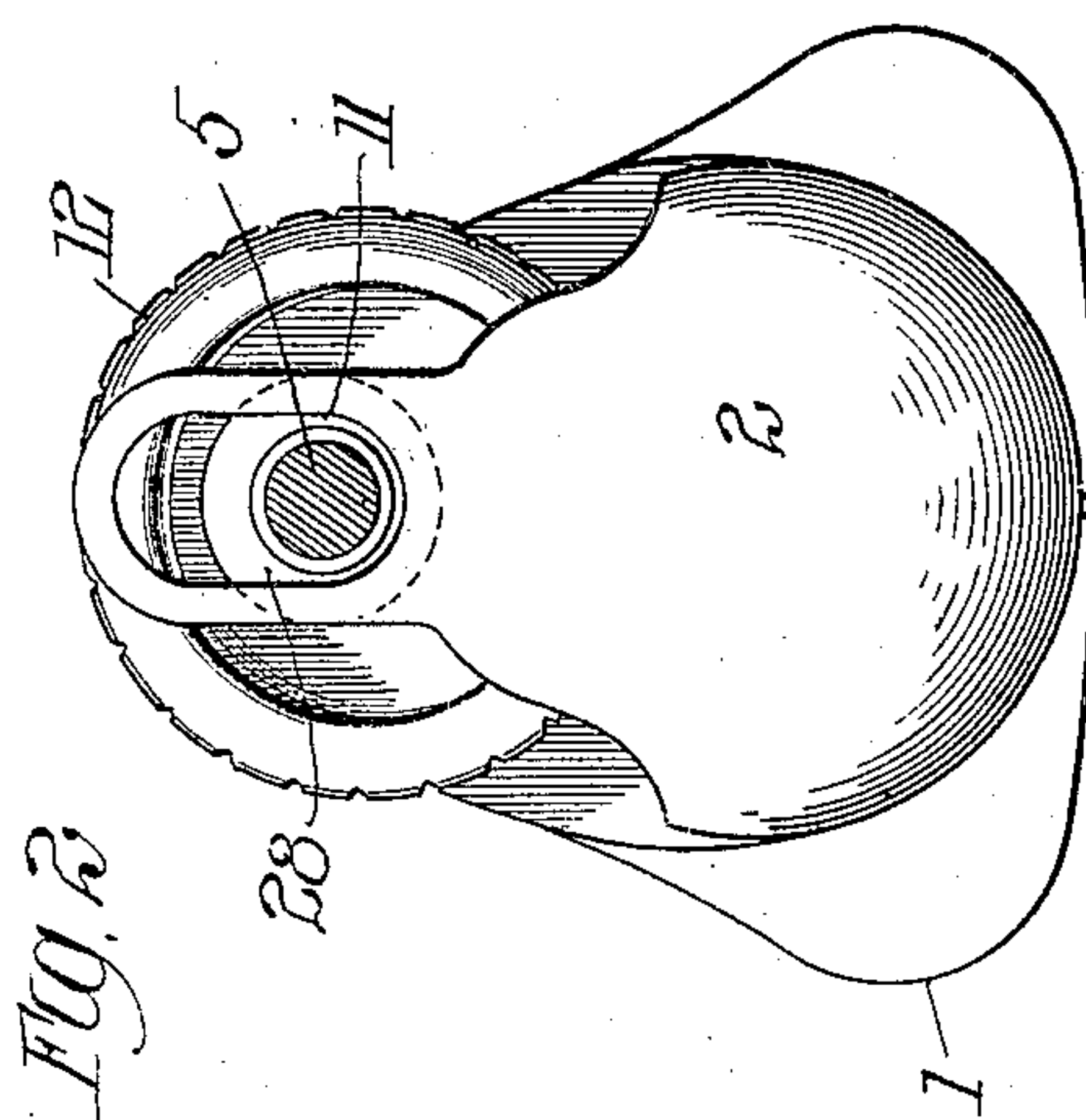


Fig. 2

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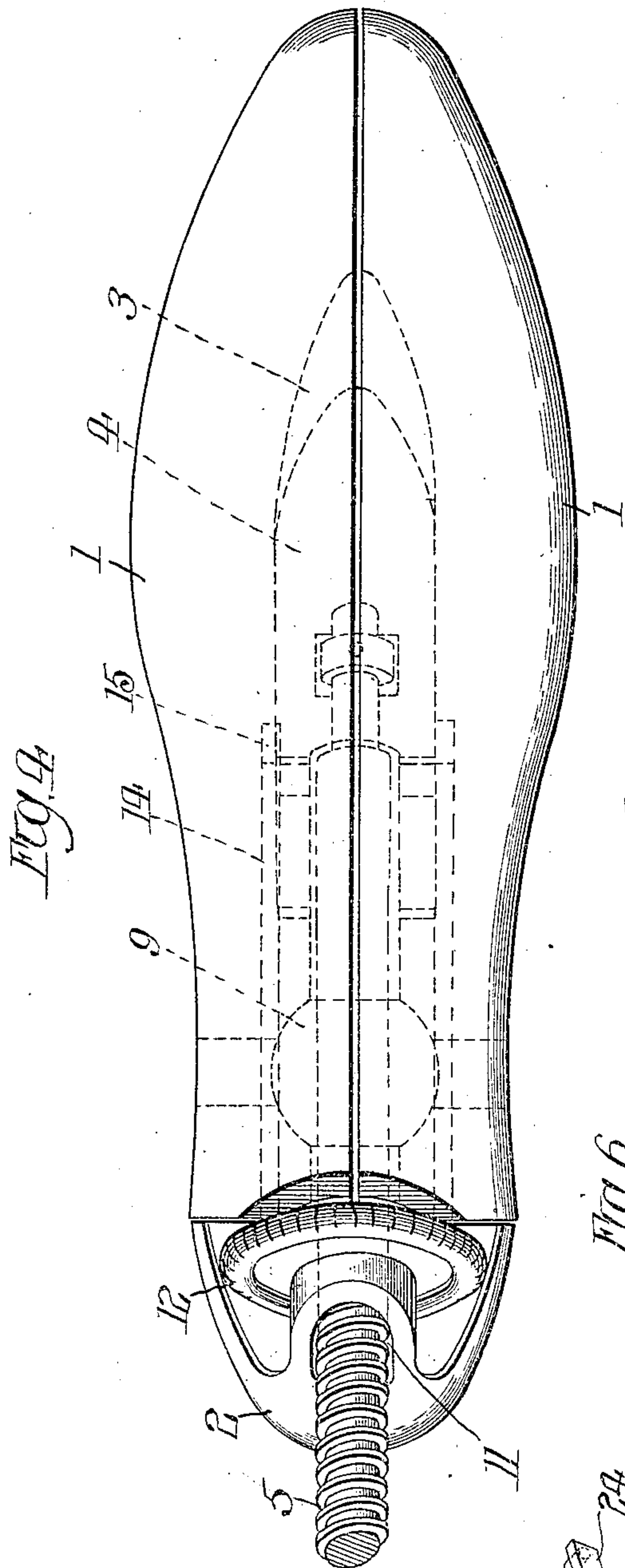


Fig. 4

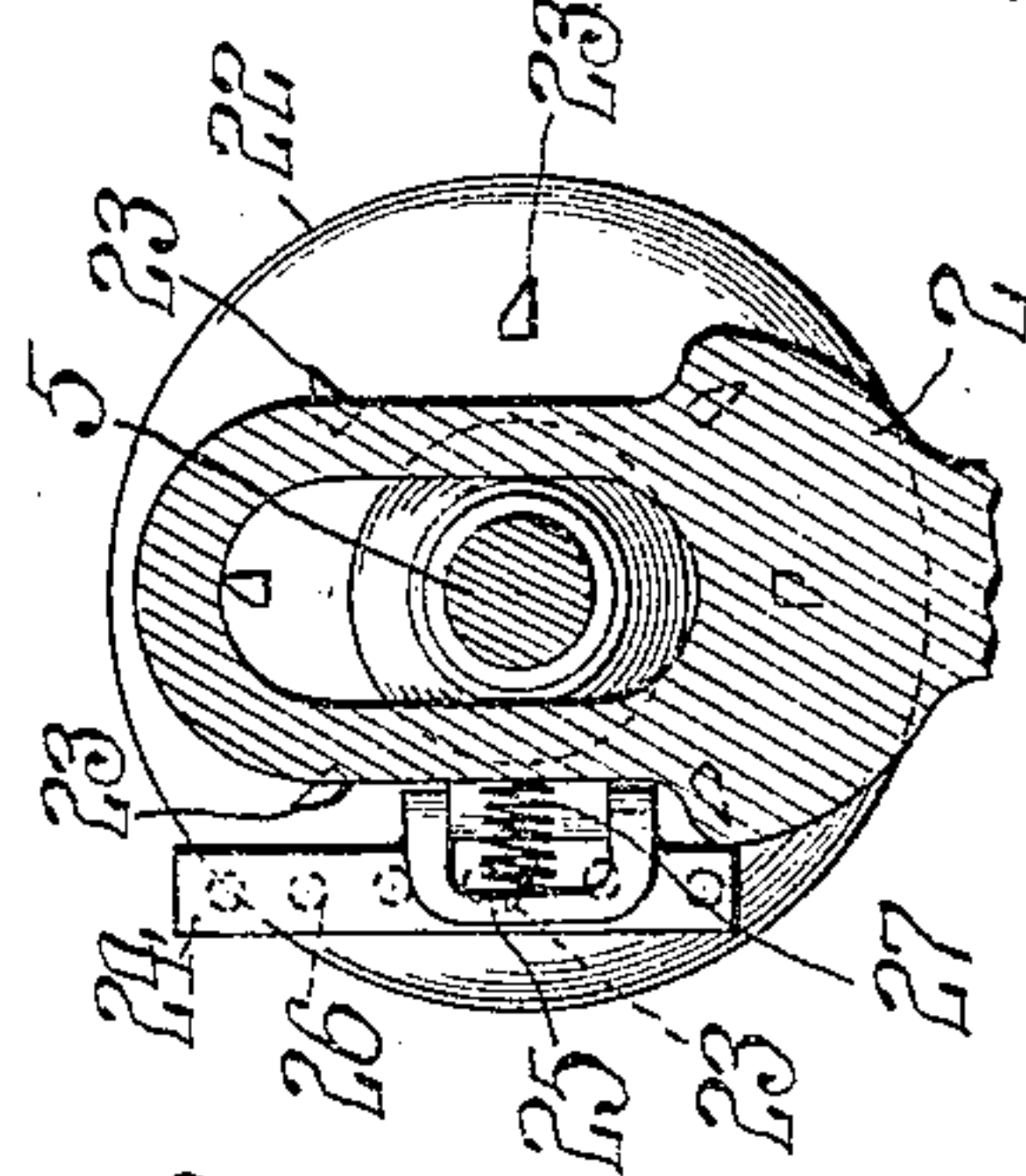
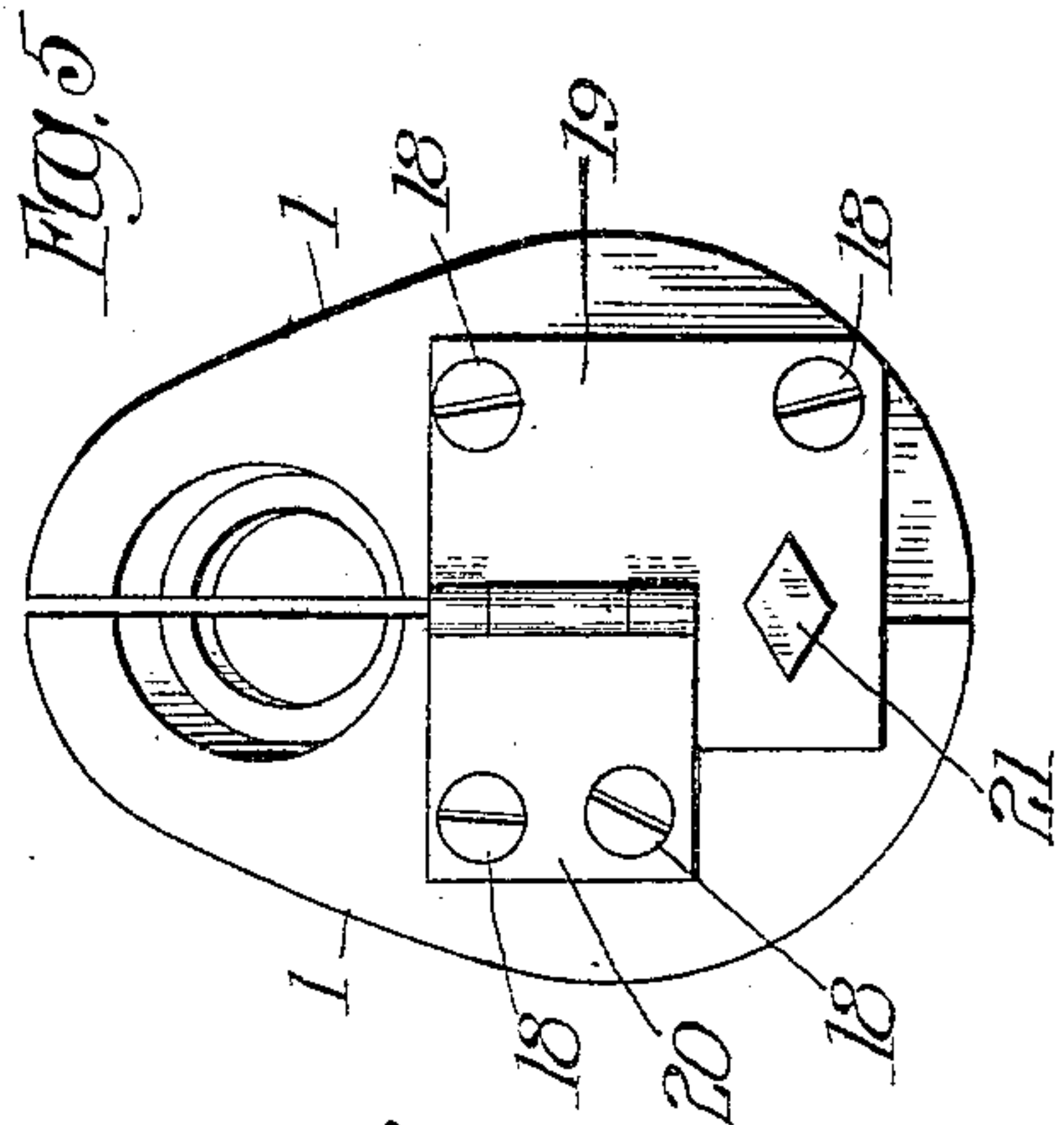


Fig. 5

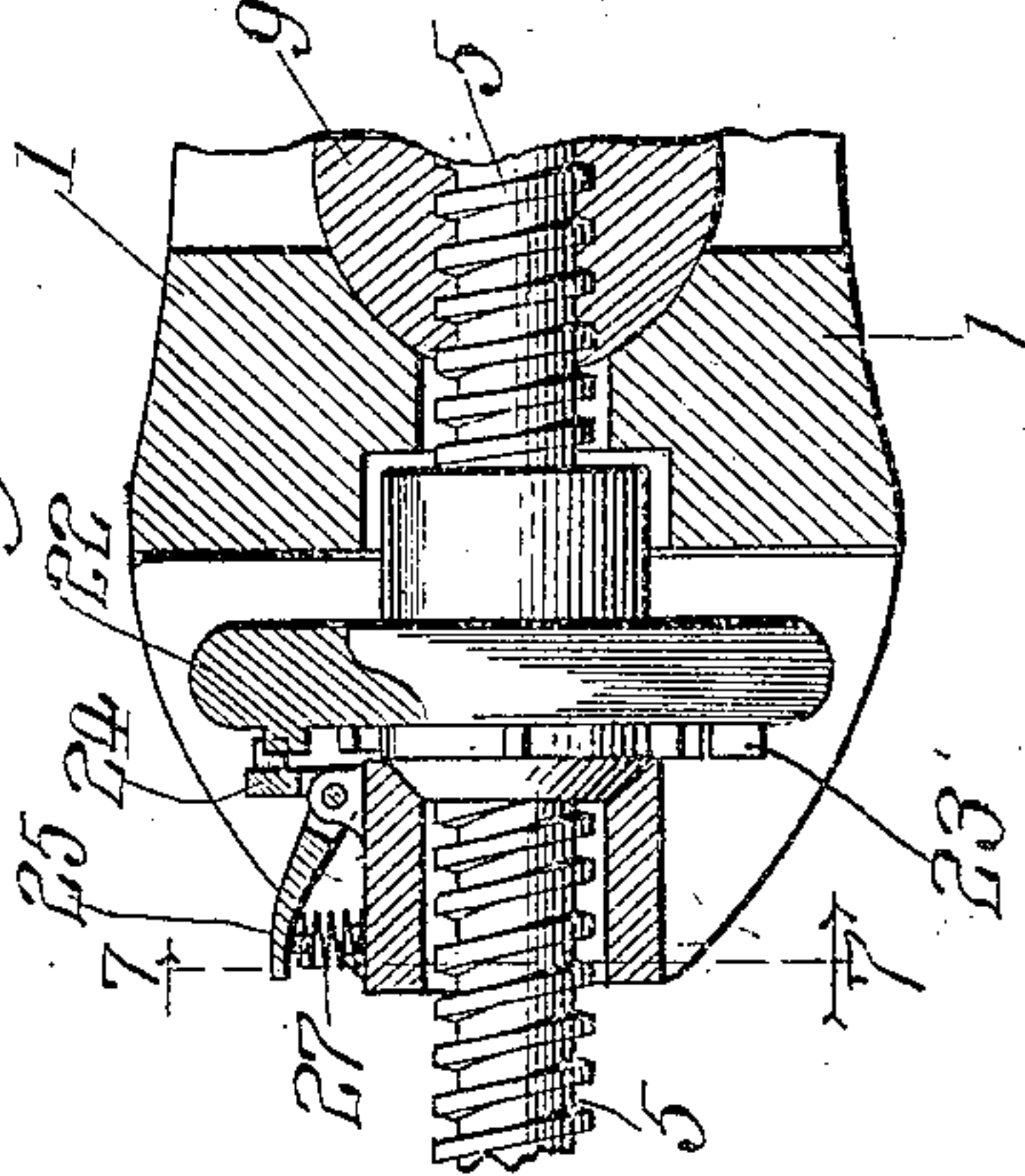


Fig. 6

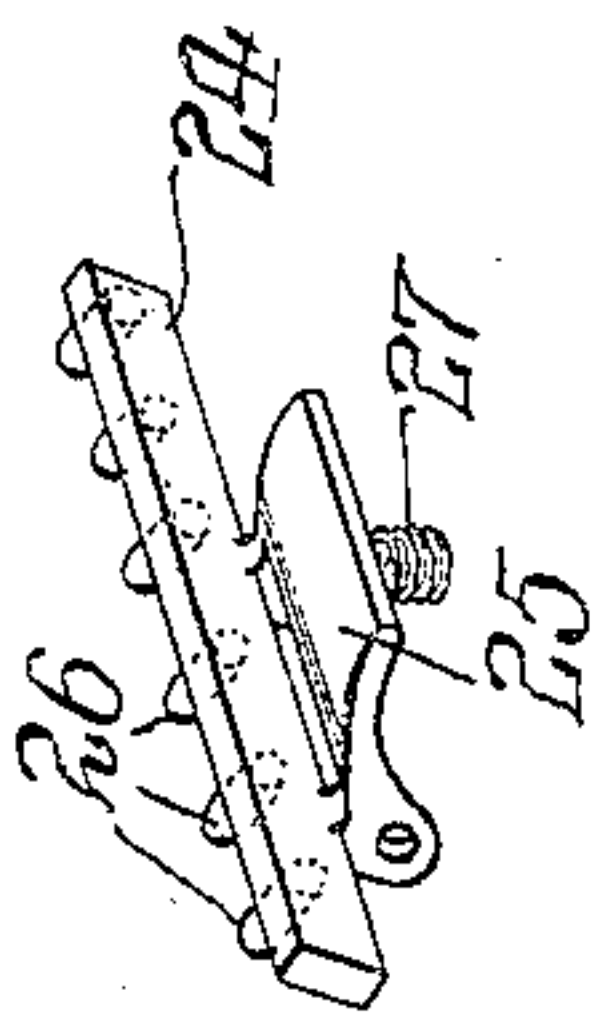


Fig. 7

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UNITED STATES PATENT OFFICE.

HELGE A. HALVORSEN, OF CHICAGO, ILLINOIS.

FOOTWEAR-STRETCHER.

959,932.

Specification of Letters Patent.

Patented May 31, 1910.

Application filed May 18, 1908. Serial No. 433,536.

To all whom it may concern:

Be it known that I, HELGE A. HALVORSEN, 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 Footwear-Stretchers or the Like, of which the following is a description.

My invention belongs to that class of devices known as footwear or shoe stretchers or the like, and has for its objects the production of a simple and more efficient and satisfactory device of the kind described and for the purposes set forth.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described and more particularly pointed out in the claims.

In the drawings wherein like reference characters indicate like or corresponding parts, Figure 1, is a longitudinal sectional view of my device, Fig. 2, is a rear elevation of the same, Fig. 3, is a rear elevation of the forward part, the rear part removed, Fig. 4, is a top elevation of my device, Fig. 5 is a rear elevation of a slightly modified form of forward device, Fig. 6 is a sectional view of a modified form of a portion of my device, showing locking means, Fig. 7, is a transverse sectional view of the same taken substantially on line 7—7 of Fig. 6, and Fig. 8 is a perspective view of the catch or lock shown in Figs. 6 and 7.

Referring to the drawings, my device comprises a form preferably divided into two parts, 1 and 2, on substantially a transverse line, with the forward or body part preferably divided into a plurality of parts on substantially a longitudinal line. The rear part 2, or what may be termed the heel where the device is designed to be used as a shoe stretcher, is arranged to be preferably forcibly adjusted relatively to the forward parts 1, when the form is positioned in the footwear, that is in the preferred construction the parts 1 and 2 are arranged to be forcibly separated and held in an extended position. By so holding the form in an extended position within the footwear, there is no tendency for the forward part to back off or out during the stretching operation. In the device shown the shoe or other article is preferably stretched by expanding or separating the several parts of the forward port of the form. As shown, I preferably

make the part 2 substantially corresponding in contour to a heel.

Any suitable means for expanding the parts of the forward end of the form may be employed. As shown the forward end preferably comprises two parts 1, 1 which may be secured together in any suitable way that will permit them to perform their functions. The two halves of the form are provided with grooves 3, in which moves or slides the wedge-shaped member 4 which may be moved as desired to spread the parts by any suitable means. The preferred construction is to move the wedge 4 by means of a screw member 5, which is pivotally connected thereto by extending the same as at 6 and securing a collar 7 thereto by means of a pin 8 or its equivalent. A nut 9 or its equivalent is preferably arranged within the form as shown so that the screw 5 is operated or rotated in one direction or the other, the wedge 4 is moved in or out. Any suitable form of handle 10 may be arranged on the end of the screw member 5.

The rear part 2 of the form is provided with a slot 11 in the upper end thereof through which passes the screw 5, and a nut 12 arranged on the screw 5, so that as the nut 12 is turned in one direction or the other the same contacts with the rear part 2 or an extension 13 thereon and so forces the rear part 2 either from or toward the forward part 1 of the form. As shown in Figs. 1 and 4, I preferably provide one or more guide-rods 14, 14 or their equivalents, on the rear part which coöperate with the holes or grooves 15, 15 on part 1 of the form, and maintain the parts of the form in relative positions at all times. As shown the guide-rods 14 and the extension 13 are secured to the rear part 2 by means of a rivet 16, but any other equivalent construction may be employed for the purpose. A plate 17 may be secured, if desired, to the forward part of the form by means of screws 18 or their equivalents. This secures the portions of the forward part of the form together, there being sufficient resiliency to permit the expansion of the parts as required. The plate when so made also tends to keep the parts in their contracted positions. The holes or slots 15 in the forward part 1 may also be protected from wear by extending the plate 17 and perforating the same for the guide-rods 14 to pass there-through.

In Fig. 5 is shown a slightly modified form of plate, the same comprising two parts 19 and 20 hinged together. This figure also shows a groove or slot 21 for a slightly modified form of guide, consisting of only one rod. The construction of the rod applicable for this construction and the means of securing the same to the rear part 2 is so obvious that the same is not illustrated. It should also be noted that this form of rod is applicable to the style of plate 17 shown in Fig. 3, or vice versa, the rods shown in Figs. 1, 3 and 4 may be used with the style of plate 19 shown in Fig. 5. When the guide-rods 14 shown in Fig. 1 are employed, it is obvious that they may be arranged so as to normally tend to substantially retain the parts 1 of the form contracted.

If desired, any suitable means may be employed to lock the nut 12, when the rear part 2 is in operative position, as for example as shown in the dotted lines in Fig. 1. A satisfactory construction to accomplish this is shown in Figs. 6, 7 and 8. Referring to these figures, the wheel or nut 22, or its equivalent, is provided with a plurality of teeth or lugs 23, or their equivalent, on one face which may be engaged by a catch 24 pivotally secured to a lug on the rear part 2 of the form. The catch 24 as shown, is provided with a thumb extension 25, and with a plurality of pins or lugs 26 adapted to engage the lugs 23, the catch being normally held in operative position by means of a spring 27 or its equivalent. By providing a plurality of lugs 26, the nut 22 may be engaged and locked at any position of the rear 2 relatively to part 1, it being obvious that the relative positions of the nut 22 and rear part 2 will vary depending on the relative positions of parts 1 and 2. If desired the lugs 23 may be beveled as shown so that the part 2 may be separated from part 1 by operating the nut 22 without pressing catch, it being necessary however, to operate the catch to release the nut.

In use my device is positioned within the footwear, and the heel or rear part 2 backed off or separated from part 1, by turning or operating the nut 12 (or 22) on screw 5 until the form is extended to both ends of the footwear, the rear part 2 being preferably tightly forced against the counter of the shoe. If now the screw 5 is operated, the wedge 4 is pushed forward toward the end of the slot or groove 3, thus expanding the parts 1 or forward part of the form, the rear part or heel 2 preventing the longitudinal backward movement of the forward part of the form during the expanding operation. To remove the form or stretcher, the screw 5 is operated, withdrawing the wedge 4 and permitting the forward part 7 of the form to contract. The nut 12 may be then

operated drawing the parts 1 and 2 of the form together. Ordinarily the friction between the beveled face 28 of the nut 12 and the beveled face 29 on the back member 2 is sufficient to prevent the nut 12 from turning with the screw 5 as it is operated, however, if necessary the nut may be held by the operator, or if the device is supplied with a suitable lock as mentioned, it may be positively locked against turning.

Having thus described my invention it is obvious that various immaterial modifications may be made in the construction or combination of parts shown and described or that it may be applicable for other than a footwear stretcher, hence I do not wish to be understood as limiting myself to the exact construction arrangement or combination of parts shown and described or limited specifically for use in stretching footwear.

What I claim and desire to secure by Letters Patent is:

1. In a device of the kind described and in combination, a relatively separated form, an adjustable rear part for said form provided with a plurality of guide rods and slidable within said form, means for forcibly separating said form and rear part comprising a screw member and a cooperating member arranged on said screw member.

2. In a device of the kind described and in combination, a form, an adjustable rear part for said form provided with a plurality of guide rods cooperating with said form, means for forcibly separating said form and rear part comprising a screw member and a cooperating member arranged on said screw member and means for preventing rotation of said cooperating member on the screw member relative to said rear part.

3. In a device of the kind described and in combination a form comprising a plurality of parts, means for substantially securing said parts together, means for expanding said parts comprising an expanding member and operating screw member therefor cooperating with the form, an adjustable rear part for said form, means for substantially operatively connecting said rear part with said operating screw member including a nut, said rear part provided with a plurality of extending rods cooperating with said form and slidably extending therein and arranged to prevent rotation of the form and rear part relative to each other.

4. In a device of the kind described and in combination a form comprising a plurality of parts, means for substantially securing said parts together, means for expanding said parts comprising an expanding member and operating screw member therefor cooperating with the form, an adjustable rear part for said form, means for substantially operatively connecting said rear part with said operating screw member

including a nut, and means for locking said nut against rotation, said rear part provided with a plurality of extending rods co-operating with said form and arranged to prevent rotation of the form and rear part relative to each other.

5 5. In a device of the kind described, a form divided on a transverse line with the parts slidably connected by a plurality of guide rods carried by one part and slidable into the opposite part, the forward part of said form divided in a longitudinal line, in combination with means for forcibly separating the parts on the transverse line and holding them in an extended position, and means for thereafter forcibly separating the forward parts on the longitudinal line to increase the width thereof.

6. In a device of the kind described, a form divided into two parts on substantially a transverse line, in combination with means for separating the rear part from the forward part to adjustably increase the length of the form and retaining the same in an extended position, means for retaining said rear and forward parts in relative position during the adjustment comprising a plurality of rods carried by one part and slidable within the opposite part, and means for adjustably and forcibly expanding the forward parts of the form.

7. In a device of the kind described, a form divided into two parts on substantially a transverse line with the forward part divided into a plurality of parts on substantially a longitudinal line, in combination with means for forcibly separating the rear part from the forward part to adjustably increase the length of the form and retaining the same in an extended position, means for retaining said rear and forward parts in relative position during the adjustment, comprising a guide rod for each of said forward parts carried by said rear part and slidable within said forward parts, and

means for adjustably and forcibly expanding the forward parts of the form.

8. In a device of the kind described, a form divided into two parts substantially a transverse line with the forward part divided into a plurality of parts substantially longitudinally thereof, means for substantially resiliently securing said forward parts together comprising a plate secured at the rear ends thereof, in combination with means for adjustably and forcibly separating said rear and forward parts of the form, and positively retaining them in a separated position, means for retaining the rear and forward parts in relative position at all times comprising a plurality of guide-rods carried by said rear part and slidable within said forward parts through said plate, and means for adjustably and forcibly expanding said forward parts relative to each other, substantially for the purposes set forth.

9. In a device of the kind described and in combination a form comprising two parts substantially secured together at the rear end thereof, means for separating said parts at the forward end of the form comprising an expanding member and operating member therefor coöperating with the form, an adjustable heel for said form, means for operatively connecting said heel part with said operating member including a coöperating member therewith, said heel provided with an extending rod for each of said forward form parts arranged to prevent rotation of the form and heel relative to each other and normally resiliently retain the forward parts of the form in a closed position.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

HELGE A. HALVORSEN.

Witnesses:

ROY W. HILL,
CHARLES I. COBB.