

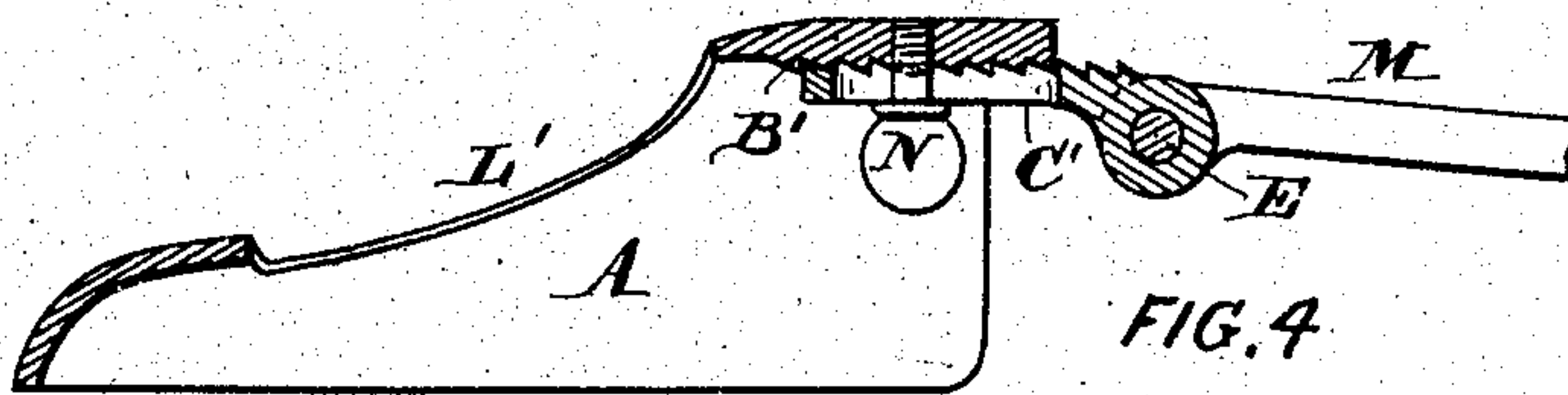
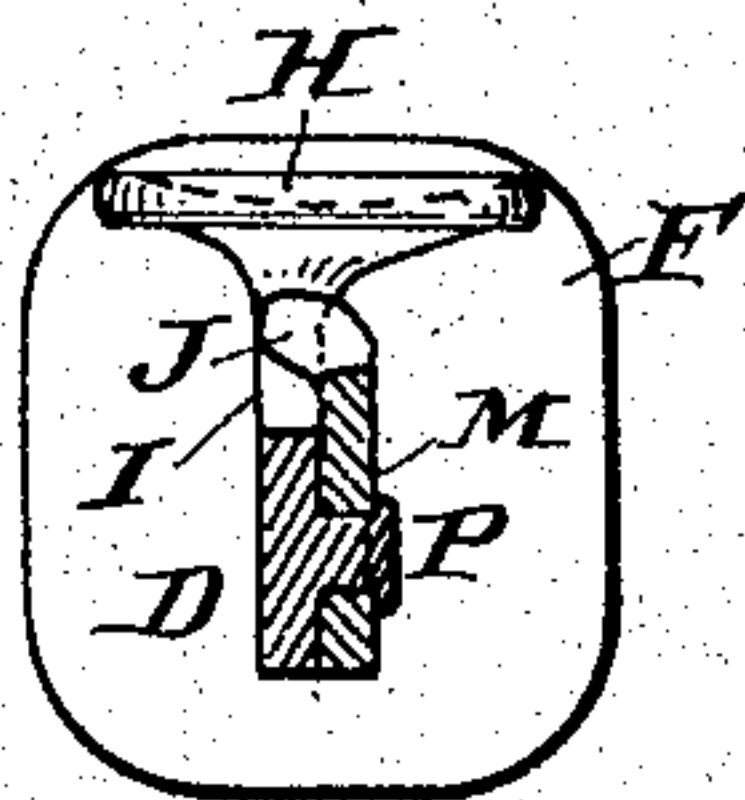
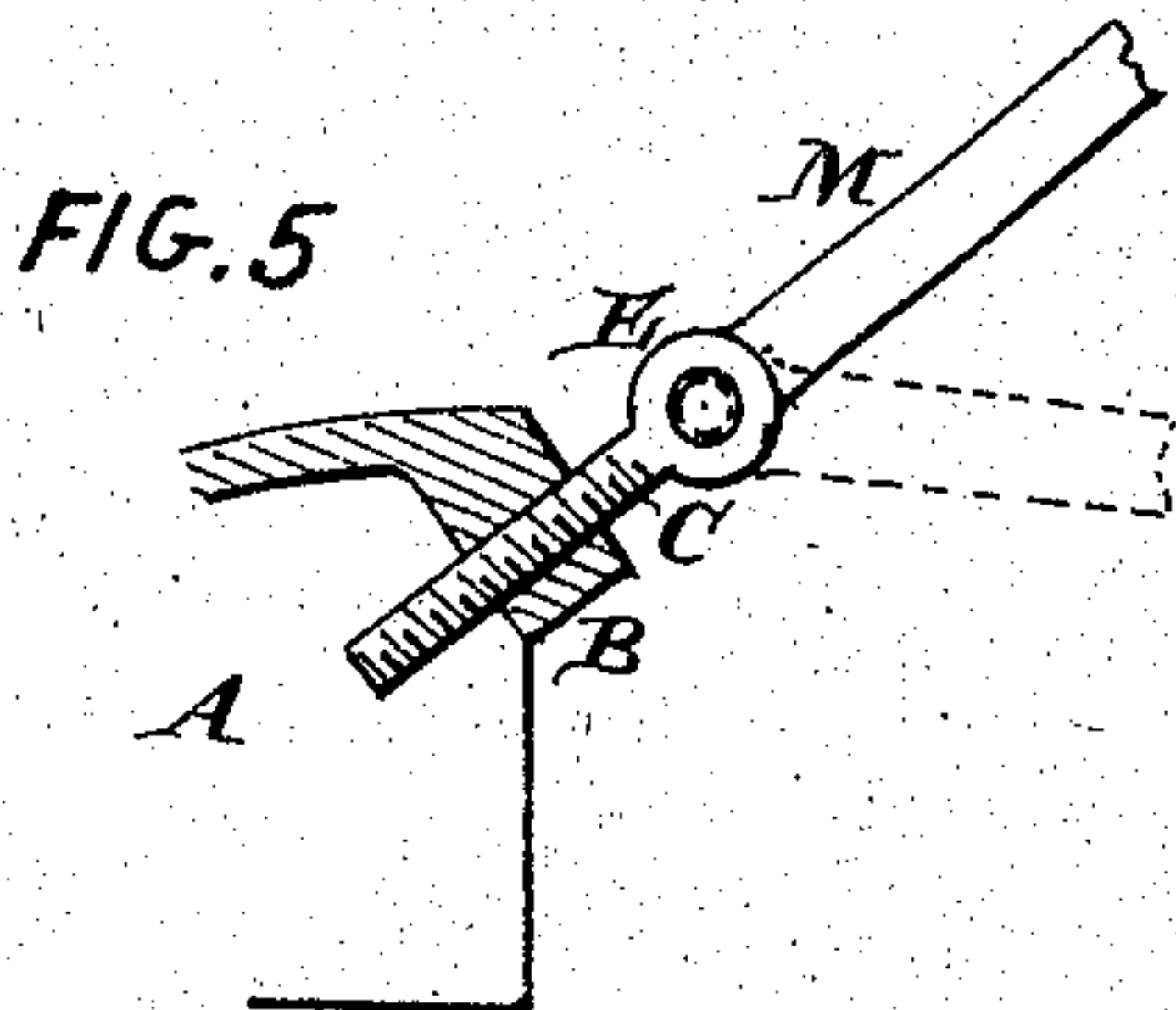
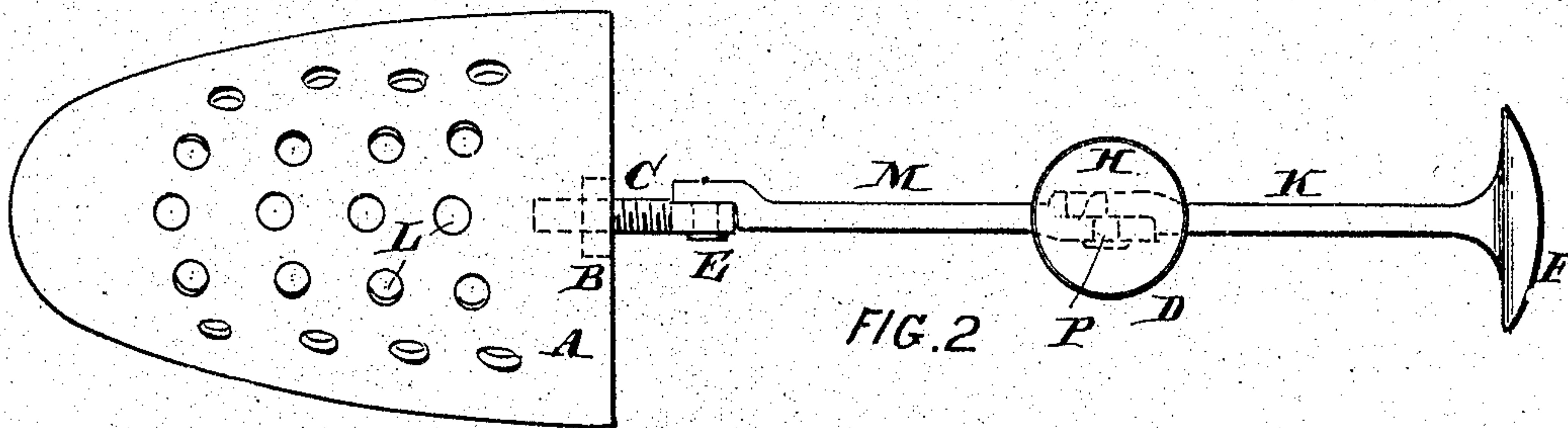
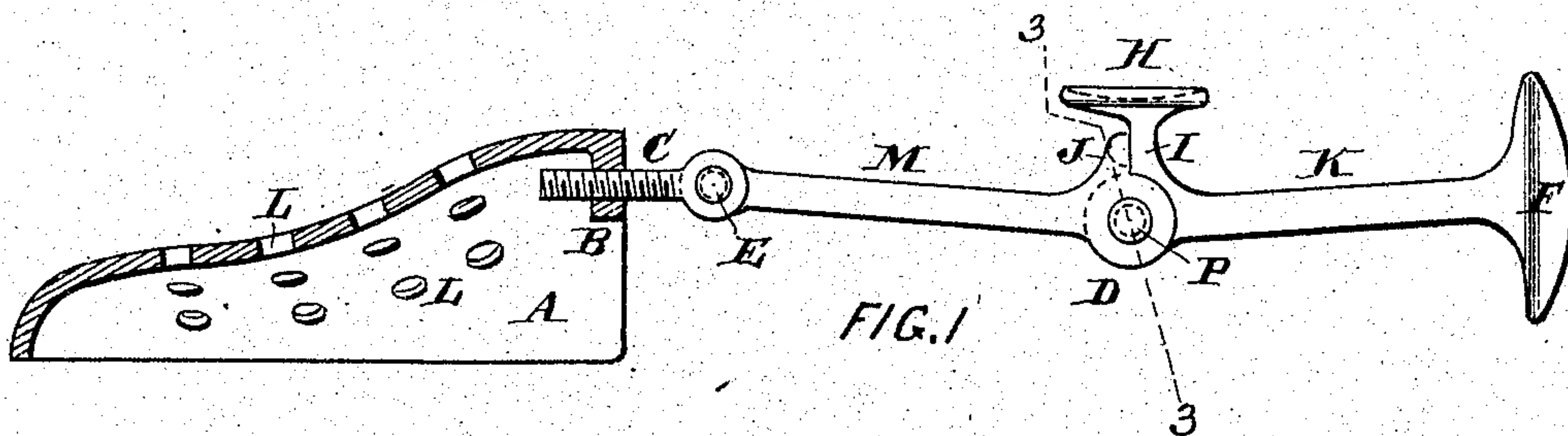
No. 786,783.

PATENTED APR. 4, 1905.

W. C. BENKERT.

SHOE TREE.

APPLICATION FILED AUG. 9, 1902.



Attest
E. Gall.
Wm Rooney.

Inventor
Wm C. Beukert
By *Wm C. Beukert*

UNITED STATES PATENT OFFICE.

WILLIAM C. BENKERT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
CHARLES E. SCHMIDT, OF PHILADELPHIA, PENNSYLVANIA.

SHOE-TREE.

SPECIFICATION forming part of Letters Patent No. 786,783, dated April 4, 1905.

Application filed August 9, 1902. Serial No. 118,993.

To all whom it may concern:

Be it known that I, WILLIAM C. BENKERT, of the city and county of Philadelphia, State of Pennsylvania, have invented an Improvement in Shoe-Trees, of which the following is a specification.

My invention has reference to shoe-trees; and it consists of certain improvements fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

The object of my invention is to provide an inexpensive construction of shoe expander or tree adapted to hold the shoe in a stretched condition when not in use or for purposes of flattening the sole and removing creases from the upper, the said tree having capacity of adjustment and ventilation.

In carrying out my invention I combine a toe and instep portion or toe-piece with a jointed heel-piece, the joint being of such nature that it acts to stretch and flatten the shoe. In my preferred construction the toe and instep portion or toe-piece is connected with a toggle by an adjustable connection, desirably a screw-threaded stud screwing into a lug in the toe-piece and to which stud the toggle is jointed.

My invention also comprehends a construction of toe and instep portion or toe-piece which is provided with a perforation or perforations for the purpose of allowing free ventilation.

My invention consists, further, in details of construction which, together with the above-specified features, will be better understood by reference to the drawings, in which—

Figure 1 is a side elevation of a shoe-tree with part in section embodying my invention. Fig. 2 is a plan view of same. Fig. 3 is a cross-section of the joint of the toggle on line 3 3 of Fig. 1. Fig. 4 is a modified form of an adjustable connection between the toe-piece and toggle, and Fig. 5 is a sectional elevation of a modification in the adjustment between the toggle and toe-piece.

A is a toe-piece and is made hollow upon the under side and provided with a downwardly-

extending lug B at the middle and upper end of the rear part. Screwed into this lug is a stud C, to which is hinged at E the toggle D. The outer or free end of the toggle is provided with the heel-piece F. The toggle consists of two arms M and K, hinged together at P and respectively having upwardly-extending lugs J I, meeting to limit the downward movement of the parts M K. Preferably these lugs are so arranged that the arms M K are capable of taking a slight angle, as shown in Fig. 1, when brought to a locked position. These lugs extend upwardly practically at right angles to the length of the arms M K, and hence are immediately above the joint P. The joint P is cheaply made by casting a hole in the arm M and casting a pin on the other arm, K, which is then loosely riveted to the hole, as shown in Fig. 3. To depress the toggle when stretching the shoe and to avoid pinching the finger, I provide a thumb-piece H as an extension of one of the lugs J I, its location being above the hinge. It is of course immaterial to which of the arms M K this thumb-piece is secured. There is no adjustment in the toggle D for accommodation to shoes of different lengths; but such adjustment is secured by the screw-stud C, having capacity for being screwed into or out of the lug on the toe-piece.

The instep portion A is provided with a series of ventilating-apertures L, as shown in Figs. 1 and 2, or with a single large opening L', as shown in Fig. 4. The object of these ventilating-apertures is to enable the shoe to be properly ventilated while held in a stretched condition. It is immaterial to my invention what form of apertures are employed in the instep portion or toe-piece, as these may be varied to suit the manufacturer.

The parts C M K may be jointed by any suitable hinge-joint; but for cheapness I prefer to cast an aperture in one of the parts and a pin on the other part, which after being malleableized is riveted over, as indicated, to hold the parts together. In this manner all expensive work is avoided.

In place of the screw-stud C for obtaining

the adjustment I may employ an adjustable plate C', as indicated in Fig. 4. In this case the plate C' is slotted and is clamped in position by a thumb-screw N, extending through
 5 the slot in the plate and screwing upwardly into the metal or body of the toe-piece. To insure the plate C' holding its position in the toe-piece, I prefer to form its upper surface with fine teeth, which coact with correspond-
 10 ing teeth on the toe-piece portion A, as indicated at B'. In this manner the plate C' may be adjusted upon the part A or toe-piece to suit requirements. Any other suitable means of adjusting the hinge connection E relatively
 15 to the part A may be employed in lieu of this joint. It is also evident that while the part A is preferably made of cast metal it may be formed of wood or other material, if so preferred.

20 To permit easy adjustment when the instep portion or toe-piece A is in the shoe, the screw-stud may be set obliquely, as shown in Fig. 5, in which case by turning the toggle in the direction of the solid lines the screw-
 25 stud may be rotated while the tree is in the shoe.

It will be observed that in my device the heel-piece and the instep portion or toe-piece are connected with a screw adjustment, which
 30 is an important feature of my invention. It is also evident that if the parts M K were held in rigid alinement and swung down with the heel part the stretching action would result. Hence the toggle may in some cases be
 35 omitted, if desired.

While I prefer the construction shown, the details may be modified without departing from the spirit of my invention.

Having now described my invention, what I

claim as new, and desire to secure by Letters 40 Patent, is—

1. In a shoe expander or tree, the combination of the toe-piece and toggle consisting of two arms hinged together the free end of one of said arms being provided with a heel-piece, 45 an extensible hinge connection between the free end of the other arm of the toggle and the toe-piece consisting of a screw-threaded stud hinged to the toggle-arm and adjustably
 50 screwed into the toe-piece, two stops or lugs respectively formed on the two arms of the toggle and extending vertically upward above the hinge of the toggle to limit its downward movement, a thumb piece or button arranged
 55 above the hinge and lugs and secured to one arm of the toggle so as to protect the hand in depressing the toggle.

2. In a shoe expander or tree, the combination of the toe-piece and toggle consisting of two long rigid arms hinged together the free 60 end of one of said arms being provided with a heel-piece, two stops or lugs respectively formed on the two arms of the toggle and extending vertically upward above the hinge of the toggle to limit its downward movement, a 65 thumb piece or button arranged upon the hinge and lugs and secured to one of the arms so as to protect the hand in depressing the toggle, and an extensible connection between the free end of the toggle-arm and the toe- 70 piece consisting of a rigid part hinged to the free end of the toggle and adjustably secured to the toe-piece.

In testimony of which invention I have hereunto set my hand.

WM. C. BENKERT.

R. M. HUNTER,
 R. M. KELLY.