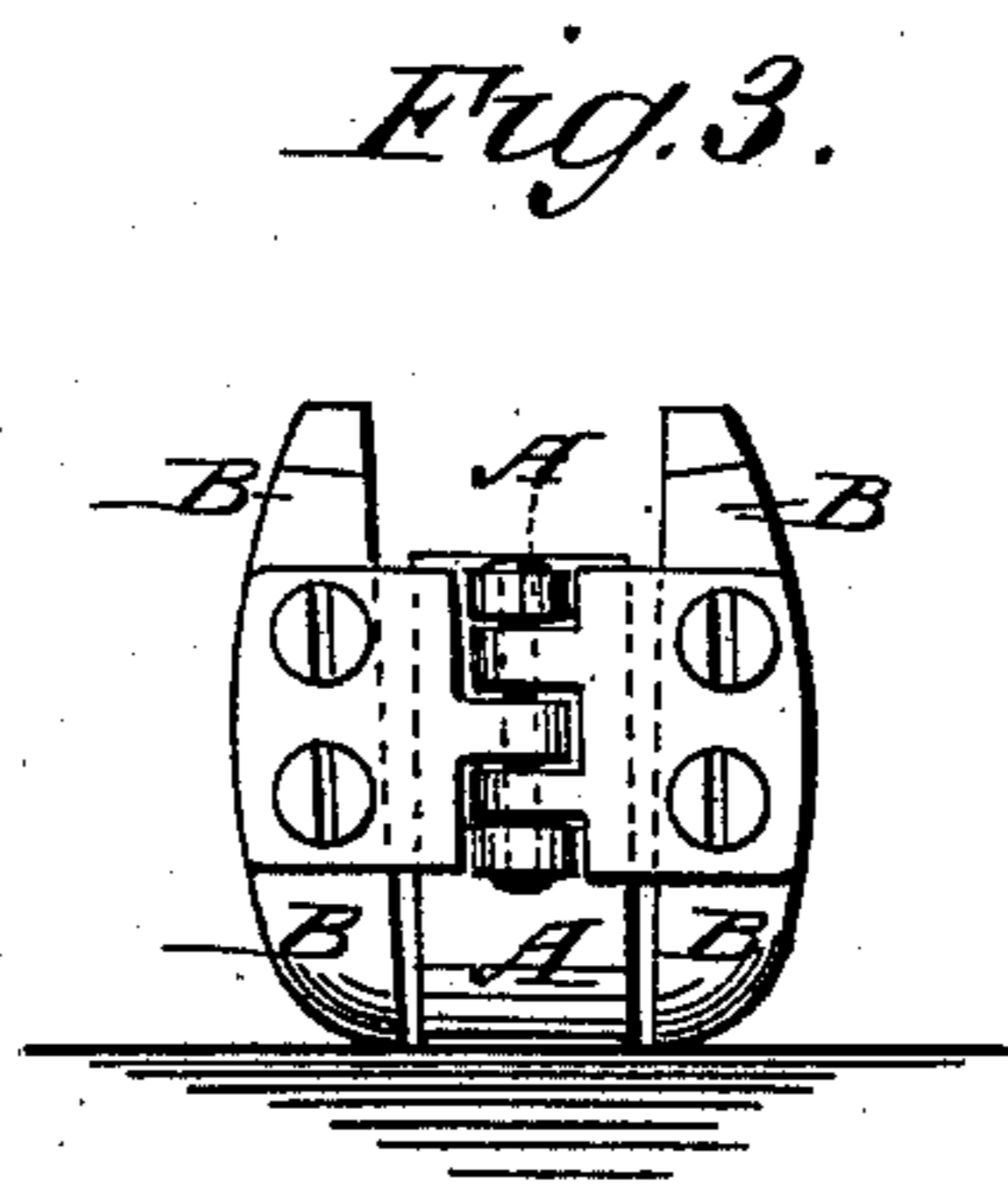
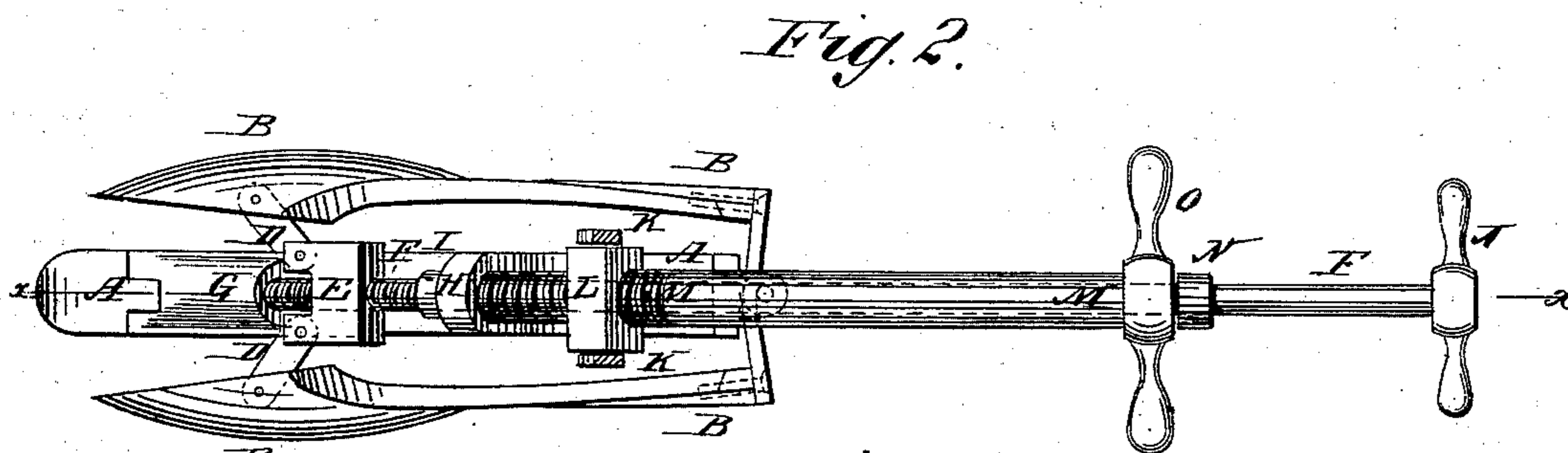
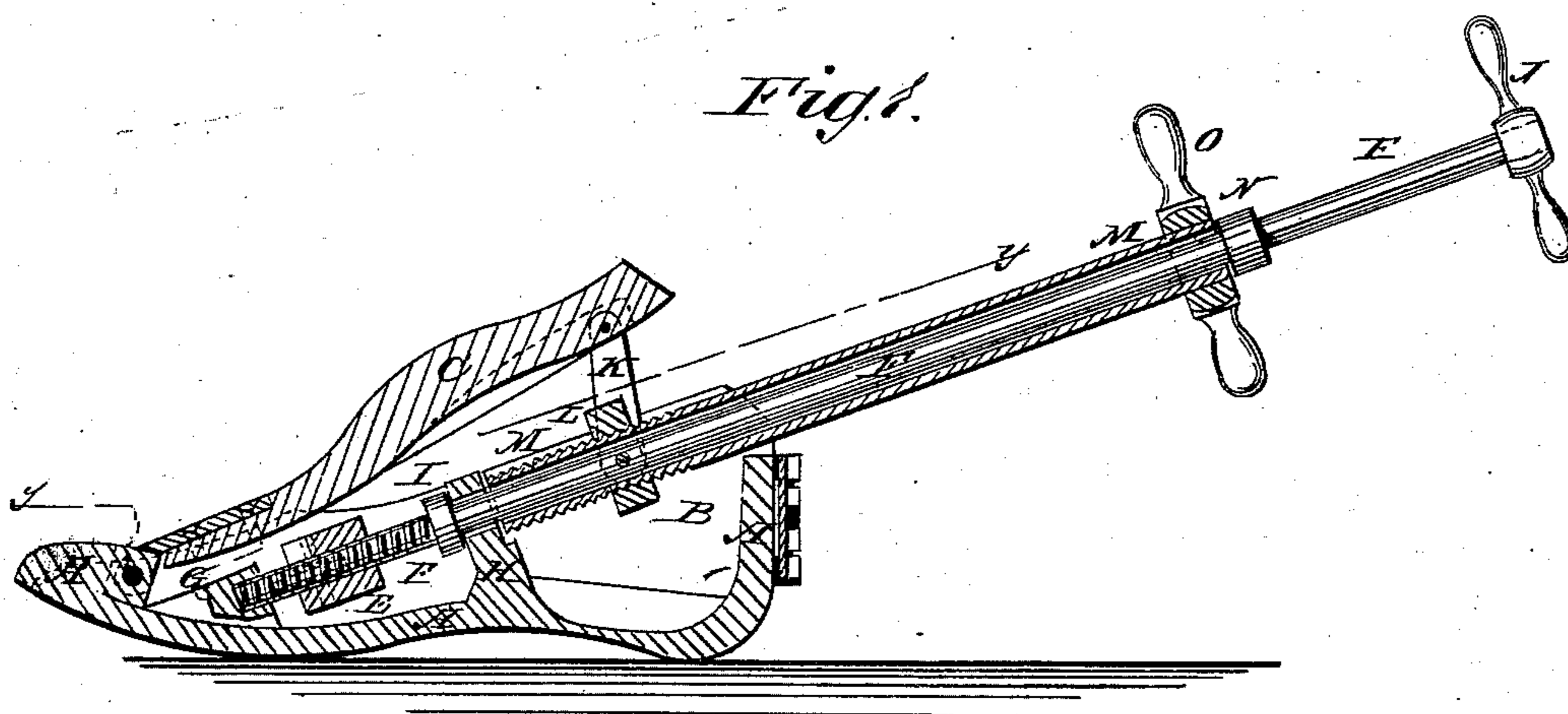


(No Model.)

F. A. FAY.
Boot and Shoe Stretcher.

No. 232,478.

Patented Sept. 21, 1880.



WITNESSES:

Francis McArdle,
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INVENTOR:

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UNITED STATES PATENT OFFICE.

FRANCIS A. FAY, OF BROOKLYN, E. D., ASSIGNOR, BY MESNE ASSIGNMENTS, TO PETER C. TIEMANN, OF NEW YORK, N. Y.

BOOT AND SHOE STRETCHER.

SPECIFICATION forming part of Letters Patent No. 232,478, dated September 21, 1880.

Application filed June 24, 1880. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS A. FAY, of Brooklyn, E. D., in the county of Kings and State of New York, have invented a new and useful Improvement in Ball and Instep Stretchers for Boots and Shoes, of which the following is a specification.

Figure 1 is a sectional elevation of the improvement, taken through the line *x x*, Fig. 2. Fig. 2 is a plan view, partly in section, through the line *y y*, Fig. 1. Fig. 3 represents a rear elevation, showing the hinged connection of the side pieces.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish ball and instep stretchers for boots and shoes, so constructed that they can be readily inserted into and removed from the boots and shoes, and which shall be simple in construction and powerful in operation.

The body of the stretcher is made in the form of a last and in four pieces, a lower or central piece, A, two side pieces, B B, and a top or instep piece, C. The side pieces, B B, are hinged at their rear ends to the rear end of the bottom piece, A, and the top or instep piece, C, is hinged at its forward end to the forward end of the bottom or center piece, A.

To the inner sides of the forward parts of the side pieces, B B, are hinged the outer ends of two short bars, D D, the inner ends of which are hinged to the opposite sides of a nut, E. The screw-thread of the nut E fits upon the thread of the screw F, the forward end of which works in a socket in a projection, G, formed upon the forward part of the lower piece, A. The shank of the screw F works in a hole in a projection, H, formed upon the middle part of the lower piece, A. The screw F is kept from forward movement by the projection G, and from rearward movement by collar I, formed upon or attached to the said screw F, and which rests against the forward side of the projection H, so that the screw F is swiveled to the lower piece, A.

To the outer end of the screw F is attached the cross-head J, to serve as a handle in operating the said screw F. With this construction, by turning the swiveled screw F in one direction the nut E will be forced forward, causing the arms or bars D to force the for-

ward ends of the side pieces, B B, outward to stretch the ball of the boot or shoe, the bars D acting as toggle-joints and pressing the forward ends of the side pieces, B, outward with great force.

To the inner side of the rear end of the top piece, C, are hinged the outer ends of two arms or bars, K, the inner ends of which are hinged to the opposite sides of the nut L. The screw-thread of the nut L fits upon the thread of the screw M, which is made hollow to receive and work upon the shank of the screw F. The forward end of the hollow screw M rests against the rear side of the projection H, and its rear end rests against a collar, N, formed upon or attached to the shank of the screw F, so that the hollow screw M will be swiveled to and upon the shank of the screw F. With this construction, by turning the hollow screw M the nut L will be moved outward, causing the arms or bars K to force the rear end of the top piece, C, upward with great force, the said bars K acting as toggle-joints.

To the outer end of the hollow screw M is attached a cross-head, O, to serve as a handle for operating the said screw M. With this construction a very powerful stretcher is produced, which is also very compact, so that it can be readily inserted in and withdrawn from the boot or shoe.

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

1. In a ball and instep stretcher, the side pieces, B, hinged at the rear to the bottom piece, A, and in front connected by short pivoted bars D with a nut, E, on the swiveled screw F, as and for the purpose specified.

2. In a ball and instep stretcher, the combination, with the upper part, C, and the hollow screw M, swiveled upon the shank of the screw F, of the hinged bars K and the movable nut L, substantially as herein shown and described, whereby the top piece, C, can be forced upward, as set forth.

FRANCIS A. FAY.

Witnesses:

JAMES T. GRAHAM,
C. SEDGWICK.