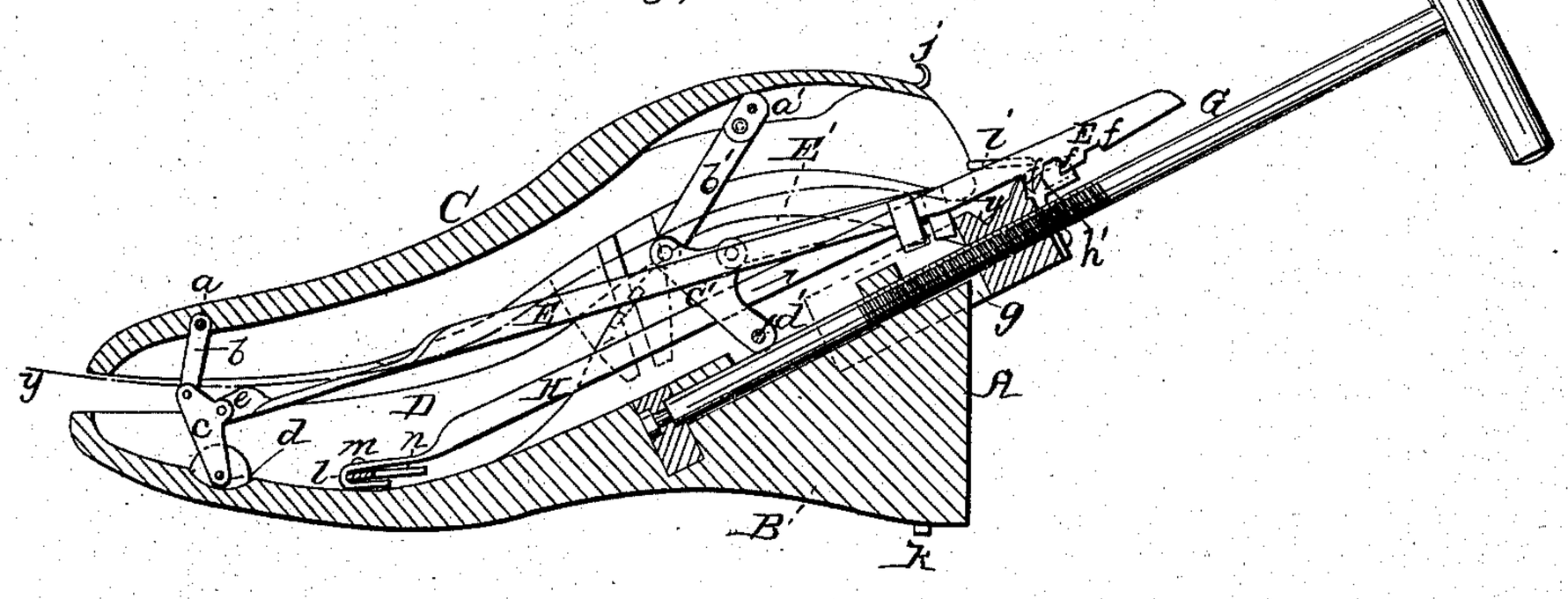
J. G. YOUNG, Jr.

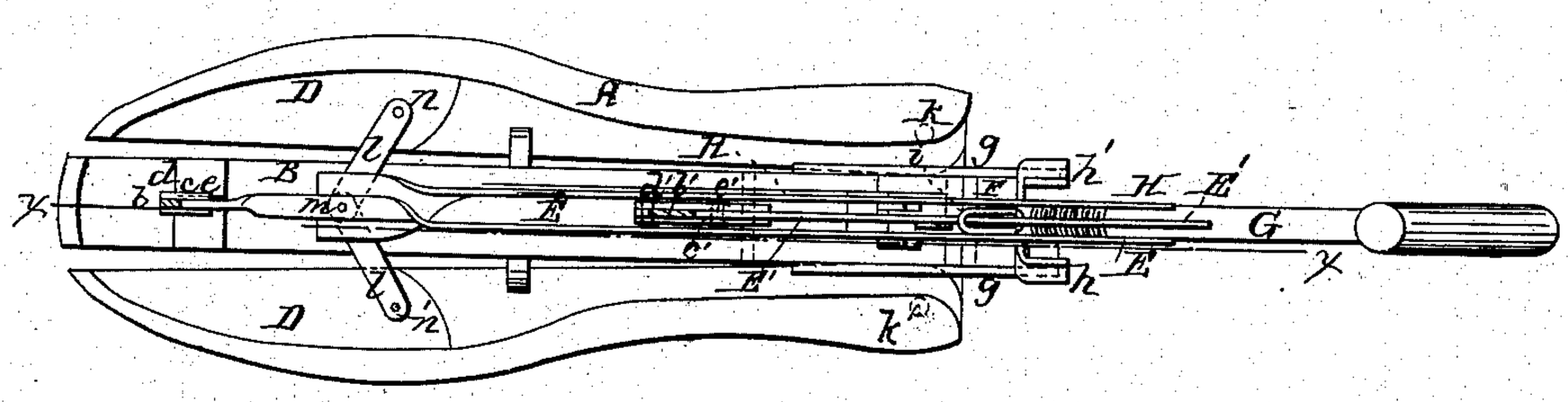
BOOT OR SHOE STRETCHER.

No. 36,818. Patented Oct. 28, 1862.

Fig; 1.



Fig; 2.



Witnesses;

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UNITED STATES PATENT OFFICE.

J. G. YOUNG, JR., OF AUBURN, MAINE.

IMPROVED BOOT AND SHOE STRETCHER.

Specification forming part of Letters Patent No. **36,818,** dated October 28, 1862.

To all whom it may concern:

Be it known that I, J. G. YOUNG, Jr., of Auburn, in the county of Androscoggin and State of Maine, have invented a new and Improved Boot and Shoe Stretcher; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Fig. 1 represents a longitudinal vertical section of my invention, taken in the plane indicated by the line *x x*, Fig. 2. Fig. 2 is a horizontal section of the same, the plane of section being indicated by the line *y y*, Fig. 1.

Similar letters of reference in both views indicate corresponding parts.

This invention consists in the arrangement of three lifting-rods, one for raising the instep, and one for raising the toe, and one for spreading, in combination with three pairs of toggle-arms acting on the several sections of the stretcher, and with a sliding nut operated by a hand-screw in such a manner that the several parts of the stretcher can be raised simultaneously or one independent of the other, as may be desired.

It consists, also, in the arrangement of a rising and falling cap, in combination with the central body of the stretcher, in such a manner that by the action of said cap the toe and the instep can be raised either separately or simultaneously, as may be desired.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation with reference to the drawings.

The stretcher A consists of four parts—viz., the stationary central part, B, the cover or cap C, and the two hinged side pieces, D. The cap C is connected by means of pivots *a a'* to the outer ends of arms *b b'*, the inner ends of which are pivoted to oscillating levers or arms *c c'*, which swing on pivots *d d'*, passing through lugs attached to the body of the stationary central part, B.

By referring to Fig. 1 of the drawings it will be noticed that the arms *b c b' c'* are connected to each other, in the manner of toggle-arms, and the arms *c c'* are attached to the ends of lifting-rods E E', by means of pivots *e e'*, at points near to the pivots connecting the arms *b c b' c'*. Each of these lifting-rods is provided with a series of notches which can be made to catch over the front edge of a nut, F, to which a longitudinal sliding motion is imparted by the hand-screw G. The nut F is connected to two slides, *g*, which catch over the sides of the central part, B, of the stretcher, and which form the guides for the nut, and the screw G is secured to the stationary part B in such a manner that it turns freely, but is not allowed to move in a longitudinal direction. By turning the screw, therefore, the nut F is moved in and out, and if the lifting-rods are turned down so that the notches *f* catch over the edge of said nut, by turning the screw the toggle-arms *b c b' c'* are straightened or brought in an angular position, and the cover or cap of the stretcher is raised or lowered simultaneously at the instep and at the toe; or if any one of the lifting-rods is thrown out of gear by the action of the other the instep or the toe can be raised as may desired.

When it is desired to throw the lifting-rod E out of gear, and to raise the instep independent of the toe, it is lifted up and a button, *h*, is turned under it, which will prevent the same catching over the edge of the nut, and when it is desired to lift the rod E', and to raise the toe of the stretcher alone, said rod is suspended by means of a loop, *i*, from a hook, *j*, on the cap C'.

The side pieces, D, are connected to the stationary body B of the stretcher by means of pivots *k*, passing through the heel part or rear end of said side pieces, so that the toes and front parts of the same can be spread or contracted at pleasure. The operation of spreading or contracting said side pieces is effected by two toggle-arms, *l*, which are connected together by means of a pivot, *m*, and which are attached to the side pieces, D, by pivots *n n'*, as clearly shown in Fig. 2 of the drawings. These toggle-arms are connected to the lifting-rod H, which is provided with a series of notches catching over the front edge of the nut F, similar to the lifting-rods E E'. If the nut is in gear with said lifting-rod, and it is moved out, by the action of the screw G, in the direction of the arrow marked on it in the drawings, the toggle-arms *l* are gradually straightened, and the side pieces are spread; and if the lifting-rod H is pushed in the direc-

tion opposite to said arrow the side pieces are compressed. When it is desired to throw said lifting-rod out of gear with the nut, it is raised, and a button, *h'*, is turned under it. This button is similar to the button *h*, and, like the same, it is pivoted to the front side of the nut, as clearly shown in the drawings.

From this description the operation of my stretcher will be easily understood. If it is desired to stretch the boot or shoe simultaneously in all directions, the lifting-rods F F' H are thrown in gear with the nut F, and by operating the screw G the side pieces expand, and the cap rises at toe and instep. If it is desired to stretch less on one part than on the other—for instance, if the instep wants more stretching than the toe and sides—the lifting-rod E' is thrown in gear first, and when the edge of the nut has arrived opposite the second notches in the lifting-rods E H the latter are also thrown in gear and the operation of stretching is completed. If it is desired to stretch in one direction only—for instance, to stretch the sides—the lifting-rods E E' are thrown out of gear, and by the action of the nut F on the lifting-rod H the spreading is effected.

The operation of this stretcher is very simple, and all its parts are so constructed that they are not liable to get out of order.

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

1. The arrangement of the lifting-rods E E' H, in combination with the nut F, screw G, toggle-arms *b c b' c' l*, cap C, and side pieces, D, all constructed and operating substantially in the manner and for the purpose shown and described.

2. The cap C, arms *b c b' c'*, and lifting-rods E E', in combination with the central part, B, screw G, and nut F, loop *i*, and hook *j*, when arranged to operate in the manner and for the purposes specified.

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Witnesses:
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