

J. A. SAFFORD.
Improvement in Nailing-Lasts for Boots and Shoes.
No. 131,565. Patented Sep. 24, 1872.

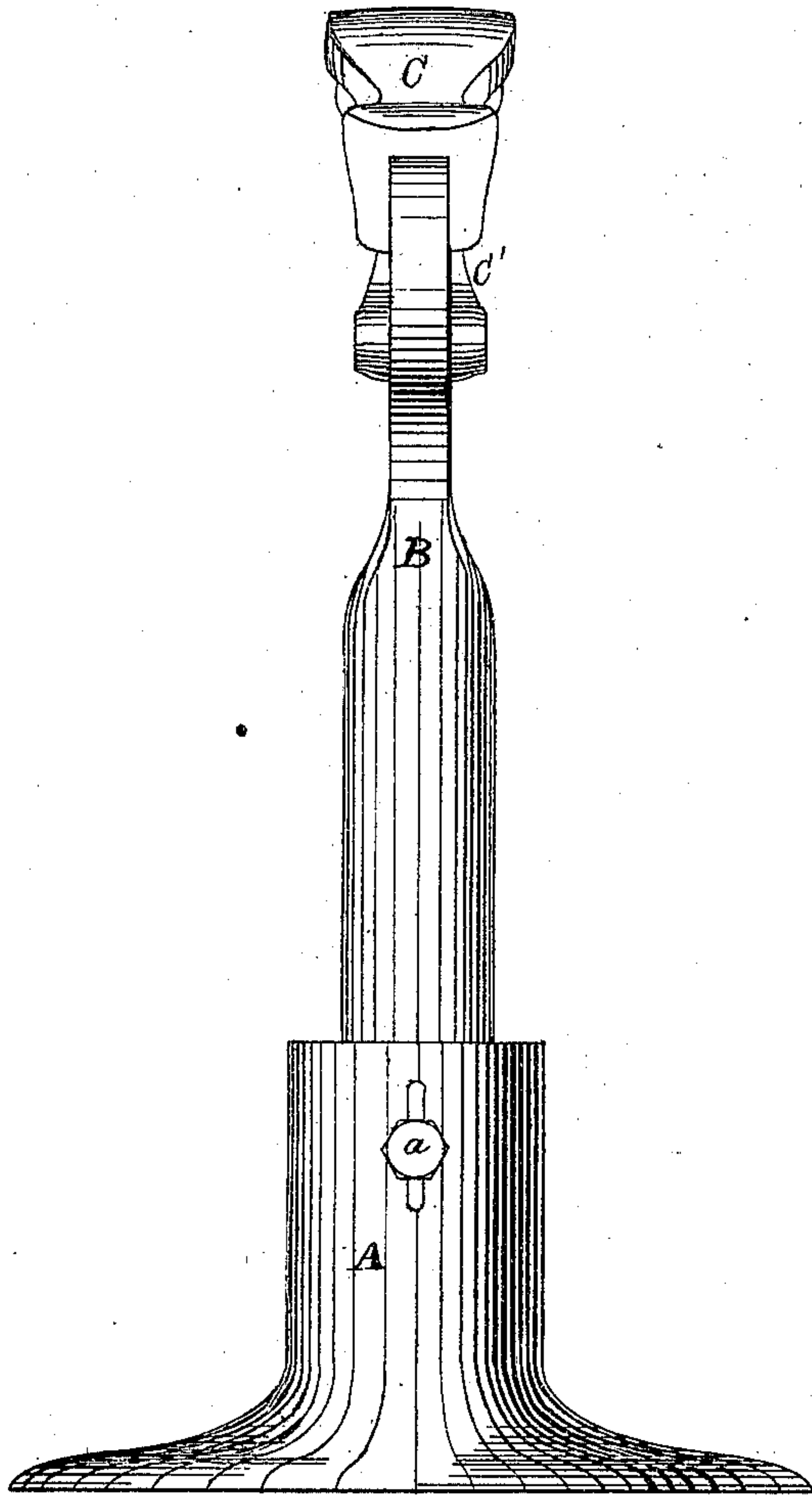


FIG. 2.

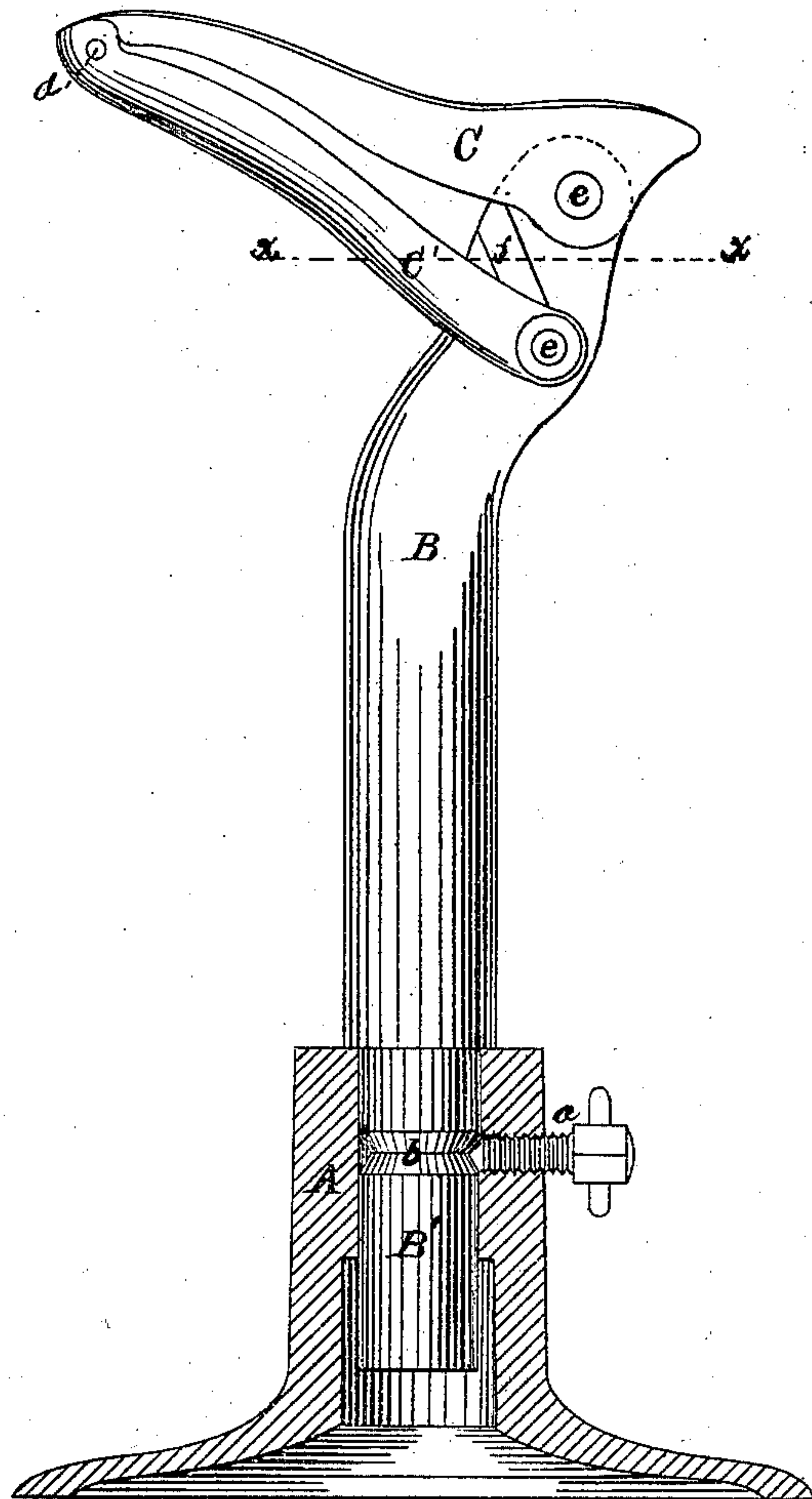


FIG. 1.

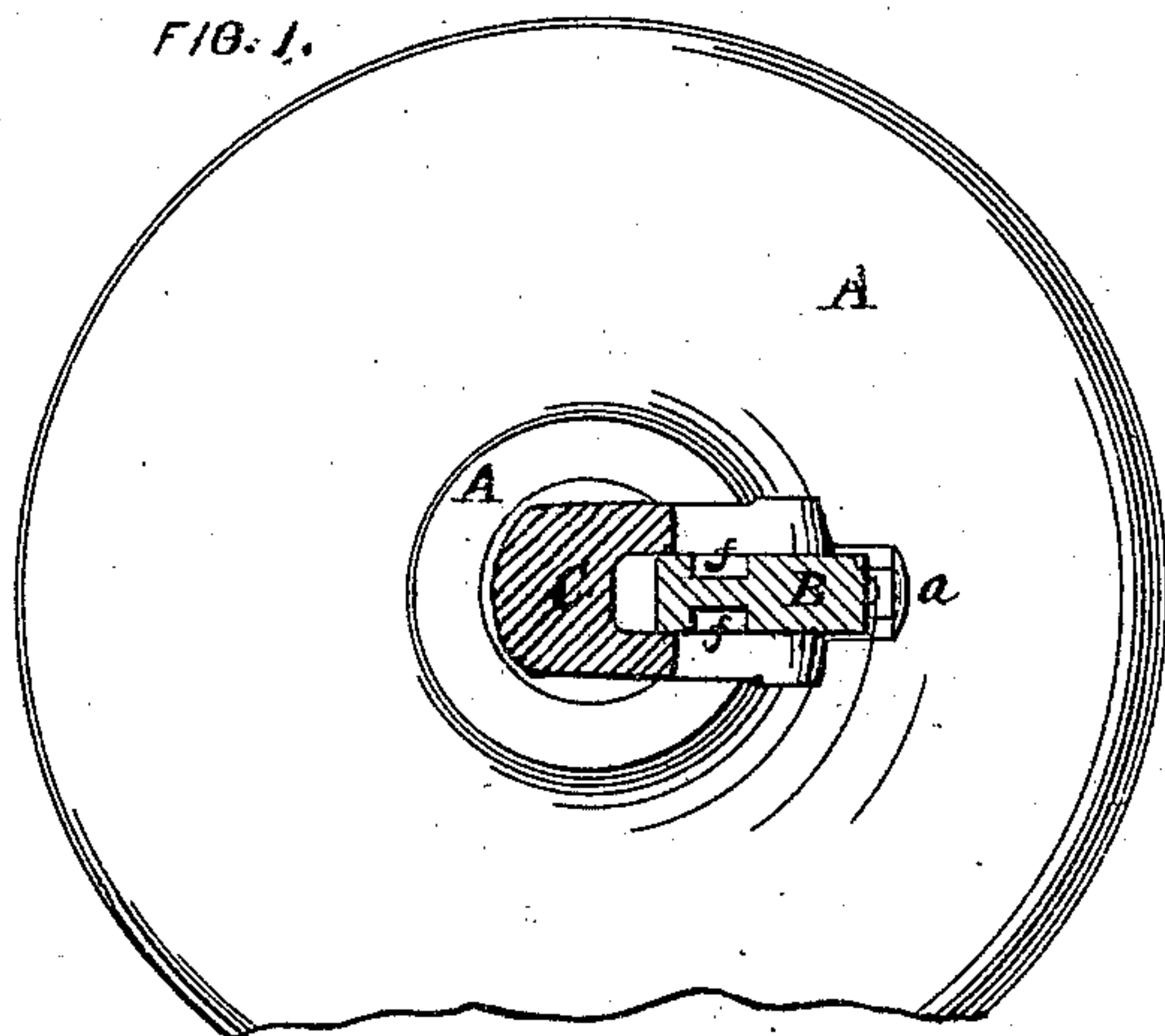


FIG. 3.

INVENTOR,

John A. Safford

WITNESSES:

G. A. Ford.
F. K. Rogers

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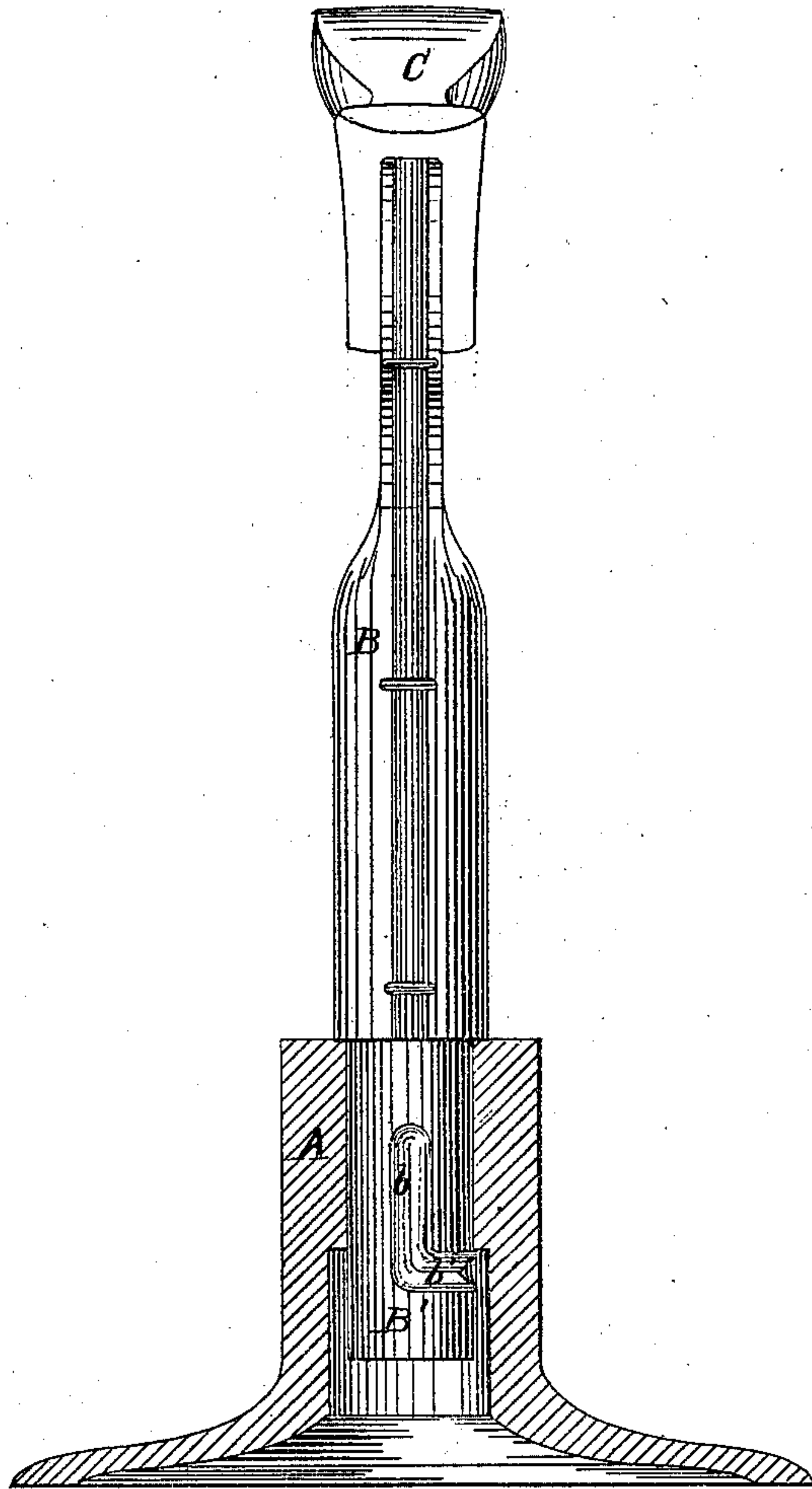


FIG. 5.

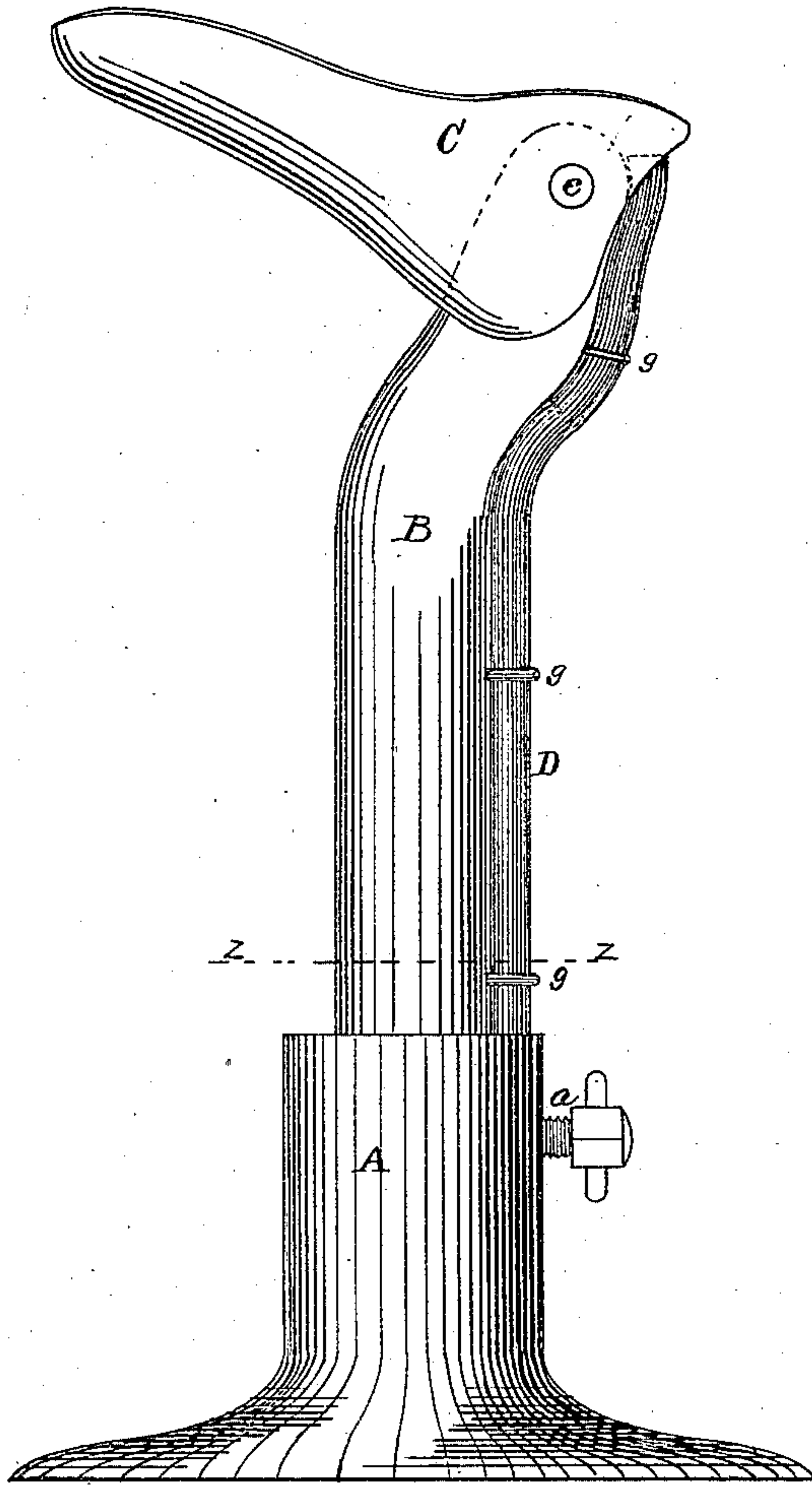


FIG. 4.

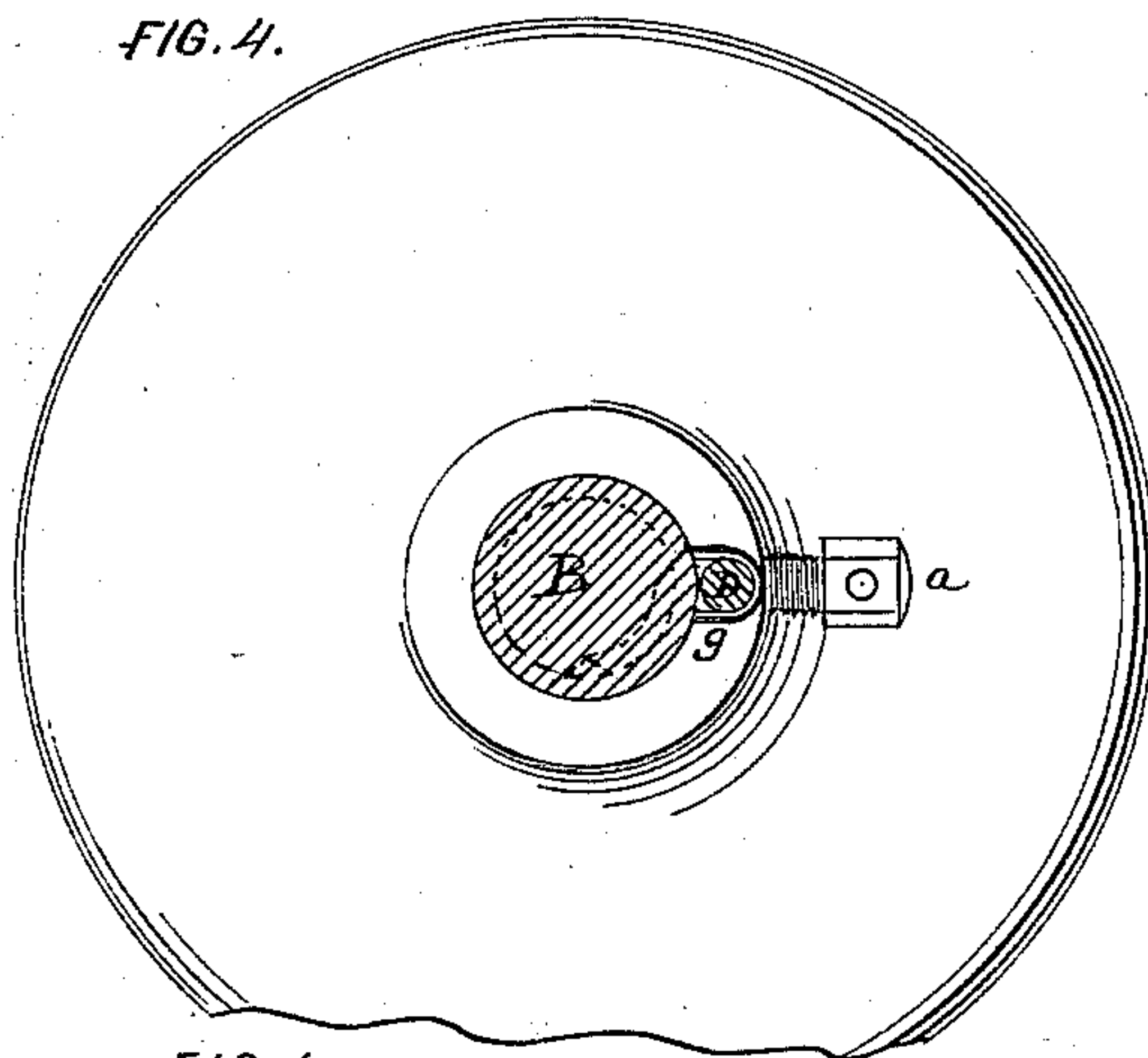


FIG. 6

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UNITED STATES PATENT OFFICE.

JOSEPH A. SAFFORD, OF WINCHESTER, MASSACHUSETTS, ASSIGNOR TO
AMERICAN BOOT AND SHOE MACHINE WORKS.

IMPROVEMENT IN NAILING-LASTS FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. 131,565, dated September 24, 1872.

To all whom it may concern:

Be it known that I, JOSEPH A. SAFFORD, of Winchester, in the county of Middlesex and State of Massachusetts, have invented a new and useful Last and Stand for Nailing and Finishing the Bottoms of Boots and Shoes, of which the following is a specification:

The object of my invention is the production of a last conveniently arranged upon a stand in such a manner that a boot or shoe may be easily drawn onto the same, and be firmly held in position thereon while the shank is being nailed, or the bottom finished; and it consists, first, in the construction of last in two parts, hinged or jointed together at the toe, and that portion thereof that fits the bottom of the boot pivoted at the heel to the top of a standard set in a base in such a manner that it may be revolved therein, while the instep portion of the last is forked so as to embrace said standard, and provided with a pin in each arm of said fork, and projecting inward therefrom and fitting into cam grooves in each side of said standard, all of which is so arranged that when the toe of the last is lifted, swinging the last on the pivot through the heel, the depth of the last through the instep will be materially reduced, so that a boot or shoe may be easily drawn thereon, and when the toe of the last is again depressed the last will be expanded so as to fill the boot or shoe and hold it firmly in place thereon. It also consists in supporting the heel of said last in the rear of the point of attachment to the standard by means of a sliding rod attached to the standard, in such a manner that when the last is in position for operating upon a boot or shoe the rear portion of the heel will rest upon the upper end of said rod, while the lower end of said rod rests upon the top of the base in such a manner as to serve as an anvil to receive the blow of driving the nail. It also consists in the formation, in the shank of the standard which supports the last, of a vertical groove, in combination with a horizontal groove extending partially around the shank of said standard, and communicating with the vertical groove in such a manner that the standard may be raised in the base and partially rotated therein, the point of a set-screw which enters said grooves limiting the movement of said standard in either direction.

Figure 1 of the drawing is a side elevation of my improvement as arranged for finishing the bottoms of boots or shoes, with the base shown in vertical section. Fig. 2 is an end elevation of the same; and Fig. 3 is a horizontal section on line *x x* on Fig. 1. Fig. 4 is a modification of the same adapted especially to nailing the bottoms of boots or shoes, shown in elevation; Fig. 5 is an end elevation of the same with the base in vertical section; and Fig. 6 is a horizontal section on line *z z* on Fig. 4.

In the drawing, A is a base having a broad flange, by which it may be secured to a table or bench by means of screws or other suitable fastening, said base being bored out to receive the shank B' of the standard B, which is retained in position therein by the set-screw *a*, the point of which enters the groove *b* formed in the shank B' without pressing against the same, so as to prevent the standard from being drawn out in drawing off the boot or shoe, but at the same time allow the standard B to rotate in said base. The standard B has an off-set or bend formed near its upper end, and has pivoted to its upper end, by the pin *c*, the upper or sole portion C of the last, the center of the pivot-pin *c* being nearly under the forward end of the heel of the boot or shoe. C' is the instep portion of the last, hinged to the sole portion C at the toe by means of the pin *d*. The rear portion of the part C' is forked, so as to embrace the standard B, each arm of said fork being provided with a pin, *e*, which projects from the inner face thereof, and is fitted to work in the cam-groove *f*, formed in either side of the standard B, said grooves being so formed and located that raising the toe of the last will cause the depth of the last through the instep to be reduced, so that a boot or shoe may be easily drawn onto said last, and a depression of the toe of the last will cause the instep to expand so as to fill the shoe, and thereby hold it firmly in place thereon while the bottom is being finished.

Instead of a cam-groove on either side of the standard B, a slot may be used extending through said standard, and a pin extending from one arm to the other of the fork formed on the rear end of the instep portion C' of the last in an obvious manner.

The modification, shown in Figs. 4, 5, and 6, on Sheet 2, is adapted more especially to nail-

ing the bottoms of boots and shoes, though it may be used for both nailing and finishing.

In this modification the last C is made solid in one piece, and pivoted to the standard B at the heel in the same manner as above described, the ankle portion thereof being forked to receive the upper end of said standard, the forward portion of the slot which forms the fork resting against the forward edge of the standard B, and serving as a stop to limit the downward movement of the toe of the last. D is a rod attached to the rear side of the standard B in bearings *g* in such a manner that it may be made to move endwise therein, when the standard is raised up in the base so that the point of the set-screw *a* will enter the horizontal portion *b'* of the groove formed in the shank of the standard B, the sliding motion of said rod releasing the last, so that the toe thereof may be raised to facilitate the drawing on or off of the boot or shoe. A groove is cut in the shank B' of the standard B in the form of a letter, L, the vertical portion *b* of which is used when the standard B is raised or lowered, and the horizontal portion *b'* is used when the standard is rotated in the base A, the motions of said standard being controlled and limited by the shape of the groove *b b'*, and the point of the set-screw *a* working therein. When the boot or shoe is on the last

and the last in position for nailing the bottom of the boot, the rod D serves as an anvil to receive the blow, the heel of the last resting upon its upper end, and the lower end of said rod resting on the top of the base A.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A last made in two parts, hinged together at the toe, the sole portion of which is pivoted at the heel end to a standard, as herein set forth, and the instep portion of which is connected to said standard by means of a pin or pins working in a slot, or in cam-grooves formed in said standard, all arranged and operating substantially as herein described, for the purpose specified.

2. In combination with a last hinged at or near its heel to an adjustable standard, the rod D, arranged and operating substantially as described, for the purpose specified.

3. In combination with the last C, standard B, and rod D, the L-shaped groove *b b'* and the set-screw *a*, arranged to work therein substantially as described.

Executed at Boston this 6th day of July, 1872.

JOSEPH A. SAFFORD.

Witnesses:

O. A. WOOD,
F. K. ROGERS.