

(No Model.)

2 Sheets—Sheet 1.

L. H. SANDERSON.

ROLLER ABTRACTER FOR WATCHES.

No. 245,872.

Patented Aug. 16, 1881.

Fig. 1.

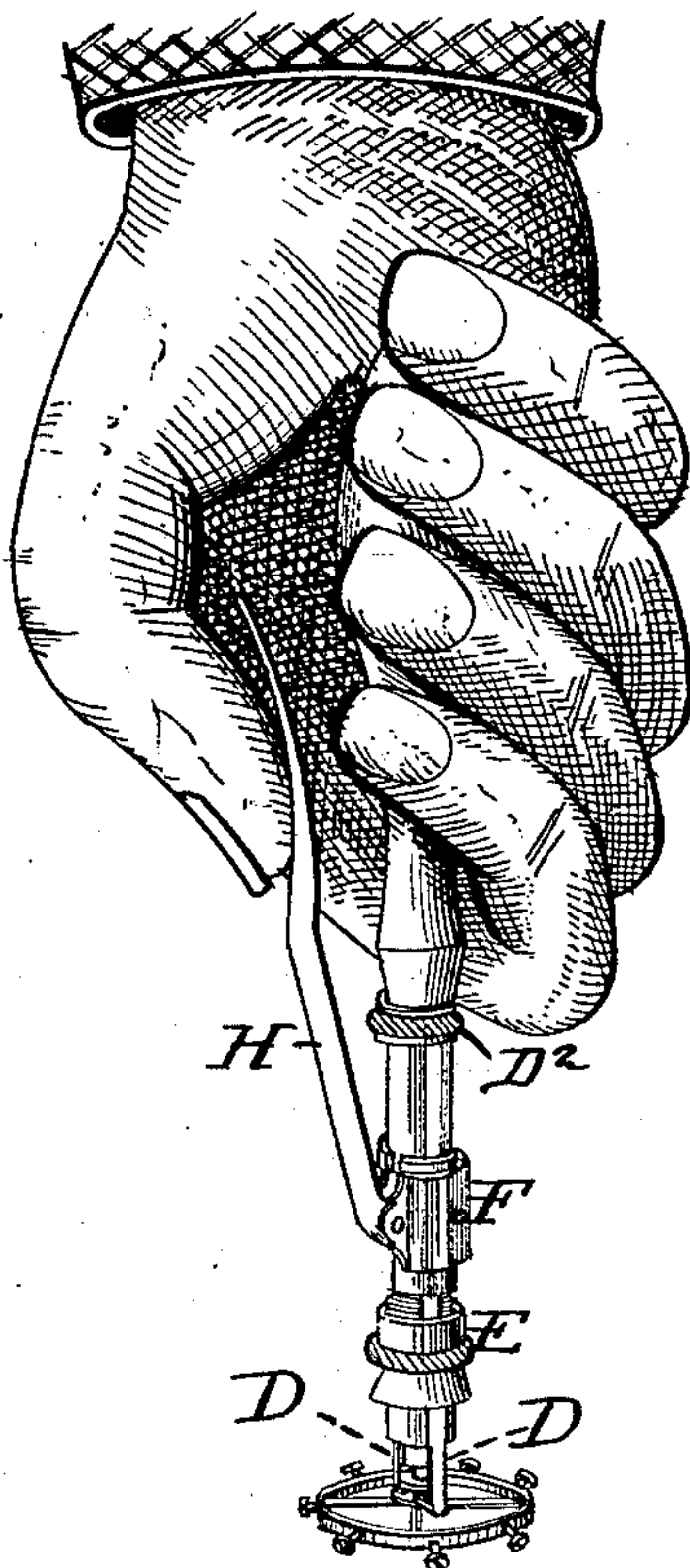
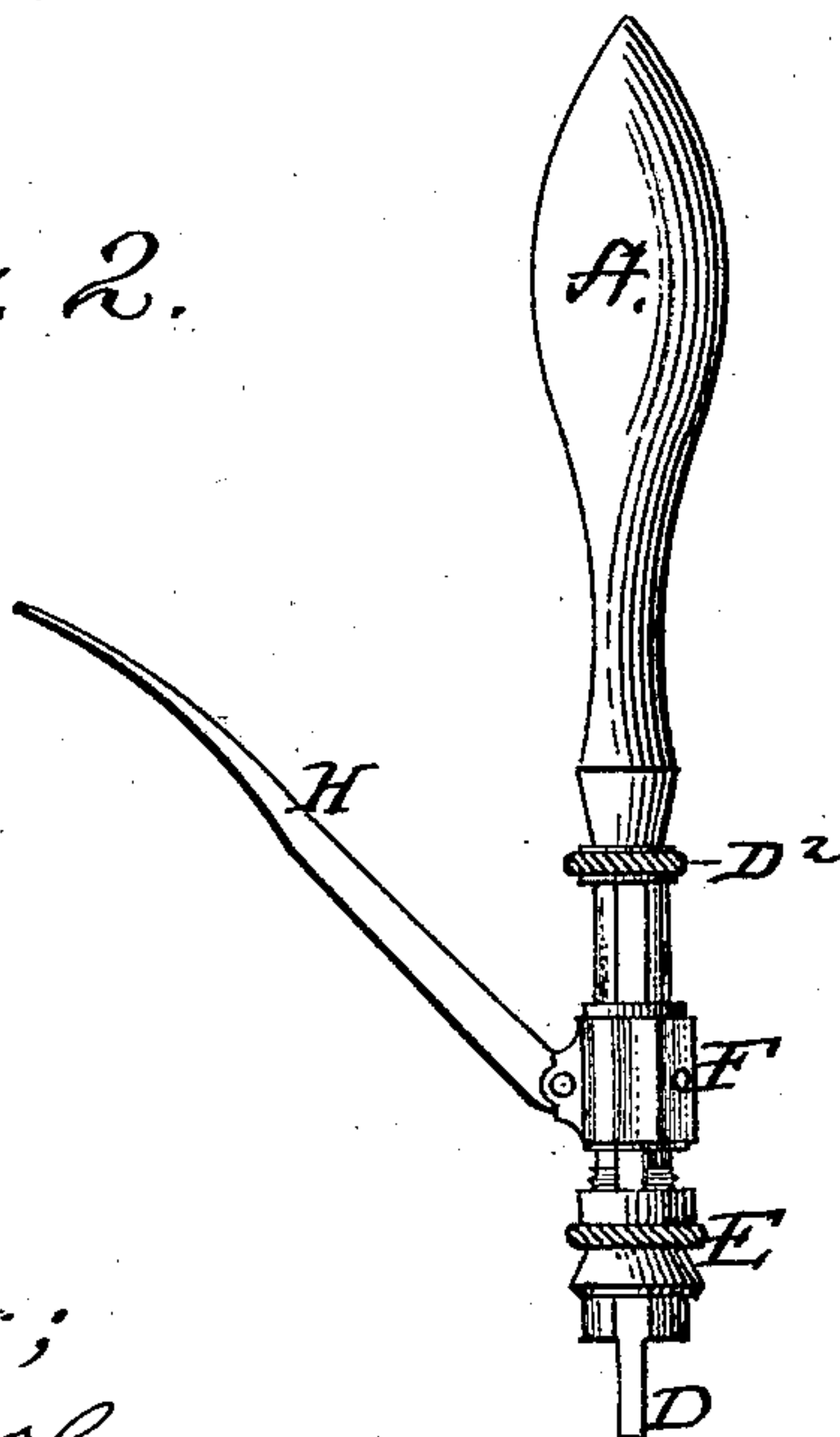


Fig. 2.



Witnesses;

*Charles Fowler,
J. M. Vznaga.*

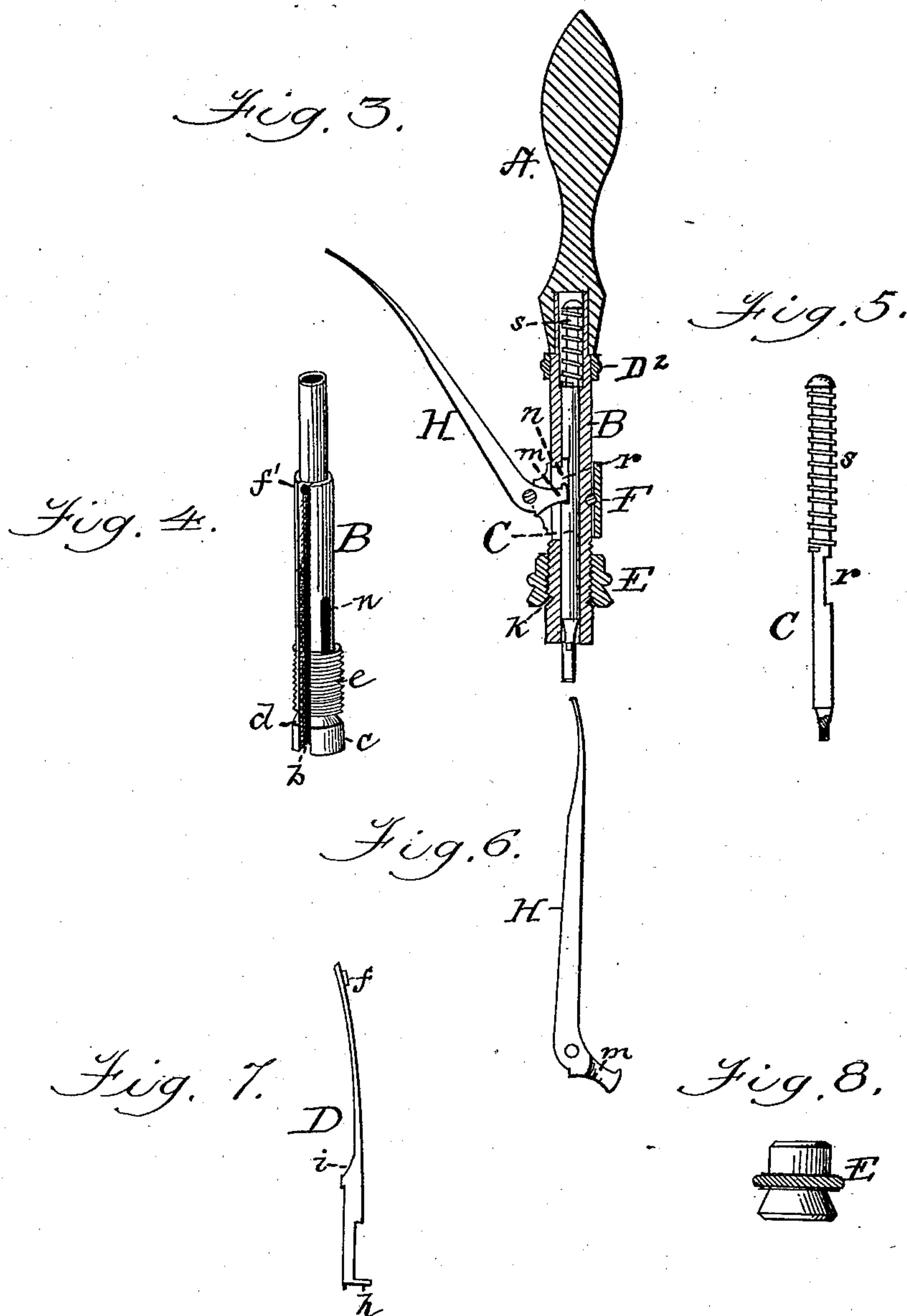
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UNITED STATES PATENT OFFICE.

LUCIOUS H. SANDERSON, OF NEW YORK, N. Y.

ROLLER-ABTRACTER FOR WATCHES.

SPECIFICATION forming part of Letters Patent No. 245,872, dated August 16, 1881.

Application filed June 27, 1881. (No model.)

To all whom it may concern:

Be it known that I, LUCIOUS H. SANDERSON, a citizen of the United States of America, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Roller-Abstracters for Watches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in a watch-maker's tool known to the trade as a "roller-abstracter," the object of which is to easily remove the "roller" from the balance-wheel of a watch without damage to the staff, wheel, or roller.

My invention consists in the combination of a cylinder formed with side grooves or channels and side clamping-jaws fitted in the said grooves and secured at their upper ends by a fastening-collar.

My improvement further consists in the combination of the cylinder formed with the side grooves and the screw-threads, the side spring clamping-jaws, and an adjusting-nut for operating the said jaws.

My improvement further consists in the combination of the cylinder formed with the side grooves or channels, into which are fitted the spring clamping-jaws, and provided with female screw-threads, the adjusting-nut for operating the clamping-jaws, the sliding spindle with its lower end hollow, and a pivoted lever for actuating the sliding spindle.

My improvement further consists in the novel construction and combination of parts, as will be hereinafter more fully set forth and specifically claimed.

Figure 1 is a representation of my improved tool in the hands of an operator, showing the mode of handling and operating the same. Fig. 2 is a side view of the tool, showing the parts in their normal condition. Fig. 3 is a vertical sectional view of the tool. Fig. 4 is a perspective view of the cylinder. Fig. 5 is a side view of the sliding spindle with the actuating coil-spring surrounding the upper por-

tion thereof. Fig. 6 is a side view of the actuating-lever. Fig. 7 is a side view of one of the spring clamping-jaws, and Fig. 8 is a view of the milled or knurled adjusting-nut.

In the annexed drawings, the letter A represents a handle, having attached or socketed therein the hollow cylinder B, within which is arranged a sliding spindle, C, hereinafter described. This hollow cylinder B (see Fig. 4) is formed with the side grooves or channels, *b*, (only one shown,) extending in the direction of the length of the cylinder, and preferably arranged so as to be diametrically opposite to each other. The lower end of this cylinder is enlarged at *c*, and is formed with a conical shoulder, *d*, and screw-threads *e*, as seen in Fig. 4 of the drawings.

The letter D represents the clamping-jaws, made of steel, and shaped so as to spring outward at the lower clamping end whenever the pressure is removed. Each of these clamping-jaws (see Fig. 7) is formed at or near its upper end with a little stud or projection, *f*, to fit the openings or notches at the upper end of the side grooves, and at the lower end with the inward-extended lip *h*, to grasp the object to be seized. It will also be observed that the metal at the lower end is re-enforced for the purpose of gaining additional strength, and is formed with a conical shoulder, *i*, for the purpose hereinafter stated. These spring clamping-jaws are fitted within the grooves *b* of the hollow cylinder, the projections *f* passing into the openings *f'*, and there confined by a sleeve or collar, *D*². This collar is adjusted on the cylinder B and over the upper ends of the clamping-jaws D D, to confine the said jaws at this point to the cylinder, substantially as shown.

The letter E represents the adjusting-nut, engaging with and working on the screw-threads of the cylinder, and having at its lower end a conical recess or socket, *k*, to engage with the conical shoulder *d* of the hollow cylinder and the conical shoulders *i* of the spring clamping-jaws. The forward or downward adjustment of the adjusting-nut causes the interior conical portion of the nut to bear upon the conical surface of the jaws, which action causes the said jaws to be forced inward, or to approach each other, against the object to be grasped, as indicated in Fig. 1 of the drawings.

The letter F represents a collar with perforated side lugs, to which is pivoted or journaled the lever H. This collar, with the lever, is adjusted and secured on the hollow cylinder in a manner that the inwardly-projecting toe portion *m* of the lever will pass through the slot *n* of the said cylinder and rest within the recess *r* of the sliding spindle, substantially as shown in Fig. 3 of the drawings. Around the upper portion of the sliding spindle above the recess is encircled a coil-spring, *s*, for keeping the spindle in a retracted position within the cylinder.

The parts being arranged and organized as shown and described, the tool is held in one hand, the thumb and forefinger adjusting the nut upon the inclined faces of the spring clamping-jaws, which movement forces the jaws to approach each other and engage the roller on the balance-wheel held in the other hand; then the lever is pressed inward toward the handle by the thumb, which causes the sliding spindle to descend, the lower end thereof, which is hollow, as seen in Fig. 5, fitting over the pivot of the staff and against the conical end of the balance-staff, which draws the roller away from the balance-staff.

It will be observed that only one hand is required to operate my roller-tool, and the other hand is free to hold the balance-wheel and its staff.

I claim the right to vary the construction and arrangement of parts without departing from the spirit of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a roller-abstracter, the combination of a cylinder, B, formed with the side grooves or

channels, *b*, and the side clamping-jaws, D D, fitted in the said grooves and secured at their upper ends by a fastening-collar, substantially as described.

2. In a roller-abstracter, a cylinder, B, formed with the side grooves or channels, *b*, and openings or notches *f'*, in combination with the clamping-jaws, having at their upper ends little studs *f* to fit into the notches, and a fastening collar or sleeve, substantially as described.

3. The combination, in a roller-abstracter, of the cylinder formed with the side grooves and screw-threads, the side spring clamping-jaws, and an adjusting-nut, operating substantially as described, and for the purpose set forth.

4. The combination, in a roller-abstracter, of the cylinder formed with the side grooves or channels and screw-threads, the spring clamping-jaws, the adjusting-nut, the sliding spindle, and the pivoted actuating-lever, substantially as described, and for the purpose set forth.

5. The improved roller-abstracter consisting of a handle, the hollow cylinder B, formed with the side grooves, *b*, notches *f'*, and screw-threads *e*, the spring clamping-jaws D, the adjusting-nut E, the sliding spindle C, formed with the recess *r*, and provided with the coil-spring *s*, the collar F, and the pivoted actuating-lever H, all arranged substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

LUCIOUS H. SANDERSON.

Witnesses:

J. M. YZNAGA,
A. G. HEYLMUN.