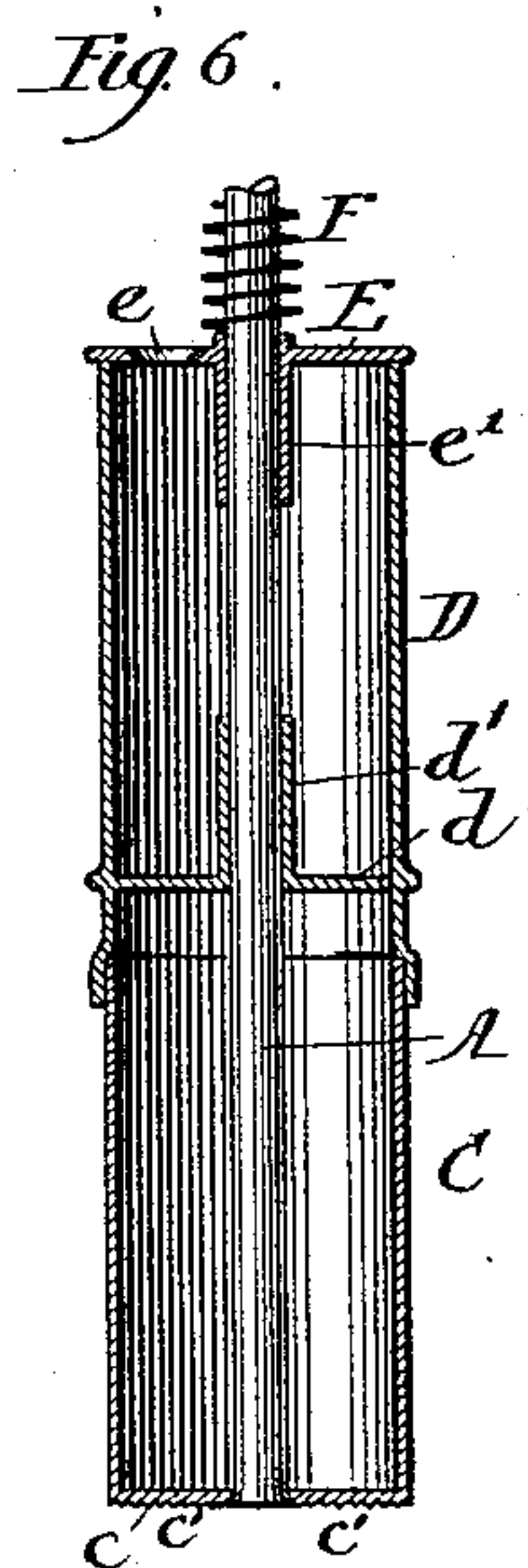
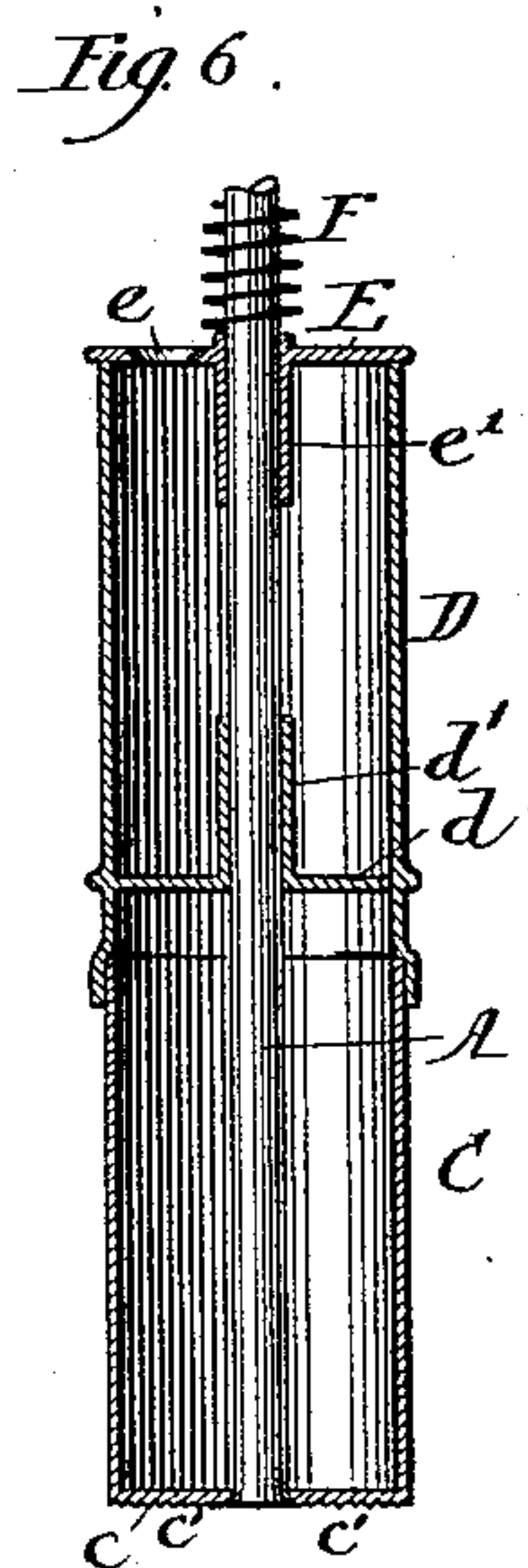
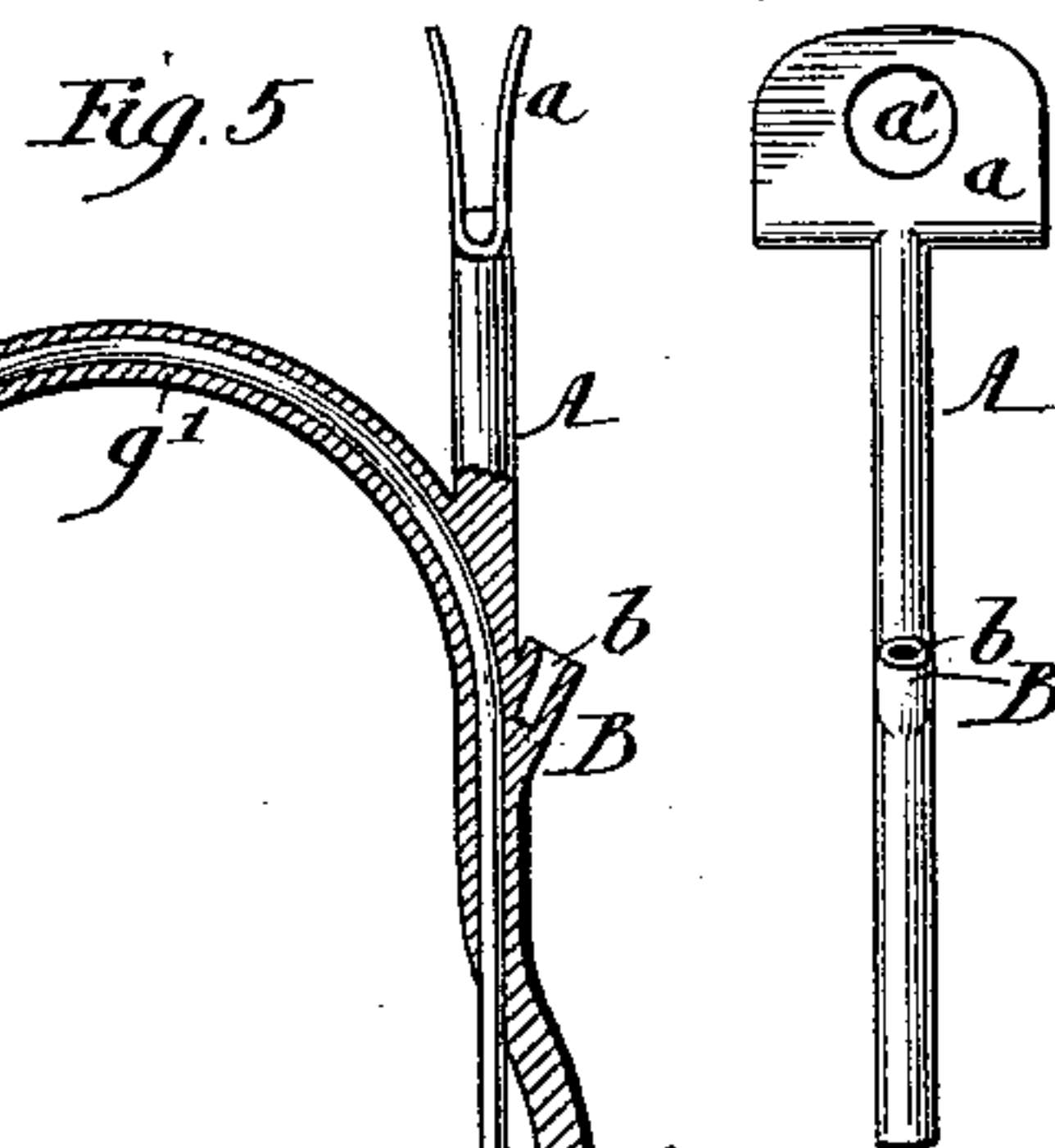
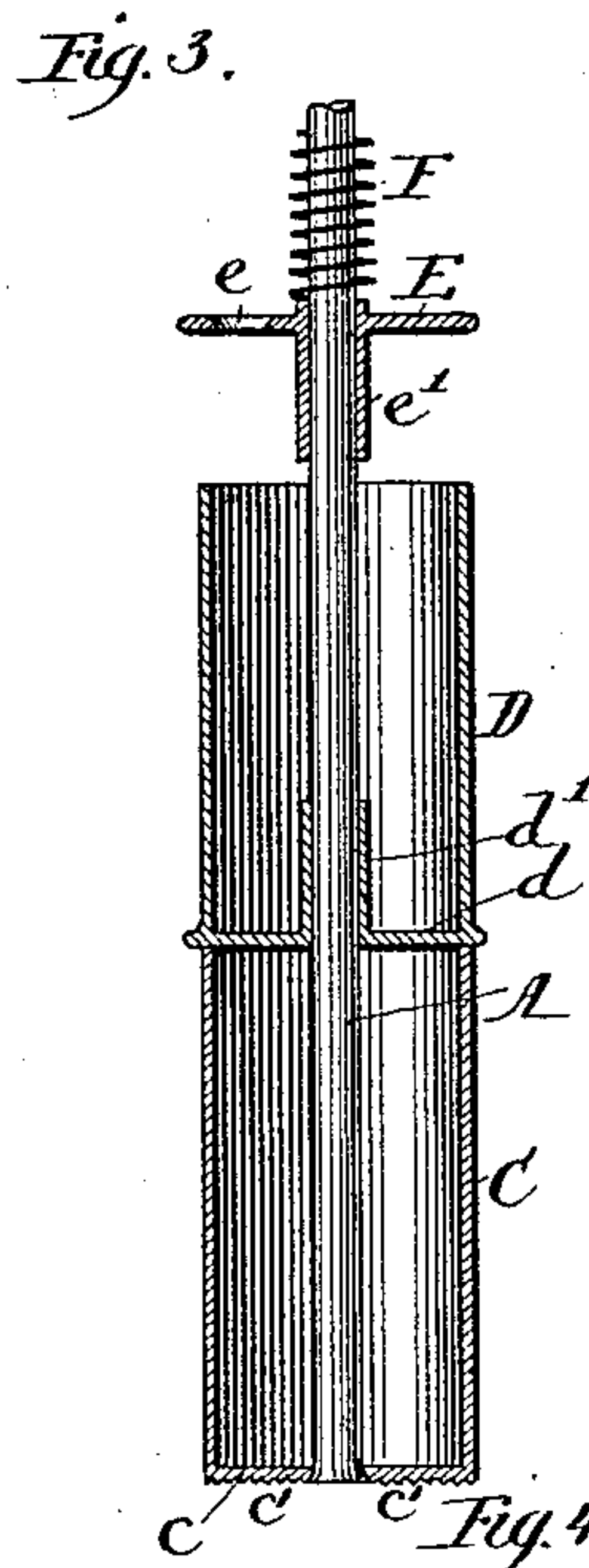
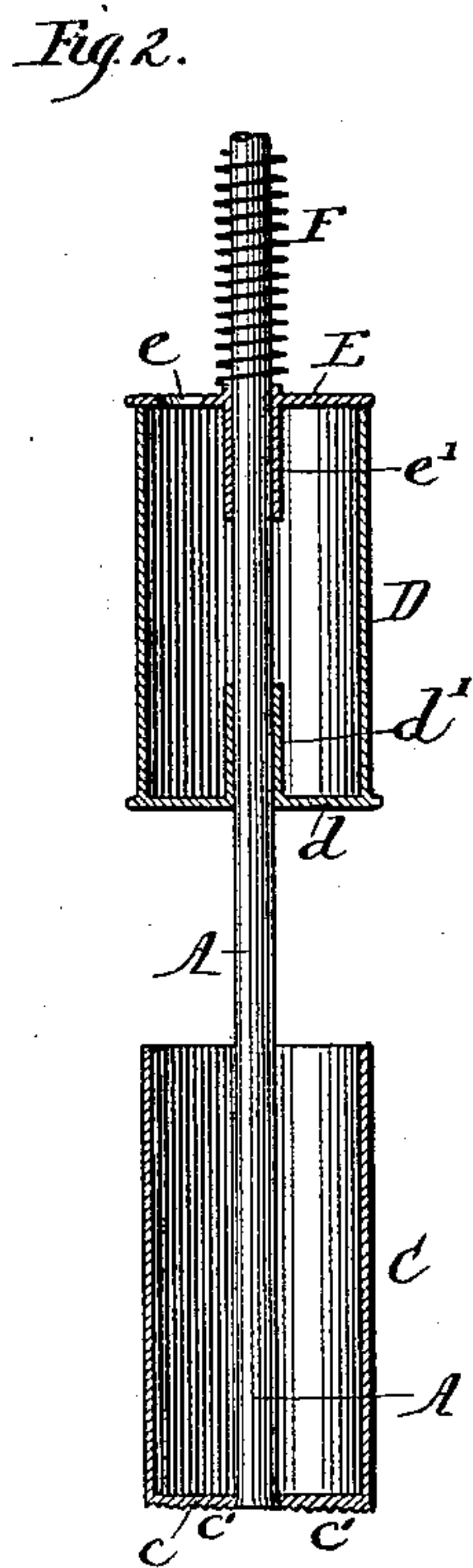
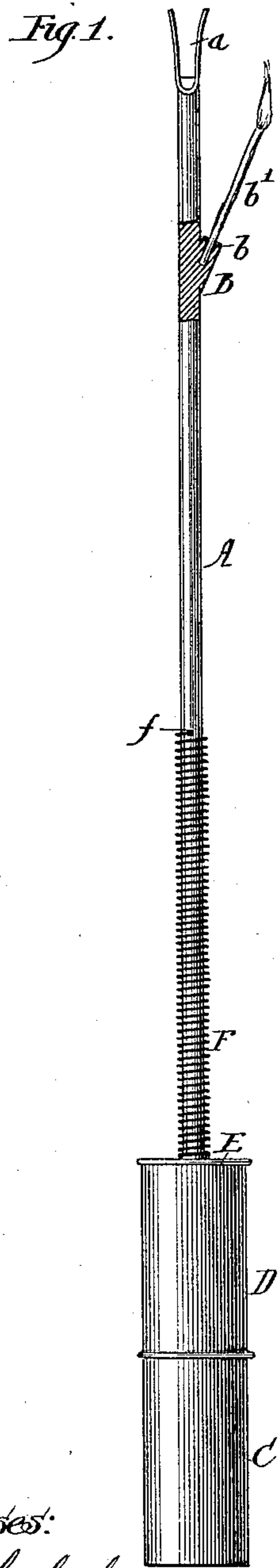


(No Model.)

H. C. GOODRICH.  
GAS LIGHTER.

No. 453,145.

Patented May 26, 1891.



Witnesses:  
Fred Gerlach.  
Chas. Bond

Inventor.

Harry C. Goodrich



# UNITED STATES PATENT OFFICE.

HARRY C. GOODRICH, OF CHICAGO, ILLINOIS, ASSIGNOR TO LOUISA M. GOODRICH, OF SAME PLACE.

## GAS-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 453,145, dated May 26, 1891.

Application filed March 4, 1890. Serial No. 342,532. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY C. GOODRICH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Gas-Lighters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, forming a part hereof, in which—

Figure 1 is an elevation, with the stem partly broken out to show the match-holding socket. Fig. 2 is a detail showing the match-receptacles in section with one receptacle raised for access to the other receptacle. Fig. 3 is a detail showing the match-receptacles in section and one on the other with the cover of the top receptacle raised. Fig. 4 is a detail showing the upper end of the stem. Fig. 5 is a detail showing the stem formed to receive a taper. Fig. 6 is a detail showing another form of match-receptacle.

The object of this invention is to construct a gas-lighter by means of which matches can be used to light the gas and have the device carry the burned and unburned matches, so that the matches are always at hand ready for use, and when used a place to deposit the burned matches is likewise at hand; and to this end the invention consists in providing a stem having at its upper end a socket to receive the end of a match and hold the match projected; in providing a match-receptacle around the stem at its lower end; in providing a second receptacle sliding on the stem for the burned matches; in providing a sliding cover on the stem for the burned-match receptacle and a spring for closing down such cover and holding one receptacle on the other, and in the several parts and combination of parts hereinafter described, and pointed out in the claims as new.

In the drawings, A represents a stem, having at its upper end a fork or turn-key to lock with the key of the gas-burner, as usual, for turning such key to light the gas. This stem A, as shown in Fig. 1, is solid, and, as shown in Fig. 5, this stem has a hole or passage *g* longitudinally through it for the passage of

a taper *h*, and has a turned end *g'* for the projection of the taper *h* to light the gas.

B is a socket on the side of the stem A at its upper end, which socket B has a hole *b* therein of a size to receive the end of a match *b'* and hold the match projected and in position to be entered to the burner and light the gas. This socket B can be formed with the stem or can be a separate piece attached to the stem in any suitable manner. The upper end of the stem A, with its turn-key *a* and the socket B, can be in a single piece and be attached to the stem in any suitable manner, and, as shown the turn-key *a* has an opening *a'* through its lips, by means of which the lighter as a whole can be hung up when not in use.

C is a receptacle, made of sheet metal or other suitable material, having its top open and having a closed bottom *c*, the outer face of which is serrated or roughened to form a surface *c'*, on which to scratch the matches. This receptacle C is attached to the lower end of the stem A by its bottom *c*, so as to encircle the stem and leave a space around the stem inside of the receptacle to receive matches, and, as shown, the attachment of the receptacle is at the end of the stem; but the end of the stem could project beyond the bottom *c* and receive a handle, if so desired. This receptacle C can be round in cross-section or an oval or flat or other shape in cross-section, so long as the shape is one to leave an interior for holding matches.

D is another receptacle, made of sheet metal or other suitable material and corresponding in shape in cross-section to the shape of the receptacle C, and having an open top and a closed bottom *d*, on which is a thimble *d'*, in the construction shown, to encircle the stem A and furnish a guide for sliding the receptacle D up and down on the stem A. The receptacle D is around the stem A, with an interior space to receive burned matches, and this receptacle D forms a cover for the receptacle C, and, as shown in Figs. 2 and 3, the receptacle C is longer than the matches, and is closed by the bottom *d*, resting on its upper edge, while, as shown in Fig. 6, the receptacle C is of the same length as the matches, or nearly so, and the bottom *d*



is entered into the receptacle D, so as not to strike the matches and ignite them in the receptacle C, and, as shown in Fig. 6, the lower end of the receptacle D is flared out and overlaps the top of the receptacle C.

E is a cap or cover for the receptacle D, and having a hole *e*, through which the burned matches can be deposited in the receptacle D, and having at its center a thimble *e'*, which encircles the stem A and furnishes a guide for the travel of the cover on the stem, either alone to open the receptacle D or with the receptacle D to open the receptacle C.

F is a coil-spring encircling the stem A, and resting at one end on the cover E and having its other end entered into a hole *f* in the stem A, or otherwise held, so that the spring will act and return the cover E and receptacle D after being raised. The receptacle D could be omitted in case a place of deposit was not desired for burned matches, in which case the cover E would be made to close the receptacle C.

The operation is as follows: A match is taken from the receptacle C, which is filled with unlighted matches, by raising the receptacle D, or the cover E in case the receptacle D is not used, and this match is struck on the surface *c'* or otherwise and inserted in the hole *b* of the socket B, by which it is held projected. The key of the burner is turned by the turnkey *a* and the match applied to light the gas, and if a number of burners are to be lighted the lighting can continue until the match has burned out, and if the burners are not then all lighted another match can be taken from the receptacle C, struck, and inserted in the socket B, and the lighting of the burners proceeded with until finished. The match *b'*, after burning out or being extinguished, is pulled from the socket B and dropped through the hole *e* into the receptacle D, where it will be retained. The receptacle C is filled with unburned matches by simply raising the receptacle D and putting the matches in the receptacle C, and when emptied of matches it can be refilled again in the same manner, and the receptacle D, when

filled, can be emptied by raising the cover E and pouring the burned matches out of the receptacle D. The two receptacles are always with the lighter, so that a match can be had to light the gas, and the burned match can be deposited where it will be out of the way without any inconvenience in hunting for a match or looking for a place to throw the burned match after using it. The socket B furnishes a means for using matches to light the gas; but if a taper is desired for this purpose one can be used in the manner shown in Fig. 5, and when so used the taper is advanced by taking hold of it at the bend *i* of the stem A, which bend leaves the taper exposed to be taken hold of by the fingers and pushed forward. The receptacle C furnishes a match-holder for matches to light the taper *h* with, in case a taper is used, and enables a match to be had without any searching around, and with the socket B a match can be used and the gas lighted, even if the taper is burned out and a new taper cannot be had, leaving the lighter as efficient as if provided with a taper.

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

1. The stem A and receptacle C, in combination with the receptacle D, sliding on the stem A and forming a cover for the receptacle C, substantially as and for the purposes specified.

2. The stem A and fixed receptacle C, in combination with the sliding receptacle D, forming a cover for the receptacle C, and cover E, substantially as and for the purposes specified.

3. The stem A and receptacle C, in combination with the receptacle D, forming a cover for the receptacle C, cover E, and spring F, substantially as and for the purposes specified.

4. The stem A, having the longitudinal hole *g* and bend *i*, in combination with the taper *h*, substantially as and for the purposes specified.

HARRY C. GOODRICH.

Witnesses:

O. W. BOND,  
FRED GERLACH.