

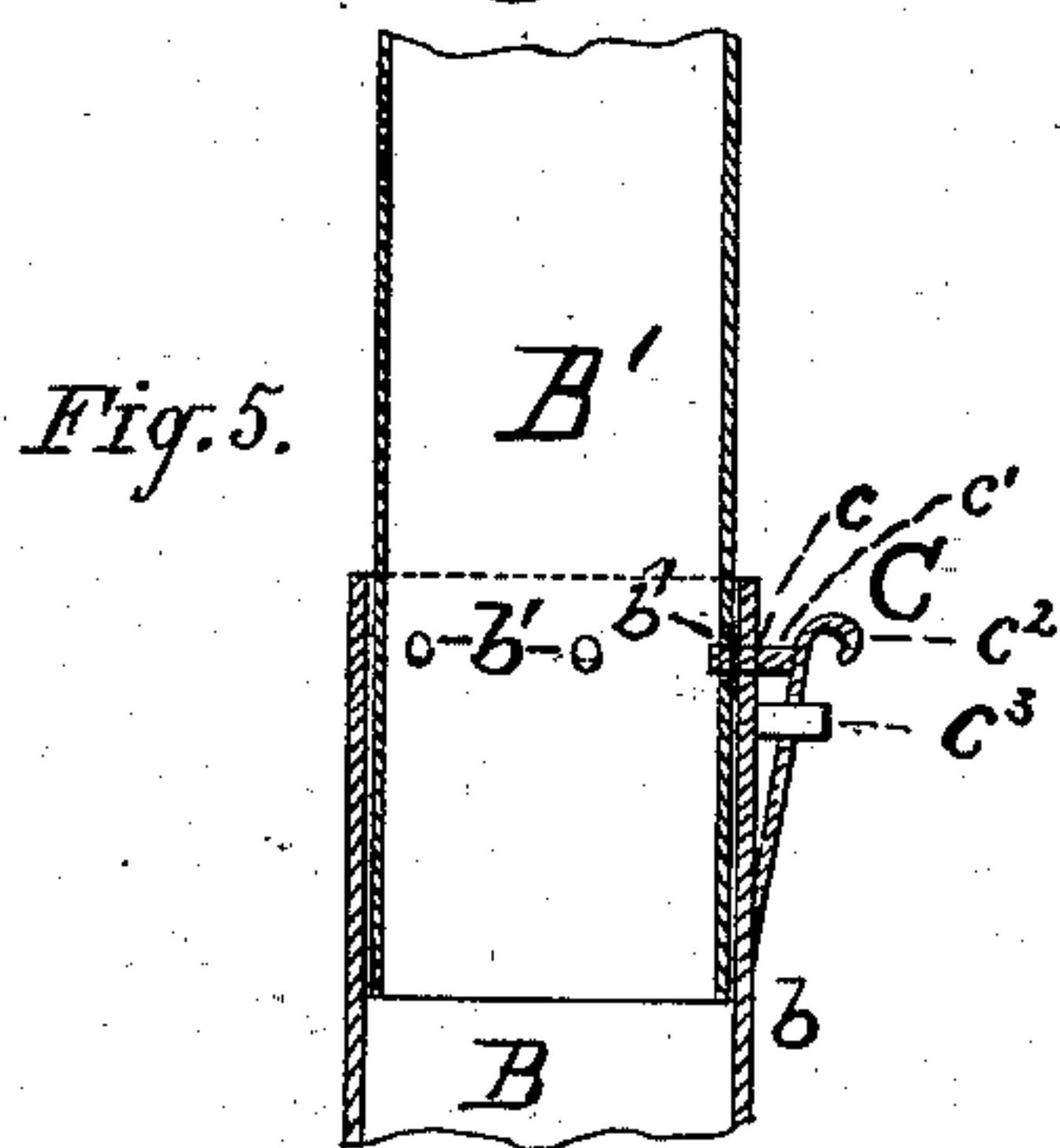
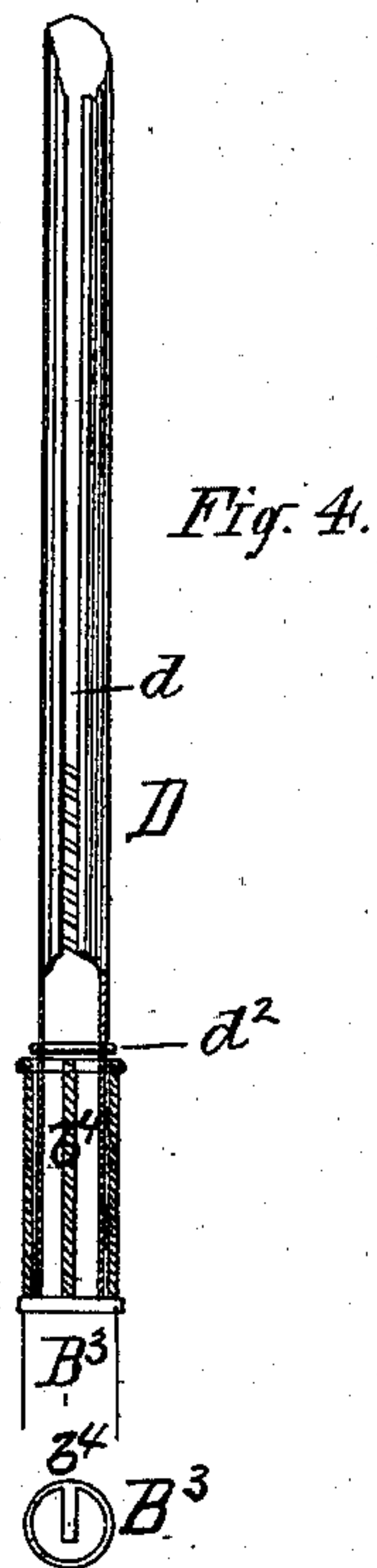
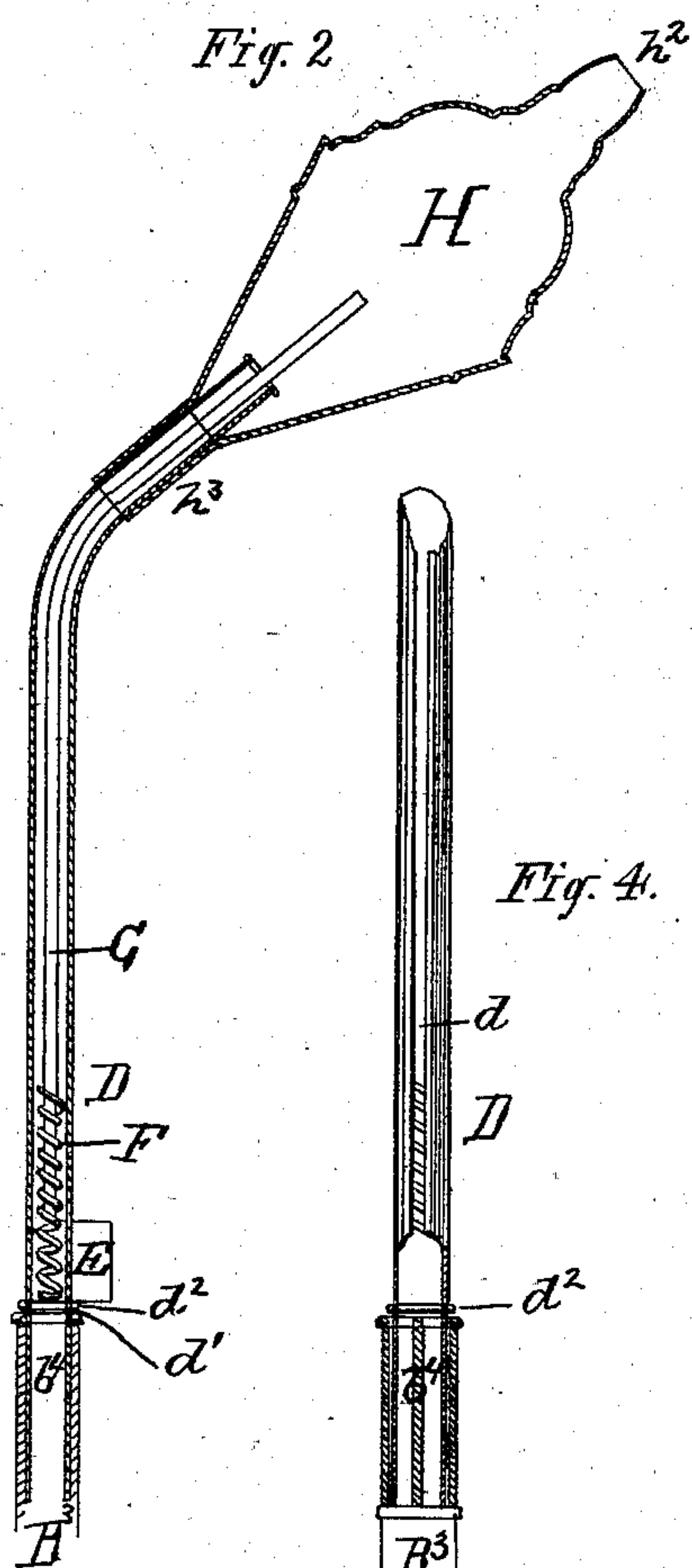
(No Model.)

T. W. HOUCHIN.

TELESCOPIC SAFETY TORCH FOR LIGHTING GAS.

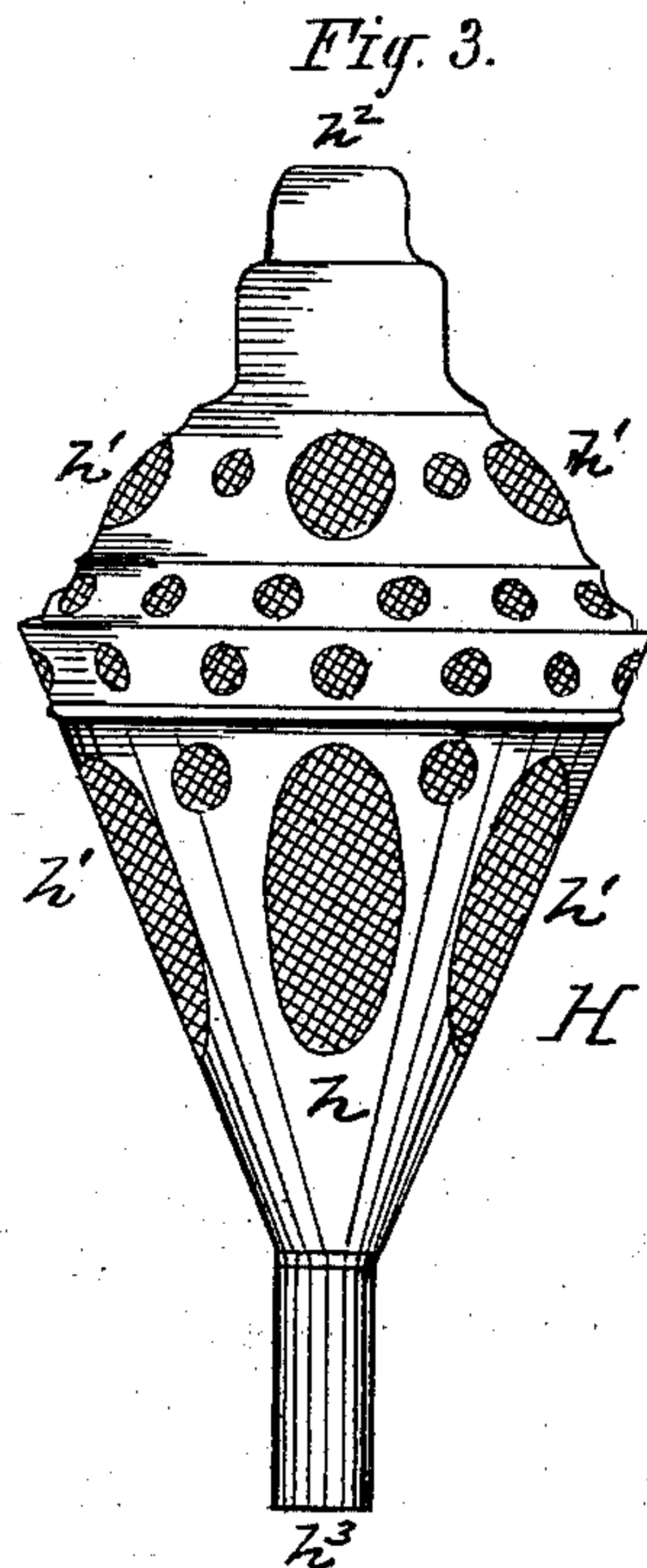
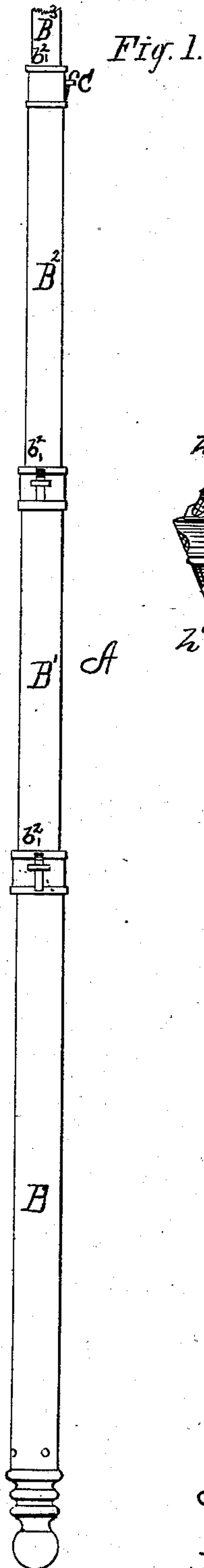
No. 282,522.

Patented Aug. 7, 1883.



Witnesses

Geo. F. Graham.
W. C. Hill.



Inventor

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UNITED STATES PATENT OFFICE.

THOMAS W. HOUCHIN, OF NEW YORK, N. Y.

TELESCOPIC SAFETY-TORCH FOR LIGHTING GAS.

SPECIFICATION forming part of Letters Patent No. 282,522, dated August 7, 1883.

Application filed April 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. HOUCHIN, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Torches for Lighting Gas; 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 represents a plan view of the stem of the torch; Fig. 2, a sectional view of the taper-tube and the guard or protector; Fig. 3, a plan view of the guard or protector; Fig. 4, a sectional detail showing the connection of the taper-tube with the stem; Fig. 5, a sectional detail showing the connection of the sections of the stem.

This invention relates to improvements in gas-lighting torches, more especially to those which are to be used for lighting jets which are at a distance, and used for illuminating places where inflammable fabrics are exposed.

The object of the invention is to produce a torch which is adapted for use at varying distances, and also to produce a device which avoids all danger of igniting any goods which may be near.

The invention consists in the construction hereinafter set forth.

In the annexed drawings, the letter A designates the stem of the torch, which consists of several hollow sections, B B' B², &c., adapted to slide or telescope into one another. At the upper end, *b*, of each section except the uppermost one is made a hole, *c*, and on a line therewith, outside, is a pin, *c'*, secured to one end of a spring, *c²*, which is fastened at its other end to the outside of the section. Encompassing the spring *c²* is a guard-loop, *c³*, which limits its movements, the whole forming the locking device C. The lower end of each section except the lowermost one is provided circumferentially with a series of holes, *b'*, and just above each an indicating-mark, *b²*, is to be made. By means of these holes *b'* and the locking device C, the various sections, after

they are extended, are held rigidly together, the pin *c'* passing through the hole *c* and into one of the holes *b'*. When it is desired to telescope the stem, the pins *c'* are withdrawn from the holes *b'* and the sections shut one within another. Within the upper end of the uppermost section, B³, is placed a longitudinal rib, *b⁴*, which adapts the stem for connection with the taper-tube D. This tube D has the slot *d* running its entire length, except at the collar *d²* and at its upper end. Through this slot *d* passes the thumb-piece E, carrying within the tube the spring F, to the upper end of which the taper G is secured. This tube D is curved, as shown, and the spring F, being pliant, adapts itself readily to the curvature. In connecting the tube D with the stem the lower end, *d'*, is inserted into the upper end of the section B³, the slot *d* allowing it to straddle the rib *b⁴*, and the collar *d²* resting upon the top of the section. This rib-connection keeps the tube in a fixed position, preventing it from turning. The taper G is to be moved in and out of the tube D by the thumb-piece E in the usual way.

To be employed with this torch, and the better to adapt it for use in lighting gas where inflammable goods are exposed, the guard or protector H is designed. This protector consists, primarily, of a gauze body—that is, it may be made entirely of gauze, or may be of metal *h*, having openings *h'*, which are covered with gauze. The meshes of this gauze are to be made so that they will be large enough for gas to pass through, and yet too small to allow the flame of the taper to pass out. This protector may be made of different shapes; but the double conical shown in the drawings is perhaps the best. The upper end of this protector has an opening, *h²*, and the lower end has a hollow stem, *h³*. In use this hollow stem is placed over the tube D, as shown in Fig. 2. By running the taper G out of the opening *h²* it can be lighted, and then pulled within the protector. The shape given the protector easily guides the taper up to and out of the opening *h²*. The gas is turned on, and the protector, with the inclosed burning taper, is held in the path of the escaping column of gas. This, passing through the meshes, becomes ig-

nited and conveys the ignition to the jet. If, in lighting the gas, any inflammable goods are in the way, the protector will push them aside without igniting them, as the flame cannot
5 pass through the meshes.

When it is desired to light a lamp, the taper is pushed out of the hole or opening h^2 , as is done when the taper is lighted, and put in contact with the lamp-wick. Only so much of
10 the flame as is required to light the lamp need be protruded, so that the body of the protector would ward off anything near the lamp.

Having described my invention, what I claim is—

15 1. A telescopic gas-lighting torch composed of sections which have at one end the series of holes b' and at the other the catches C, as set forth.

20 2. A telescopic gas-lighting torch composed of sections which have at one end the series of holes b' and at the other the catches C, such catches consisting of loops c^3 , spring c^2 , and pin c' , as set forth.

3. In a gas-lighting torch, the stem A, pro-

vided at its upper end with the interior rib, 25 b^4 , in combination with the taper-tube D, having the slot d , whereby said tube can be inserted and held in the end of the stem, as set forth.

4. The protector H, made wholly or par- 30 tially of gauze, and shaped like a double cone, as shown, and having the opening h^2 at one end and the hollow stem h^3 at the other, as set forth.

5. As a new article of manufacture complete 35 in itself, the protector H, made wholly or partially of gauze, having the opening h^2 at one end and the hollow stem h^3 at the other, such stem being adapted to slip over the end of a torch, as set forth. 40

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

THOS. W. HOUCHIN.

Witnesses:

JAMES S. PAYNE,
EUGENE FEGAN.