

E. SKRIWAN.
MANTLE TYING APPARATUS.
APPLICATION FILED FEB. 26, 1909.

963,821.

Patented July 12, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

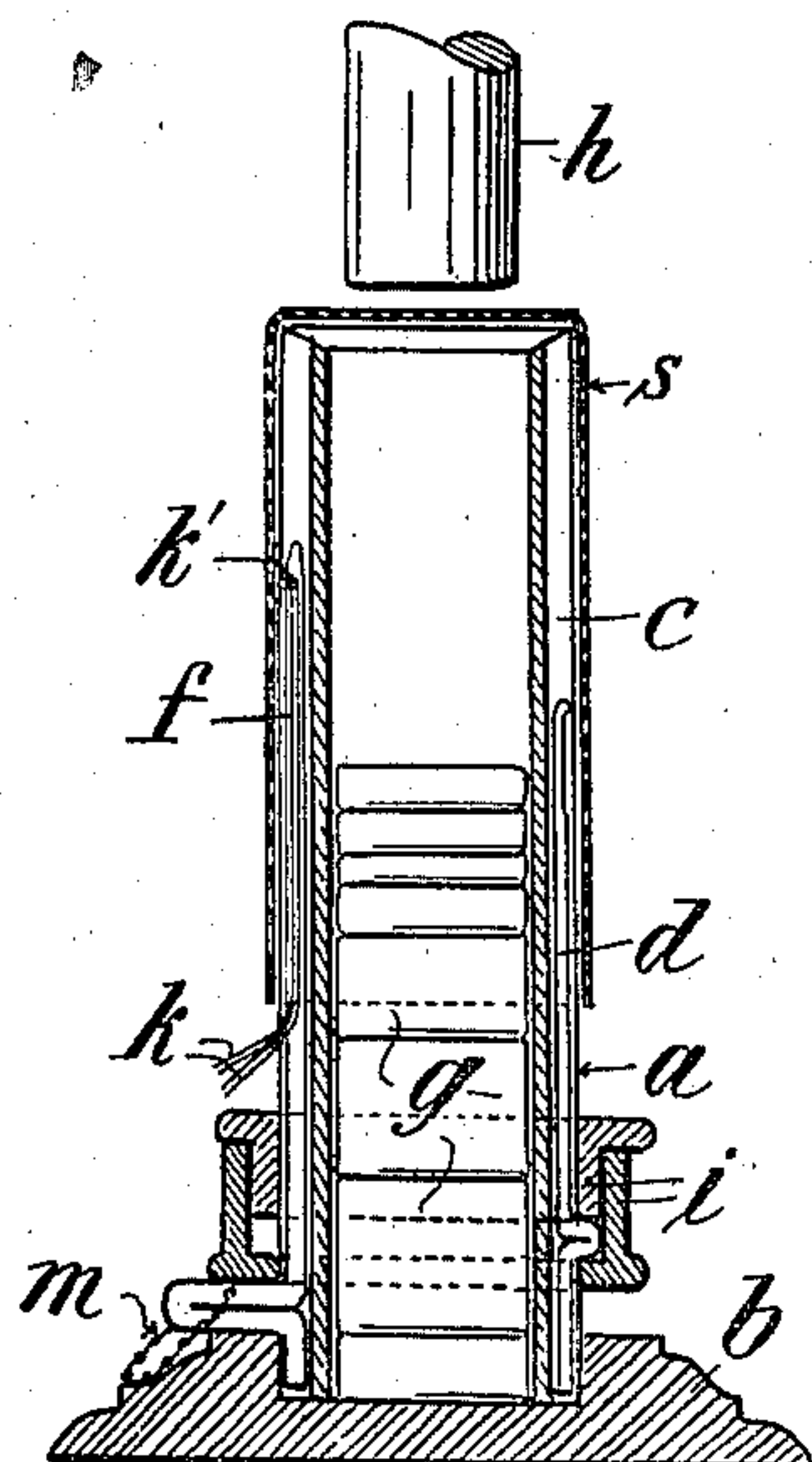


Fig. 2.

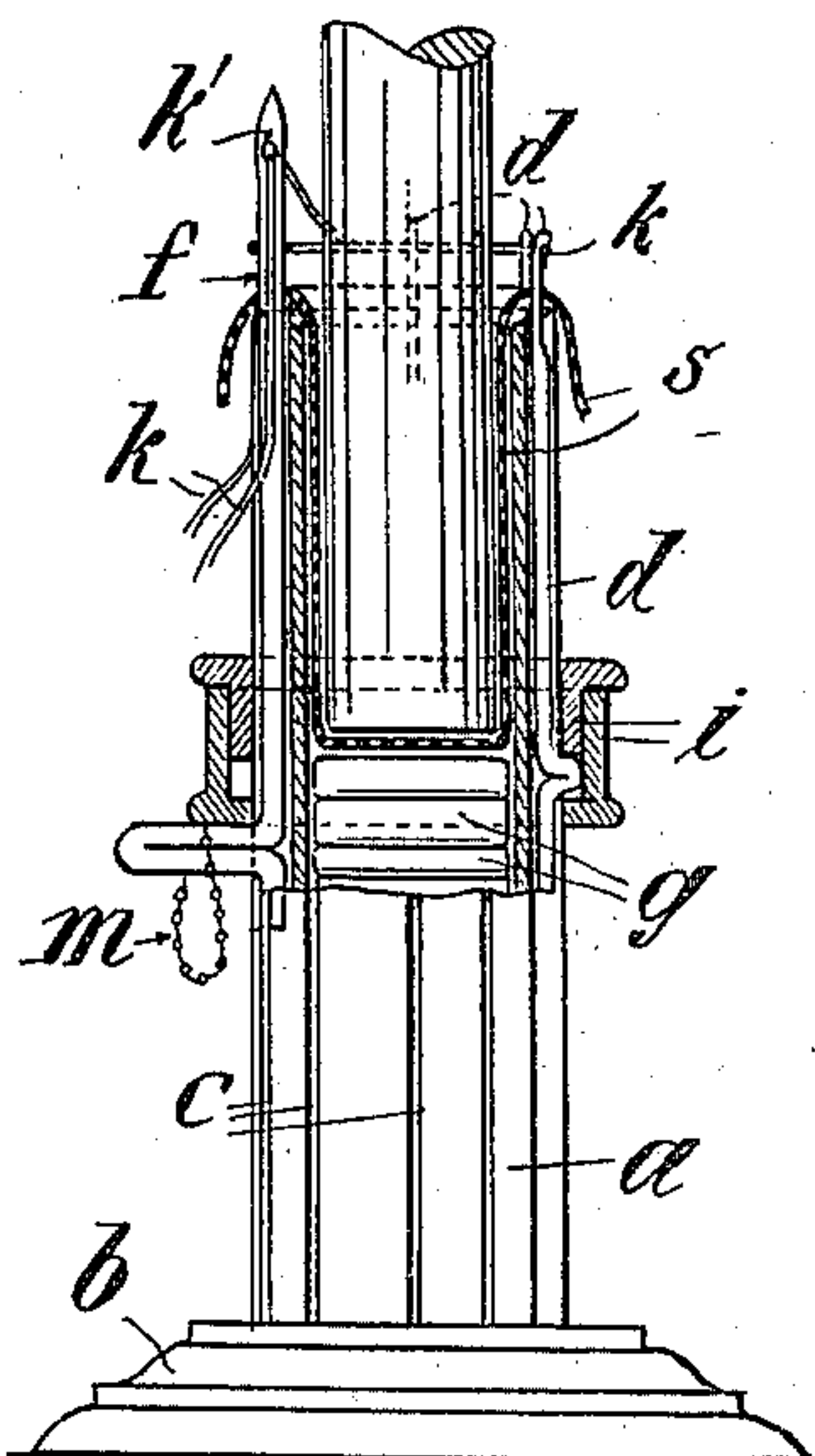


Fig. 5.

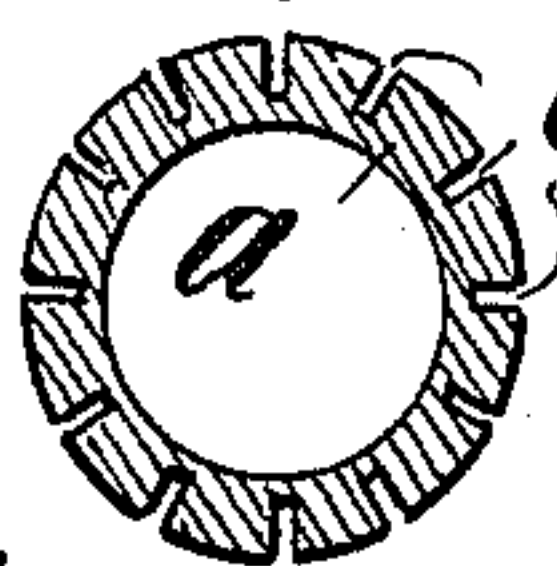


Fig. 3.

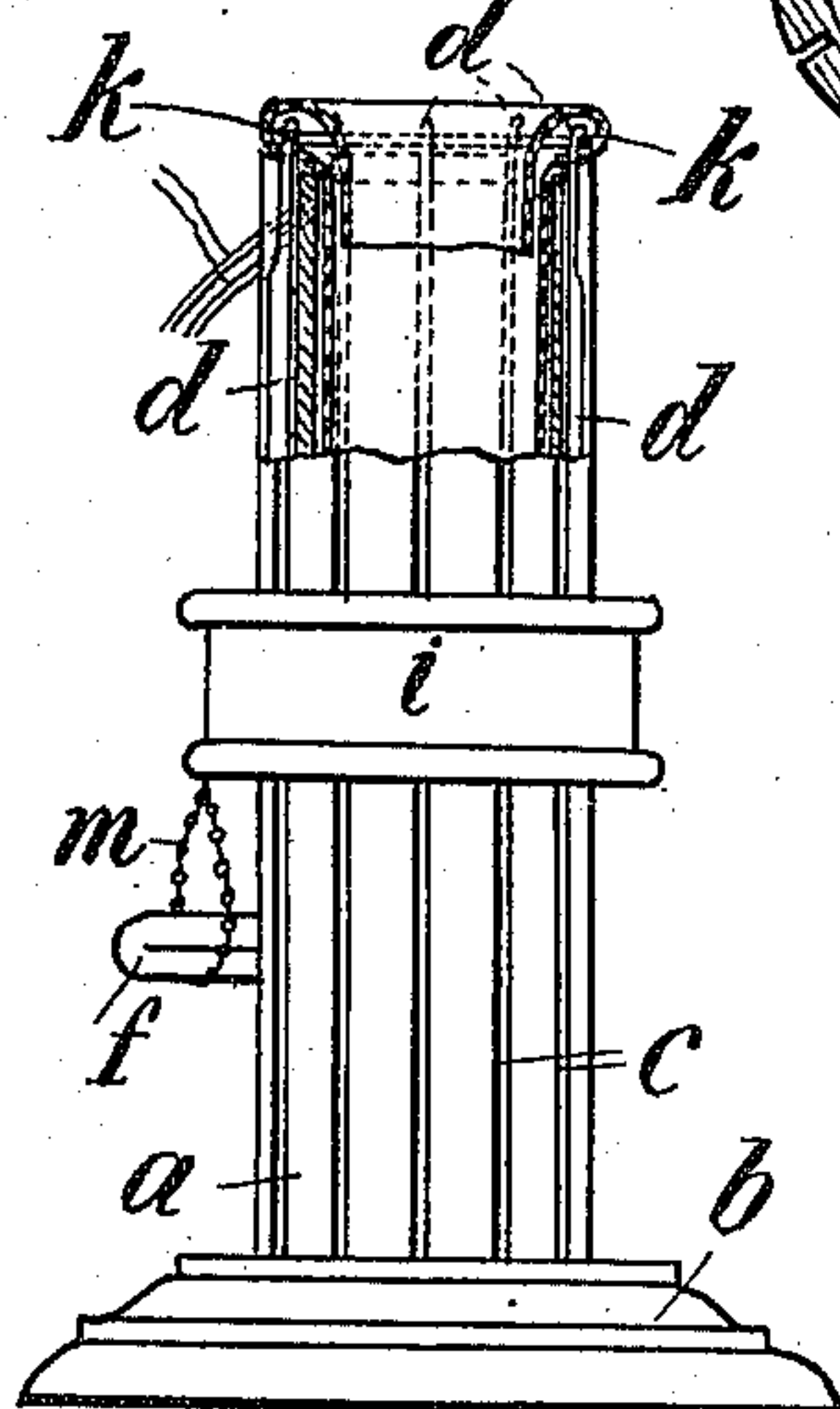
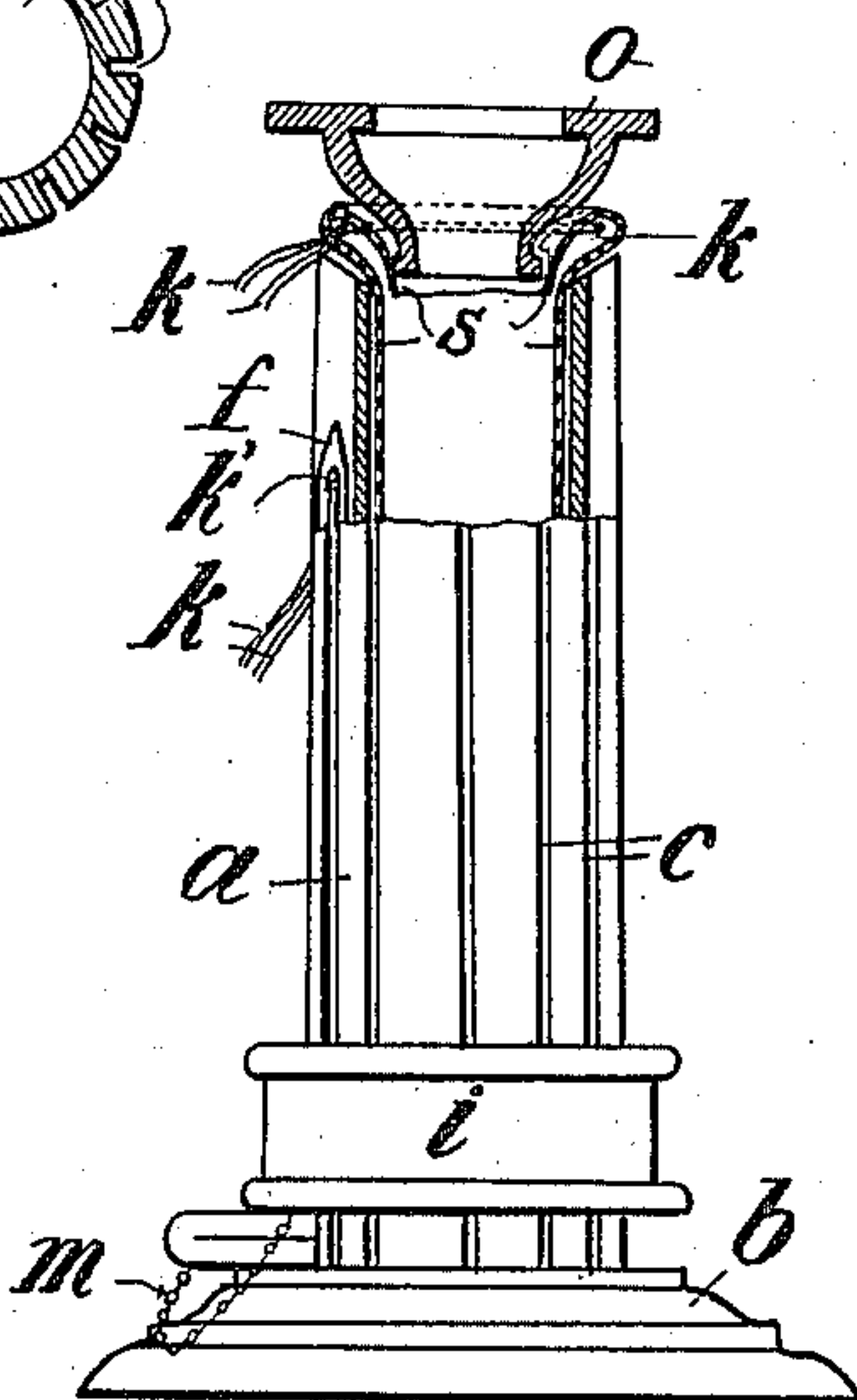


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 6.

Fig. 6a

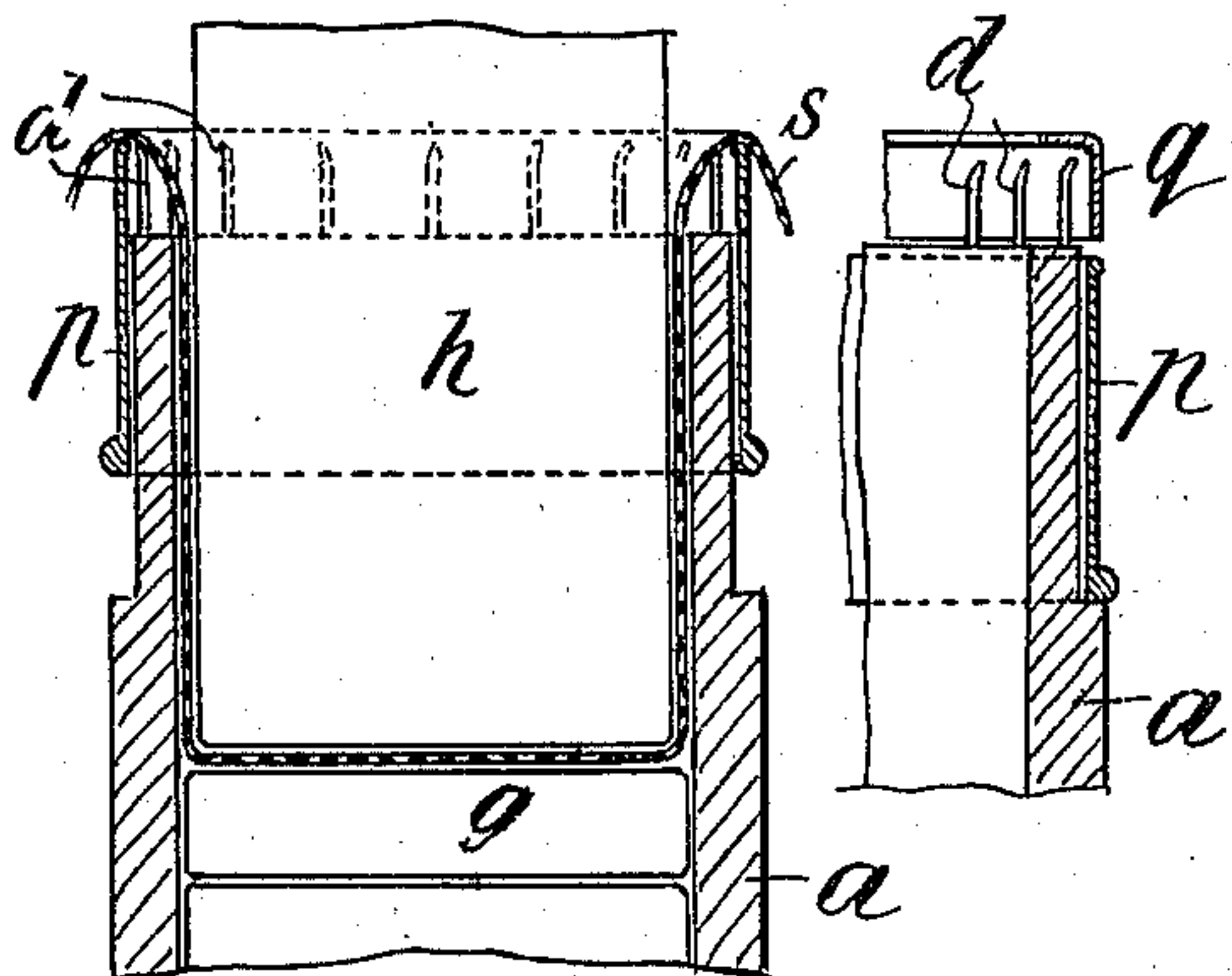


Fig. 7.

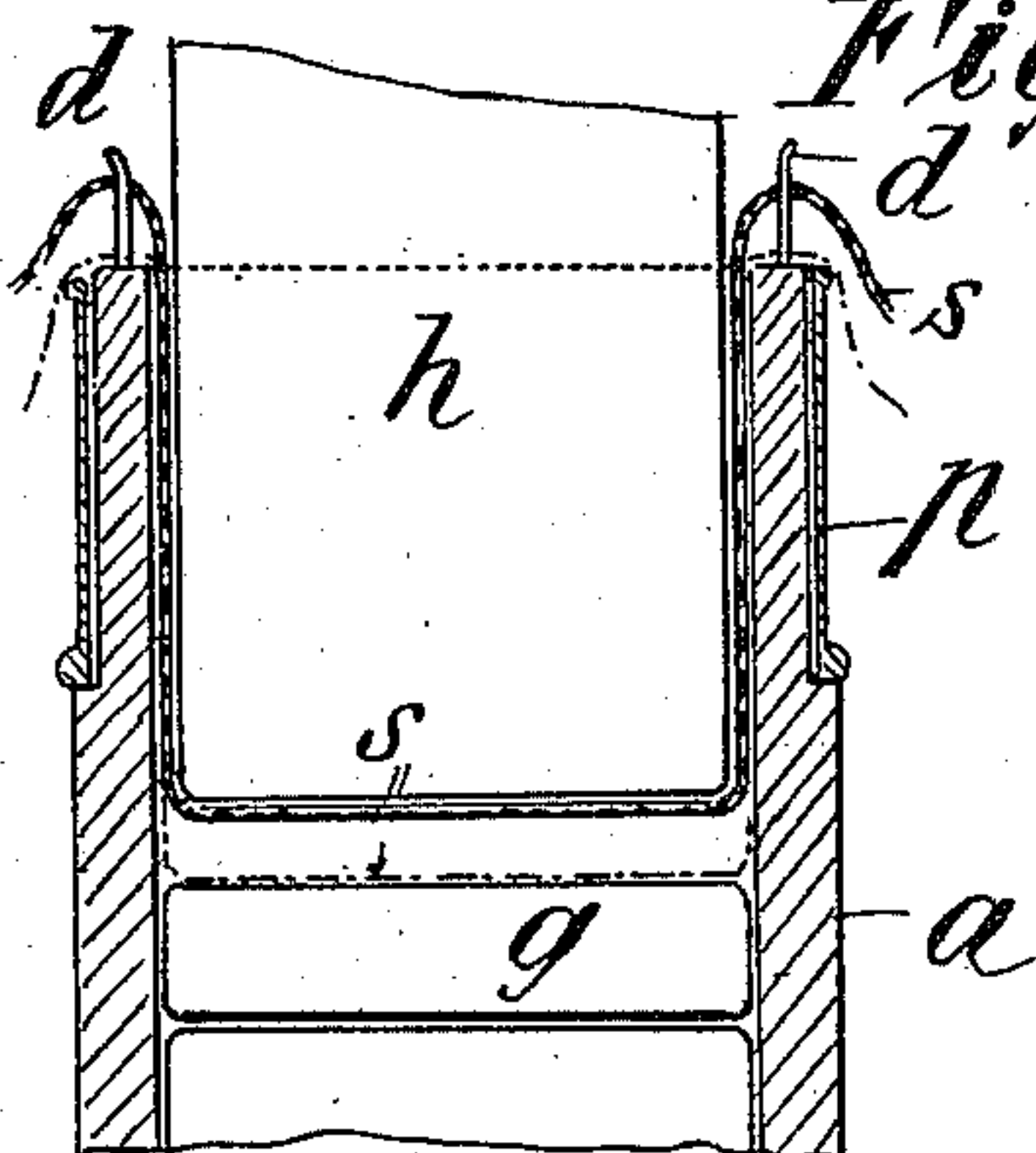
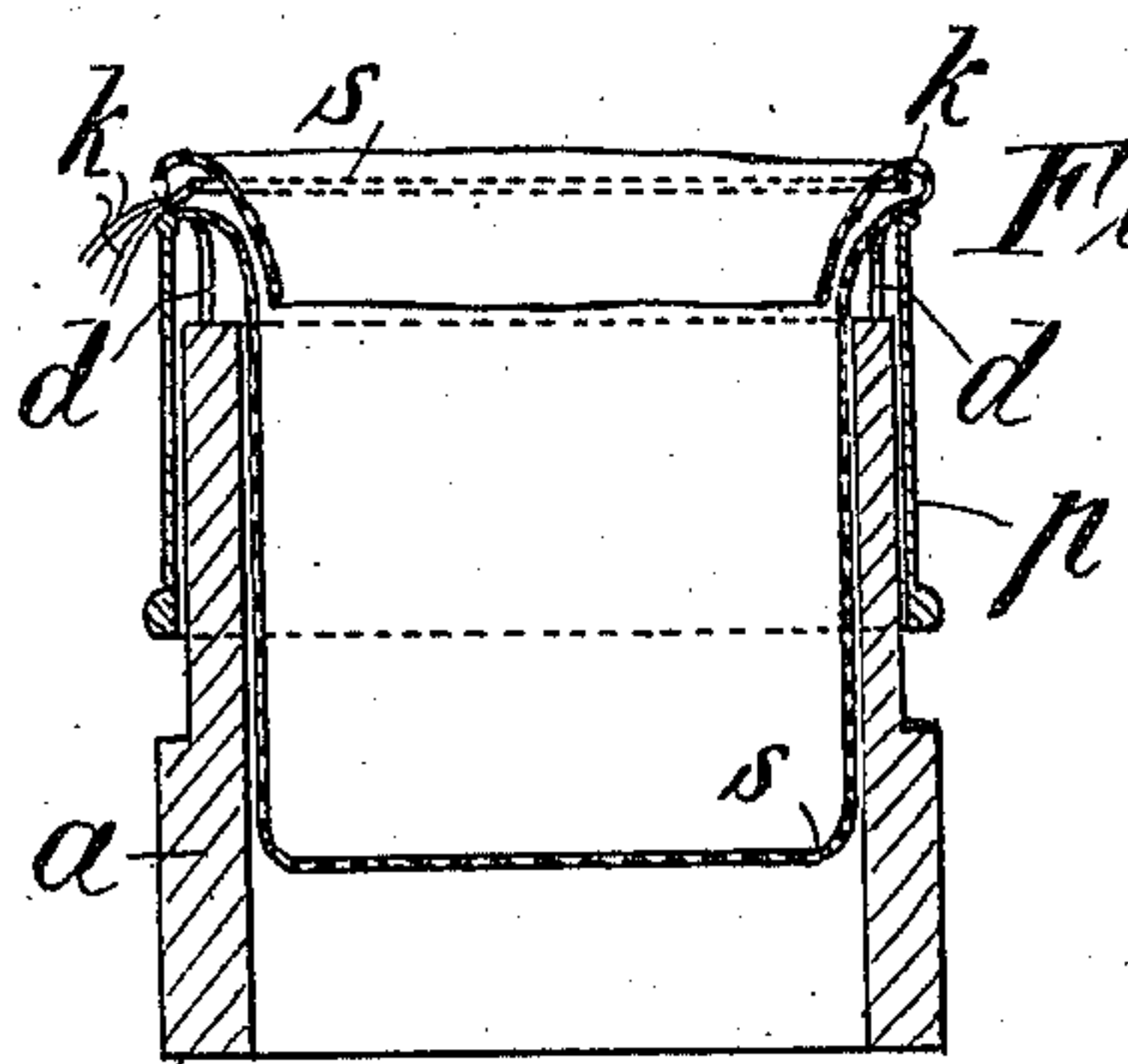


Fig. 8.



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UNITED STATES PATENT OFFICE.

EMIL SKRIWAN, OF VIENNA, AUSTRIA-HUNGARY.

MANTLE-TYING APPARATUS.

963,821.

Specification of Letters Patent.

Patented July 12, 1910.

Application filed February 26, 1909. Serial No. 480,250.

To all whom it may concern:

Be it known that I, EMIL SKRIWAN, a citizen of Austria, residing at Vienna, Lower Austria, Austria-Hungary, have invented certain new and useful Improvements in Mantle-Tying Apparatus, of which the following is a specification.

This invention has for its object to provide apparatus for attaching incandescent mantles to their supporting holders in a simplified manner and with increased rapidity, whereby, besides, the saving of time, a better fitting of the mantle is effected, the latter being fastened along the entire circumference and not, as previously, over a few meshes only. The mantle being thus free from creases an even distribution of the flame over the same is obtained, while the mantle is more durable and less sensitive to vibration.

The accompanying drawings show various forms of the improved apparatus.

Figures 1 to 4 inclusive show the apparatus by vertical sectional views, partly in elevation, showing the parts in different operative positions. Fig. 5 is a horizontal sectional view of the tubular part *a*. Figs. 6, 6^a, 7 and 8 are vertical sectional views showing a slight modification, the parts being in different operative positions.

In the construction shown in Figs. 1 to 5 the apparatus comprises a tubular part *a* supported by a base *b* and provided with longitudinal grooves *c* or small tubes which are evenly distributed over the whole circumference and serve as guides for pins *d*. Distance pieces *g* as well as a peg or mandrel *h* are adapted to be placed inside the tubular part *a*, the height of said part in conjunction with that of the distance pieces determining the depth to which the peg may be introduced and thereby the length of the mantle. The pins *d* are provided at their upper ends with suitable hooks or the like to prevent the slipping of the thread. In order to effect simultaneous movement of the pins, the latter are fixed to a two-part ring *i* which while frictionally held upon part *a*, is adapted to slide up and down on the said tubular part, which motion is thus transmitted to the pins. The needle *f* which carries the thread *k* and is provided with an eye *k*¹ is not an essential part of the apparatus, as an ordinary sewing needle may be used; it is however of advantage to guide said needle *f* also in a groove on the tubular

part *a* and to connect it to the ring *i* in such manner (for instance by a chain *m*) that it follows the movement of the ring, but is also free to be moved up and down independently.

The operation of the apparatus is as follows:—The mantle *s* is first tightly drawn over the tubular part *a*, so that the closed or constricted end of the mantle is concentric with the bore of the tubular part, (Fig. 1). The mantle is then manually pressed against the part *a* with sufficient force to produce tension on the mantle but allow it to pass up between the hand and the part *a* as the mandrel *h* is pushed down. The peg *h* has thereby drawn the mantle inward over the edge of the tubular part, the open end of the mantle remaining turned over the edge of said tubular part, (Fig. 2). The ring *i* is now raised, while the edge of the mantle is held down, whereby the latter is pierced by the pins *d* (Fig. 2) and subsequently for a suitable distance by the needle *f* carrying the thread. This thread above the mantle is then extended into a loop and cast around the pins *d* (once or several times) after which the thread is tightened. It is immaterial whether the peg *h* is still inside the tubular part *a* or whether it has been withdrawn before the piercing of the mantle by the pins *d*. The needle *f* is now withdrawn and the edge of the mantle is turned inward over the thread loop *k* (Fig. 3). (If necessary the edge of the mantle is previously trimmed.) The holder-ring *o* is then placed inside the opening of the mantle, which, after the pins *d* are withdrawn (Fig. 4) is closed tightly into the groove of the holder-ring *o* by pulling the ends of the thread which are then finally tied. The attachment of the mantle to the holder-ring is thus completed and the mantle can now be passed on to the next stage of the manufacturing process.

In the construction shown in Figs. 6 to 8 the pins *d* are stationary and surrounded by a sliding collar *p*. The points of the pins are covered by the sliding collar or by a removable guard ring *q* (Fig. 6^a) during the shaping of the mantle by means of the peg, in order to prevent premature piercing of the mantle. The operation is nearly identical with that aforescribed. Before the mantle is shaped, the sliding collar *p* which should move tightly on the tubular part *a*, is at first raised until its thickened

rounded edge projects above the points of the pins *d*, or as shown in Fig. 6^a the ring *q* is placed over the pins *d*, with the sliding collar in its lowest position. The mantle is
 5 then drawn inward by means of the peg in the manner described. This being done, the collar *p* is brought to its lowest position or the ring *q* is slipped off upward over the mantle and peg, after which the edge of the
 10 mantle is pressed down on the points of the pins *d* (Fig. 7) by pulling the mantle slightly and simultaneously pressing down the peg. The formation of the thread loop, the turning in of the edge and the placing
 15 of the holder-ring is thereupon effected in the manner above described, a needle similar to that used in the construction seen in Figs. 1 to 5 and similarly secured being preferably used to carry the thread through the mantle
 20 preparatory to forming the loop. The collar *p* is now raised again (Fig. 8) until the mantle together with the holder and thread is slipped off the pins which are adapted to bend slightly inward under the pressure of
 25 the collar *p*. The ends of the thread are then drawn tight and fastened.

The operation of attaching the mantles to their holders can be performed rapidly with only little practice; it presents, however, the
 30 safest guarantee of a durable and strong attachment. The apparatus further permits the thread to be wound twice or more times around the holder-ring, whereby the risk of breakage of the incandescent mantle, owing
 35 to the fracture of the holder or thread, is minimized.

Having now described my invention what I claim and desire to secure by Letters Patent of the United States is:—

1. The improved apparatus for attaching 40 incandescent mantles to their holders, comprising a tubular part having grooves, a peg fitting inside said tubular part for the shaping of the mantle and pins for fixing the mantle in position, said pins being 45 guided in said grooves, a ring on which said pins are mounted, and a thread-carrying needle movable with the ring, and also movable independently.

2. An apparatus of the character de- 50 scribed comprising a tubular part, a peg fitting inside said tubular part for the shaping of the mantle, pins arranged within longitudinal grooves in the tubular part, and a ring on which said pins are mounted, 55 said ring being slidable on the said tubular part.

3. The improved apparatus for attaching incandescent mantles to their holders comprising a tubular part having longitudinal 60 grooves, a peg fitting inside the tubular part, distance pieces also fitting inside said tubular part, pins guided in said grooves, and a ring on which said pins are mounted, said ring being slidable on the tubular part. 65

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

EMIL SKRIWAN.

Witnesses:

WILHELM BERGER,
 ROBERT W. HEINGARTNER.