

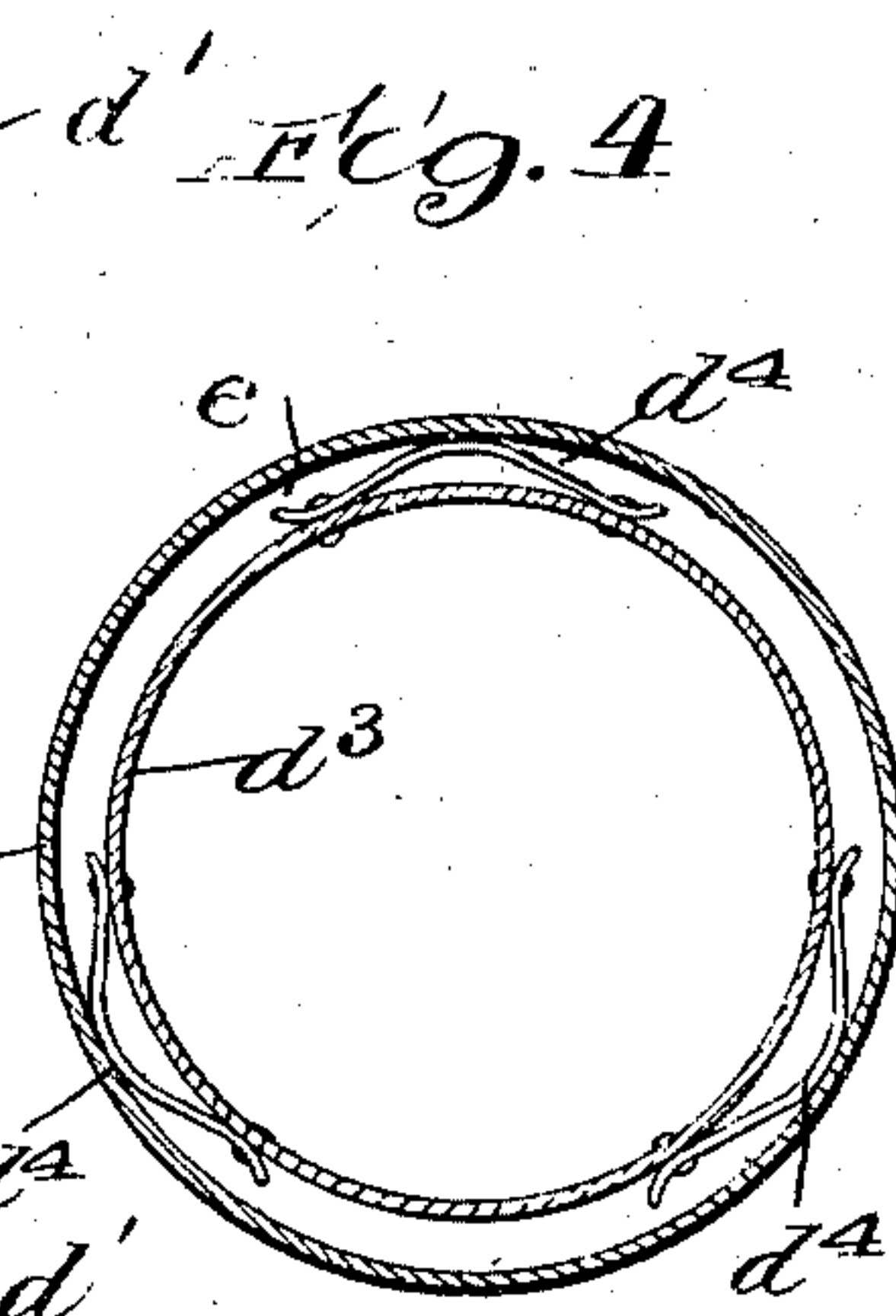
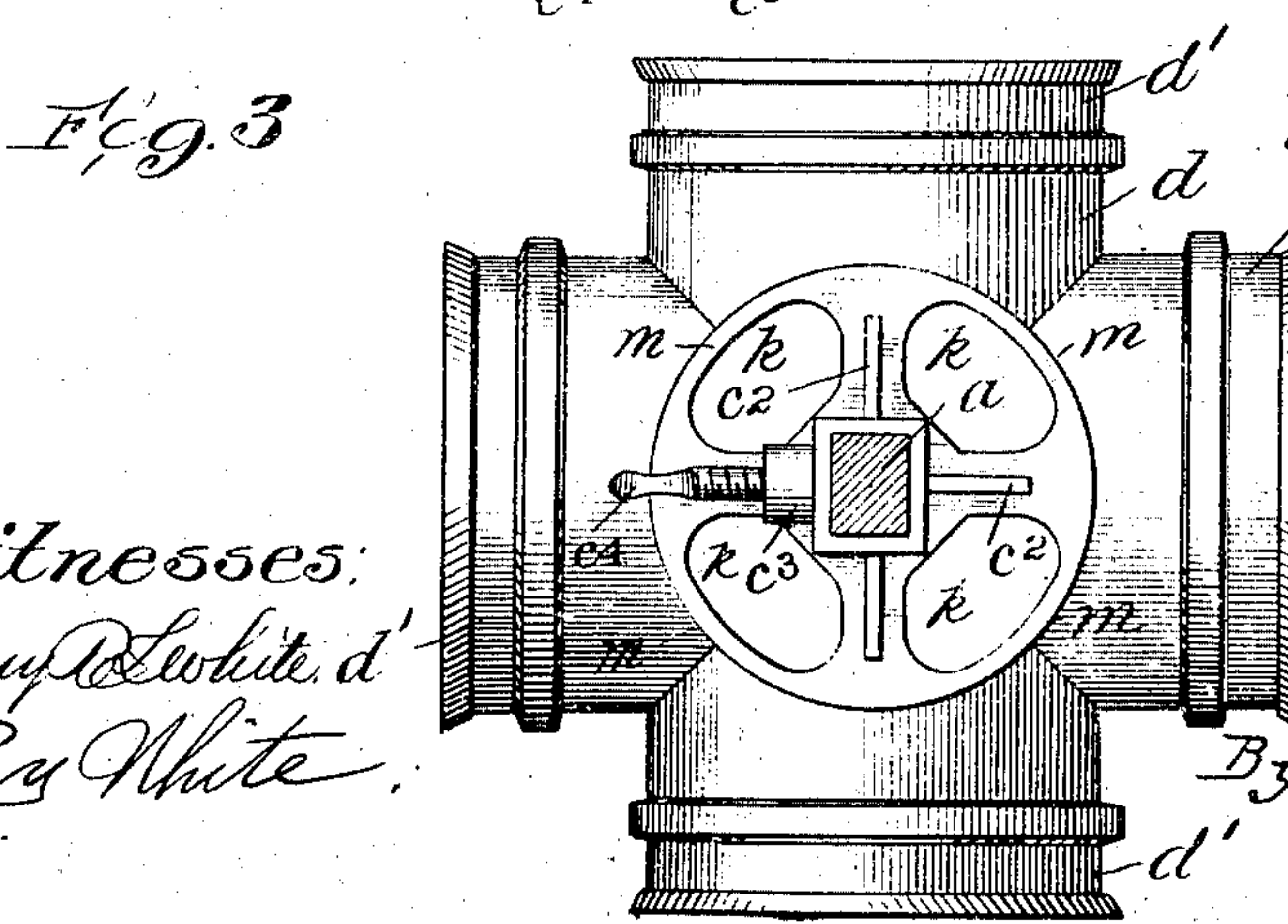
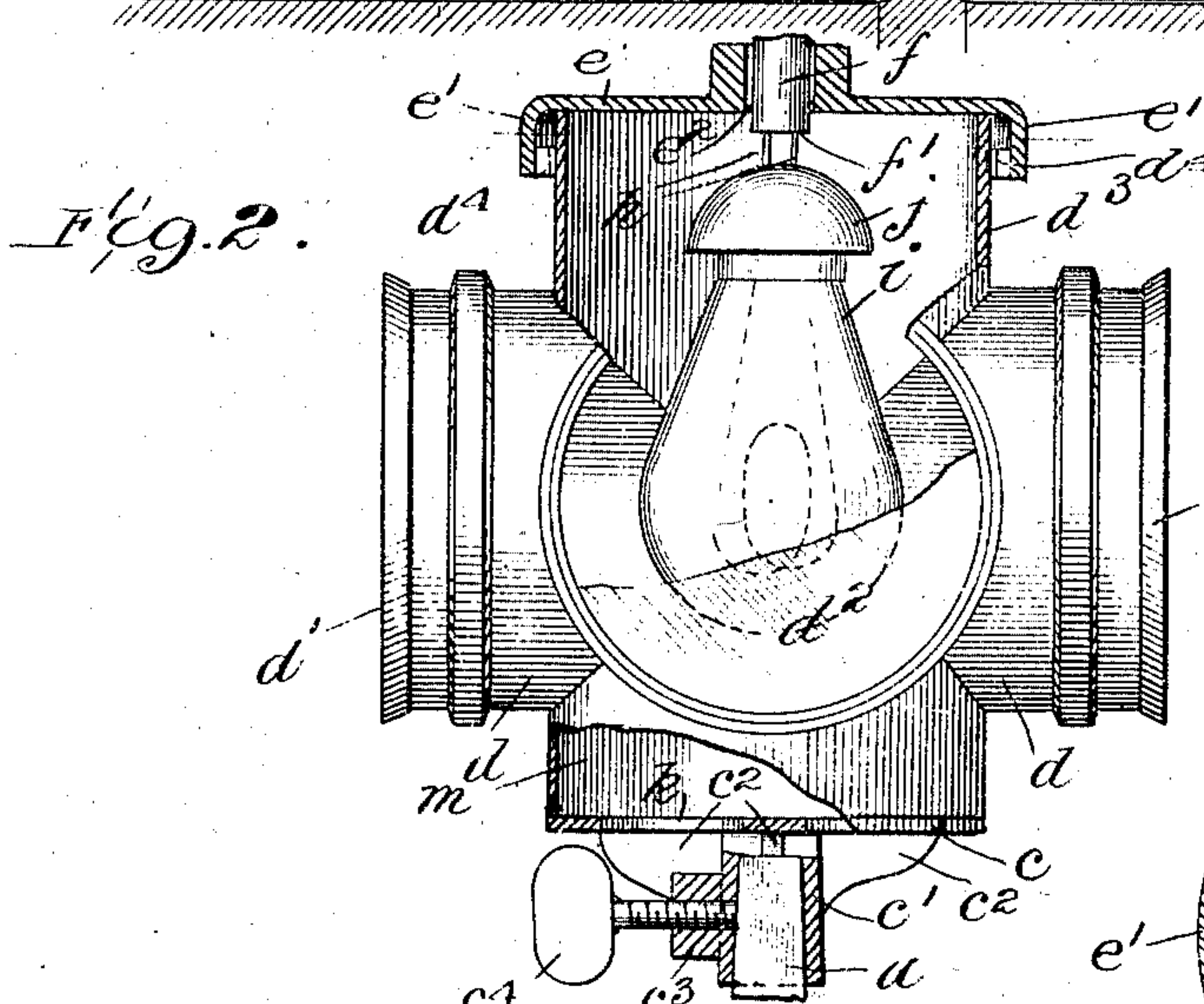
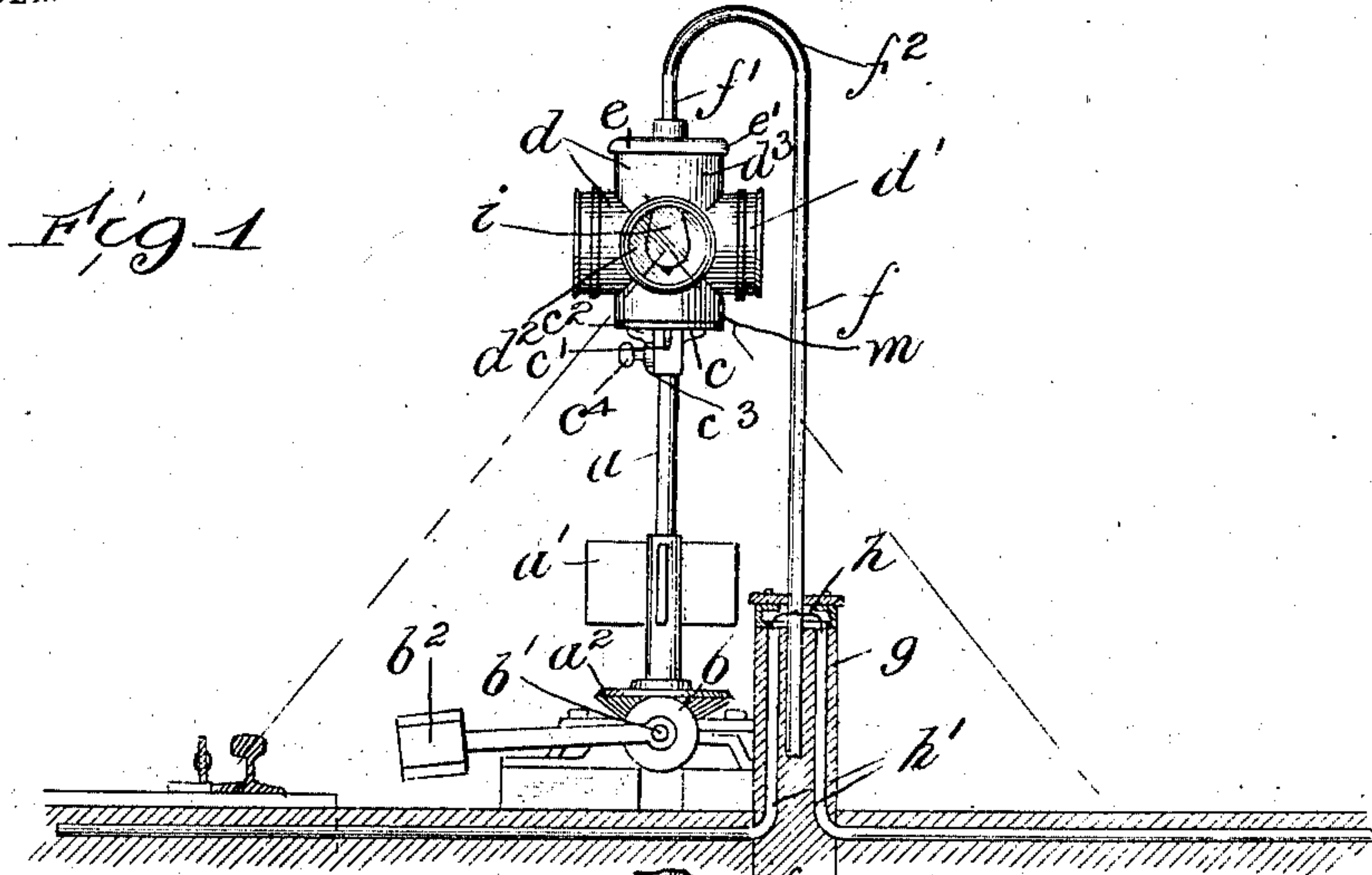
No. 743,418.

PATENTED NOV. 10, 1903.

C. F. ANNETT.
SWITCH LAMP.

APPLICATION FILED JUNE 26, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES F. ANNETT, OF CHICAGO, ILLINOIS.

SWITCH-LAMP.

SPECIFICATION forming part of Letters Patent No. 743,418, dated November 10, 1903.

Application filed June 26, 1903. Serial No. 163,168. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. ANNETT, a citizen of the United States, residing in the city of Chicago, county of Cook, and State of Illinois, have invented a new and useful Improvement in Switch-Lamps, of which the following is a specification.

My invention relates to switch-lamps lighted by means of incandescent electric-light bulbs; and the chief object of my invention is to provide means whereby a single bulb may illumine the signal-lenses and at the same time illumine the switch-stand and adjacent switch connections without permitting the rays of light to become confused with the rays of light emerging through said lenses.

Heretofore switch-lamps have usually been constructed to throw light laterally through the lenses of the lamp; but as the rays of light were constrained to penetrate only horizontally the switch-operating parts and those portions of the ground and of the track immediately surrounding the lamp remained dark and it was necessary at night for the switchman or brakeman in operating the switch to carry a lantern with him and use the lantern to reveal the condition of the switch-operating parts. By means of my device no lantern is required to show the position of the target and connected parts, and where a switch-stand of sufficient height is employed the rays of light will fall not only upon the switch-operating parts, but on the switch-point itself, thus enabling the operator to determine at a glance whether the various parts of the switch are in proper operative condition.

It is also my object to prevent undue vibration of the lamp and to provide means whereby the lamp-shell may be readily removed and yet afford protection to the lamp-bulb when said shell is not present.

I also contemplate certain improved details of construction more particularly pointed out in the accompanying claims.

I attain these objects by means of the device illustrated in the accompanying drawings, in which—

Figure 1 is a general side view of the device, showing the same mounted in position upon the switch-stand. Fig. 2 is an enlarged side view, partly in section, showing more clearly

the details of construction. Fig. 3 is an inverted plan view showing the bottom of the lamp. Fig. 4 is a plan view of the lamp, taken in section on the line 4 4, Fig. 2, to show the construction of the spring-clips for holding the cap in position on the lamp-shell.

Similar letters of reference denote like parts in the several figures of the drawings.

a represents an upright rotatable rod or post, which carries the target a' . Said rod is rotated by any convenient means, a suitable form being shown in Fig. 1 of the drawings, wherein a^2 represents a bevel-gear secured to said post a and meshing with the bevel-gear b . Said bevel-gear b is secured to the crank-shaft b' , which connects with the switch-rod and switch (not shown) in the usual manner. Said crank-shaft is operated by means of the weighted lever b^2 .

The upper extremity of the post a is preferably approximately rectangular in cross-section, so as to fit into the socket c' , formed in the lamp-base c . It is desirable to strengthen said lamp-base by means of the webs c^2 . A threaded boss c^3 receives a set-screw c^4 to retain the lamp in position upon said base c .

The lamp or shell d is provided with four lateral openings, (marked d'), which are provided with glass lenses d^2 in the ordinary manner. At the top of the lamp is formed a stack d^3 , which is preferably cylindrical and provided with the spring-clips d^4 for retaining the cap e in position by engaging the depending flange e' thereof. At the center of the cap is the aperture e^2 , which receives the depending extremity f' of the gooseneck f . Said gooseneck consists of a tube or pipe mounted upon the stand g at the side of the post a and adapted to receive the electric conductors h . Any suitable conduits, as h' , lead from the source of electric supply into said stand g , so that said conductors may pass from said conduits h' into and through the gooseneck f . By means of the bend f^2 said gooseneck is enabled to support the electric bulb i from the top of the lamp-shell without interfering with said shell or with the switch-operating mechanism. Beneath the cap e , below the depending extremity f' of the gooseneck f , is the bulb-socket j , which is suspended by means of the conductors h , as shown in

Fig. 2 of the drawings. Said socket *j* is of greater diameter than the aperture *e*² in the cap *e*, and therefore when the lamp is removed from the post *a* said socket *j* forms a temporary support for the cap *e*. It is desirable that the said aperture *e*² in the cap *e* be of slightly greater diameter than the gooseneck *f*, so that the post *a* and the switch-lamp thereon may be rotated without setting up friction between the rotating parts and the stationary part *f*. It is also desirable that the socket *j* be suspended from the flexible conductors *h* a slight distance below the lower extremity *f'* of the gooseneck *f* in order that the bulb *i* may be free to swing slightly, and thereby be relieved of such vibrations as the gooseneck *f* or cap *e* may receive from passing trains.

The electric-light bulb *i*, above mentioned, hangs in an inverted position within the lamp-shell *d* in such relation thereto that the main illuminating portion of said bulb is approximately at the center of the shell, and the base *i'*, which fits into the socket *j*, is in the upper portion of the lamp-shell, preferably at a point above the top of the lateral openings *d'*. One of the chief purposes in mounting the light-bulb in this manner is to render it possible to utilize the light from said bulb to illuminate not only the signal-lenses in the openings *d'*, but also the switch-lever mechanism, as hereinabove explained, and to this end the lamp-base *e* is provided with the openings *k k*. These enable the lamp to illuminate a large ground area without permitting the downwardly-projecting rays of light to mingle with those projecting laterally through the signal-lenses.

It is obvious that the form of switch-lever and form of connections between said lever and the rotatable post *a* and also the form of stand *g* may be considerably varied without departing from the spirit of my invention.

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

1. In a switch-lamp, the combination of a rotatable post; a lamp-shell removably mounted on said post; said lamp having a stack pro-

jecting upwardly therefrom; a cap loosely fitting over the stack portion of said shell, said cap being permanently suspended from a fixed point of support, and spring-clips mounted on said stack portion to engage said cap for holding the same in proper relation to the lamp-shell when the latter is in position upon said post.

2. In a switch-lamp, the combination of a rotatable post; a lamp-shell removably mounted on said post; an apertured cap removably mounted on said shell; a socket in said shell beneath said cap for suspending an electric-light bulb; and a fixed support such as the gooseneck *f* extending downward through the aperture in said cap, said socket forming a temporary support for said cap when the lamp is removed from its post.

3. In a switch-lamp, the combination of a rotatable post, a lamp-shell removably mounted on said post; an apertured cap removably mounted on said shell; a socket in said shell beneath said cap for suspending an electric-light bulb; a fixed support such as the gooseneck *f* extending downward through the aperture in said cap, said socket forming a temporary support for said cap when the lamp is removed from its post and a flexible connection between said socket and said point of support for the purpose described.

4. In a switch-lamp, the combination of a rotatable post connected to the switch; a lamp-shell removably mounted on said post and said shell having openings both at the sides and in the bottom thereof; an apertured removable cap on said lamp-shell; a fixed hollow gooseneck having a depending portion extending through the aperture in said cap; electric conductors passing through said gooseneck and also through said cap; and an electric-light bulb suspended from said conductors beneath said cap, substantially as described.

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Witnesses:

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