

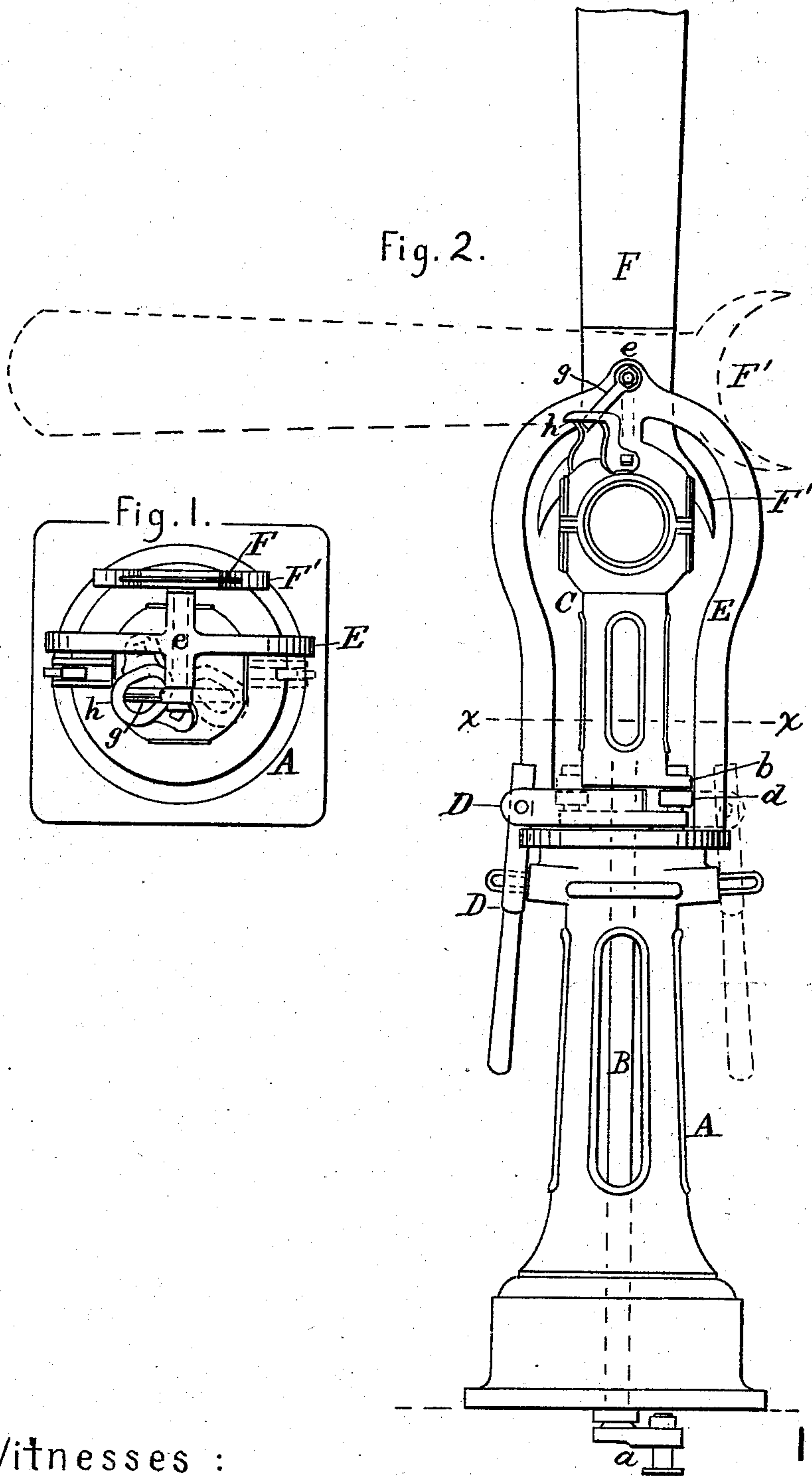
(No Model.)

2 Sheets—Sheet 1.

A. G. CUMMINGS.
Switch Stand.

No. 237,256.

Patented Feb. 1, 1881.



Witnesses :

W. Burris

H. A. Daniels

Inventor :

Albert G. Cummings

By *C. B. Towles*

Attorney.

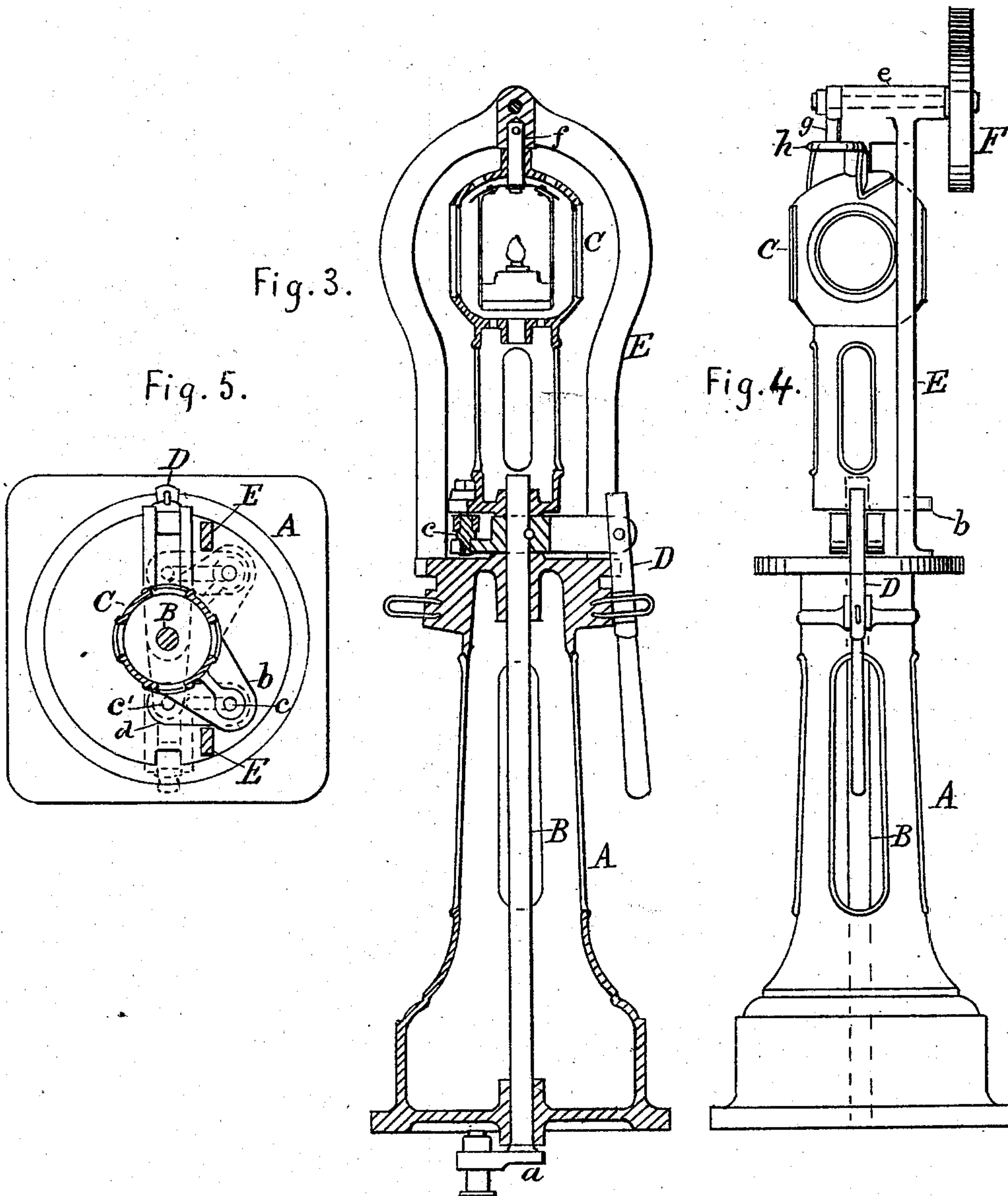
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Inventor :

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UNITED STATES PATENT OFFICE.

ALBERT G. CUMMINGS, OF HARRISBURG, PENNSYLVANIA, ASSIGNOR TO
PENNSYLVANIA STEEL COMPANY.

SWITCH-STAND.

SPECIFICATION forming part of Letters Patent No. 237,256, dated February 1, 1881.

Application filed April 23, 1880. (No model.)

To all whom it may concern:

Be it known that I, ALBERT G. CUMMINGS, a citizen of the United States, residing at Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Switch-Stands; 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.

Figure 1 is a plan view of my semaphore switch-stand. Fig. 2 is a front view, showing in dotted lines the lever shifted from one side of the stand to the other and the semaphore in a horizontal position. Fig. 3 is a vertical section. Fig. 4 is a side view; and Fig. 5 a cross-section on line *xx* of Fig. 2, showing the two positions of the link-connection and lever by which the lamp-case is operated.

Like letters in all the figures of the drawings indicate like parts.

This invention relates to the class of switch-stands in which the crank-shaft is so connected with the lamp-case that while the crank makes one-half revolution the lamp-case makes only one-quarter, the object being to bring the crank to a dead-center at either point of its full stroke, and at the same time cause the lamp-case to present the proper colored glass in the line of the track to correspond with the position of the switch.

My invention consists of the switch-stand having a semaphore arranged to operate in combination with the lamp-case by direct connection therewith, as hereinafter shown and set forth, for indicating the position of the switch-rail; also, of the lamp-case, having a projection, in combination with pins and a link or other intermediate connection, so as to accomplish the half-turn of the crank and the quarter-turn of the lamp-case by a simpler construction, the parts being readily put together.

A is the stand, in which is the vertical crank-shaft B, having its bearing or support in the base of the stand and made to extend up through it, and thence into the lamp-case C, where it

terminates. The lamp-case turns upon the said shaft, and is secured thereon by a screw-nut or pin attached to the end of the shaft in the case. The crank *a* is made to connect in a suitable manner with the switch-rod. Immediately above the table of the stand is the jointed operating-lever D, fitted and secured to the shaft by means of a pin or other suitable device, the shaft passing through the lever, which, when moved from one position to the other, causes the lamp-case to turn with the shaft—that is, to make the quarter-turn—the lever being fastened in the usual manner, at either position, to an arm extending through the stand. The lower end of the lamp-case is provided with a projection, *b*, having a pin, *c*, extending down through a slot in a link, *d*, interposed between the projection and the lever, the pin having a free movement in the slot of the said link. Another pin, *c'*, is attached to the end of the lever, and extends up through a pivot-hole in the solid end of the link. Thus the lever, when turned from one position to the other, will cause the crank-shaft to make one-half revolution and the lamp-case only one-quarter. The same result may be accomplished by a slot in the projection *b*, which would be made of sufficient length for that purpose, and the pins and link, or other intermediate connection, should be constructed and adapted to meet the change.

E is a supplementary stand, erected upon the table of the switch-stand and provided with a bearing, *e*, for the shaft of the semaphore F to work in, and which also serves to keep the lamp-case steady by means of a stationary pin, *f*, extending down from the bearing and through the top of the lamp-case, a disk or shield being rigidly attached to the pin under the top of the case, so as to shed the water from the flame that may pass through the draft-holes.

If desired, a hanger may be suspended from the pin to support the lamp, so as to hold it with the breadth of flame to the signal.

An arm, *g*, is rigidly attached to the end of the semaphore-shaft, which arm projects downward through a slotted or forked piece, *h*, attached to the top of the lamp-case, so as to cause the semaphore to make a quarter-turn simultaneously with the lamp-case when the

lever is moved from one position to the other, the semaphore being raised from a horizontal to a perpendicular position, or vice versa, when the lever is moved back or forth, the movement of the lever being limited at either point by its coming in contact with the supplementary stand, so that it only makes one-half revolution. The semaphore is made heavier at the end, where its shaft connects with it, and is also of a crescent shape, (see F', Fig. 1,) to counterbalance the weight of the extended portion and avoid obstructing the light when in a perpendicular position, the extended portion standing out above the lamp-case, thus affording a conspicuous and distinct signal.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The semaphore having its shaft provided with a fixed arm, in combination with a slotted or forked piece attached to the top of the lamp-case, substantially as and for the purposes set forth.

2. The legs of the supplemental stand E, combined with the top of the switch-stand,

and the jointed operating-lever D, whereby said jointed lever is regulated in its action upon the crank-shaft and lamp-case, substantially as and for the purposes set forth.

3. The lamp-case provided with a projection, *b*, in combination with pins *c c'*, slotted link, *d* or other intermediate connection, and lever D, substantially as and for the purpose set forth.

4. The combination of the semaphore and lamp-case, constructed to operate simultaneously by means of the fixed arm *g*, slotted piece *h*, projection *b*, slotted link *d*, pins *c c'*, and jointed operating-lever D, substantially as set forth.

5. The semaphore arranged in immediate proximity to the lamp-case and having its weighted end of a crescent shape, in combination with the lamp-case, substantially as and for the purposes set forth.

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

ALBERT G. CUMMINGS.

Witnesses:

H. A. DANIELS,
L. C. YOUNG.