

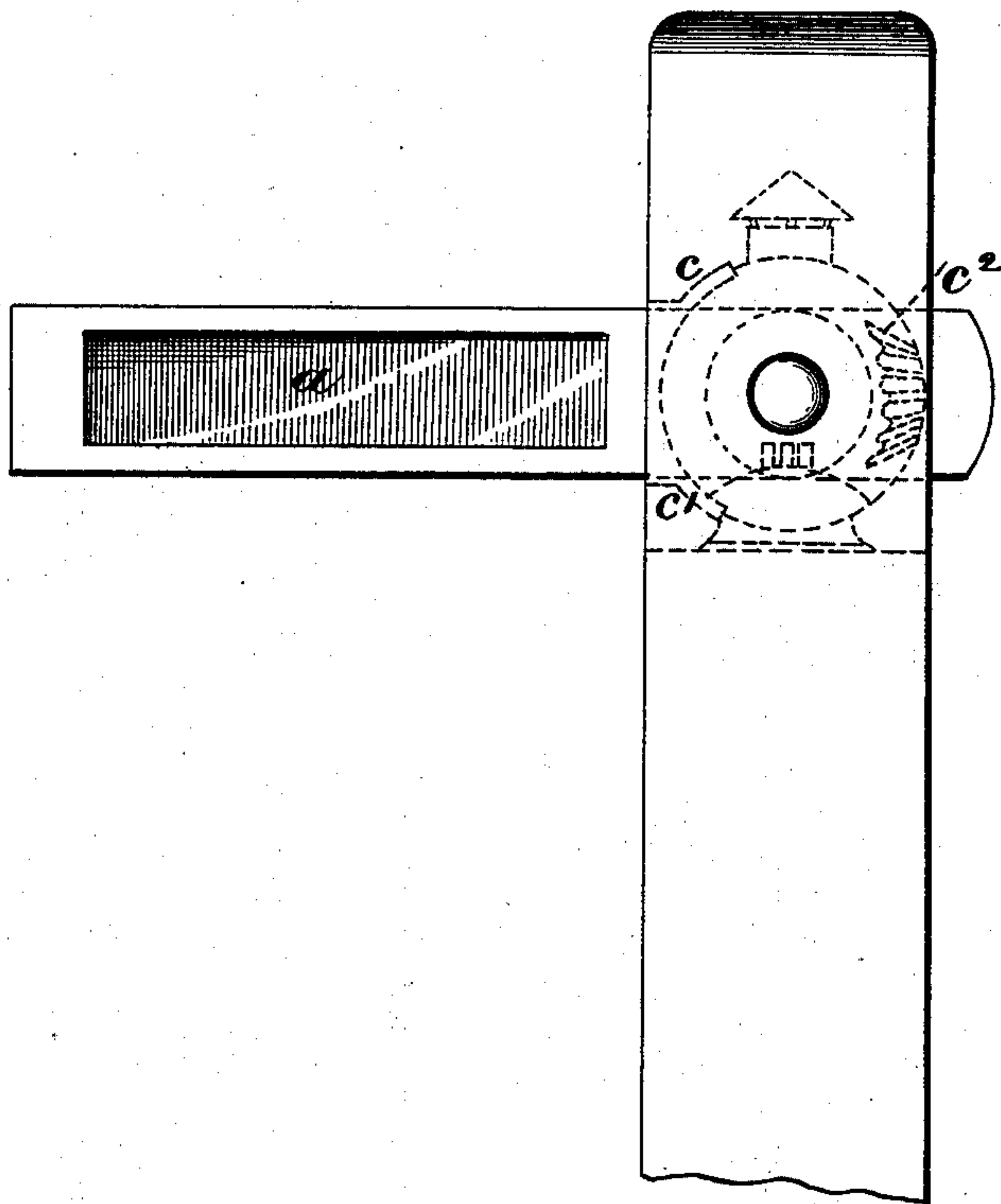
(No Model.)

J. W. HANCOCK.  
SEMAPHORE SIGNAL.

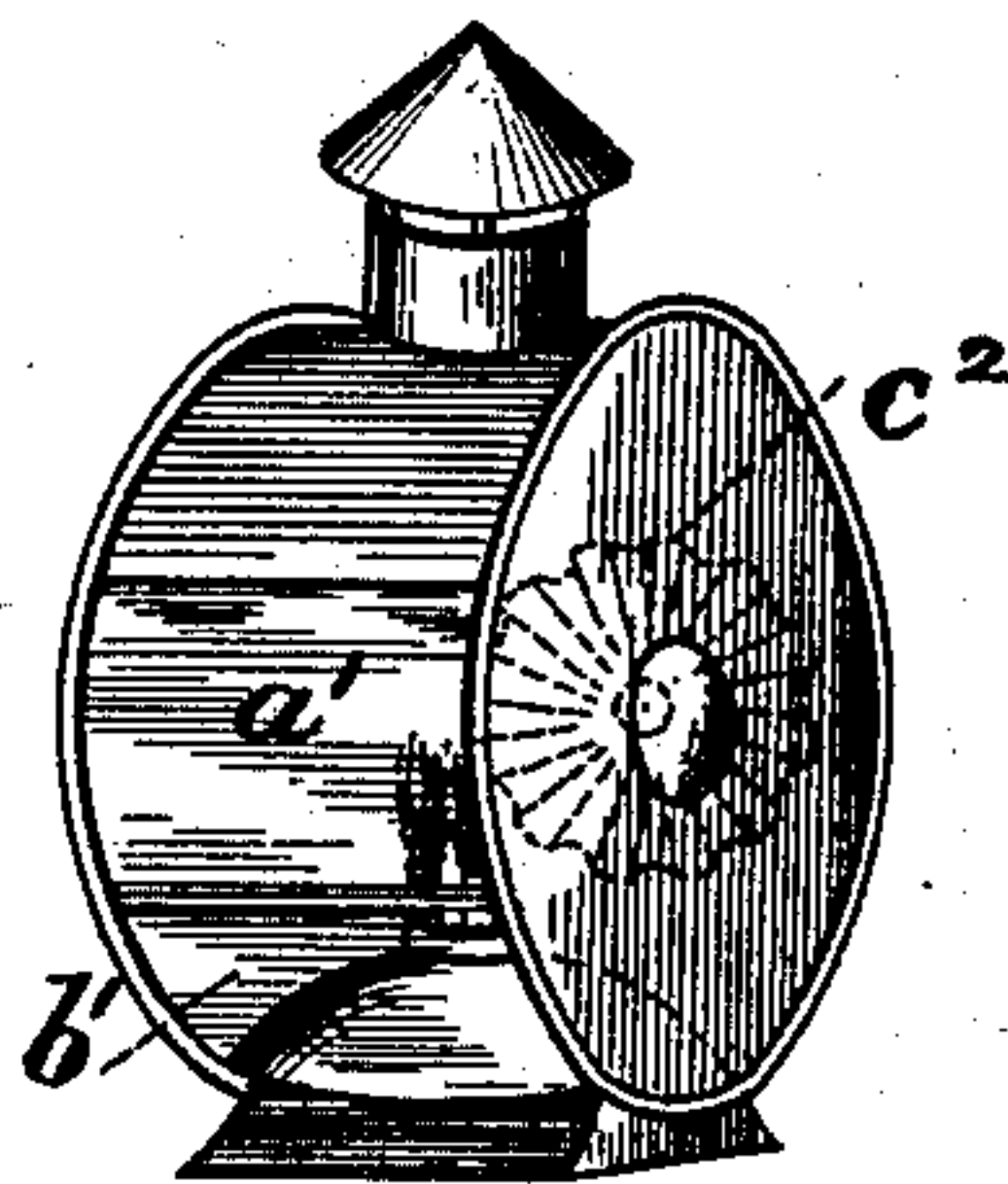
No. 406,836.

Patented July 9, 1889.

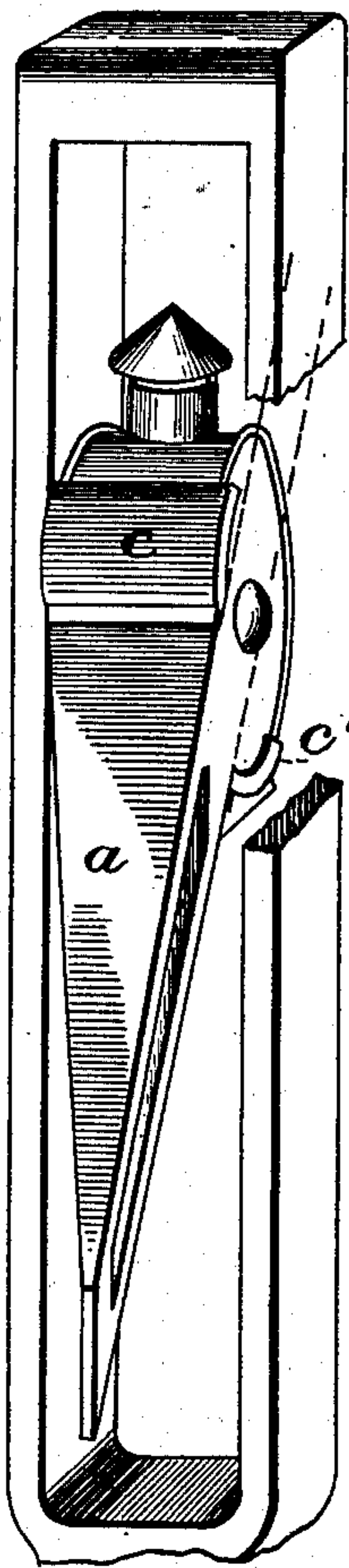
*Fig. 1.*



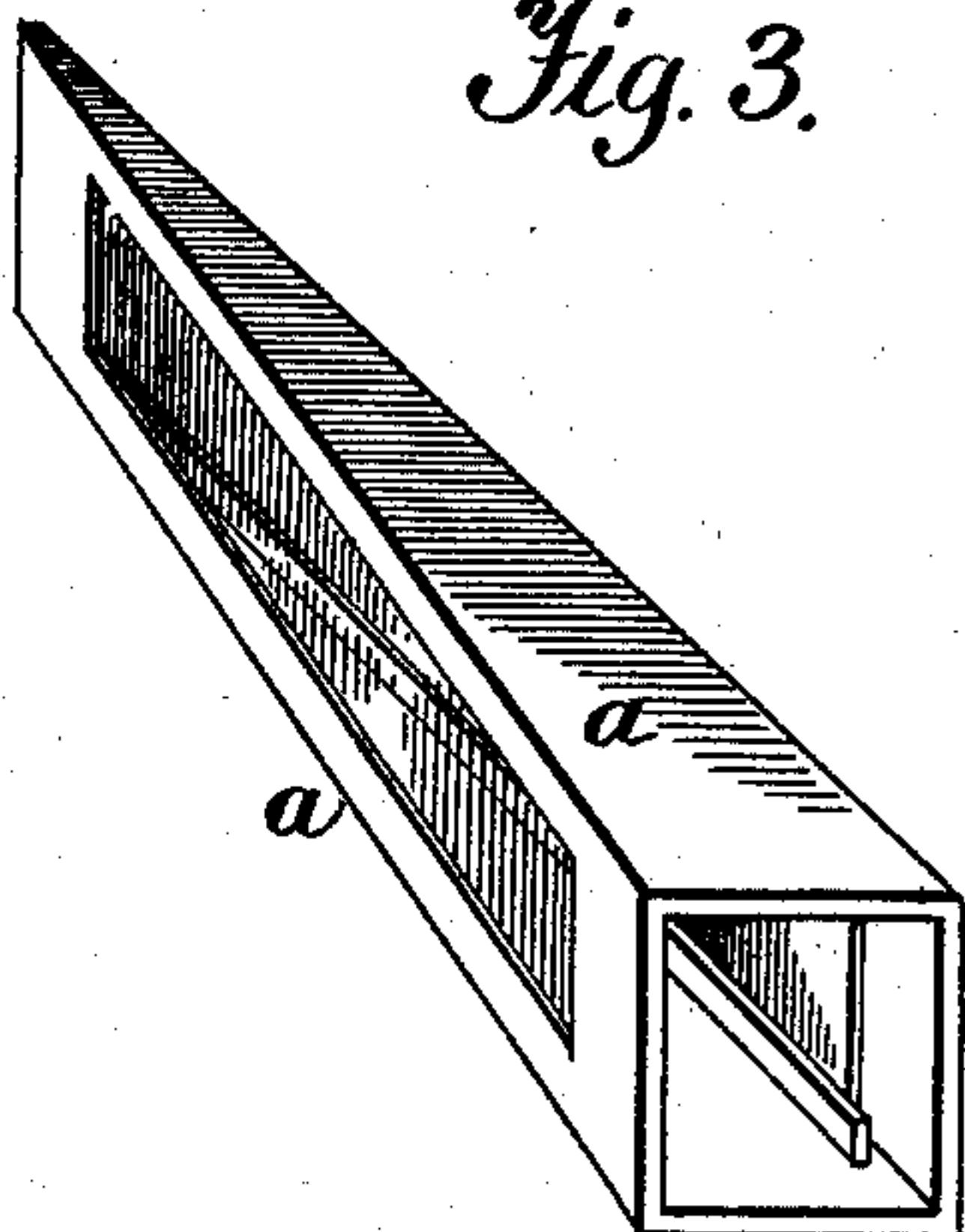
*Fig. 2.*



*Fig. 4.*



*Fig. 3.*



*Witnesses.*  
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# UNITED STATES PATENT OFFICE.

JOSEPH WYATT HANCOCK, OF KNIGHTON, COUNTY OF LEICESTER,  
ENGLAND.

## SEMAPHORE-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 406,836, dated July 9, 1889.

Application filed February 13, 1889. Serial No. 299,784. (No model.) Patented in England February 1, 1884, No. 2,556.

*To all whom it may concern:*

Be it known that I, JOSEPH WYATT HANCOCK, a subject of the Queen of Great Britain, residing at Knighton, in the county of Leicester, England, have invented certain new and useful Improvements in Semaphore-Signals, (for which I have obtained a patent in Great Britain February 1, 1884, No. 2,556;) and I do 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 the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in the construction of semaphore-signals to be used in signaling by day and night.

To these ends and to such others as the invention may relate the same consists in the peculiar construction and in the novel arrangement and combination of parts, all as more fully hereinafter described, shown in the drawings, and then specifically defined in the appended claims.

In the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, I have clearly illustrated the invention, like letters referring to like parts throughout the several views.

Figure 1 is a front elevation of a semaphore-arm constructed in accordance with my invention, the same being shown in a raised or extended position and the lantern being shown in dotted lines. Fig. 2 is a detached view of the lantern. Fig. 3 is a detached view of the wedge-shaped arm, and Fig. 4 is a side view of the arm arranged within the upright or support and shown in a lowered position.

The arm of the signal is in the shape of a wedge-shaped box, the face or front whereof is of the ordinary size and shape, and the inner end of the arm is of sufficient size to correspond with openings formed in the circumference of a cylindrical lantern, which is employed as hereinafter described. The outer ends of the front and back of the arm are joined, while the inner ends are separated, so

as to allow of the passage of the light into the same. The face of the arm and also the back of the same are made in the form of frames, into which are fitted plates of opal glass or other suitable material, and the remainder of the interior of the arm is lined, so as to reflect the light. The inner end of the arm is open, and when in the extended or lowered position is opposite one of the before-mentioned openings in the circumference of the lantern. In order to avoid unnecessary strain upon the levers employed for actuating the said arm by reason of the increased weight of the same, the ends thereof are by preference made to balance, or nearly so, at each side of the turning-point or pivot. On the lower side of the inner end of the arm is a plate, which, when the arm is extended, will be in front of the opening in the circumference of the lantern, which is provided for illuminating the interior of the arm when it is lowered, and on the upper side of the said end of the arm is a similar plate for covering the upper opening in the circumference of the lantern when the arm is lowered. The inner face of each of the said plates acts as a reflector when opposite one of the openings in the circumference of the lantern.

The lantern hereinbefore referred to is made cylindrical, with flat back and front faces, the centers of which are, when desired, provided with bull's-eyes. The lantern is entirely closed, with the exception of the chimney, which is provided with a cap, the requisite supply of air entering the lantern through the chimney. The before-mentioned openings in the circumference of the lantern are covered with glass, and are so formed as to be respectively opposite the inner end of the arm when the same is in either of the before-mentioned positions. Burners are so arranged within the said lantern as to illuminate the interior of the hollow arm and also the bull's-eyes in the front and back faces. Within the lantern is arranged a reflector for the purpose of reflecting light from the burner or burners into the interior of the arm.

Referring now to the details of the drawings by letter, *a* is the wedge-shaped signal-arm, *a'* is the opening in the circumference of the



lantern for illuminating the arm when it is raised or extended, and *c* is the plate which is attached to the arm *a* for shading or covering the opening *a'* when the arm is lowered.

5 *b'* is the opening for illuminating the arm when in the last-mentioned position, and *c'* is the plate for shading or covering the said opening *b'*. The arm is so pivoted that the said plates move concentrically with the circumference  
10 of the lantern, as will be readily understood.

The reflector within the lantern is shown at *c<sup>2</sup>*. The employment of a dark margin around the glass in the face or faces of the arm will serve to increase the density of the light trans-  
15 mitted.

Semaphore-arms constructed and arranged in connection with lantern, as hereinbefore described, will be found of great advantage in preventing the mistakes which frequently  
20 occur through the color-blindness of certain persons and other causes—such as thick or hazy weather. They will also be found suitable for attachment to walls or other flat sur-

faces for advertising and other purposes, while their employment for marine signaling 25 will be exceedingly advantageous.

Having thus described my invention and set forth its merits, what I claim to be new, and desire to secure by Letters Patent, is—

1. In a semaphore-signal, the combination, 30 with the lantern, of a signal-arm of a hollow wedge shape, having open end and one face or both the front and back faces covered with glass, substantially as described.

2. The combination, with the cylindrical 35 lantern provided in its circumference with the openings *a'* and *b'*, of the pivoted signal-arm in the form of a hollow wedge, and provided with the plates *c* and *c'*, substantially as and for the purpose specified. 40

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

JOSEPH WYATT HANCOCK.

Witnesses:

EDMUND CLAY, Jr.,

FRED F. WIGGINS.