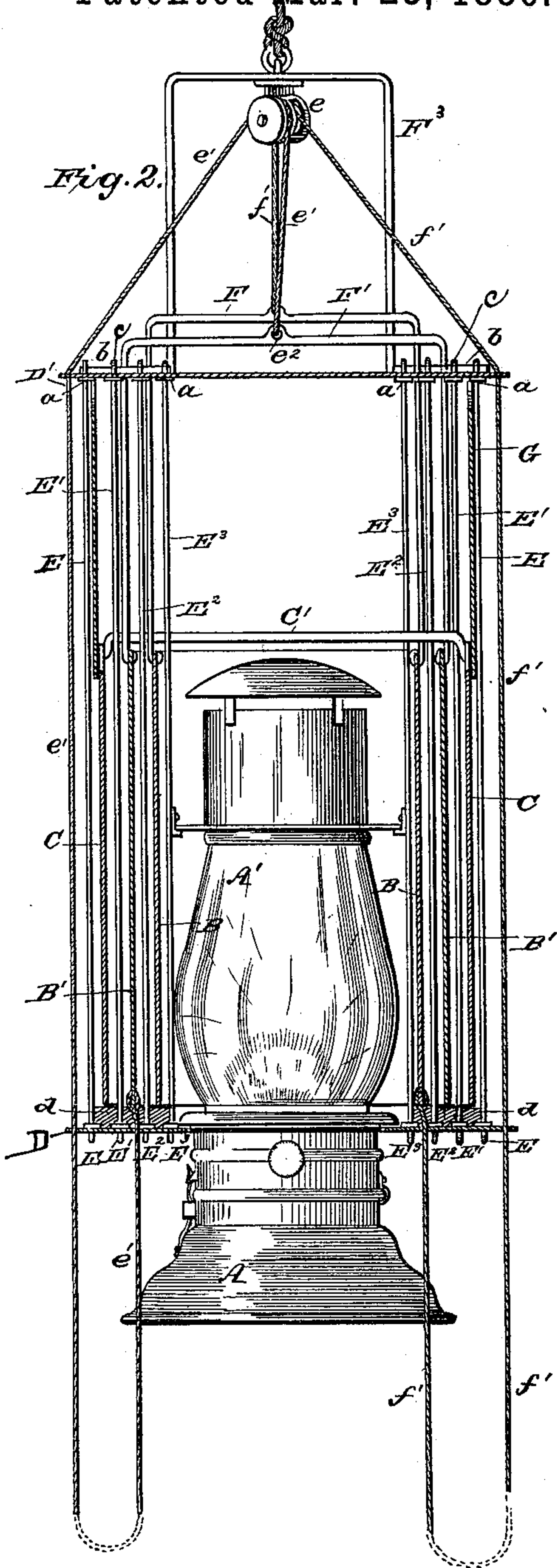
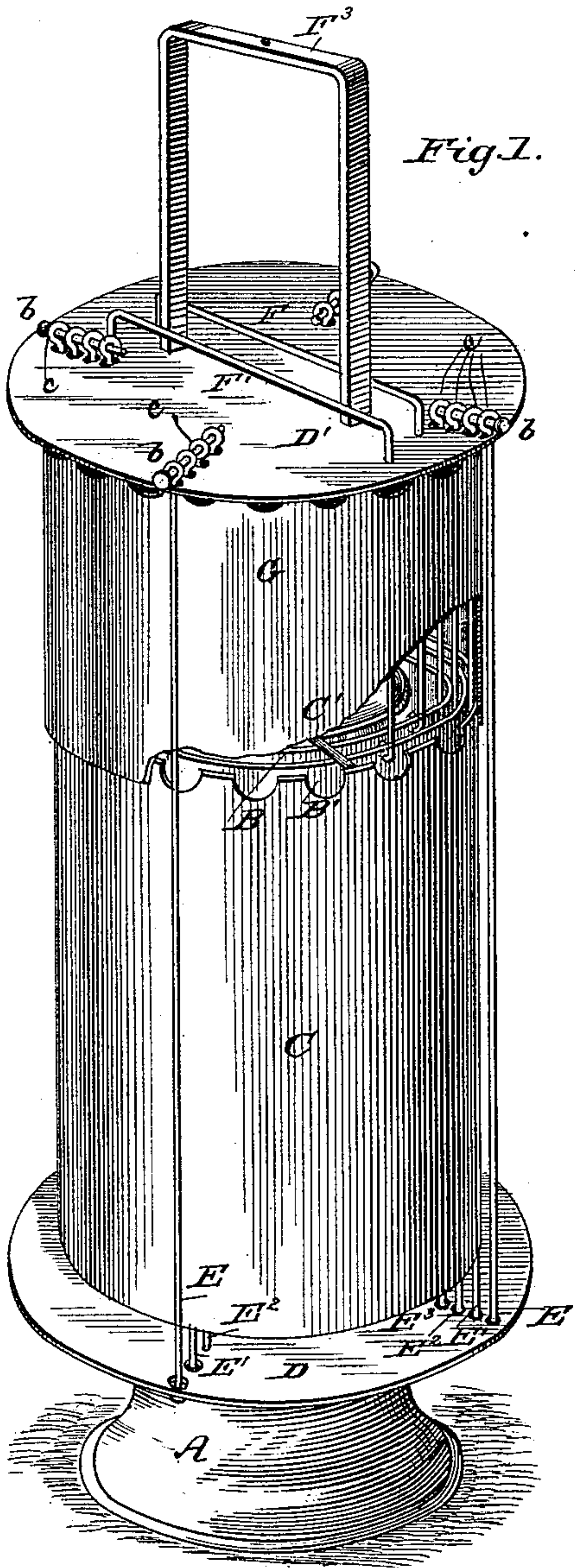


(No Model.)

G. WELLS.
SIGNAL LANTERN.

No. 338,574.

Patented Mar. 23, 1886.



WITNESSES:

WITNESSES:
Fred. G. Dieterich
Edw. W. Byrne.

INVENTOR:

Geo. Wells
BY *Munn & Co*
ATTORNEYS.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE WELLS, OF ANNAPOLIS, MARYLAND.

SIGNAL-LANTERN.

SPECIFICATION forming part of Letters Patent No. 338,574, dated March 23, 1886.

Application filed March 23, 1885. Serial No. 160,488. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WELLS, a citizen of the United States, residing at Annapolis, in the county of Anne Arundel and State of Maryland, have invented certain new and useful Improvements in Signal-Lanterns, of which the following is a description.

Figure 1 is a perspective view, partly broken away, of my invention when used as a hand-lantern. Fig. 2 is a vertical section of my improved signal-lantern as arranged to be operated at the mast-head.

My invention relates to signal-lanterns of that class in which lights of different colors are exhibited by means of concentric sliding glass cylinders of different colors, which are alternately slid over or around the flame of the lamp.

My lantern, while applicable for use on railroads and like places, is mainly intended for use on board of ship for the purpose of signaling at sea between ships at night-time in accordance with a code of signals of my own invention, and copyrighted, in which a different succession of colors are made to indicate the letters of the alphabet, and between each of which letters it is necessary to entirely shut in or mask the light in order to separate the signal-letters.

To this latter end my improvement consists in an outer opaque cylinder or mask which normally rests around and in front of the lamp, and which is lifted away from the lamp by the elevation of each or all of the colored cylinders which it is not desired to exhibit.

The improvement also consists in the peculiar construction and arrangement of the parts of the lantern, as will be hereinafter more fully described.

In the drawings, A represents the lamp, which may be of any ordinary construction, having a clear glass chimney, A'.

B B' are two concentric cylinders of colored glass, the inner one of which, B, is green, and the other, B', is red. These cylinders may be made of toughened glass, colored gelatine, or other colored transparent media. Outside these colored cylinders is another concentric opaque cylinder, C, which constitutes a mask for the lantern.

To the lamp A there is attached a horizontal

flange or ring, D, which is connected to a horizontal disk, D', at the top by four sets of rods, E E' E² E³, in each of which set there are four rods arranged in a radial line and separating and guiding the concentric cylinders B B' C in their vertical movement. These rods are connected to the disk D' at the top in a detachable manner by flanges *a* on the rods that rest beneath the disk and keys *b*, that pass through eyes *c* in the rods where they protrude through disk. This connection permits the parts of the lantern to be separated and the colored cylinders to be removed and repaired.

The cylinders B B' C all rest normally down on the flange or ring D upon rubber blocks or cushions *d*, as shown in Fig. 2, and they are manipulated to expose any one of the colors at will, as follows: From the green cylinder B there rises a wire bail, F, whose vertical sections are parallel and pass through the disk D', and are bent to form a handle above the same. From the red cylinder B' a corresponding bail, F', passes up through the disk and forms a handle above it, and to the top of the outer opaque cylinder or mask there is fastened diametrically a cross-bar, C', which passes over the tops of the cylinders of colored glass, and which, with the mask, is lifted by either or both of the colored cylinders when desired.

In operating the lantern to exhibit any succession of colors the colored cylinders are lifted by the bails above the disk D'. Thus, if it is desired to show a red light, the bail of the green cylinder is lifted, and this lifts the green cylinder, and with it the outer mask, (by reason of its cross-bar,) from the range of the frame, and the red cylinder, being down on the collar or flange D, shows a red light. To show a green light, the red cylinder is lifted by its bail, and this in rising lifts the outer mask, and, leaving the green cylinder down, shows a green light. To show a white light, both red and green cylinders are lifted, and with them the mask, leaving the white light shining through the chimney. It will be observed that as the mask descends and entirely obscures the light between each exposure, it is possible by a prearranged code of signals to exhibit any succession of lights, which, for

marine-signaling at night, secures advantages that are too obvious to require specific mention.

At times it will be necessary to operate this signal-lantern from aloft, and for this purpose
5 its rigid bail-shaped handle F^3 , which rises from the upper disk, D' , is provided with double-sheaved block-and-tackle e , hung to the handle in the center, and having a rope, e' , one end of which is fastened to an eye, e^2 , in
10 the middle of the bail of one of the colored cylinders, and passes thence around one of the sheaves of the block e , and then through guide-eyes in disk D' and flange D , (which keeps the lantern from swinging about,) and then de-
15 scends to the deck, and, passing up again, is fastened to the lower edge of the same colored cylinders, so that by pulling on the rope on one side the colored cylinder attached thereto is raised, while by pulling the same rope in the opposite
20 direction the colored cylinder is pulled down again. It is not absolutely necessary to have this rope after reaching the deck to pass up to the lantern again; but the weight of the cylinder might not be sufficient to cause it to drop
25 down again against the gravity of the rope that raised it. To cover this difficulty I make the rope to return to the lantern, so as to exert a positive pull on the cylinders in either direction. The other colored cylinder has a
30 similar rope, f' , that passes around the other sheave of the double pulley-block, and is fastened to the bail of said cylinder, and thence descends through guide-eyes in the disk D' and collar D , and after descending to the deck
35 rises again to the lower end of the cylinder of that color for the same purpose of positive action either way.

To prevent the wind from blowing down into the lantern a pendent cylindrical skirt or
40 flange G is attached to the upper disk, D' , and extends down to and a short distance below the upper edge of the outer cylinder or mask. It will therefore be seen that when the outer cylinder or mask is raised it telescopes into

the flange G . The cylinder C , however, in- 45 stead of telescoping within the flange G , may be made of larger diameter than flange G , so as to rest upon the outer side thereof and telescope upon the same.

Having thus described my invention, what 50 I claim as new is—

1. The combination, with the lamp and the concentric colored cylinders in a signal-lantern, of an outer mask-cylinder having a bar extending inwardly across the colored cylin- 55 ders and arranged, as described, to be raised with either or both of the said colored cylinders, substantially as shown and described.

2. The combination, with the lamp and the concentric cylinders B B' C , of a collar or 60 flange, D , connected to the lamp, a disk, D' , above, the connecting-rods extending from the collar to the disk and separating the cylinders, and a key for detachably fastening the disk to the rods, substantially as shown and described. 65

3. The combination, with the lamp and its concentric cylinders B B' C , having attached bails, of the collar and disk D D' , the connecting-rods extending from the disk to the collar and separating the cylinders, a handle 70 or bail fastened to and rising from the disk, and a block-and-tackle hung from said handle, and having cords extending from the bails of the cylinder down through guide-eyes in the collar and disk, to permit the cylinders to be operated aloft, as described. 75

4. The disk D' , having a pendent skirt or flange, G , combined with the lamp bearing a collar, D , the rods connecting the collar and disk, the concentric cylinders arranged be- 80 tween the rods, and the outer cylinder or mask arranged to telescope with the said skirt or flange, as and for the purpose described.

GEO. WELLS.

Witnesses:

EDW. W. BYRN,
CHAS. A. PETTIT.