

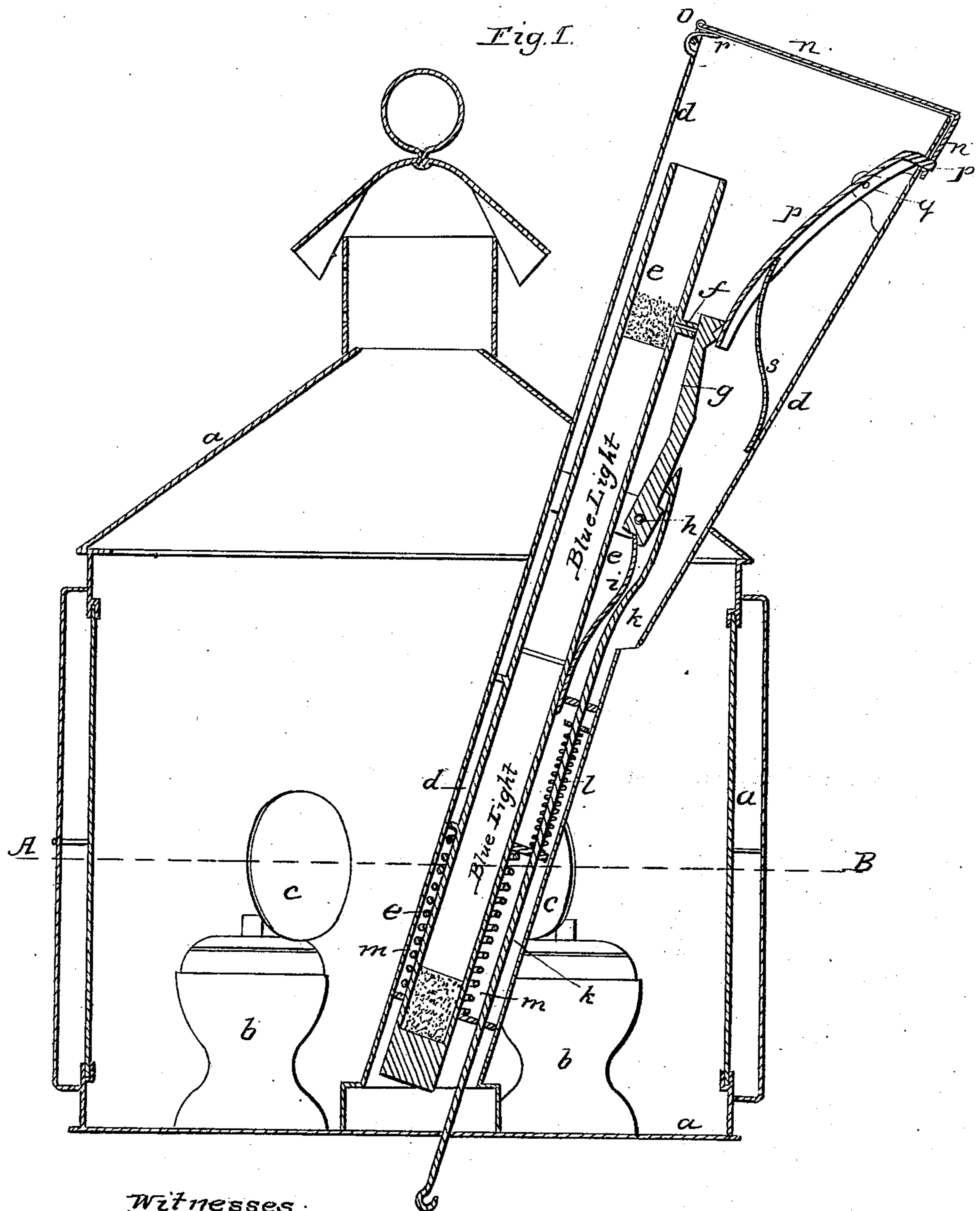
T. T. WOODWARD.

2 Sheets—Sheet 1.

Signal Lantern.

No. 29,118.

Patented July 10, 1860.



Witnesses:  
*Joseph Garrett*  
*Albert W. Brown.*

Inventor:  
*Thomas T. Woodward*

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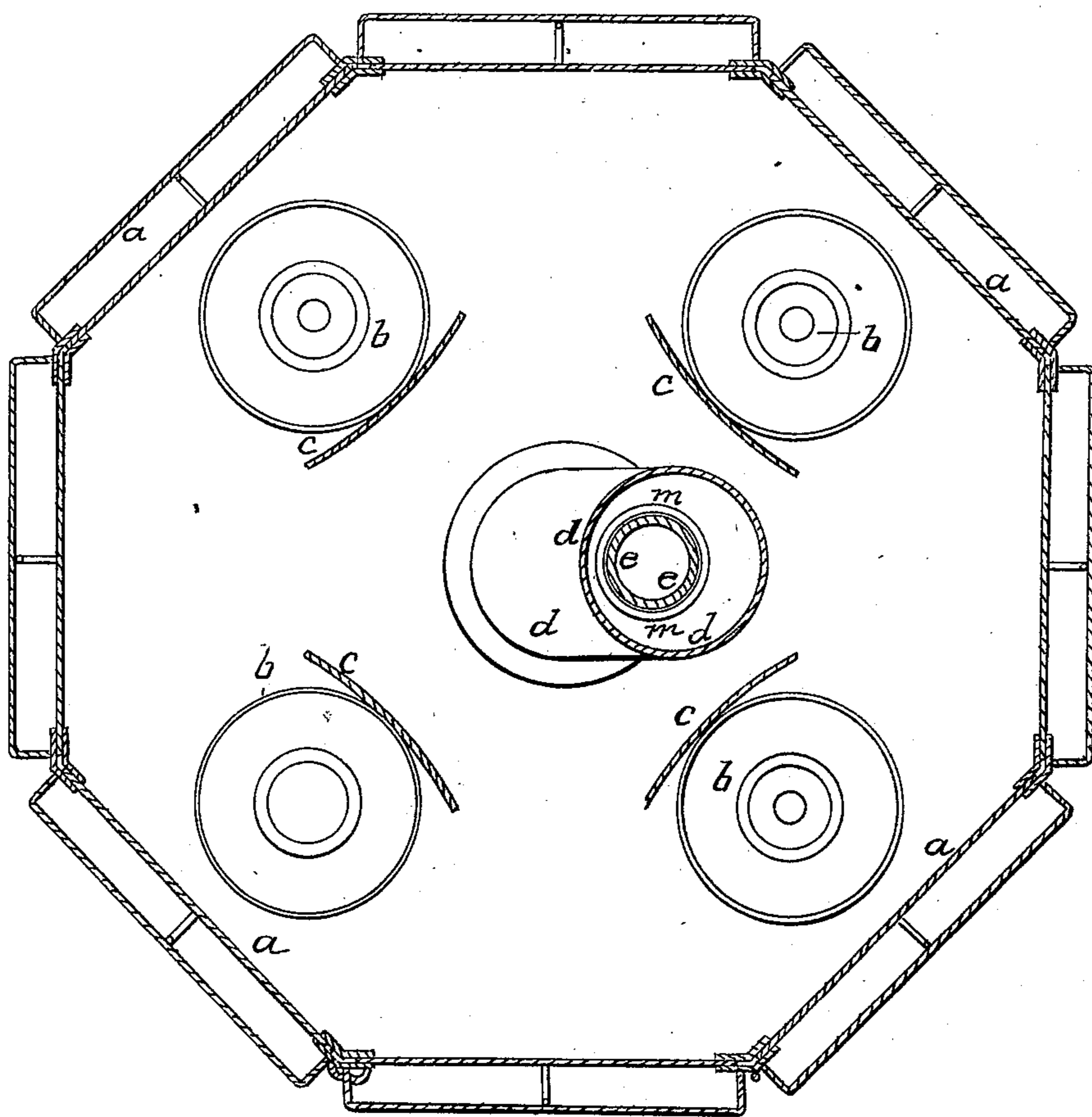
Signal Lantern.

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*Fig. 2.*



*Witnesses:*

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# UNITED STATES PATENT OFFICE.

THOMAS T. WOODWARD, OF SOUTH READING, MASSACHUSETTS.

## IMPROVED SIGNAL-LANTERN.

Specification forming part of Letters Patent No. 29,118, dated July 10, 1860.

*To all whom it may concern:*

Be it known that I, THOMAS T. WOODWARD, of South Reading, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Signal Apparatus Used for Vessels; and I do hereby declare that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements, by which my invention may be distinguished from all others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plate of drawings represent my improvements. Figure 1 is a central vertical section of my new apparatus. Fig. 2 is a horizontal section of the same, taken in the plane of the line A B, Fig. 1.

The object of my invention is to provide such a signal apparatus for a vessel that a signal and an alarm can be given at a moment's warning in case of a sudden emergency, and so as to have the means of producing these results always at hand.

It has heretofore been customary to keep a lantern in the rigging of a vessel at night or during the fog or a storm, but in the latter cases a light cannot be seen a sufficient distance to afford any protection to the vessel, and therefore in case of danger of a collision a flash-light or blue light is usually ignited; but the means of producing this effect are not usually readily accessible and cannot be made available until too late.

My invention consists in a portable apparatus, which, while answering the purposes of a light in ordinary weather at night, is always in readiness to produce at a moment's notice both a report and a flash, blue, or other light, or to fire a rocket, and so as to not only show the position of the vessel to others, but also, if needed, to produce a light sufficiently intense and steady to illumine the path of the vessel and show the locality of breakers or other dangers.

My new portable signal apparatus consists of a light or series of lights having suitable reflectors placed in a lantern, with which is

combined a new arrangement of devices, consisting of a proper tube or barrel containing blue or other pyrotechnic lights or rockets, with a charge or charges of powder, the powder being made to explode and at the same time ignite the contents of the barrel at any moment that may be desired, so as to produce a sudden explosion and light by means of a suitable arrangement of mechanical devices that can be actuated by simply pulling a cord or otherwise.

*a a a* in the drawings represent the outer frame-work of a lantern composed of metal and glass and containing any desired number of lights *b b b*, &c., and reflectors *c c*, &c. This lantern is to be suspended in the rigging of a vessel by any suitable means, so that it can be removed at pleasure and readily transported from place to place. Within this lantern is inserted a casing *d d*, containing a cylindrical barrel *e e*, which is to be loaded with powder and blue or other suitable pyrotechnic lights, as shown in Fig. 1.

*f* is a nipple, upon which a percussion-cap is to be placed, and *g* the hammer by which the said cap is to be exploded, so as to communicate fire to the powder, and thereby produce a report and also to ignite the charge of blue or other pyrotechnic lights in the barrel *e e*. The hammer *g* is hung upon a pivot *h* and retracted by a spring *i*, and is actuated by a rod *k*, retracted by a spiral spring *l*, a cord or other suitable device being attached to the lower end of the rod *k*. The recoil of the barrel is provided for by a spiral spring *m*.

In order to protect the barrel *e e* and its contents from exposure to the weather, a cap or covering *n n*, turning on a hinge *o*, is attached to the top of the casing *d d*, which cover is kept closely shut by a bent lever *p p*, Fig. 2, turning on a pivot *q*. The cap or covering *n n* is made to fly open when the rod *k* is pulled by the action of the hammer *g*, against which it bears, the hammer *g* disengaging the lever *p p* from the cover *n n*, which is then thrown open by a spring *r*. A spring *s*, bearing on the bent lever *p p*, keeps the cover in position when closed.

From the foregoing description it will be seen that by simply pulling a cord attached to the rod *k* an explosion and report will be produced, and at the same time a permanent

and brilliant light will be instantaneously produced, which will not only serve as a signal to other vessels, but will illumine the locality of the vessel and show the position of breakers or other dangers, and it will further be evident that the essential feature of my invention consists in constructing a portable apparatus combining the elements of an ordinary light or signal with a suitable arrangement of devices, whereby in case of a sudden emergency an alarm or report and an intense light can be produced instantaneously, as in my new signal apparatus the means of producing these results are always in readiness and can at any moment be actuated by pulling a cord or other suitable device.

Any number of barrels *e e* can be kept loaded to substitute for the one in the lantern when its contents are discharged.

It is desirable to put a charge of powder in the bottom of the barrel *e e*, so as to discharge from it all that may be left of its contents when the lights are burned out.

Having thus described my improvements, I shall state my claims as follows:

What I claim as my invention, and desire to have secured to me by Letters Patent, is—

1. The portable signal apparatus for vessels, substantially as hereinabove described, the same consisting of a lantern for producing a constant light, with which is combined an apparatus for instantaneously producing a report or an alarm and an intense pyrotechnic light, as set forth.

2. In combination with the igniting and discharging apparatus, the cover *n n*, so operated as to be instantaneously thrown open when the contents of the barrel are ignited, and serving to protect the same from exposure to dampness, &c., as set forth.

THOMAS T. WOODWARD.

Witnesses:

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