H. THOMPSON.

Submarine Telescopic Lantern.

No. 87,012. Patented Feb. 16, 1869.

Fig: 1.

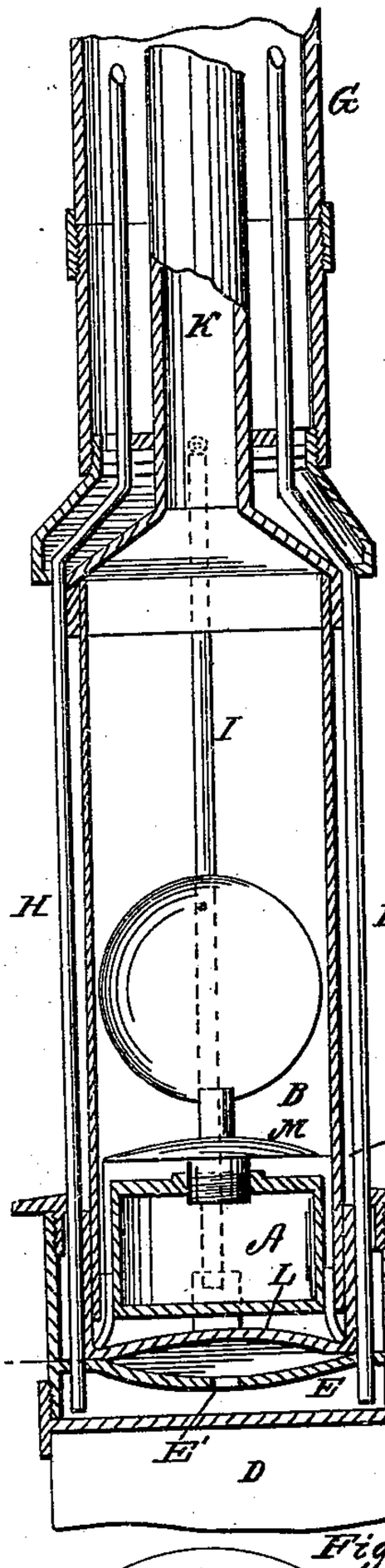


Fig: 3.

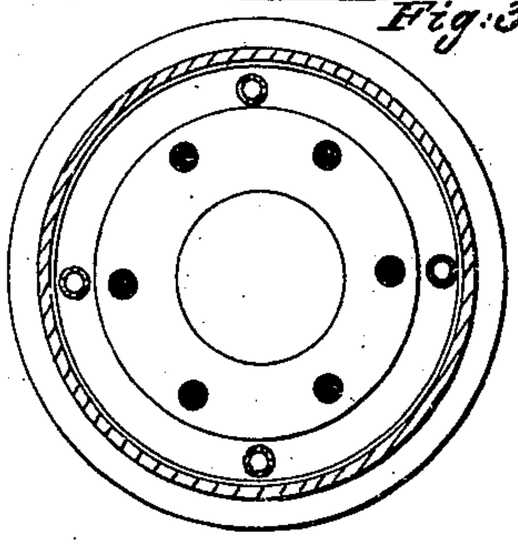


Fig: 4.

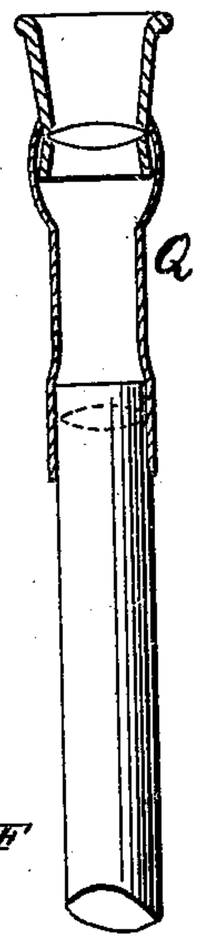
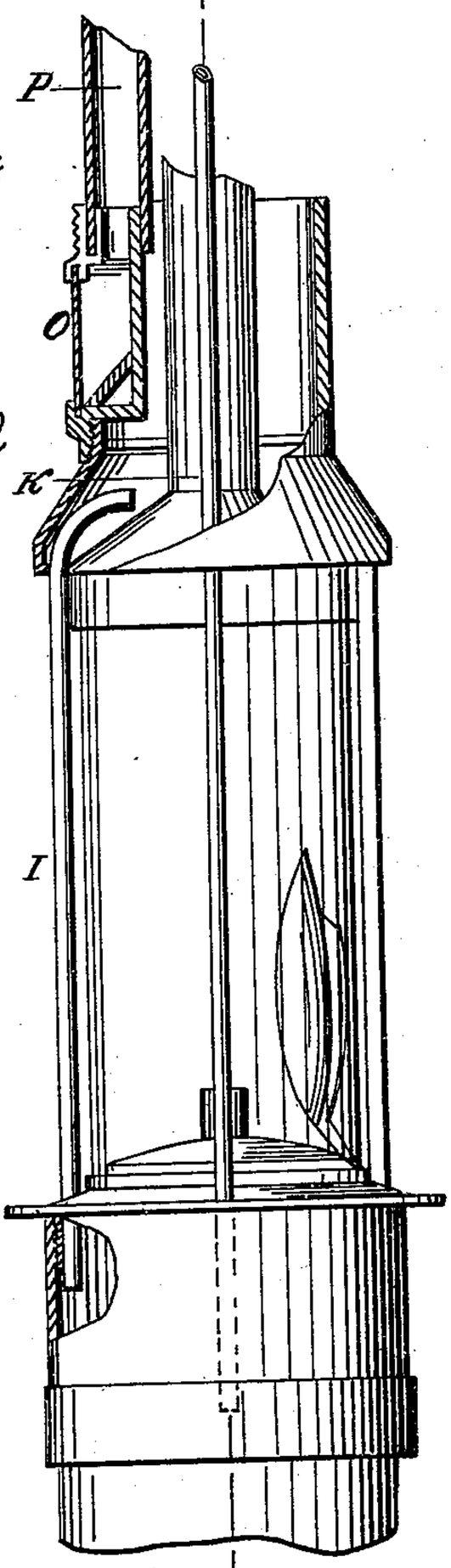


Fig: 2.



Witnesses:

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HENRY THOMPSON, OF MOBILE, ALABAMA.

Letters Patent No. 87,012, *dated February* 16, 1869.

IMPROVEMENT IN SUBMARINE TELESCOPIC LANTERNS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HENRY THOMPSON, of Mobile, in the county of Mobile, and State of Alabama, have invented a new and improved Submarine Telescopic Lantern; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming a part of this specification.

My invention relates to improvements in submarine lanterns, the object of which is to provide a more useful lantern than any now employed for the same purpose.

It consists in the application to a lantern of an improved means for supplying air for the support of combustion, and also for the protection of the lamp.

Figure 1 represents a sectional elevation of my improved lantern,

Figure 2 represents an elevation with parts broken away;

Figure 3 represents a horizontal section on the line *x x* of fig. 1; and

Figure 4 represents a detail view.

Similar letters of reference indicate corresponding parts.

A represents the lamp, which may be of ordinary construction, and provided with a glass cylinder, B, connected to the cap of the cylinder C by a water-tight joint at *d*.

The cylinder C is righted at the bottom, as represented at D, and provided with a chamber, E, below the partition E′, into which the air, necessary for the support of the flame, is introduced from above by the tube F, rising up outside the glass tube B, and entering the large protecting-tube G, above the said glass cylinder.

H represents a corresponding tube, similarly arranged, to be used, when gas is used for burning, to conduct the same from the reservoir above.

I represents shorter tubes, arranged to convey air from the receiving-chamber below the space around the exterior of the flue K, to cool the same, which, without a protecting circulation of air, would become heated to such an extent as to fuse it.

The said tubes, F, H, and I, at the same time afford protection to the glass tube, and serve to connect the upper and lower metallic portions of the lantern.

The air delivered into the chamber E, finds its way through the perforated partition in the same, and the bottom of a cup, L, wherein the lamp A is supported, and thence around the lamp up to the concave disk M, which causes a certain portion of the air to ascend around the wick-tube, while a greater portion is spread out into a circular, vertical current, in contact with the interior of the glass tube, thereby keeping it at as low temperature as possible.

In the case of gas being used, I propose to provide a small meter in the space E, to which the gas-tube H shall be connected, so that the gas shall be delivered to the burner under a graduated pressure, and, if preferred, the air may be passed through a similar meter, or its pressure may be regulated above, as it is delivered to the air-tube, by any suitable means.

Near the bottom of the large projecting tube G, I provide an opening through it, and introduce a glass, or other transparent substance, O, and attach within the said tube G, and behind the said transparent substance, a smaller tube, P, also having an opening in its side coincident with that in the tube G, and arranged in the bottom of the said inner tube-lenses, whereby, in combination with telescopic lenses, arranged at the top of the tube P, which is continued to the top, or a sufficient distance above the tube G, the objects upon which the light from the lantern is reflected may be inspected through the said tube.

In order to prevent injury to the eye from application to the telescopic tubes, I propose to introduce between the eye-glass and the tube, a rubber or other yielding tube, Q, as represented in fig. 4.

The projecting tube G, as well as the others, will be made of such length as may be desired, and best adapted to make a portable apparatus, of joints, suitably connected, to be water-tight when put together, in which form the apparatus will also serve a good purpose as a sounding-pole.

Having thus described my invention,

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

The combination, with the air-receiving cylinder C, provided with the air-supply pipes F, and the flue K, of the air-pipes I, arranged substantially as and for the purpose described.

The above specification of my invention signed by me, this 21st day of September, 1868.

HENRY THOMPSON.

Witnesses:

FRANK BLOCKLEY,

ALEX. F. ROBERTS.