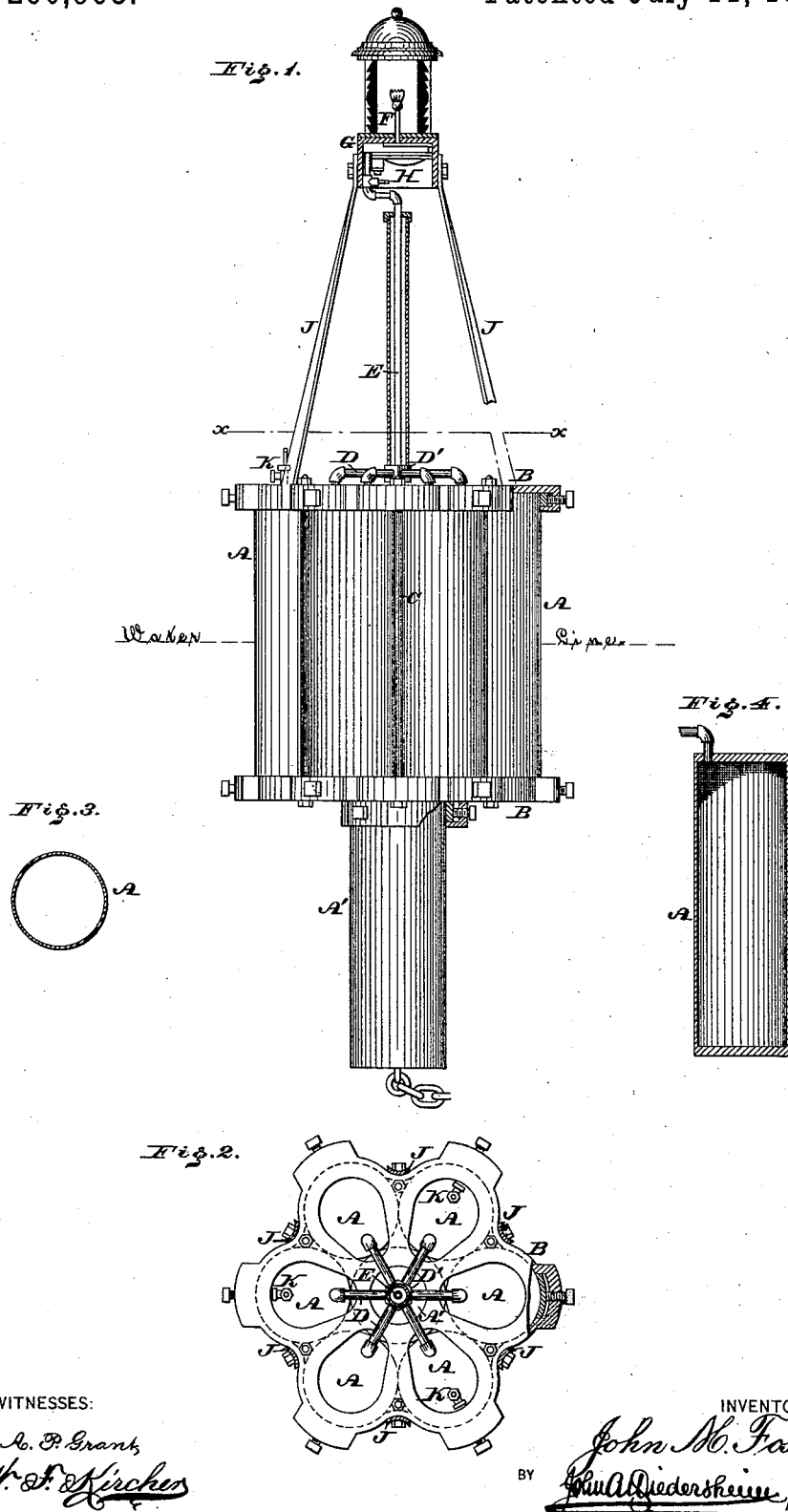


(No Model.)

J. M. FOSTER.
SIGNAL BUOY.

No. 260,963.

Patented July 11, 1882.



WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

JOHN M. FOSTER, OF PHILADELPHIA, PENNSYLVANIA.

SIGNAL-BUOY.

SPECIFICATION forming part of Letters Patent No. 260,963, dated July 11, 1882.

Application filed February 24, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. FOSTER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Buoys, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation, partly broken away, of the buoy embodying my invention. Fig. 2 is a plan view in the sectional line *x x*, Fig. 1. Fig. 3 is a horizontal section of one of the cylinders of the buoy. Fig. 4 is a vertical section thereof.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to improvements in gas-lighted buoys; and it consists of a buoy having a group of gas-holding cylinders which are of comparatively small area and capable of bearing a high pressure of gas, thus providing means for supplying the burner with gas for a long period of time. Each cylinder forms a distinct water-tight compartment, securing perfect buoyancy, and preventing loss of the entire buoy should either compartment or cylinder be injured. Furthermore, the cylinders are strong and durable and the cost of construction of the buoy is not materially increased.

Referring to the drawings, A represents a series of closed cylinders, which are grouped around the cylinder A', to which the anchor-chain is attached, and firmly connected by means of caps or heads B, which are bolted to the cylinders, and rods C C, which bind said heads, the lower caps being also bolted to the central cylinder, A'.

D represents a series of gas-outlet pipes, each of which is secured to and communicates with one of the cylinders, and a coupling, D', common to all of the pipes.

Secured to and communicating with said coupling D' is a pipe, E, which leads to the burner F of the buoy, said burner being supported in a housing, G, which likewise contains the gas-governor H, the housing being sustained on bars or rods J, which are fixed to the top cap or head, B.

The cylinders are provided with valves or

cocks K for charging the cylinders with gas, it not being essential to provide each cylinder with a valve, as the cylinders communicate with each other and may be charged one from another.

It will be seen that while each cylinder is of comparatively small area the cylinders together provide for the buoy an increased area, whereby, when they are charged, they are adapted to supply the burner with gas for a long period of time, the gas after leaving the cylinders passing through the pipes D and coupling D' to the pipe E, and thence through the governor to the burner.

Each cylinder is a water-tight compartment, thus securing perfect buoyancy, and should either cylinder be injured the remaining cylinders are sufficient to sustain the buoy, and thus prevent loss thereof. Furthermore, the cylinders are strong and durable and firmly clamped together, whereby the buoy possesses increased strength, and is capable of sustaining a higher pressure of gas than can be sustained by the ordinary buoy, the cost of construction not being materially increased.

The cylinders are made of wrought-iron lap-welded gas-tubes, with heads welded to the body, and thus constructed without seams or rivets, the central cylinder, which acts as the ballast, being similarly constructed.

The aggregate area of all the cylinders being subdivided into a number of separate apartments, together with their cylindrical shape, gives the greatest possible strength both for containing gas under great pressure and to resist injury from floating ice, &c., thus practically producing an indestructible buoy. Buoys made of sheets riveted together are liable to loss from this latter cause, and when used to contain gas under pressure are impracticable in actual service.

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

1. In a gas-lighted buoy, a burner and pipe leading thereto, in combination with a series of gas-supplying cylinders or compartments, each of which has independent connection with said pipe, substantially as and for the purposes set forth.

2. In a gas-lighted buoy, gas-burner F, pipe E, and coupling D', in combination with central cylinder, A', a concentric series of gas-supplying cylinders, A, and the pipes D, whereby
5 each cylinder has independent communication with said coupling.

3. A buoy having gas-holding cylinders formed of seamless wrought-iron tubes, the

bodies of the tubes being lap-welded and the heads welded to the bodies, substantially as is shown and for the purpose set forth.

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Witnesses:

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