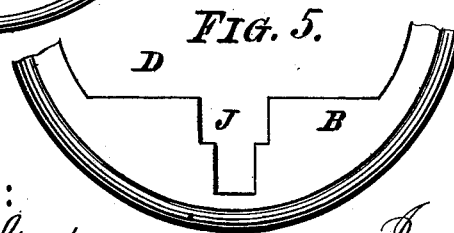
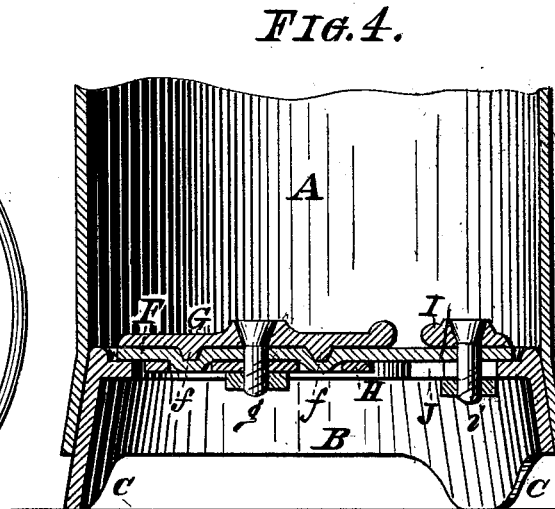
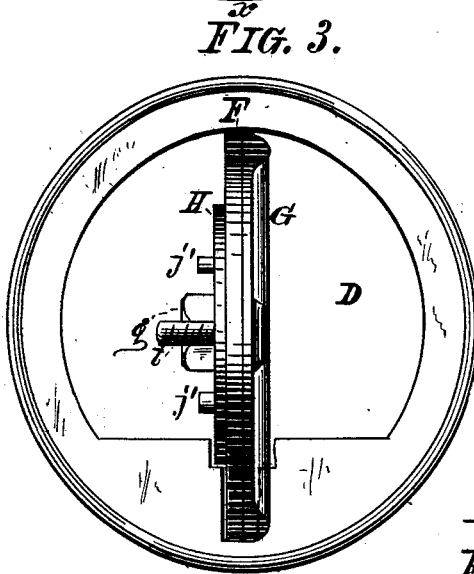
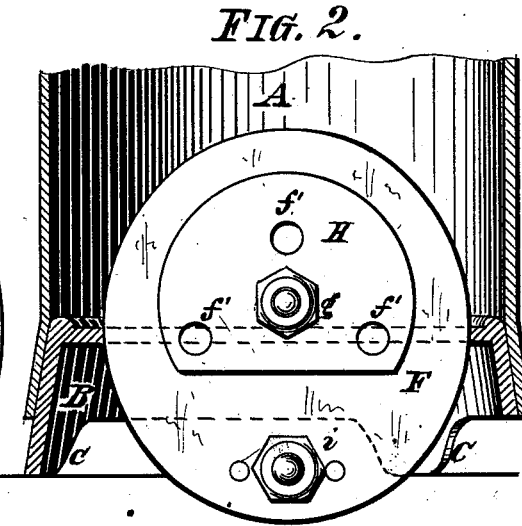
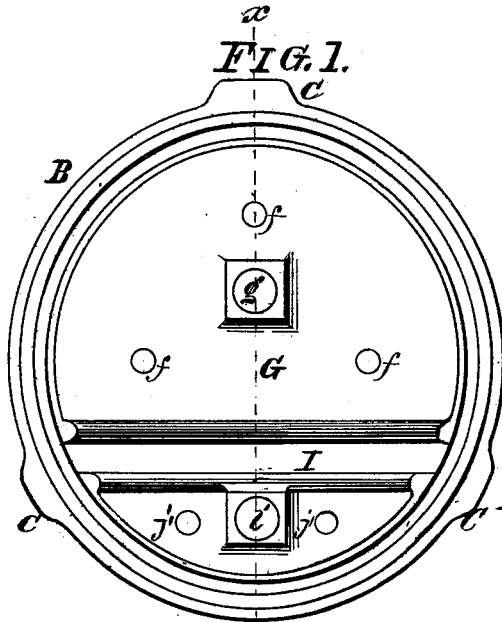


J. SCHERER.
Pump-Valve.

No. 213,531

Patented Mar. 25, 1879.



Witnesses:

Michael J. Stark
Frank Hirsch

Inventor:

Joseph Scherer
by *Michael J. Stark*
Attorney.

UNITED STATES PATENT OFFICE.

JOSEPH SCHERER, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF HIS
RIGHT TO ADAM REID, OF SAME PLACE.

IMPROVEMENT IN PUMP-VALVES.

Specification forming part of Letters Patent No. **213,531**, dated March 25, 1879; application filed
January 28, 1879.

To all whom it may concern:

Be it known that I, JOSEPH SCHERER, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements on a Pump-Valve; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has general reference to ship, sand, and other pumps; and it consists in the peculiar arrangement of parts and details of construction, as hereinafter first fully set forth and described, and then pointed out in the claims, whereby the flap may be removed and reinserted through the water, &c., passage which said valve is arranged to close.

In the drawings already referred to, which serve to illustrate my invention more fully, Figure 1 is a plan of the valve. Fig. 2 is a sectional view of the same with the valve-flap in position for removal through the water, &c., passage. Fig. 3 is a plan of the device illustrated in Fig. 2. Fig. 4 is a sectional elevation in line *x x* of Fig. 1. Fig. 5 is a plan of a fragment of the valve-case.

Like parts are designated by corresponding letters of reference in all the figures.

A is the usual pump-cylinder of a ship, sand, &c., pump, soldered or riveted to the valve-casing B in the usual manner. This casing is provided with legs or lugs C, upon which the pump rests when in use, and it has the usual passage D, closed by a flap-valve, consisting of a leather or rubber disk, F, and a metallic plate, G, placed on top of said disk F, and fastened thereto by the screw-bolt *g*. On the bottom side of said disk F is fixed another metallic plate, H, while on the top and rear end thereof is a fastening-plate, I, having a screw-bolt, *i*, serving as a means of attachment of said flap-valve to the casing B. The face of said casing B has a notch, J, Fig. 5, through which the bolt *i* is passed; but said notch J serves the further purpose of allowing the withdrawal of the flap-valve through the passage D.

On the bottom side of the plate G there are a number of projections, *f*, and in the bottom

plate, H, there are a corresponding number of apertures, *f'*, registering with the projecting pins *f*, but larger in diameter. These pins force the leather disk F into said apertures *f'*, and thereby securely retain the top plate, G, as well as the bottom plate, H, in proper position. This is an essential feature of my pump, because the leather disk F, when getting dry after having been used, will shrink, and the plates thereby get loose, and are, therefore, very apt to be displaced, so that when the pump is again wanted for use it may be inoperative, and, as in cases of shipwrecking, &c., cause danger and losses.

The back plate, I, is provided with two steady-pins, fitting apertures *j'* in the casing B, and thereby retain the flap-valve in proper position.

In pumps of the kind described, where the cylinder is soldered or riveted to the casing B, it is in most cases necessary to unsolder or unriver the cylinder before access can be had to the flap-valve for repairs, which occupies considerable time, and is more or less expensive. To avoid this objection I have provided the face of the valve-casing with the notch J, which allows the narrower side of the flap-valve to pass through the way or passage D, as clearly illustrated in Figs. 2 and 3, so that in cases of repair nothing is to be done but to unscrew the nut *i*, and then lift the flap-valve from its seat and pass it downward through the passage it is designed to close.

Having thus fully described my invention, I claim—

1. The combination, with the casing B, having the passage D and notch J, of the flap-valve described.

2. The combination, with the disk F, of the plate G, having the projections *f*, and the plate H, provided with the apertures *f'*, the parts being arranged for attachment substantially as and for the object stated.

In testimony that I claim the foregoing as my invention I have hereto set my hand and affixed my seal in the presence of two subscribing witnesses.

JOSEPH SCHERER. [L. S.]

Attest:

MICHAEL J. STARK,
FRANK HIRSCH.