S. STEWARD

Pump-Valves.

No. 148,775. Patented March 17, 1874.

Fig. 1.

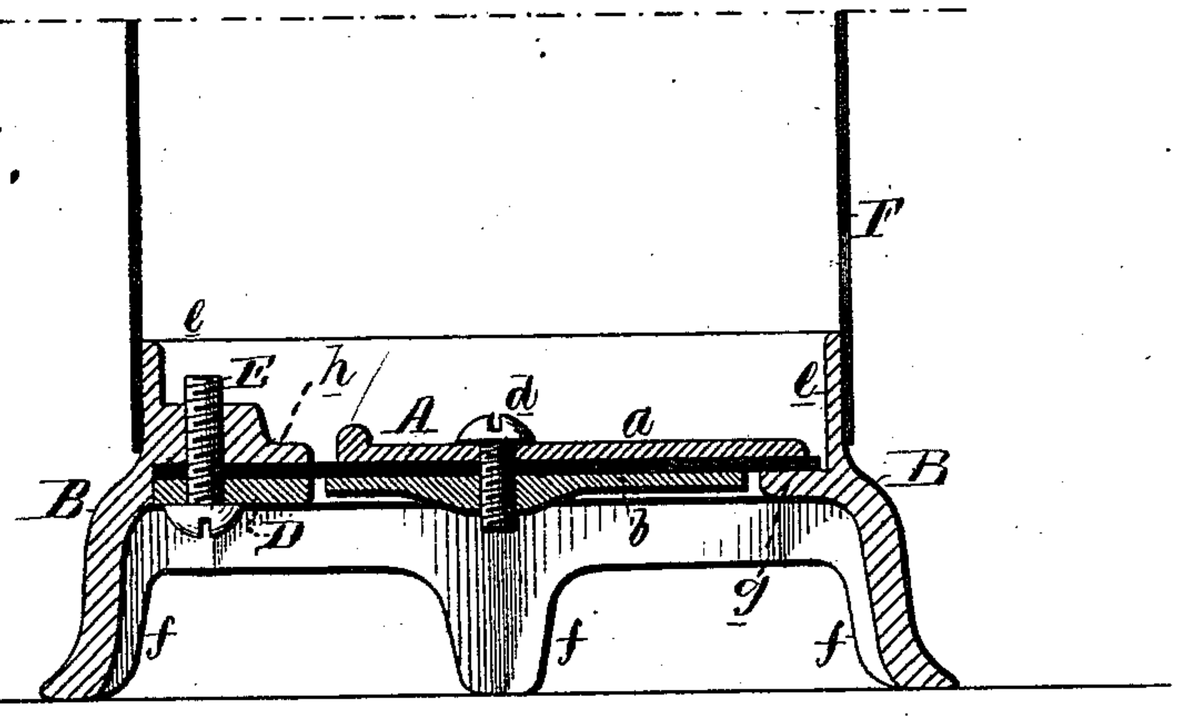
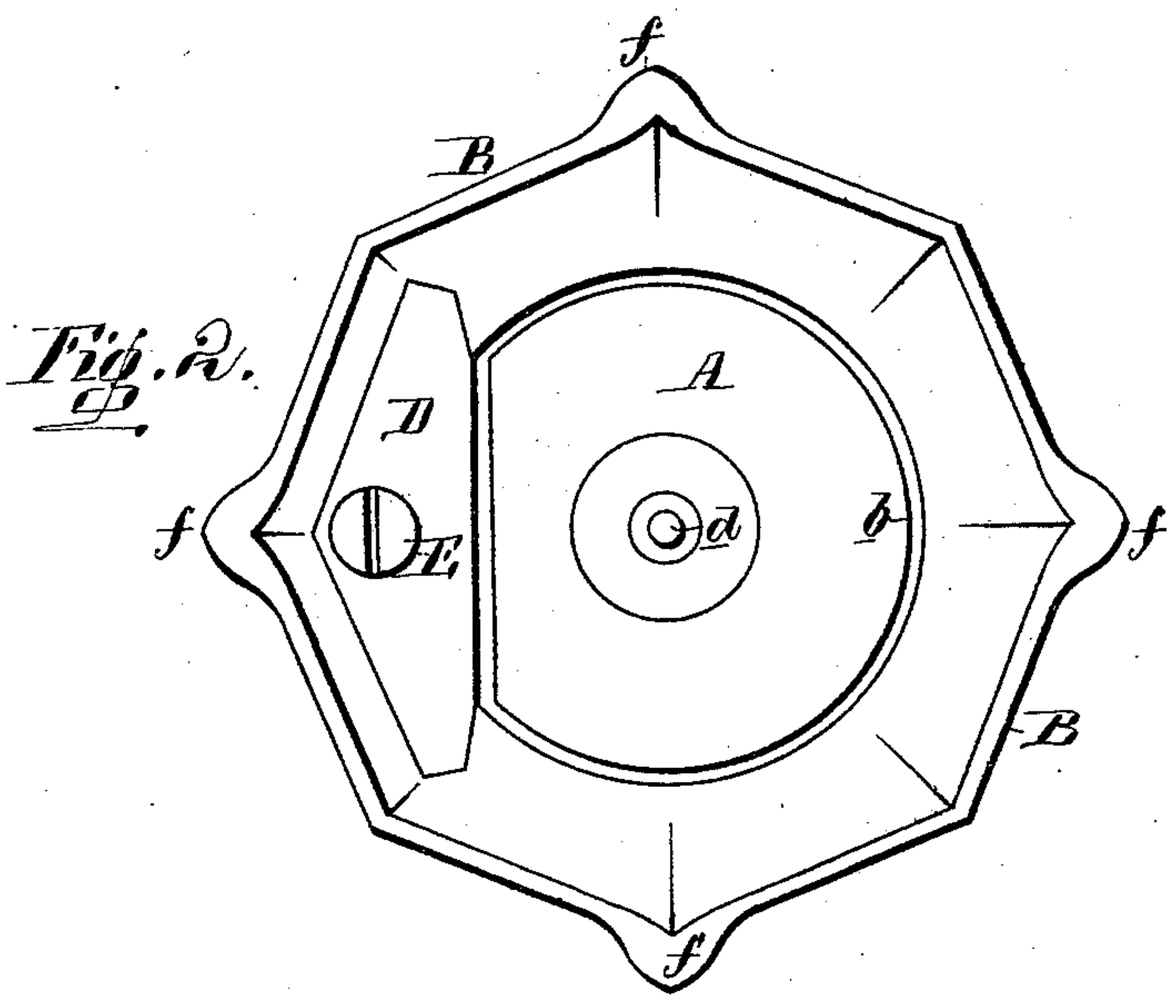


Fig. 2.



Witnesses, Harry Smith
Thomas McElwain

Sidney Steward
by his Attys.
Howson and Son.

UNITED STATES PATENT OFFICE.

SIDNEY STEWARD, OF TRENTON, NEW JERSEY.

IMPROVEMENT IN PUMP-VALVES.

Specification forming part of Letters Patent No. **148,775**, dated March 17, 1874; application filed January 15, 1874.

To all whom it may concern:

Be it known that I, SIDNEY STEWARD, of Trenton, New Jersey, have invented an Improvement in Pump-Valves, of which the following is a specification:

The object of my invention is to facilitate the repairing or the replacing of the valves of sheet-metal pumps, such as are commonly used on canal and other boats, and I attain this object by securing the rubber valve A to the cast-metal base B of the pump by a plate, D, and screw E, applied to the under side of said base. The base B has a flange, *e*, which extends into and is permanently secured to the lower end of the sheet-metal barrel F of the pump, and the said base has four or other suitable number of projections or legs, *f*, which permit the free access of water to the space beneath the valve, the latter opening upward, and closing upon an internal shoulder, *g*, of the base.

In pumps of this class, as heretofore constructed, it has been the practice to secure the valve to the upper side of the base by rivets, or otherwise, in such a manner as to prevent its removal when injured or worn out, until the base had been unsoldered from the pump-barrel. This, leaving out the question of expense, is, for boat-pumps especially, a serious defect, as the pump has frequently to be laid aside as useless, until a tinman can be reached.

It has been usual also to secure the plates *a* and *b* and rubber portion of the valve permanently together by rivets, and to discard the whole when the rubber became worn out.

In my improved pump, the valve is secured at one end to the under side of a projection, *h*, on the base by a screw, E, and clamping-plate D, the upper surface of a flange, *g*, forming the seat of the valve. Owing to this arrangement, no skilled labor whatever is demanded in disconnecting the valve when worn out or injured, all that is necessary being to remove the screw E and clamping-plate D, when the valve can be withdrawn from the under side of the base, and the plates *a* and *b* can be separated and disconnected from the rubber portion of the valve, on simply removing the central screw *d*. In replacing the valve, the plates *a* and *b* can be as readily secured to the opposite sides of a new piece of rubber cut to the required shape, and the latter fastened to the outer side of the base by the screw E and clamping-plate D.

I claim as my invention—

A pump in which the valve A is secured to the under side of a flange, *h*, on the base B, by a screw, E, and plate D, and has its seat upon a flange, *g*, of the said base, all as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SIDNEY STEWARD.

Witnesses:

J. W. MARGERUM,

JOSEPH B. STEWARD.