(No Model.)

J. MASLIN.

STEAM PUMP.

No. 477,949. Patented June 28, 1892.

Fig. 1.

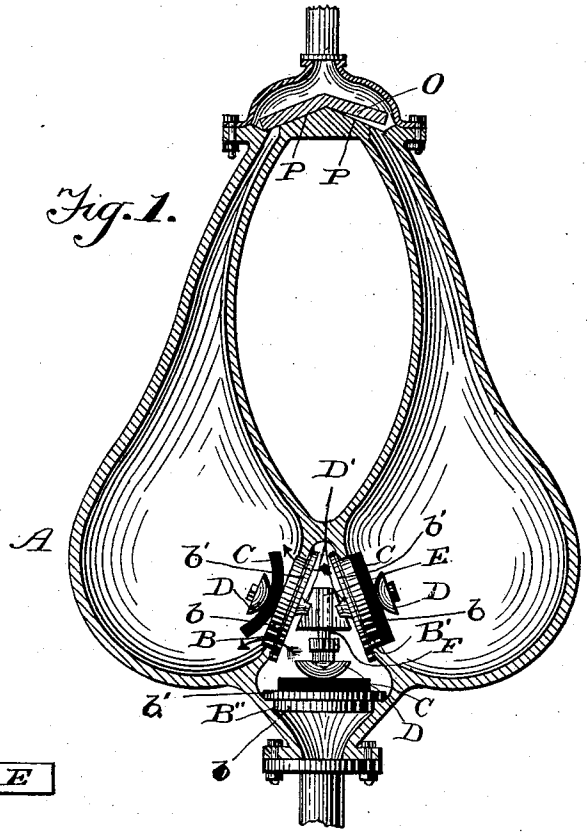


Fig. 3.

Fig. 4.

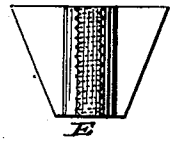
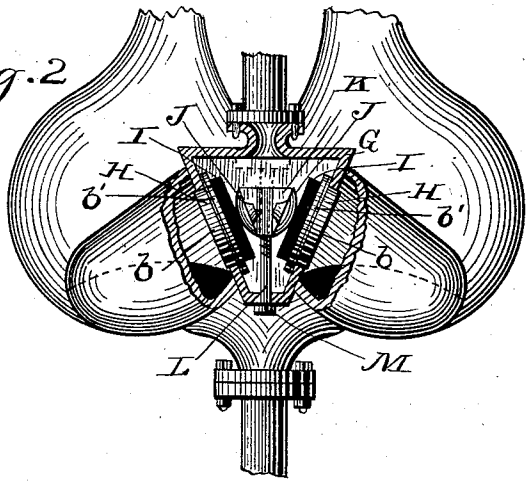


Fig. 2.



Witnesses
Thos. E. Robertson
W. E. Clendaniel

Inventor
John Maslin
By T. J. W. Robertson
Attorney

UNITED STATES PATENT OFFICE.

JOHN MASLIN, OF JERSEY CITY, NEW JERSEY.

STEAM-PUMP.

SPECIFICATION forming part of Letters Patent No. 477,949, dated June 28, 1892.

Application filed February 25, 1892. Serial No. 422,807. (No model.)

To all whom it may concern:

Be it known that I, JOHN MASLIN, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Steam-Pumps, of which the following is a specification, reference being had therein to the accompanying drawings.

This improvement relates more particularly to the arrangement of the valves of that class of pumps commonly known as "pulsometers;" and the invention consists in the peculiar construction, arrangement, and combinations of parts hereinafter more particularly described, and then definitely claimed.

In the accompanying drawings, Figure 1 represents a vertical section of a pump constructed according to my improvement. Fig. 2 is a view of part of a pump, showing the device for fastening the discharge-valves. Figs. 3 and 4 are a side and top view of a wedge used to fasten the valves.

Referring now to the details of the drawings by letter, A represents the shell, which may be of the form shown or of any approved shape, provided with three valve-seats B B′ B″ of gun or other suitable metal and set in apertures of suitable size to receive them formed in the shell, which apertures are preferably formed by chills, so as to require no fitting. On each of these seats is secured a rubber disk-valve C and a guard D in a manner well understood. At the back of the valve-seats B B′ are projecting bosses D′, which are grooved to embrace a wedge E, which is threaded to receive a bolt F, having a double square head and a point below the head, which bears in a depression on the top of the guard over the lower valve. Each of these seats is provided with a projecting rim *b*, that enters the apertures in the shell, and a flange *b′*, which is pressed against the walls of the valve-chamber surrounding the apertures. In the valves shown in Fig. 1 the flange *b′* forms the face of the valve and serves the additional purpose of preventing the valve-seats moving while the wedge is being forced into place by the action of the screw. In the form of valve shown in Fig. 2 the valve is on the opposite side of the disk, and consequently the rim *b* has no function except to prevent the valve moving while the wedge is being forced in place by the screw. From this it will be seen that it is only necessary to set the valve and seats in their places, or with the wedge between the bosses D, and then turn the bolt F to fasten all three of these valves solidly and securely in place.

The discharge-valves and their seats are fastened in a somewhat similar manner. In this case G is a triangular valve-box having apertures to receive the valve-seats H H, carrying the rubber disk-valves I I and the guards J J. Between these guards is set a wedge K, through which and the bottom of the valve-box passes a bolt L, fastened by a nut M, by tightening which the wedge K is drawn downward, and this securely fastens the valves and their seats in place. The wedge, however, may be tapped to receive a threaded bolt passed in from the bottom, or a shorter bolt may be used passing into the top of the wedge and bearing on a cross-bar set across the outlet of the discharge, as shown in dotted lines in Fig. 2.

The arrangement of the neck-valve is also a novel construction, and consists of a double-flap valve O, the two sections being set at a slight angle with each other and the two seats P P therefor being set at a considerably greater angle, so that as one section of the valve is seated the other is off its seat, and thus allows a free passage of the steam through it.

From the above description it will be seen that by my arrangement of the valves the valves in each of the valve-boxes can be secured in place by a single bolt, and thus the making and "assembling" of the pumps are very much cheapened, so that they can be sold at much less cost.

What I claim as new is—

1. The combination of a valve-chamber having openings to receive removable valve-seats with a plurality of removable valve-seats, each provided with a projecting part entering said openings and a rim resting against the walls of the valve-chamber surrounding said openings, a wedge set between said valve-seat, and a screw for forcing said wedge between the valve-seats, and thus holding them in position, substantially as described.

2. The combination of a valve-chamber having openings to receive removable valve-seats with a plurality of valve-seats B, adapted to

rest against the walls of said valve-chamber around said openings and having grooved bosses D′, a wedge E set between the bosses, and a screw for forcing said wedge between said bosses, substantially as shown and described.

3. The combination of a valve-chamber having three openings arranged in a triangle to receive movable valve-seats with three valve-seats pressed against the walls of said chamber around said openings, two of the valve-seats having each a grooved projection D′ on its back, a wedge set between said projections and having a threaded aperture, and a bolt screwed into said aperture and supported by the third valve-seat, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 24th day of February, 1892.

JOHN MASLIN.

Witnesses:
JOHN SCOTT,
WATSON L. REYNOLDS.