No. 654,321. Patented July 24, 1900.

J. J. O'CROWLEY.

VALVE FOR PUMPS.

(Application filed Jan. 25, 1900.)

(No Model.)

FIG. 1.

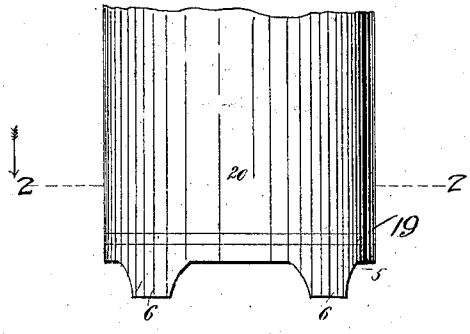


FIG. 2.

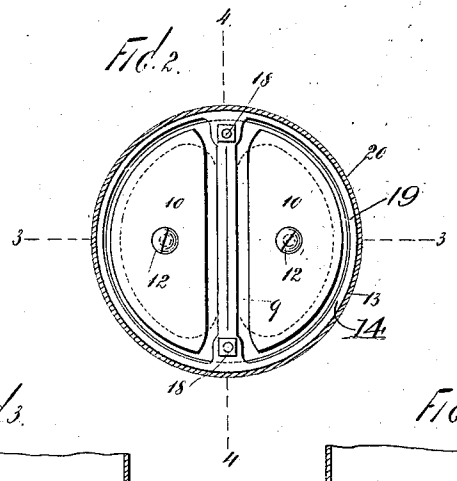


FIG. 3.

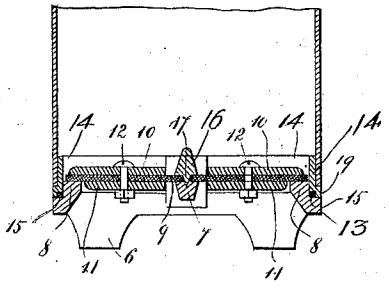
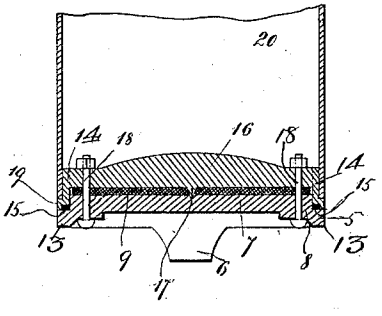


FIG. 4.



WITNESSES

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VALVE FOR PUMPS.

SPECIFICATION forming part of Letters Patent No. 654,321, dated July 24, 1900.

Application filed January 25, 1900. Serial No. 2,747. (No model.)

To all whom it may concern:

Be it known that I, JAMES JOSEPH O'CROWLEY, 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 Valves for Pumps, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to valves for pumps, and particularly to devices of this class for use in pumps which are employed on canal and other boats for removing water from the holds thereof; and the object of the invention is to provide an improved valve of this class which is simple in construction and operation and which is so constructed and mounted in the pump that it may be quickly and easily removed therefrom for repair or for the substitution of a new valve.

The invention consists in the construction and arrangement of parts hereinafter described and constitutes an improvement upon the construction shown in United States Letters Patent No. 623,617, issued to me April 25, 1899.

In the accompanying drawings, forming part of this specification, in which like reference characters denote like parts in the several views, Figure 1 is a side elevation of a pump-body provided with a valve constructed and mounted according to my invention; Fig. 2, a section thereof on the line 2 2 of Fig. 1; Fig. 3, a transverse section thereof upon the line 3 3 of Fig. 2, and Fig. 4 a similar section thereof upon the line 4 4 of Fig. 2.

In the practice of my invention I provide an annular pump-base member 5, provided with suitable legs or supports 6, whereby it may in operative position be maintained slightly raised above the structure upon which it may rest. The base 5 is provided with a diametrical web 7 and with an annular inwardly-directed flange 8 in the same horizontal plane as said web. A circular valve-disk 9, preferably composed of rubber, rubber and canvas, or leather, is arranged upon the web 7 and flange 8 and is provided with two metal plates 10 upon its upper side and two similar plates 11 upon its lower side and respectively in registration with the plate 10. The plates 10 and 11 are thus arranged in pairs, each embracing one plate 10 above and one plate 11 below the valve-disk, and each of said pairs is arranged at one side of the web 7, and, together with the portion of the valve-disk arranged between the two plates constituting the respective pair, operate to normally close the space between the web 7 and the flange 8 at one side of said web. The base member 5 is shouldered annularly exteriorly of the flange 8 at 13, and an annular connecting and reinforcing member 14 fits said shouldered portion resting upon a gasket 15, whereby a water-tight joint is provided. The member 14 is provided with a diametrical web 16, upon the under surface of which is formed a projection 17, which enters a suitable recess in the web 7, and the member 14 and valve-disk 9 are detachably locked in position by means of bolts 18, which are passed through openings in the web 16 and the web 7 and which may be removed to allow the removal of the valve-disk for substitution or repair.

The member 14 is provided exteriorly with a shouldered portion 19, upon which fits the lower end portion of the pump-tube 20, and the member 13 thus serves as a reinforcement for the contiguous portion of the pump-tube, the pump-tube being usually of relatively-thin material and also serves as a connection for the pump-tube and the base member.

The operation of the pump described is the same as that of other pumps of the class, the pump rod and piston, which are not shown, operating within the pump-tube.

I do not limit myself to the specific construction and arrangement of parts herein described, but reserve the right to vary the same within the scope of my invention.

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

1. A pump of the class described, provided with a base member embodying an inwardly-directed flange, a valve which is placed upon said flange, a supplemental member which is seated upon said base member, said base member and said supplemental member being each provided with a transverse web by and between which webs the central portion of said valve is immovably secured, whereby

the sides of said valve are free to move operatively, substantially as shown and described.

2. A pump of the class described, provided with a base member embodying an inwardly-directed flange, a valve which is placed upon said flange, a supplemental member which is seated upon said base member, said base member and said supplemental member being each provided with a transverse web by and between which the central portion of said valve is immovably secured, whereby the sides of said valve are free to move operatively, and means for detachably securing together said transverse webs in position to retain said valve between the same, substantially as shown and described.

3. A pump of the class described, comprising a base member provided with an inwardly-directed flange and with a transverse web connected at its ends with said flange, a supplemental member which is seated upon said base member and provided with a transverse web corresponding with the first-named transverse web, a valve which is placed between said members and which is firmly secured centrally by and between said transverse webs, and means for securing said members in operative position, substantially as shown and described.

4. A pump of the class described, comprising a base member provided with an inwardly-directed flange and with a transverse web connected at its ends with said flange, a supplemental member which is seated upon said base member and provided with a transverse web corresponding with the first-named transverse web, a valve which is placed between said members and which is firmly secured centrally by and between said transverse webs, and means passing through said valve for securing said members in operative position, said means comprising screws or bolts passed through said transverse webs at the ends thereof, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 23d day of January, 1900.

JAMES JOSEPH O'CROWLEY.

Witnesses:

F. A. STEWART,

C. C. OLSEN.