

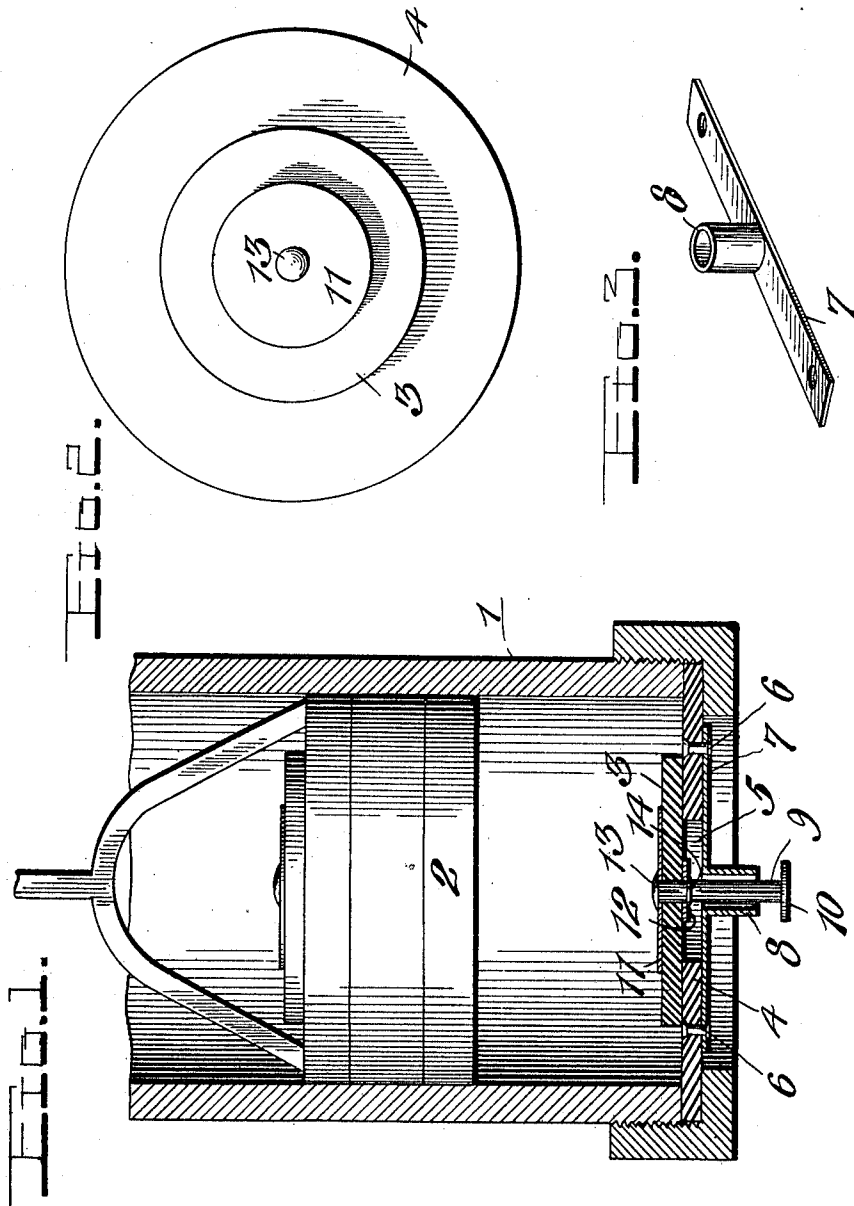
J. J. BALLARD & F. W. PARSONS.

PUMP VALVE.

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980,184.

Patented Jan. 3, 1911.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN J. BALLARD AND FRANK W. PARSONS, OF NEWARK VALLEY, NEW YORK.

PUMP-VALVE.

980,184.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, JOHN J. BALLARD and FRANK W. PARSONS, citizens of the United States, residing at Newark Valley, in the county of Tioga and State of New York, have invented certain new and useful Improvements in Pump-Valves, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in pump valves.

The object of the invention is to provide a simple and practical vibrating valve for a pump or the like, which will have exceptional sealing qualities so that the valve may be used on various kinds of lift and force pumps.

20 With the above and other objects in view, the invention consists of the novel construction, combination and arrangement of parts, hereinafter fully described and claimed, and illustrated in the accompanying drawings in which:—

25 Figure 1 is a sectional view through a portion of one style of pump showing the application of the improved valve thereto; Fig. 2 is a top plan view of the valve; and Fig. 3 is a perspective view of the guide for the valve stem.

30 Referring more particularly to the drawings 1 denotes a pump cylinder, 2 its piston and 3 denotes the improved valve. This valve is composed of a disk of heavy leather or other fibrous, absorbent material, and it is mounted to vibrate toward and from a valve seat of similar material, here shown in the form of a ring or plate 4 having a central opening 5. The valve seat or member 4 which is preferably constructed of leather, 35 may be mounted in any suitable manner, and attached to its bottom face by means of rivets or other fastenings 6, is a cross bar or strip 7 having at its center a depending tubular guide 8 for the stem 9 of the valve 3. The valve 45 is secured to this stem or rod between upper

and lower washer plates 11, 12, by upsetting or heading the upper extremity of the stem, as shown at 13, and crimping an annular stop shoulder 14 in the stem beneath the washer 12 (see Fig. 1).

55 By constructing the valve and its seat of leather or analogous material, which when soaked will have adhesive properties, it will be seen that the sealing action of the valve will especially adapt it for use in pumps 60 which must stay primed a long time, and by mounting and guiding the valve as set forth, the device will be exceedingly strong and durable, and at the same time comparatively inexpensive. In practice we have found 65 this valve exceedingly effective in pumps which handle sand and gravel, and while it may be used with great success in pumps of this character, it will be understood that it may be used in various other lift and force 70 pumps and the like.

Having thus described the invention, what is claimed is:

1. In a pump, a valve seat composed of a plate of leather having an opening, a guide 75 arranged opposite said opening, a valve stem mounted in said guide, and a valve disk fixed to said stem and constructed of leather, as and for the purpose specified.

2. The combination of a plate having an 80 opening and composed of fibrous absorbent material, a cross strip secured to said plate and extending across said opening and formed at its center with a tubular guide member, a valve disk composed of fibrous, 85 absorbent material, a stem passing through the valve and said tubular guide and having a stop head at one end, washer plates arranged on said stem on opposite sides of the valve disk, and retaining shoulders formed 90 on said stem to retain the valve disk and the washer plates in position.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

JOHN J. BALLARD.
FRANK W. PARSONS.

Witnesses:

GURNEY QUICK,
MORGAN HOPLER.