No. 890,997. PATENTED JUNE 16, 1908.

R. W. MURRAY.

VALVE FOR MINE PUMPS.

APPLICATION FILED OCT. 19, 1907.

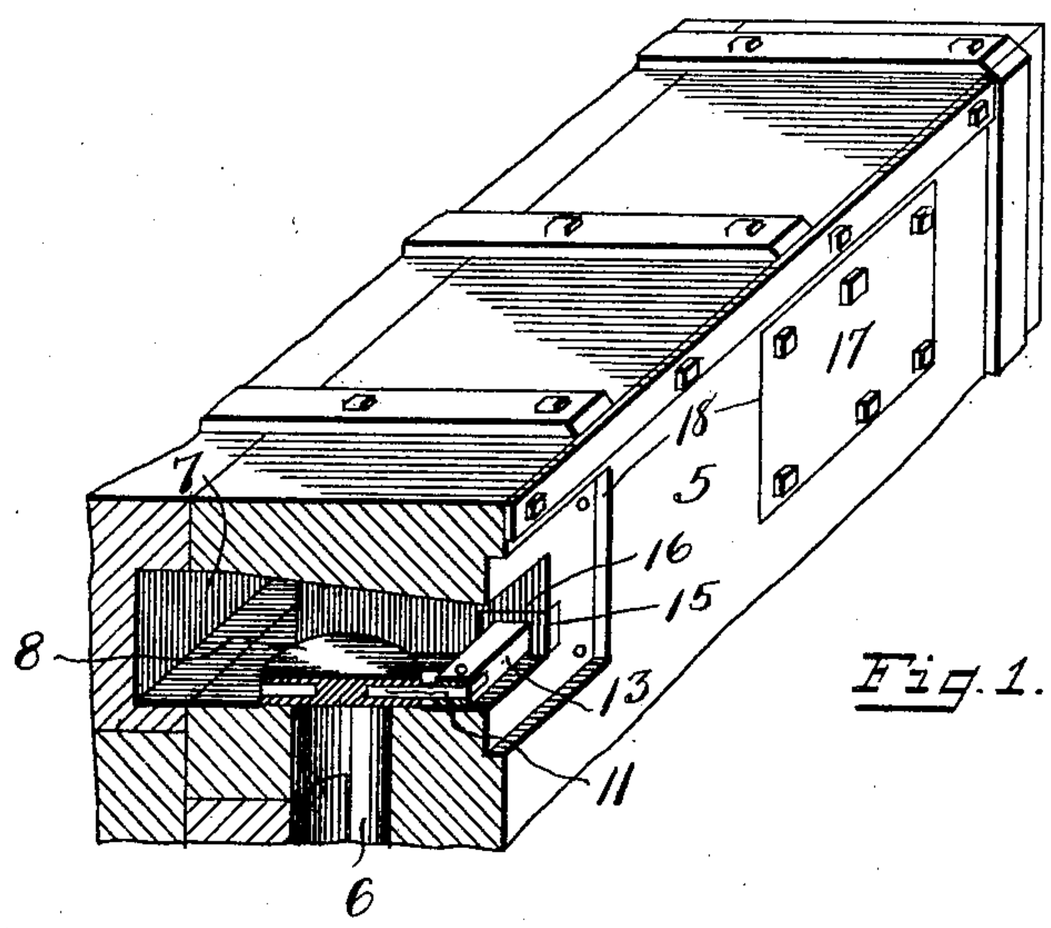

Fig. 1.

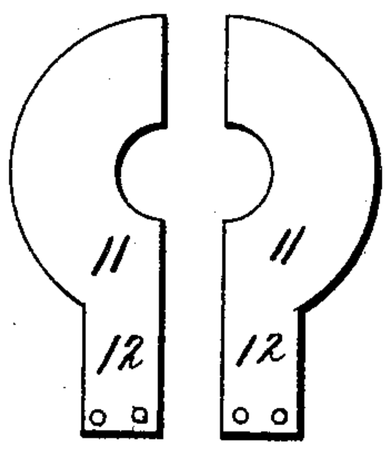

Fig. 2.

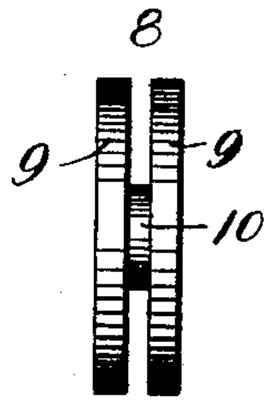

Fig. 3.

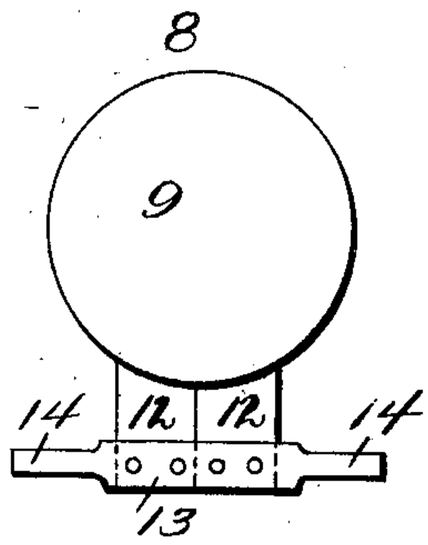

Fig. 4

Witnesses

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VALVE FOR MINE-PUMPS.

No. 890,997. Specification of Letters Patent. Patented June 16, 1908.

Application filed October 19, 1907. Serial No. 398,197.

To all whom it may concern:

Be it known that I, ROBERT W. MURRAY, citizen of the United States, residing at Rendville, in the county of Perry and State of Ohio, have invented certain new and useful Improvements in Valves for Mine-Pumps, of which the following is a specification.

My invention relates to pumps and more particularly to a construction of valve and valve chamber for pumps, whereby the life of the valve will be greatly prolonged and whereby said valves may be readily moved from, or placed in position in the valve chambers.

Further objects and advantages of the invention will be set forth in the detailed description which now follows.

In the accompanying drawing, Figure 1 is a portion of a pump partly in perspective and partly in section. Fig. 2 is a detail view illustrating clamping plates hereinafter described. Fig. 3 is an edge elevation of the valve disk and Fig. 4 is a plan view of the complete valve.

Like numerals designate corresponding parts in all of the figures of the drawing.

Referring to the drawing, the numeral 5 designates a portion of the water end of a pump and 6 designates a port through which the water passes on its way to said pump. This port communicates with a valve chamber 7 and said port is controlled by a valve disk 8. It will be seen by referring to Fig. 3, that this valve disk which is preferably formed of rubber, though it may be formed of other material, comprises two flat, circular members 9 which are connected by a shank 10. The clamping plates 11 are adapted to fit between the disks and engage the shank 10. These clamping plates have rearwardly extending portions 12 which are adapted to be clamped within a bar 13 whereby they are held in proper relation to each other, and in engagement with the shank 10. The ends of the bar 13 are reduced as at 14 to fit into blocks 15, the ends of the bar being pivotally mounted in these blocks. The wall of the valve chamber has been cut away as at 16 to form a recess for the reception of the block 15. It will be understood that the chamber is cut away in this manner upon each side thereof, and that each of the reduced ends 14 of the bar 13 is mounted in a block 15. Plates 17 are adapted to be secured in position in recessed portions 18 of the pump end to close the open side of the valve chambers. It will be seen that when these plates have been removed, the blocks 15 with the valves carried thereby, may be slipped bodily from the valve chambers and others substituted therefor.

The structure of valve herein shown and described is a particularly advantageous one for the reason that both sides thereof are adapted to engage the valve seat, for this valve may be readily inverted and when so inverted, presents a new and unworn surface to the valve seat.

From the foregoing description it will be seen that simple and efficient means are herein provided for accomplishing the objects of the invention but while the elements shown and described are well adapted to serve the purpose for which they are intended, it is to be understood that the invention is not limited to the precise construction set forth, but includes within its purview such changes as may be made within the scope of the appended claims.

What I claim is:

1. The combination with a pump and valve chamber thereof, of blocks slidably mounted in the walls of said valve chamber, a bar pivotally mounted in said blocks and extending across said valve chamber and a valve carried by said bar, said valve having similar upper and lower faces to permit it to be used as a valve when inverted.

2. In a device of the character described, a valve comprising a pair of disks connected by a shank and a pair of plates adapted to engage said shank and to lie between said disks, and a member to which said plates are secured, said member being adapted to hingedly support the valve and either of said disks being adapted to engage a valve seat.

3. In a device of the character described, a valve comprising a pair of rubber disks connected by a shank and a pair of plates adapted to lie between said disks and to fit about said shank.

4. In a device of the character described, a valve comprising a pair of rubber disks connected by a shank, a pair of plates adapted to lie between said disks and to fit about said shank, and a member to which said plates are secured, said member being adapted to hingedly support said disks.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT W. MURRAY.

Witnesses:
JOHN M. SWEENEY,
GEORGE T. RODGERS.