J. D. TWIGGS, JR.

VALVE.

APPLICATION FILED JAN. 29, 1909.

955,018.

Patented Apr. 12, 1910.

Fig. 1.

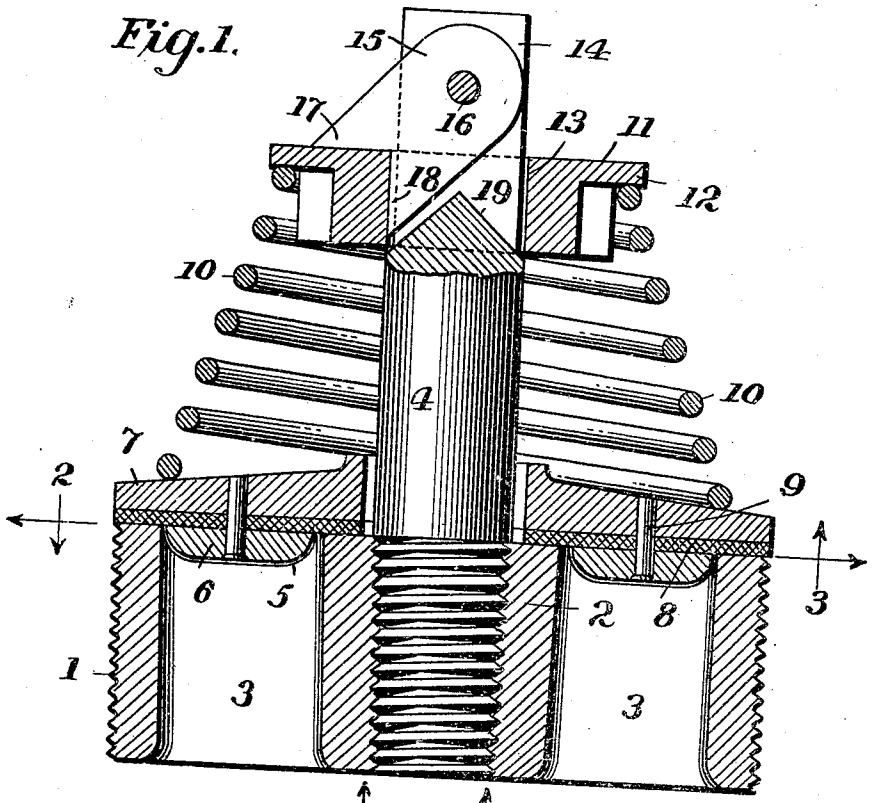


Fig. 2.

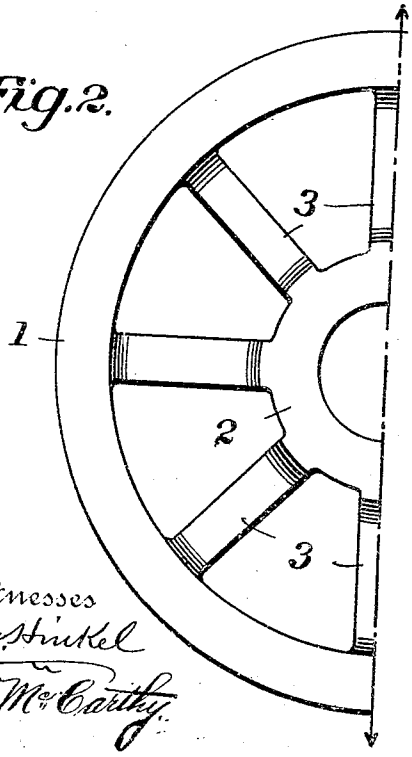
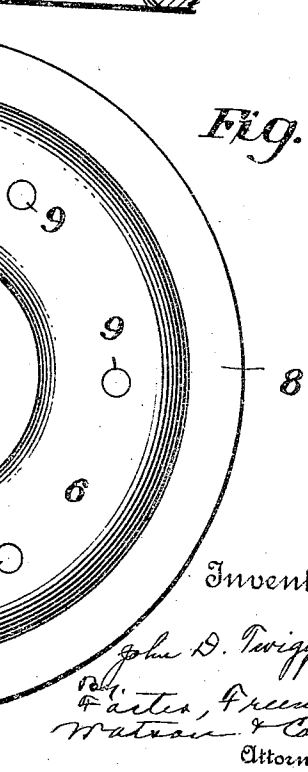


Fig. 3.



Witnesses

J. G. Stinkel

J. J. McCarthy.

Inventor

John D. Twiggs Jr

by Carter, Freeman, Watson & Coit

Attorneys.

UNITED STATES PATENT OFFICE.

JOHN D. TWIGGS, JR., OF AUGUSTA, GEORGIA.

VALVE.

955,018. Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed January 29, 1909. Serial No. 474,965.

To all whom it may concern:

Be it known that I, JOHN D. TWIGGS, Jr., a citizen of the United States and resident of Augusta, in the county of Richmond and State of Georgia, have invented certain new and useful Improvements in Valves, of which the following is a specification.

This invention relates to valves for pumps and has particular reference to the retainer for holding the valve plate in place and to the construction of the valve and its seat.

The novel features of the invention will be apparent from the following description taken in connection with the accompanying drawings.

In the drawings: Figure 1 is a sectional view of the device; Fig. 2 is a partial plan view of the valve seat; and Fig. 3 is a partial bottom plan view of the valve plate.

As will be seen by reference to the drawings, the valve seat is made up of two concentric ring sections 1 and 2, joined by the spider arms 3. The ring 1 has screw threads upon its outer section and securing it in place, and the ring 2 has internal screw threads to receive the lower end of the stem 4. The upper edges of the arms 3 have rounded depressions 5, and these depressions receive the ring 6 having a correspondingly rounded lower surface and being carried by the valve plate 7. The ring 6 and plate 7 are preferably made of metal, and between them there is a disk 8 of yielding material such as leather held in place by rivets or bolts 9 passing through the ring, disk and plate.

Bearing upon the top of the plate 7 there is a coiled spring 10 which is held at its upper end by the abutment 11 movable lengthwise of the stem 4, and it will be noted that the spring has a conical outline so that the different coils may nest within each other when the spring is compressed. The abutment 11 has the flange 12 against which the spring bears and the central opening 13 fitting the stem 4.

The upper end of the stem 4 is provided with a longitudinal slot 14 in which the latch 15 is mounted upon pivot pin 16. The lower end of this latch is made angular in form having the two wings 17 and 18, and it will be noted that when hanging in its lower position the lower end will strike the bottom 19 of the slot and will thus uphold one point of the latch projecting from the stem at substantially right angles, and in the path of the abutment 11. The abutment 11 being pressed upward by the spring engages the point 17 of the latch and the latch is prevented from turning farther upon its pivot by the engagement of the point 18 with the side of the abutment, and thus the latch holds the abutment in proper position. When it is desired to remove the abutment, spring and valve plate, it is merely necessary to press the abutment 11 down below the point 18 and to then turn the latch upon its pivot until it is in a vertical position with its side within the margin of the stem. The parts can then slide off the upper end of the abutment and can be changed or repaired. It will be observed that jars or shocks will not move the latch above described out of operative position, but that it can be very easily turned to position for removal of the parts. The construction of the valve plate and the valve seat having the rounded ring 6 fitting between the concentric rings of the seat and in the rounded depressions in the arms makes a device which will be properly centered when forced to its seat, and the leather disk forms a water tight valve.

Having thus described the invention, what is claimed is:

1. In a device of the class described, the combination with a valve seat, of a valve plate fitting said seat, a central stem on said seat extending through said valve plate, an abutment freely movable on said stem, a spring between said abutment and valve plate, and a catch having an angular lower end pivoted in a slot in the upper end of said stem.

2. In a device of the class described, the combination with a valve seat, of a valve plate fitting said seat, a central stem on said seat extending through said valve plate, an abutment freely movable on said stem, a spring between said abutment and valve

plate, and a catch having an angular lower end pivoted in a slot in the upper end of said stem in such position as to have its angular end normally projecting therefrom in the way of said abutment and adapted to be turned up in said slot so as to permit said abutment to pass.

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

JOHN D. TWIGGS, JR.

Witnesses:
PAUL F. GOULEY,
R. E. REYNOLDS.