

D. F. STAYMAN.
HYDRAULIC VALVE.
APPLICATION FILED JUNE 10, 1919.

1,385,932.

Patented July 26, 1921.

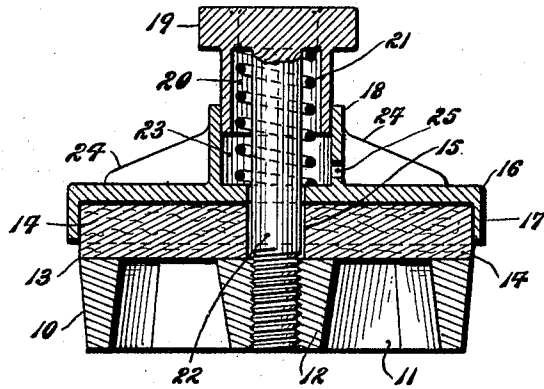


Fig. 1

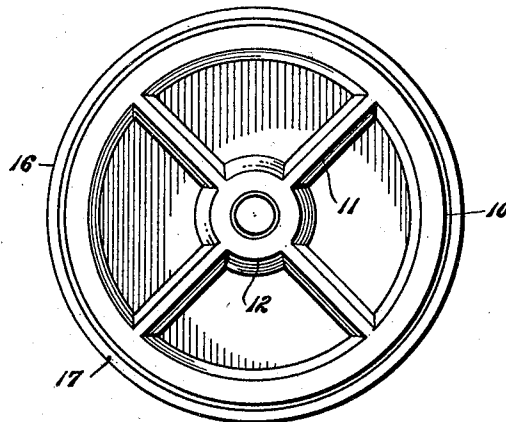


Fig. 2

WITNESS:

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HYDRAULIC VALVE.

1,385,932.

Specification of Letters Patent.

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Application filed June 10, 1919. Serial No. 303,049.

To all whom it may concern:

Be it known that I, DAVID F. STAYMAN, a citizen of the United States, residing at Baltimore, State of Maryland, have invented new and useful Improvements in Hydraulic Valves, of which the following is a specification.

The invention relates to valves and more particularly to hydraulic valves and has for an object to provide a valve of simple construction, involving few parts that can be readily assembled and as easily removed from one another for the purpose of repair or replacement.

Among other features the invention comprehends a valve particularly adapted for use in connection with pumps, in which the water or other fluid is discharged at successive intervals and in which instance it is therefore desirable to have a valve involving simple structure and mechanism and which will readily yield to the action of a fluid in its passage through the pump.

In the further disclosure of the invention, reference is to be had to the accompanying drawings, constituting a part of this specification, in which similar characters of reference, denote corresponding parts in all the views, and in which,—

Figure 1— is a vertical sectional view taken through the valve, and

Fig. 2— is a bottom plan view.

Referring more particularly to the views, the numeral 10 indicates a body which is preferably reinforced with suitable radial ribs 11 and a central boss 12 from which the ribs radiate, the upper face of the body 10, forming a valve seat 13 for a valve element 14, which may be in the nature of a fiber disk or the like, the valve element having a central opening 15 therethrough. A top or cover 16 is provided and fits snugly over the valve element as shown, also including an annular rim 17 fitting around the periphery of the valve and the top is formed with a tubular guide 18 which with a headed member or part 19 forms a housing 20 of an expandible helical spring 21 which is adapted to encircle a stud 22 projecting from the part 19 to extend through a chamber 23 formed by the housing and also pass through the top and valve element and thread into the boss 12.

The tubular guide or bearing 18 is provided with suitable reinforcing ribs 24 and has an aperture 25 therein, as shown.

It will be noted that the stud 22 has the spring encircling the same with the spring seated against the underside of the headed portion of the part 21, the other end of the spring seating against the top, within the housing, so that the spring will be maintained in its central operating position at all times.

With this construction it will be seen that there is provided a valve which is of simple construction and in which the removal of the stud from the threaded engagement with the boss of the body, permits of removing all of the parts relative to each other for the purpose of repair or replacement. By providing the aperture 25 the water or other fluid pumped through the valve can pass into the housing and thus aid in cushioning the valve in its action.

From the foregoing description it will be clearly seen that the construction set forth provides a valve in which the various parts when assembled as shown, cooperate to insure effective action of the valve element and although I have mentioned that this valve may be employed in connection with hydraulic pumps, it will be understood that it may be adapted for various other purposes.

Having described my invention, I claim,—

In a device of the class described, a valve element, a body on which said valve is seated, and a cylinder for forming an air cushion, said cylinder comprising upper and lower tubular sections having telescoping connection, the lower section having a port therein and including a flanged cover plate for the valve, the upper section including a head, a stem formed on the head, concentric with the walls of the upper section of the cylinder, the stem projecting through the valve and into said body, to which it is secured, and a spring encircling the stem within the two part cylinder thus formed, and spaced from the walls of each.

In testimony whereof I affix my signature.

DAVID F. STAYMAN.