

No. 715,726.

Patented Dec. 9, 1902.

D. M. WRIGHT.

TANK VALVE.

(Application filed May 6, 1902.)

(No Model.)

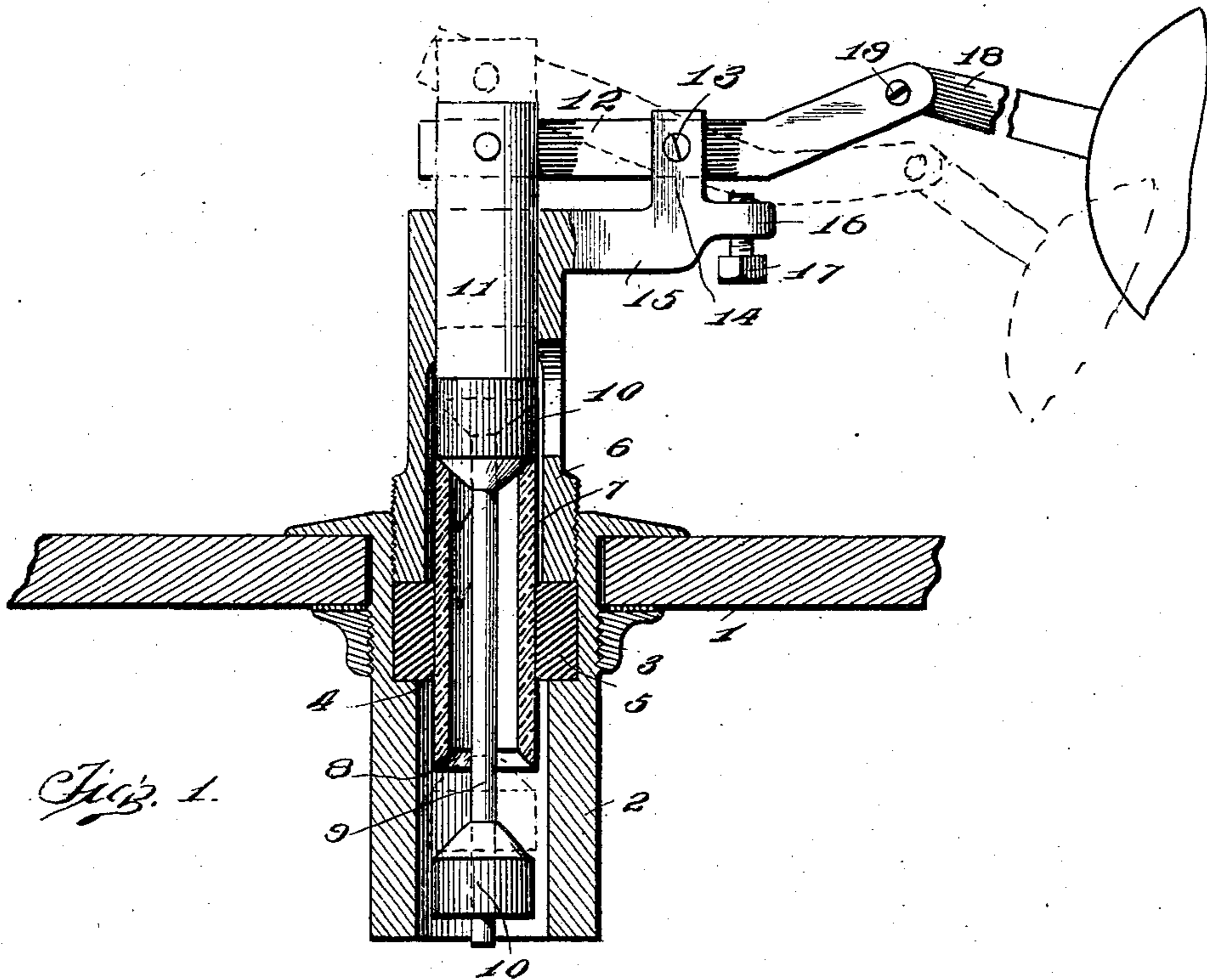


Fig. 1.

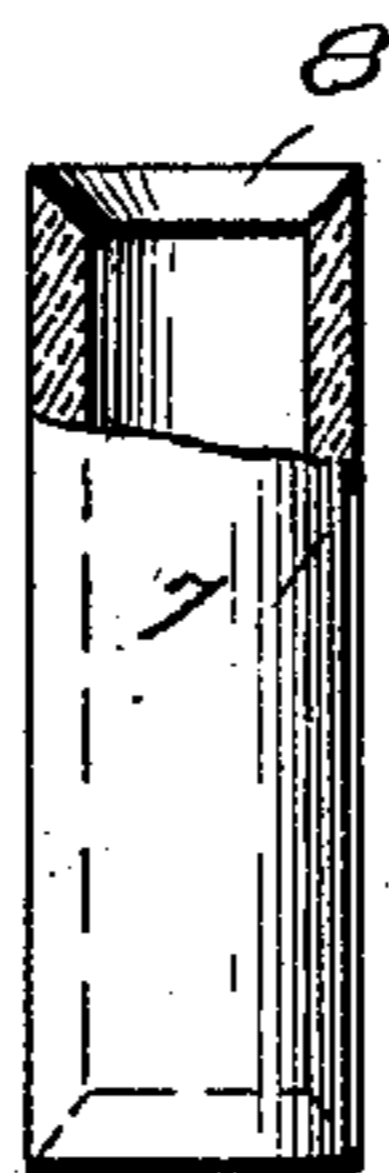


Fig. 2.

Witnesses
L. G. Handy
Edgar M. Kitchin

Inventor
Daniel M. Wright
By
Mason Fenwick & Lawrence
his Attorneys

UNITED STATES PATENT OFFICE.

DANIEL MILLER WRIGHT, OF SCRANTON, PENNSYLVANIA.

TANK-VALVE.

SPECIFICATION forming part of Letters Patent No. 715,726, dated December 9, 1902.

Application filed May 6, 1902. Serial No. 106,167. (No model.)

To all whom it may concern:

Be it known that I, DANIEL MILLER WRIGHT, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Tank-Valves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in tank-valves; and the object in view is the production of a mechanism capable of effectually controlling the supply of water to a tank provided with means for stopping such flow in the event of any of the parts becoming broken.

With this and other objects in view it consists, in combination with a suitable casing, of a double-valve seat, a double valve, means for seating one portion of said valve upon its respective portion of said seat, and means for automatically seating the other portion of said valve upon the breaking of any of the parts.

It also consists in certain other novel constructions, combination, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a longitudinal vertical section through a tank-valve embodying the features of the present invention. Fig. 2 represents a detail side elevation of a double-valve seat.

In the art to which the present invention relates it has been found desirable not only to effectually control the supply of water to the tank by means of a valve when in a perfectly-working condition, but also when the parts have become inoperative because of breakage, and in order to attain this result to the best advantage and also in order that certain other valuable functions may be attained I employ the elements disclosed in the accompanying drawings, in which—

The numeral 1 indicates a portion of the bottom of any suitable tank through which is passed a flanged sleeve 2, clamped in position in the well-known manner by a nut 3. The sleeve 2 is provided with an interior annular shoulder 4, adapted to receive a rubber gasket 5, the inner surface of said sleeve

above the shoulder 4 being threaded for receiving the threaded end of a tube 6, which in operation is designed to be screwed down upon the gasket 5 for compressing the same vertically and expanding it horizontally. Passing through the gasket 5 is a glass tube 7, formed on either end with inwardly-extending bevels 8 8 for forming a double-valve seat, one at each end of the tube. The said glass tube is held in position by the clamping of the gasket 5 as the same is compressed vertically and expanded horizontally by the downward movement of the tube 6. Extending longitudinally through the center of tube 7 is a valve-stem 9, carrying valves 10 10, one being secured at each end thereof. The upper end of the stem 9 is secured to a head 11, extending through the upper end of tube 6 and being pivotally attached to a suitable lever 12, the said lever being in turn pivoted, as at 13, to a fulcrum-block 14, carried by an arm 15, extending laterally from the upper end of tube 6. The arm 15 is preferably provided with a lug 16, through which is passed a set-screw 17, designed to be adjusted vertically for controlling the length of pivotal movement of the lever 12. At the outer end of lever 12 is connected a float-carrying arm 18, preferably by means of a clamping-bolt 19, which is designed to facilitate the adjustment of the said arm 18 to various angles relative to the lever 12.

In operation the parts having been assembled, as indicated in Fig. 1, with the glass tube 7 tightly clamped in position by means of the gasket 5 and the upper valve 10 resting upon its seat in the upper end of said tube the water is permitted to flow from said tank, thereby permitting the float-arm 18 to move downwardly until the lever 12 is caused to contact with the upper end of the screw 17, whereby the said upper valve 10 will be raised from its seat, permitting the inflow of water until the arm 18 is again raised to its normal position and resealed the upper valve 10. This operation will continue unless by some accident the arm 18 or the lever 12 becomes broken or possibly some of the other surrounding parts, whereby the upper valve 10 will no longer retain its seat, and the action of the water against the lower valve 10 is permitted to raise the same to its seat. It

will be noted that as long as the parts carried by the tube 6 are inoperative the pressure of the water against the lower valve 10 will retain the same in its seat and prevent the entrance of water into the tank. It will be further observed that by an adjustment of set-screw 17 the distance to which the upper valve 10 may move away from its seat in normal operation and the nearness of approach of the lower valve 10 to its seat may be controlled. The adjustment of arm 18 relative to lever 12 will also effect a controlling of the relative position of the said valves in the same manner as the adjustment of the set-screw 17.

Although I have specifically set forth a particular embodiment of elements designed to accomplish a given result, yet I wish it to be understood that I shall not limit myself to the exact details enumerated, but shall deviate therefrom to any degree within the spirit and scope of the invention, whereby a similar result may be attained.

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

1. A device of the class described, comprising a suitable sleeve provided on its interior with a shoulder, an elastic gasket seated on said shoulder, a tube threaded into said sleeve and adapted to contact with and compress the elastic gasket vertically and expand it laterally, a glass tube extended through said gasket and clamped therein through the operation of the same, the ends of the said glass tube forming valve-seats, a

stem extending through the tube and carrying at each end a valve adapted to rest in the respective seats formed thereon, and means for controlling the seating of the valves, substantially as described.

2. A device of the class described, comprising a sleeve, an annular shoulder formed on the interior thereof, an elastic gasket resting on said shoulder, a tube threaded into the end of said sleeve, the upper end of said tube having a lateral extension carrying a fulcrum-block, a glass tube extending through said gasket and forming a valve-seat, a valve for said seat, and a weighted lever mounted in the fulcrum-block and the lateral extension of the sleeve and connected with said valve for controlling the same, substantially as described.

3. A device of the class described, comprising a sleeve, an annular shoulder formed in the interior thereof, an elastic gasket supported on said shoulder, a tube passed into the end of said sleeve into contact with said gasket, a glass tube extending through said gasket and forming a valve-seat, a valve for said seat and means carried by said first-mentioned tube and governed by the intake through said glass tube for controlling the position of said valve, substantially as described.

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

DANIEL MILLER WRIGHT.

Witnesses:

W. W. BAYLOR,
G. BEER.