(No Model.)

C. M. CALLANAN.

GLOBE VALVE.

No. 605,389. Patented June 7, 1898.

Fig. 3.

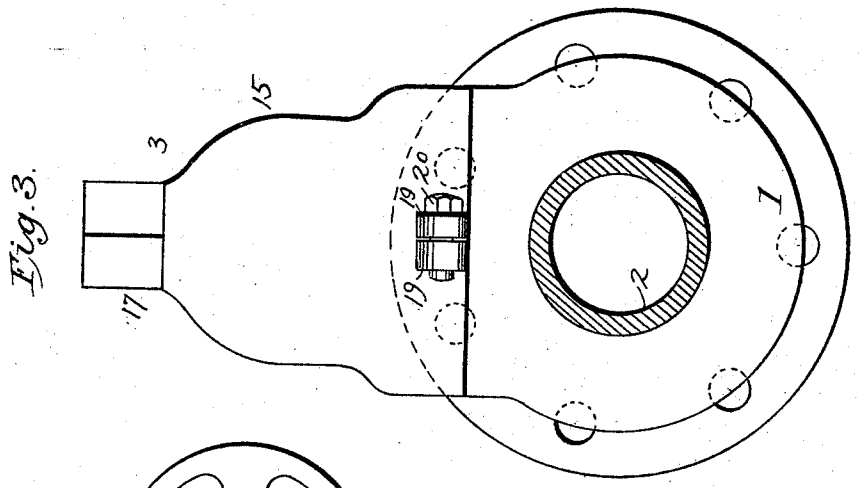


Fig. 2.

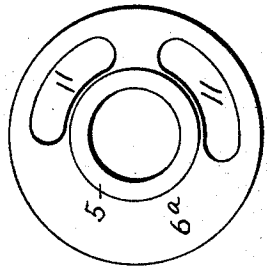
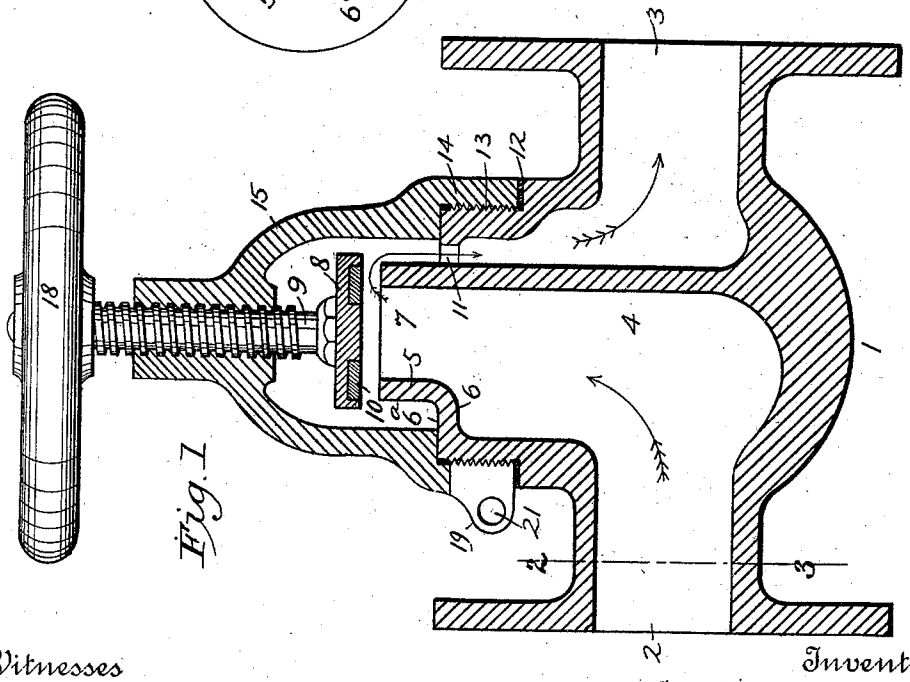


Fig. 1.



Witnesses
W. W. Hollingsworth
Victor J. Evans.

Inventor
Cornelius M. Callanan,

By John Wedderburn. Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CORNELIUS M. CALLANAN, OF BUFFALO, NEW YORK.

GLOBE-VALVE.

SPECIFICATION forming part of Letters Patent No. 605,389, dated June 7, 1898.

Application filed May 15, 1897. Serial No. 636,736. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS M. CALLANAN, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Globe-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.

The object of my invention is to produce a globe-valve provided with a cap which may be readily attached or detached and with a valve which by reason of its peculiar construction may be trued with facility without necessity for its removal and which by reason of certain peculiarities of construction of the valve-casing will not be liable to distortion under excessive pressure or high temperature.

In the accompanying drawings, forming a part of this specification, Figure 1 is a central vertical section through the valve-casing and valve. Fig. 2 is a top plan with the cap and valve removed. Fig. 3 is a section on the line 2 3 of Fig. 1, showing the inlet-flange in dotted lines.

Referring to the numerals on the drawings, 1 indicates a globe-valve casing, provided, as usual, with inlet and outlet openings 2 and 3 and with a partition or wall 4, extending from the bottom of the casing and designed to include upon its inlet side a valve-seat 5.

6 indicates a dome provided at the top of the valve and having a dome-plate 6^a, which is pierced at its center by the valve-port 7, defined by the upwardly-projecting annular valve-seat 5, designed for the reception of the valve 8, carried upon the extremity of the valve-stem 9 and provided upon its lower face with the annular composition or other packing 10, designed to contact with the upper edge of the valve-seat 5.

11 indicates a pair of outlet-ports through the dome-plate 6^a, upon the exterior of the valve-seat, and through which the fluid is designed to pass from the valve to the outlet 3. The dome of the valve-casing is preferably recessed, as at 12, and is provided with annular screw-threads 13, designed for the reception of internal screw-threads upon the threaded flange 14 of the valve-cap 15, designed for the reception of the threaded stem 9 of the valve.

17 indicates a squared wrench-collar projecting from the top of the valve-cap and designed to receive the wrench when it is desired to screw or unscrew the cap from the dome of the valve-casing. Any suitable means for rotating the valve-stem may be employed—as, for instance, the usual hand-wheel 18. In practice where an ordinary screw-threaded cap is employed upon the valve-casing its removal is practically impossible after the valve has been used for any considerable length of time, for the reason that the internal pressure will cause the fluid to be forced between the screw-threads, thereby facilitating corrosion. I have therefore made provision for releasing the engaging threads of the dome and cap, whereby any corrosion which has served to bind the parts together will be destroyed so far as its adhesive power interferes with the removal of the cap. To this end I slit the threaded flange of the cap transversely and provide clamping-lugs 19 upon opposite sides of the slit, designed to be clamped together or separated by means of a screw-bolt 20, passing through correlative bores 21 in the lugs. By this means when it is desired to remove the cap the screw-bolt is removed from the clamping-lugs, and the resiliency of the screw-flange will cause the engaging faces of the screw-threads to be separated sufficiently to reduce the frictional contact to a minimum. The wrench is then applied to the wrench-collar 17 and the screw-cap is readily removed.

In the event of the valve-seat having become cut or untrued it may, by reason of its projection above the dome-plate, be readily trued by the use of an ordinary file, and by reason of its connection with the surrounding dome-plate and the partition 4 it is practically impossible for the valve-seat to become distorted under a high pressure or temperature.

It will be observed from the foregoing that I have produced a globe-valve the cap of which may be readily removed and the valve-seat of which may be readily trued without necessity for removal or for the employment of expensive reseating mechanism.

I do not desire to limit myself to the details of construction herein shown and described, but reserve to myself the right to change, modify, or vary such details within the scope of my invention.

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

1. In combination a valve-casing and a cap therefor screw-threaded to the said casing, one of the said parts being slitted and having clamping-lugs projecting from opposite sides of the slit, and a screw-bolt designed to be received by the lugs as and for the purpose set forth.

2. The combination with a valve-casing provided with an externally-screw-threaded dome, of a valve-cap provided with a slit and internally-screw-threaded flange, a pair of clamping-lugs projecting from the threaded flange of the cap upon the opposite sides of the slit, and a screw-bolt, designed to be received by the clamping-lugs, substantially as specified.

3. The combination with a valve-casing provided with a dome-plate having ports and a projecting annular valve-seat, of a valve-cap provided with an internally-screw-threaded and transversely-slitted thread-flange, clamping-lugs projecting from the threaded flange of the cap and a clamping screw-bolt designed to be received by the lugs, substantially as specified.

4. The combination with a valve-casing provided with a dome-plate having ports and an upwardly-projecting annular valve-seat, of a valve-cap provided with a slitted thread-flange internally screw-threaded and designed to engage corresponding threads upon the dome of the valve-casing, clamping-lugs upon the threaded flange, a bolt designed to be received by the lugs, a wrench-collar upon the upper extremity of the cap, a valve-stem carried by said cap and provided with a valve in operative proximity to the valve-seat and means for actuating said valve, substantially as specified.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CORNELIUS M. CALLANAN.

Witnesses:

HERMAN M. TRAUT,

JAMES BROWN.