

(No Model.)

T. HOLLAND.  
Globe Valve.

No. 235,086.

Patented Dec. 7, 1880.

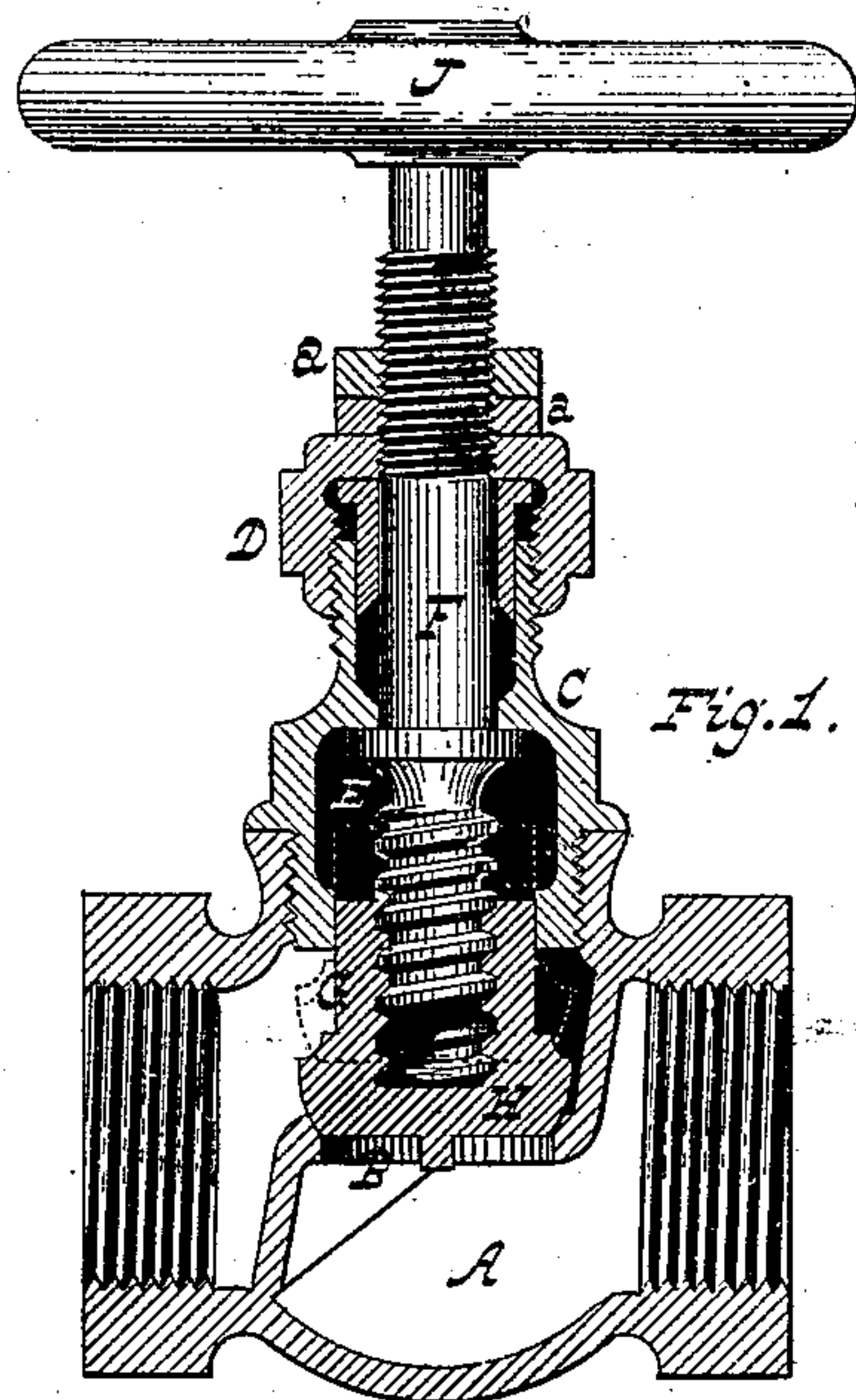


Fig. 1.

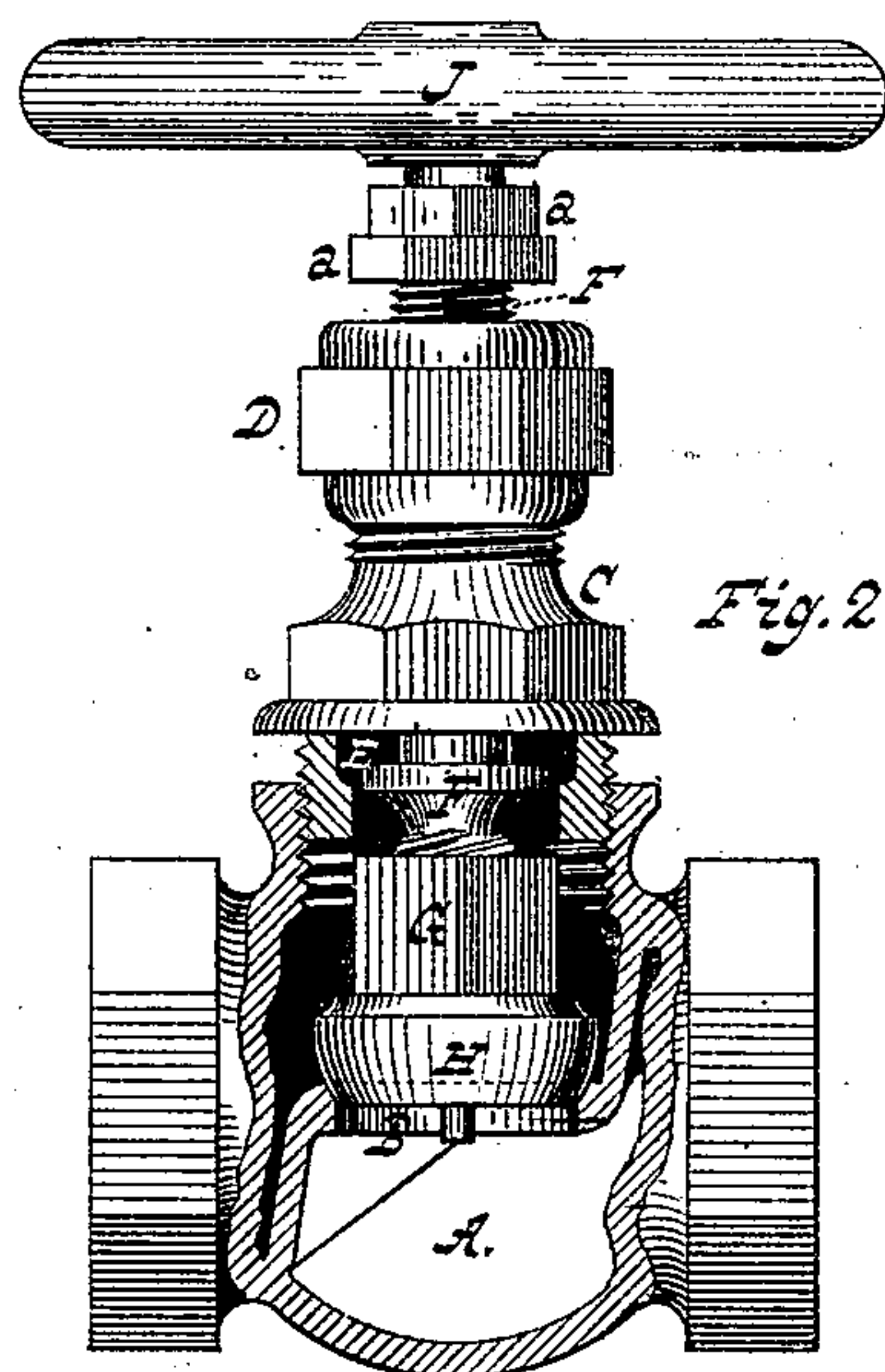


Fig. 2.

Witnesses:

Joseph Seeburger.  
Frank W. Huntley.

Inventor:

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Atty.

# UNITED STATES PATENT OFFICE.

TIMOTHY HOLLAND, OF TROY, NEW YORK.

## GLOBE-VALVE.

SPECIFICATION forming part of Letters Patent No. 235,086, dated December 7, 1880.

Application filed May 13, 1880. (No model.)

*To all whom it may concern :*

Be it known that I, TIMOTHY HOLLAND, of the city of Troy, in the county of Rensselaer and State of New York, have invented a new and useful Improvement in Globe-Valves, of which the following is a specification.

This invention relates to that class of globe-valves commonly known as "self-grinding;" and it consists in so constructing and arranging valves of this class that although the valve-disk may be rotated upon the seat by means of the spindle, as usual during the process of regrinding, the rotation of said disk may be checked when operated by the spindle to open or close the valve.

The object of this arrangement is to prevent the valve from being injured by small particles of gravel, iron-scale, or other gritty substances becoming lodged and ground between the disk and seat, which often occurs in valves of ordinary construction and renders frequent regrinding necessary.

Many attempts have heretofore been made to remedy this defect in valves by using various forms of loose disks, with locking devices, to secure the same to spindle, to be rotated thereby when needed for regrinding purposes; but in most of these contrivances expensive and complicated combinations have been used, and for that reason found objectionable.

In my improved device, as hereinafter more fully described, I have effectually accomplished the same results in a simpler and more economical manner.

In the accompanying drawings, Figure 1 is a section of said improved valve in a vertical position; and Fig. 2 is an elevation of same, partly in section, showing arrangement during said process of regrinding.

Similar letters of reference in each indicate corresponding parts.

A represents the globe or spherical shell common to valves of this class, with valve-seat B, molded as usual, in connection therewith.

C represents the cap screwed into neck of globe, as shown in Fig. 1, provided with the customary stuffing-box, D, also with the internal chamber, E, to receive screw-spindle on valve-stem F, and admit the nut or follower G engaging therewith, formed in conjunction with the valve-disk H, the mouth or open end of said chamber being contracted slightly and fitted to conform to, and engage with, the rect-

angular outer surfaces or sides of said follower, as more clearly shown in Fig. 2.

The valve-stem aforesaid, extending centrally outward through stuffing-box, may be suitably threaded beyond the same to receive the twin check-nuts *a a*, and may also be provided with the usual hand-wheel J.

The operation of this device is as follows: When adjusted for use, as in Fig. 1, (in both views, for convenience of description, the valve being shown in a vertical position,) by screwing the check-nuts down upon the top of stuffing-box, the flange or collar shown on valve-stem above screw-spindle is brought in contact with the top of chamber in cap, when, by turning the hand-wheel, the follower, and consequently the disk, may be raised or lowered through agency of said spindle, and the valve opened or closed, the position of same when raised being shown by dotted lines in Fig. 1, said check-nuts and flange on valve-stem respectively serving to prevent valve from closing when opened or opening when closed.

By the locking formation of cap-chamber and follower previously described, the disk may be prevented from turning upon the seat when operated by the spindle, as aforesaid.

When regrinding becomes necessary, by screwing up the check-nuts and partially unscrewing the cap, the valve-stem may be lowered and the follower released from the chamber, as shown in Fig. 2, so that the disk may be readily rotated upon the seat by means of the spindle, as desired.

What I claim is—

1. In combination with the shell and operating-stem of a globe-valve, the latter provided with a screw-spindle and with a shoulder or flange for limiting its vertical movement, the check-nuts *a a* and follower and disk G H, substantially as shown and described, for the objects herein set forth.

2. The improved globe-valve consisting of the shell or body A, valve-seat B, cap C, stuffing-box D, cap-chamber E, valve-stem and screw-spindle F, follower G, valve-disk H, hand-wheel J, and check-nuts *a a*, combined, constructed, and arranged substantially as shown and described, for the objects herein set forth.

TIMOTHY HOLLAND.

Witnesses:

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