

(No Model.)

J. O'MEARA.

VALVE.

No. 258,592.

Patented May 30, 1882.

Fig. 1.

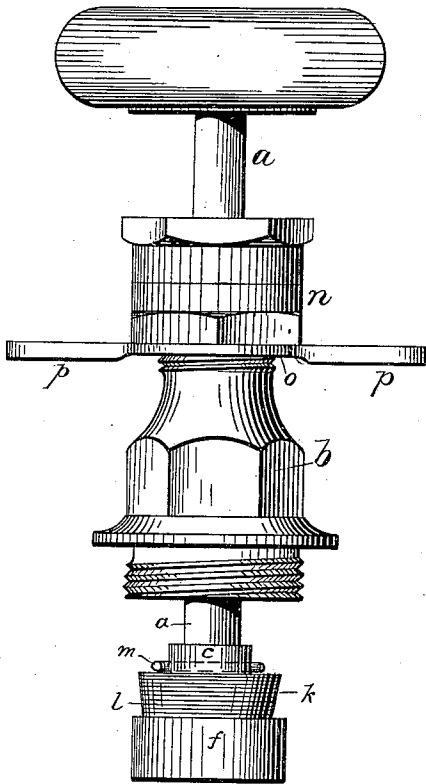


Fig. 2.

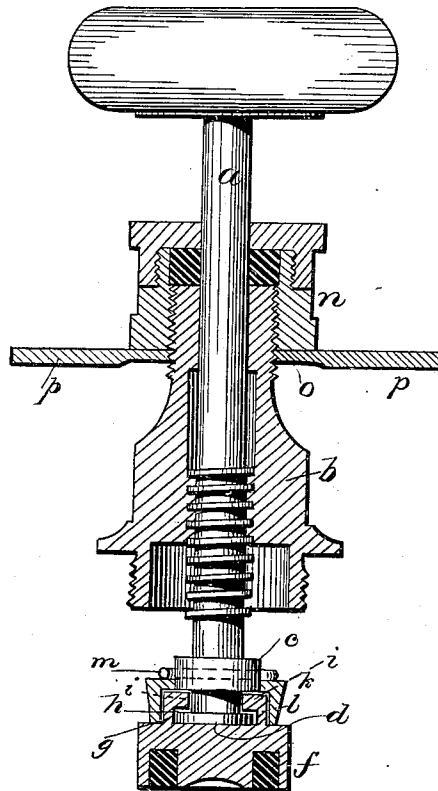


Fig. 3.

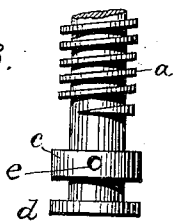


Fig. 4.

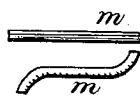


Fig. 5.

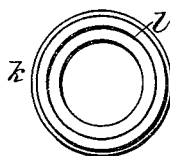


Fig. 6.

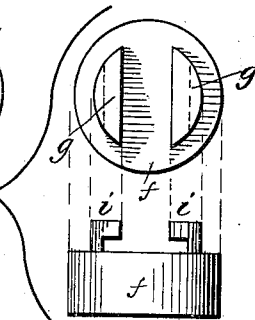
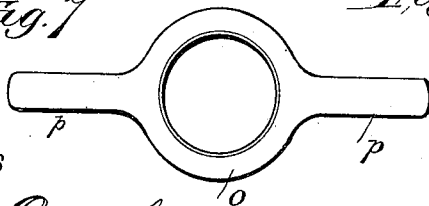


Fig. 7.



WITNESSES

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UNITED STATES PATENT OFFICE.

JEREMIAH O'MEARA, OF NEW YORK, N. Y.

VALVE.

SPECIFICATION forming part of Letters Patent No. 258,592, dated May 30, 1882.

Application filed January 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, JEREMIAH O'MEARA, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention is in the nature of improvements on the means for securing the disk-holders to the valve-stem, and for locking the separable boxes shown and described in my United States Letters Patent Nos. 240,754 and 240,755, dated April 26, 1881; and the object of the invention is to simplify the construction without impairing, but, on the contrary, increasing, the efficiency of the same.

To these ends the invention consists, first, in providing the valve-seat, disk, or disk-holder, or its equivalent, in globe, gate, angle, check, and similar valves, gage-cocks, water-cocks, and all valves for steam, water, or gas fittings, with a grooved projection adapted to be loosely slipped on the end of a stem and held thereupon with freedom of motion, so as to become self-adjusting by means of an annular cap inclosing said grooved projection and locked down thereupon by a suitable pin; and, second, in providing a wrench on the thread of the bonnet below the divided box, which wrench has a projecting handle, by which it may be operated by a finger of the hand used to turn the valve in operating the same for the purpose of holding the box against displacement by the sticking of the stem therein, all as hereinafter set forth and claimed.

In the accompanying drawings, in the several figures of which similar letters of reference indicate like parts, Figure 1 is a side elevation of the bonnet, stem, disk-holder, and wrench containing my invention. Fig. 2 is a vertical section of the same with the stem in elevation. Fig. 3 is an elevation of the end of the stem. Fig. 4 illustrates the pin before and after its application. Fig. 5 is a bottom plan view of the annular cap. Fig. 6 shows

the disk-holder in top plan view and side elevation, and Fig. 7 is a top plan view of my wrench.

I have purposely omitted from my drawings a valve-shell, because I do not limit my invention to any particular kind of valves.

The stem or spindle *a* and the bonnet *b* may be of any approved form.

c is a fixed collar on the valve-stem, and *d* is another collar below it. A hole, *e*, is made transversely through the collar *c*.

f is a disk-holder similar to those shown in my patents above referred to, or it may be of any other construction, as desired, it being the disk, plug, or seat used for opening and closing a valve. I provide a projection, *g*, on top of this holder, and form in it an undercut or $\perp$ -shaped groove, which will afford parallel lips *h*, by means of which the projection is adapted to be loosely slipped over the collar *d* of the stem, with the lips *h* between the two collars on said stem.

k is an annular cap, adapted to fit closely but removably upon the collar *c*, and the flange *l* whereof is adapted to fit over the projection *g* of the disk-holder when said disk-holder is in place on the stem. By means of this cap the disk-holder is prevented from lateral displacement from the stem, but at the same time allowed free movement upon said stem to admit of its adjusting itself to any inequalities of its bearing, and also allowed free rotation on said stem. The cap is held in place upon the projection of the disk-holder by means of a pin, *m*, passed through the hole *e* in the collar *c* and held therein by having its ends bent back, substantially as shown. By this construction the disk-holder is readily attached to and detached from its stem, and by a very simple and cheap means. When to be disconnected the pin is removed and the cap lifted off the projection, when the said projection can be easily slipped, in fact will fall, off the stem.

Difficulty has been experienced in getting at the box-locking nut in the valves heretofore used, and the employment of independent tools to operate it has been necessary; this, too, at an inconvenience, loss of time, and expense. I obviate these objections by providing on the thread of the bonnet *b*, below the box *n*, a movable screw-threaded wrench, *o*, having project-

ing handles *p.* As the operator turns the hand-wheel of the valve, if the box is moved with it by the sticking of the stem and box, the operator can reach down with a finger of the
 5 hand, or with the other hand turn the handled wrench up against the box, and thus stop its backing or running off.

Valves provided with my box or gland locking device can be used in parlor-radiators with
 10 great assurance of freedom from damage by leakage, as this wrench is adapted to be operated by even the most unskillful when a leak is discovered.

I do not limit the application of my invention in this wrench to valve-glands, since it is
 15 quite obvious that the wrench is equally applicable to stuffing-boxes generally.

What I claim is—

1. A valve-seat, disk, disk-holder, or plug
 20 adapted to be loosely connected to a stem or spindle, combined with a loose superposed cap and independent means to hold said cap in place, substantially as described.

2. A valve-stem having a collar on its end,
 25 a disk, or its described equivalent, having an undercut grooved projection to fit over such collar, a cap on said stem provided with a flange to embrace such projection to prevent its lateral displacement, and a pin secured in
 30 the stem above the cap to hold said cap against

vertical displacement and down upon the projection of the disk, substantially as shown and specified.

3. A valve-stem provided with a collar on its end, a disk, or its described equivalents, provided with parallel lips to embrace such collar, an annular cap on the stem having a flange to inclose said lips and collar, and means to prevent the vertical displacement of such cap, substantially as shown and specified.
 40

4. A threaded wrench provided with a handle and applied to the threaded bonnet of a valve below the box or gland thereon to hold such box or gland against being backed or run
 45 off by the turning of the valve-stem, substantially as shown and described.

5. The combination, with a threaded bonnet and a box thereupon, of a handled wrench applied below such box on the bonnet, substantially as and for the purpose described.
 50

6. The handled wrench, combined with an independently-movable stuffing-box or gland to hold such box or gland against accidental displacement, substantially as specified.

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

JEREMIAH O'MEARA.

Witnesses:

JULIUS FRICKE,
 WM. M. MANNIS.