(No Model.) 2 Sheets—Sheet 1.

T. HOLLAND.

VALVE.

No. 282,894. Patented Aug. 7, 1883.

Fig. 1

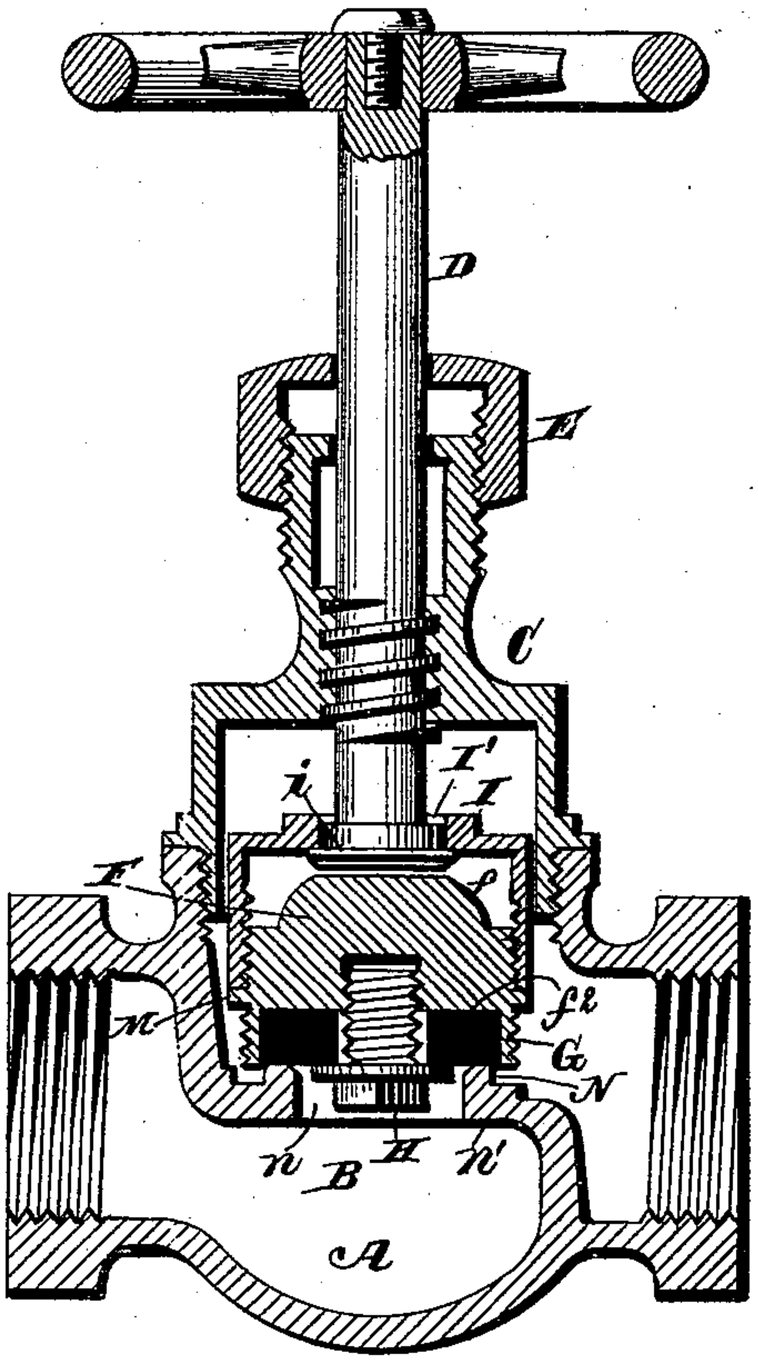


Fig. 2.

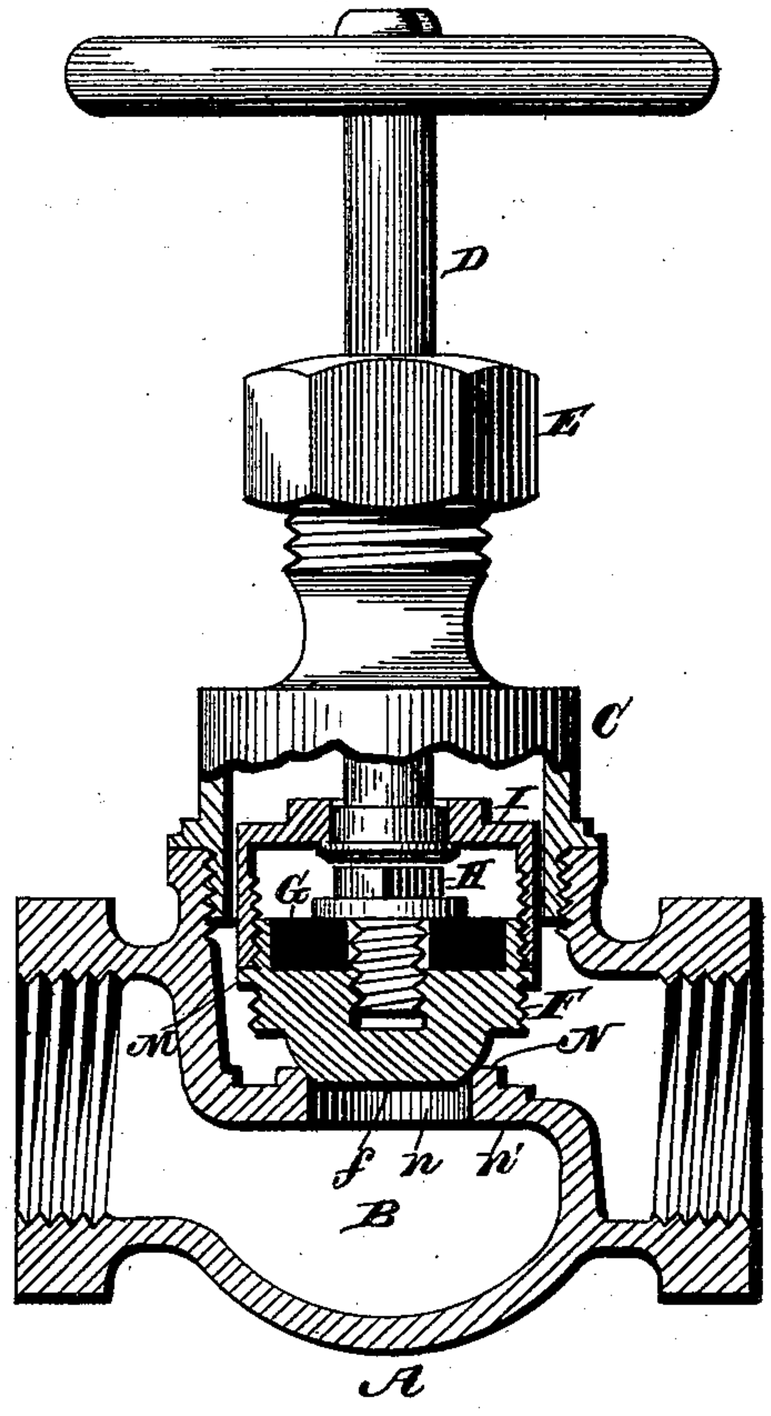
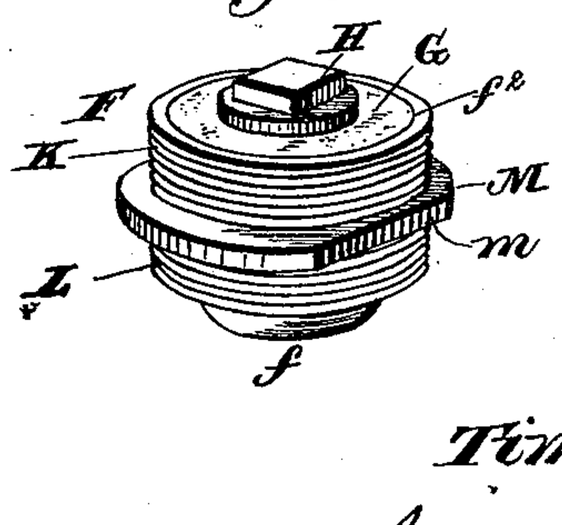


Fig. 3.



Witnesses,

Robert Everett.

J. A. Rutherford

Inventor.

Timothy Holland.

By James L. Norris.

Atty

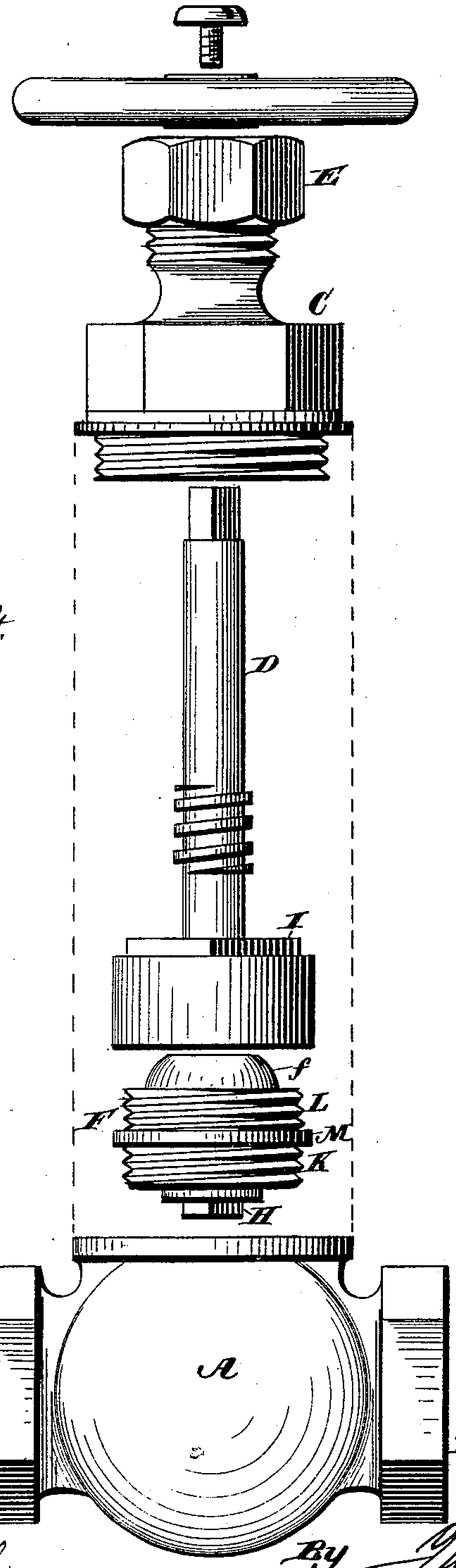
(No Model.) 2 Sheets—Sheet 2.

T. HOLLAND.

VALVE.

No. 282,894. Patented Aug. 7, 1883.

Fig. 4.



Witnesses.
Robert Everett.
J. A. Rutherford.

Inventor:
Timothy Holland.
By James L. Norris
Atty.

UNITED STATES PATENT OFFICE.

TIMOTHY HOLLAND, OF TROY, NEW YORK.

VALVE.

SPECIFICATION forming part of Letters Patent No. 282,894, dated August 7, 1883.

Application filed October 17, 1882. Renewed July 9, 1883. (No model.)

To all whom it may concern:

Be it known that I, TIMOTHY HOLLAND, a citizen of the United States, residing at Troy, in the county of Rensselaer and State of New York, have invented new and useful Improvements in Valves, of which the following is a specification.

The object of this invention is to provide a reversible valve which shall have two faces so formed that after one face and the seat adapted therefor have become worn the valve can be reversed and its remaining face be used without requiring any regrinding of the former seat, the seat used for the said second face being necessarily formed, in the first instance, in making the seat for the first-mentioned valve-face.

To such end my invention consists in a reversible valve possessing the peculiarities of construction hereinafter described, whereby after one face of the valve becomes worn it can be reversed and the opposite face brought into use; also, in providing the reversible valve with an annular flange between its two faces, so as to afford a stop which shall limit the depth to which the valve can be inserted in its holder; also, in a holder adapted to engage and hold the valve with either face of the latter exposed; also, in the construction and in the organization of parts, all fully shown in the annexed drawings, in which—

Figure 1 is a central section through a valve constructed in accordance with my invention. Fig. 2 is a part section and a part elevation thereof. Fig. 3 represents the double valve. Fig. 4 represents all of the parts detached.

A indicates the shell, which is provided with the water and steam passages, as usual.

C indicates the head, which is screwed into the top of the shell and provided with a screw-threaded bore, within which the screw-threaded valve-stem D works. A cap-nut, E, is fitted upon the head, and serves as an ordinary stuffing-box for the valve-stem.

The reversible valve F consists of a cylindrical body of metal, having at one side a convex projection, *f*, which is adapted to constitute an acting side of the valve when presented to the valve-seat. In the opposite side of the said cylindrical body of metal is a recess, f^2, in which is received a washer, G, of metal or some elastic material, said washer being held within this recess or seat by means of a screw, H, passing through the center of the washer and screwed into a screw-threaded socket in the said metal body. This washer constitutes the remaining opposite face of the reversible valve, and is to be employed as hereinafter described.

I indicates the valve-holder, which consists of an internally-screw-threaded cap or collar loosely fitted upon the end of the valve-stem. The cylindrical metal body designated as the "reversible valve" F is provided with two peripheral sets of screw-threads, K and L, said two sets being separated by an annular flange, M, so that when this double valve is fitted into its holder it can be screwed up to said annular flange, which limits the extent to which the valve can be inserted in the collar. This insures accuracy of adjustment, since the flange M serves as a stop which limits the depth to which the valve-body can be inserted in the collar.

It will be seen that these sets of screw-threads are respectively brought into use according to which face of the valve is to be used. In the present instance the cap or collar composing the valve-holder I is provided with an opening, I′, through which the valve-stem passes. The valve-stem has a head, *i*, on its lower end, and as said head is below the top of the cap or collar the latter will be held upon the valve-stem. The valve-stem could, however, be screwed into the cap, or it could be connected therewith in other ways—as, for example, it could be hooked to the same. As the collar or cap I has internal screw-threads or retention-grooves, it is adapted to receive and engage either end of the double valve without alteration. The valve might be otherwise locked in the collar; but that shown is regarded as the best mode of connecting the two. The adaptation of the valve-seat to either form of valve-face is attained in the simplest possible manner. Thus for the face formed by the washer the upper edge of the annular flange N, around an opening, *n*, in a partition, *n′*, located in the shell, serves as a seat, while for the convex valve-face the inner edge and wall of said flange serve a like purpose.

It will thus be seen that after the valve-face

formed by the washer becomes worn, instead of rendering a new valve necessary the valve-piece can be reversed, so as to bring its convex face into service. The annular flange M on this double valve is cut away at opposite sides, as at *m*, so that it can be grasped by a wrench or other like tool in unscrewing it from or screwing it into its seat. In screwing or unscrewing this double valve the valve-stem can be turned so as to bring the valve-holder well up into the head and hold it therein while the valve is being turned, or the valve-stem can be lowered and the parts then manipulated.

Having thus described my invention, what I claim is—

1. The combination of a valve-casing having its interior partition provided with an aperture the upper edge of which is constructed to form two valve-seats, a valve-holder composed of a cap or collar, a valve-stem, to the lower end of which the valve-holder is swiveled, and a reversible valve detachably connected with the holder and provided with opposite valve-faces, said valve being adapted to be disconnected from its holder, reversed, and secured in its reversed position to the holder, for bringing either of its valve-faces against one of the valve-seats, substantially as described.

2. The combination of a valve-casing having its interior partition provided with an opening the upper edge of which is constructed to form two valve-seats, a valve-holder composed of an internally-threaded cap or collar, and an externally-threaded valve having two opposite valve-faces, and adapted to be disconnected from the valve-holder, reversed, and secured in its reversed position to the holder, to bring either of its valve-faces against one of the valve-seats, substantially as described.

3. The combination, with the valve-casing provided with a projecting flange surrounding the opening in the partition, of a valve-holder and a reversible valve detachably connected with the holder, and provided with one valve-face adapted to rest upon the flange, and another valve-face adapted to fit in the partition-opening, substantially as described.

4. The combination, with a valve-casing having a partition provided with an opening the upper edge of which is constructed to form two valve-seats, of a valve-holder and a reversible valve detachably connected with the holder, and having a flat face and an opposite convex face, substantially as described.

5. The reversible valve provided with an annular flange between its two faces, said flange serving as a stop to limit the extent to which the valve can be inserted in its holder, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

TIMOTHY HOLLAND.

Witnesses:
JNO. P. O'BRIEN,
SIDNEY SMITH.