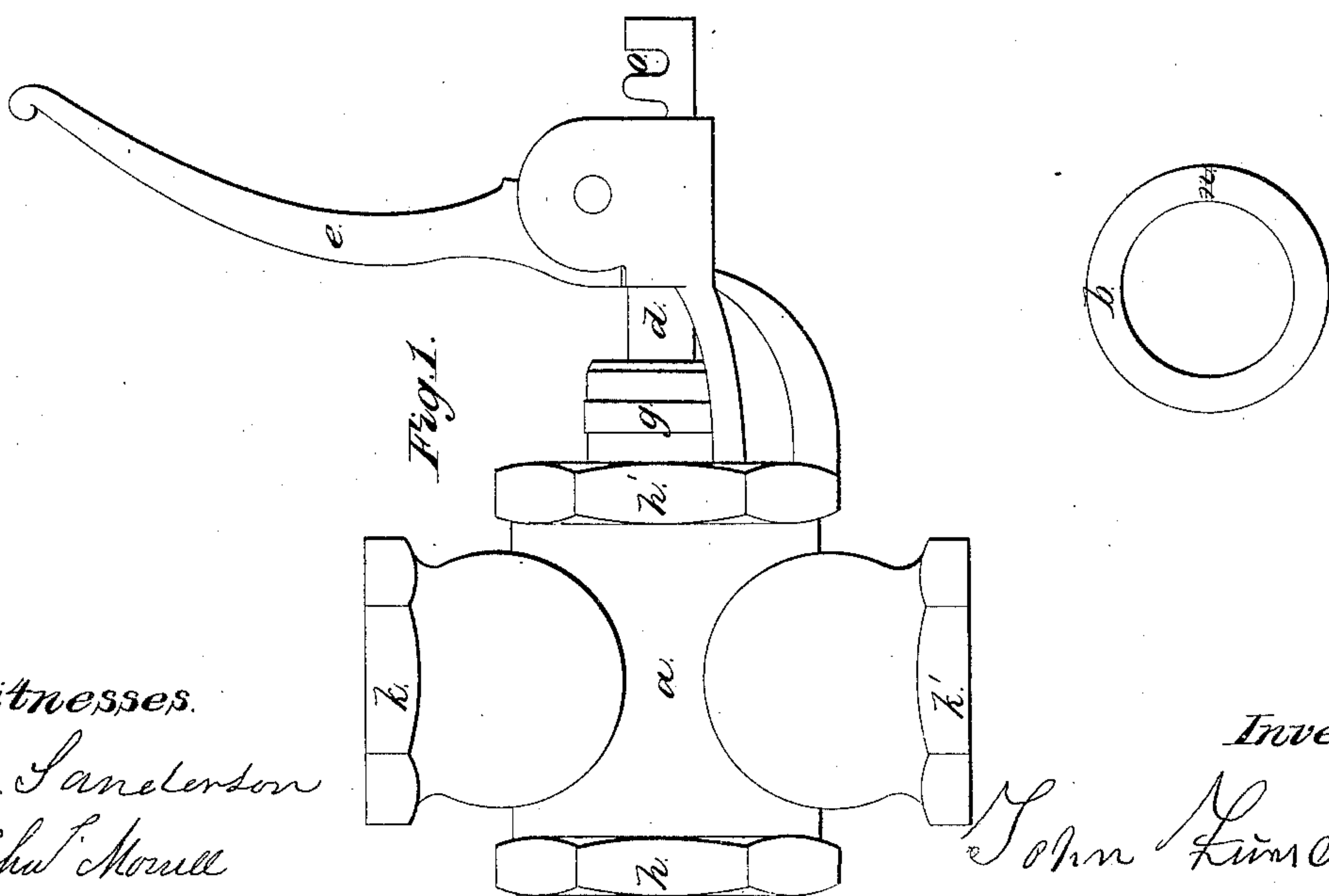
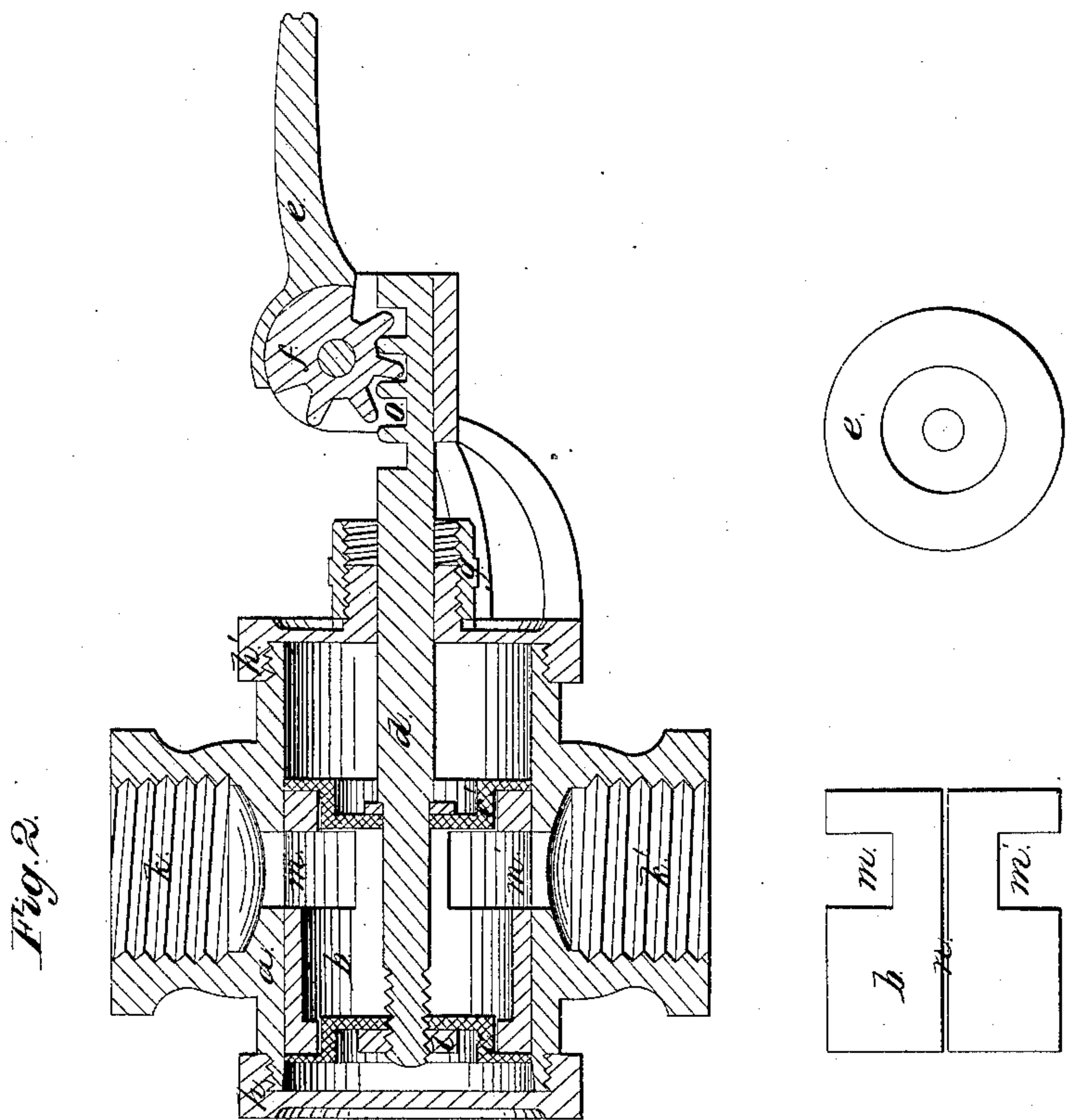


J. Zundorff,
Steam Balanced Valve.
N^o 62,721. Patented Mar. 5, 1867.



Witnesses.

E. Sanderlerson
Chas. Morrell

Inventor.

John Zundorff

United States Patent Office.

JOHN ZUNDORFF, OF NEW YORK, N. Y.

Letters Patent No. 62,721, dated March 5, 1867.

IMPROVEMENT IN STEAM VALVES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN ZUNDORFF, of the city, county, and State of New York, have invented a new and improved Steam Valve; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a side elevation.

Figure 2 is a longitudinal section.

a is the cylinder containing the works; *b* is the expanding ring for closing the parts of the valve; *c c'* are the plates forming the ends of expanding ring *b*; *d* is the piston and ratchet; *e* is the lever; *f* is the pinion; *g* is the nut for gauging the stroke; *h h'* are the cylinder heads; *k k'* are the steam-pipe connections; *l* is the nut on end of piston; *m m'* are the steam ports; *n* is the slot in the expanding ring *b*.

The nature of my invention consists in a simple and secure steam valve for the purpose of cutting off steam effectually without regard to the amount of pressure produced.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Construction.

The cylinder *a* is formed of metal to the required capacity with its steam-pipe connections, *k k'*, with its steam-port holes, *m m'*, transversewise of the cylinder from connection *k* to *k'*. The cylinder heads *h h'* are then fitted as shown in figs. 1 and 2. The expansive ring is then made with its longitudinal slot *n* and transverse ports *m m'* of size and dimension corresponding with the bore of cylinder *a*, the plates *b b'* being made and fitted with apertures in their centres to receive the piston and ratchet-rod *d*. The expansive ring *b*, plates *c* and *c'*, and ratchet-rod *d*, are put together and inverted into the cylinder *a*. The pinion *f* and the lever *e* being adjusted, the valve is ready for use.

Operation.

The steam valve being adjusted for use, its operation is as follows: When steam is let on the ports are closed by the expansive ring *b*, so as not to admit steam through the valve opening. In order that the steam shall pass through the valve opening, the lever *e* is depressed, as shown in fig. 2, thereby giving free circulation to the steam through the valve opening and pipes for conducting the steam to any desired place.

The expansive ring is made of any known flexible metal turned or worked off so as to fit the cylinder, the cylinder being made a little tapering at the end in which the ring is inserted, so that the ring has to be crowded in by force; then, as the ring and cylinder wear by use, the ring expands and always fits the cylinder, thereby keeping the valve always tight.

What I claim as my invention, and desire to secure by Letters Patent, is—

The expansive movable ring *b*, with longitudinal slot *n* and ports *m m'*, when constructed substantially as described and for the purposes set forth.

JOHN ZUNDORFF.

Witnesses:

E. SANDERSON,

CHAS. MORRILL.