

2 Sheets-Sheet 1.
P. H. Kendrick,

Stop Cock.

No 85,389.

Patented Dec. 29, 1868.

Fig. 1.

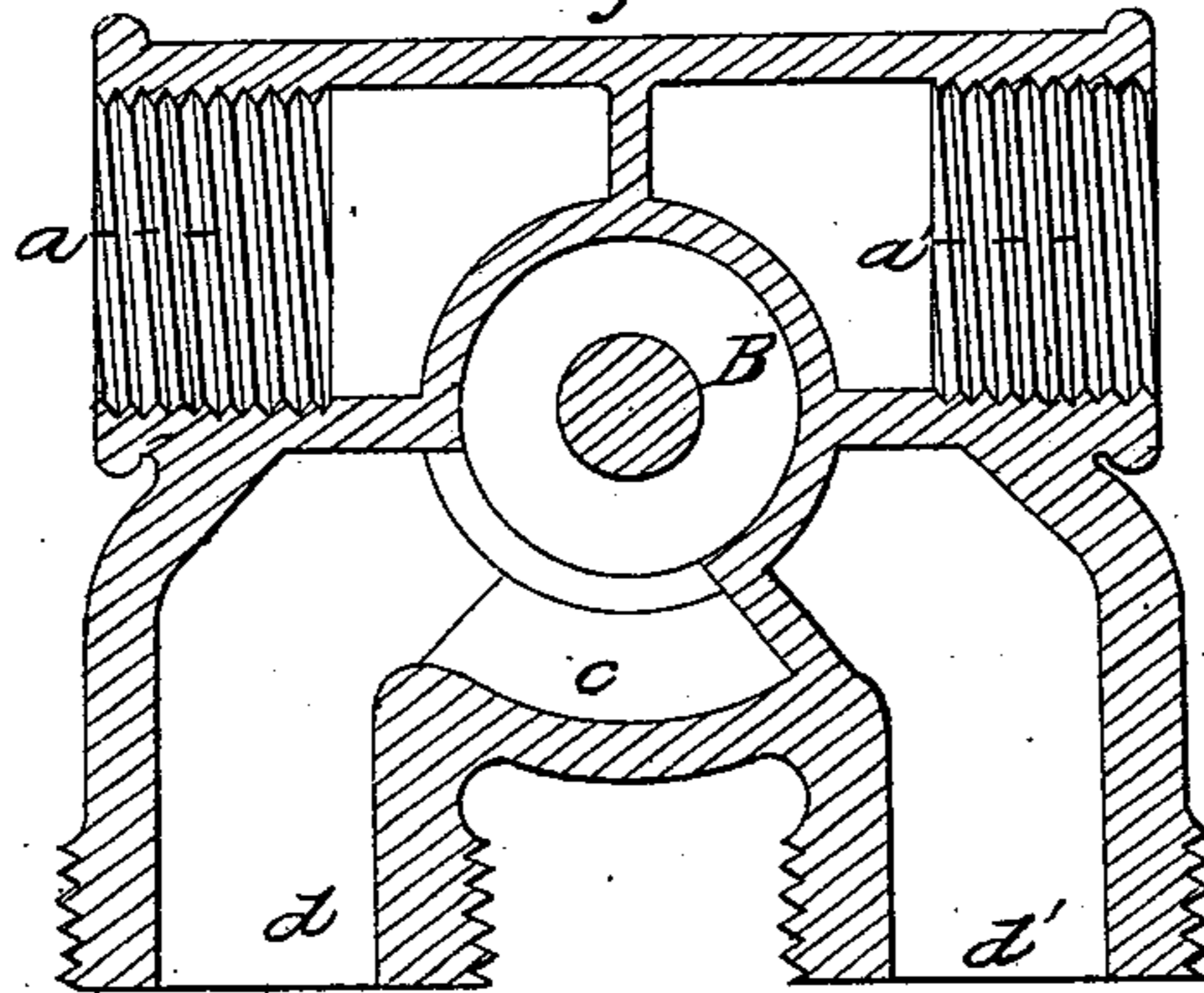
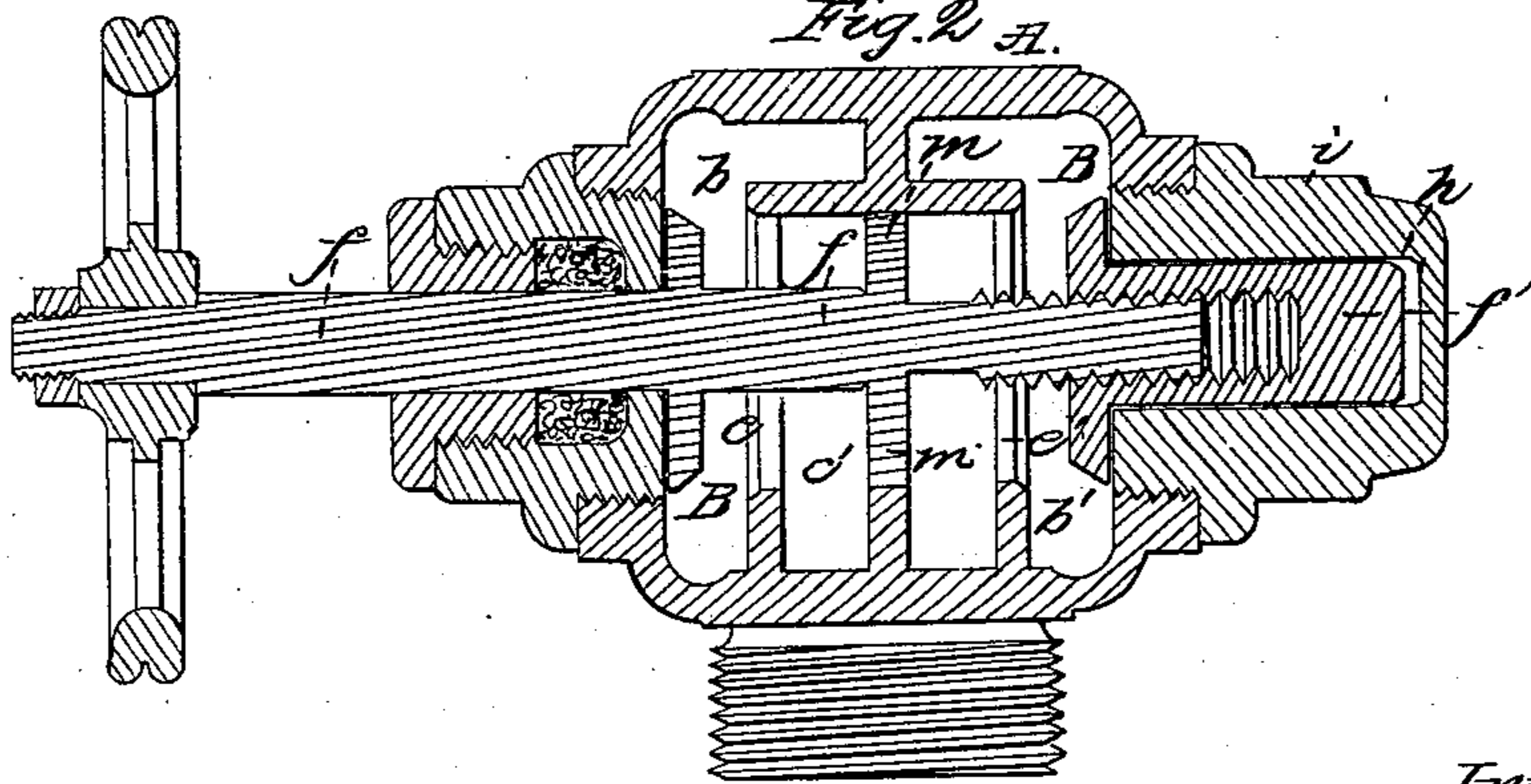


Fig. 2 A.



Witnesses:

*Geo. A. Loring.
Edward Griffith.*

Inventor:

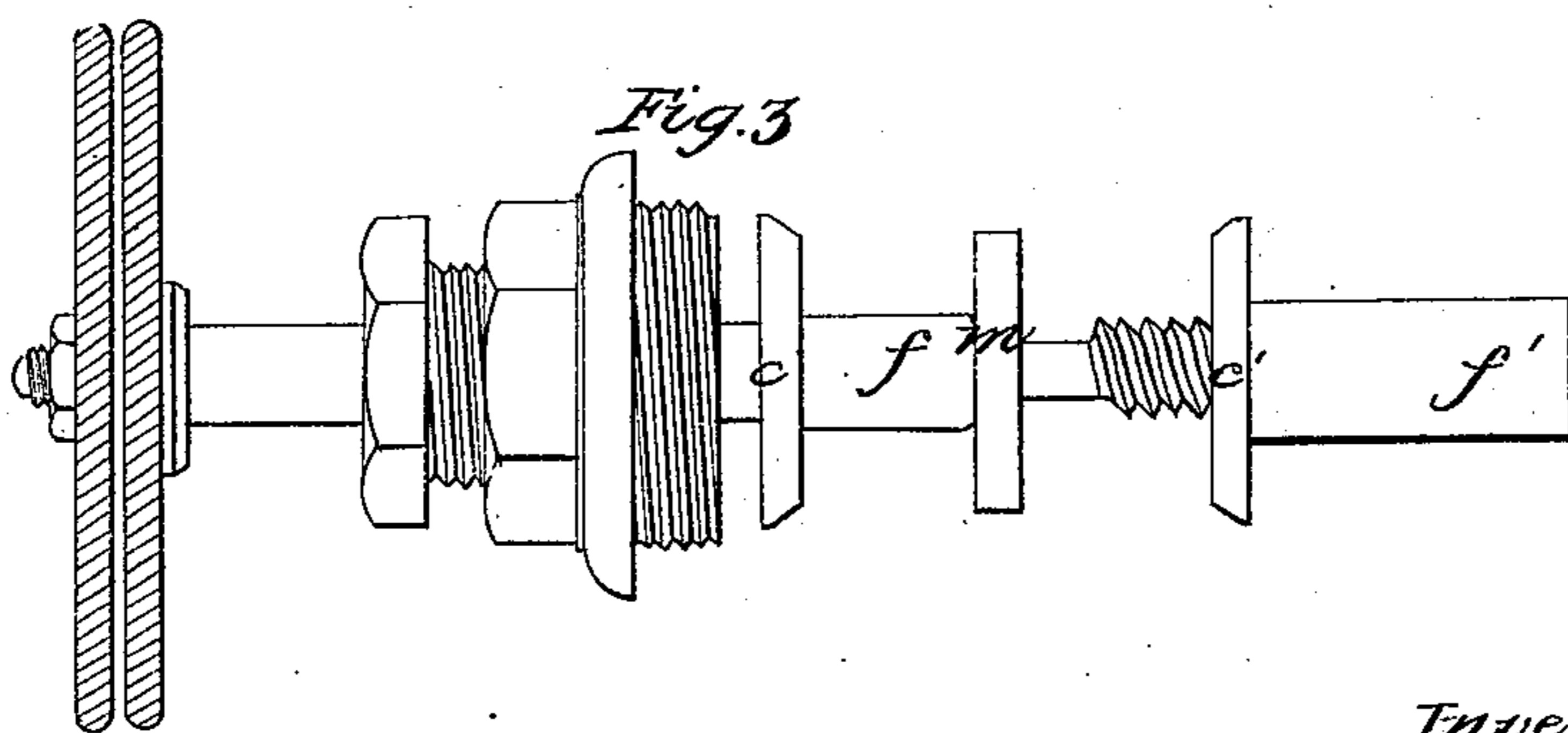
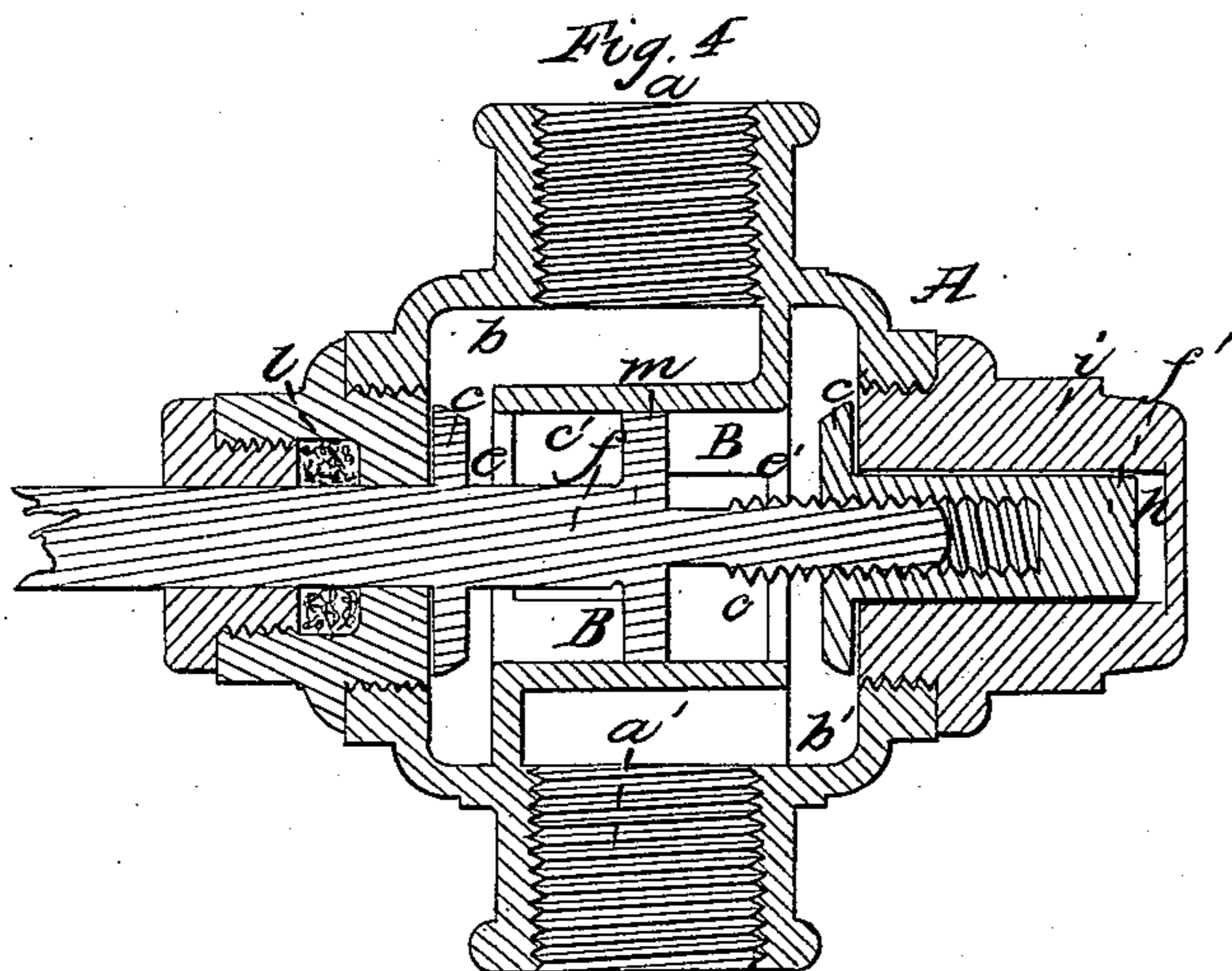
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Frederick Curtis.*

2 Sheets-Sheet 2.
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Witnesses:

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Inventor:

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United States Patent Office.

PAUL H. KENDRICKEN, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 85,389, dated December 29, 1868.

IMPROVEMENT IN VALVES FOR STEAM AND OTHER ENGINERY.

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

To all to whom these presents shall come:

Be it known that I, PAUL H. KENDRICKEN, of Boston, in the county of Suffolk, and State of Massachusetts, have made an invention of a new and useful Valve for Regulating the Flow of Steam, Water, &c.; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawings, making part of this specification, and in which—

Figures 1 and 2 are vertical sections of a valve constructed as contemplated by my invention.

Figure 3 is a side elevation of the two valves and their adjuncts as removed from the valve.

Figure 4 is a horizontal section of the entire valve.

This invention relates to means for simultaneously closing the entrance and exit of a liquid gas or steam, and effecting this by the employment of one valve-stem, in order that a person, in actuating one valve, shall of necessity actuate both the inventions, besides numerous instances of useful application, being especially valuable in its application to steam-radiators, to obviate the evil now very common of closing the exit or port, and leaving the entrance-port open.

The invention consists in the peculiar combination and arrangement of the entrance and exit-ports, and two valves applied thereto, and connected together, so as to be operated by one stem, in such manner that, upon turning the stem in one direction, both valves are closed upon their seats, and *vice versa*, both valves being opened, a collar being applied to the stem of one valve, and between the two, so as to prevent flow of steam from one portion of the valve to the other, the whole being substantially as hereinafter explained.

In the drawings above mentioned as accompanying this specification and illustrating my invention, A denotes the body of the valve, the four quarters of such body, from its centre, being exact counterparts of each other, the valve-chamber being shown at B.

Upon opposite sides of the body of the valve are two openings or passages, *a a'*, one being the induction and the other the eduction-port, such ports communicating with the valve-chamber B by a passage or port, *b* or *b'*, communication between the two passages *a a'* being entirely closed.

Furthermore, two additional ports or passages, *c* or *c'*, lead out of the valve-chamber B, and upon opposite sides thereof, the latter ports or passages communicating with two orifices or short pipes, *d d'*, made in the lower part of the body of the valve, upon opposite sides thereof, such openings, *d* and *d'*, being continuations of the induction and eduction-passages *a a'* before mentioned.

The pipes *d d'* are to be provided with screws for connecting them with the extreme ends of a steam-radiating coil, or any conduit or object containing steam, water, &c., the flow of which it is desired to control.

Within the valve-case A are two valves, C or C', the seats of the valves being shown at *e e'* as disposed between the passages *b* or *b'* and ports *c* or *c'*, respectively.

The stems of the valves are shown at *f f'*, one of

them being triangular, and sliding in a similar-shaped recess, *h*, formed in a nut, *i*, screwed into the body of the valve, as shown in the drawings. This shape of the valve-stem allows rectilinear movements of the valve, but preventing rotary movement of the same.

The stem of the opposite valve, which is cylindrical, has a male screw formed upon it, which screws into the first-mentioned valve-stem, a collar, *m*, being formed upon the stem *f*, and so disposed thereon as to remain midway between the ports *b b'* and *c c'*, when the valves are open upon their seats, such collars, as before mentioned, serving, under such circumstances, to shut off communication between the induction and eduction-ports of the valve.

When the valves are open and steam passing through the valve-chamber B, this collar is moved away from between the said ports by the action of its valve-stem, and a free circulation of steam through the entire valve permitted.

The cylindrical valve-stem *f* has a stuffing-box, *l*, properly applied to it, and to its outer end a hand-wheel is affixed in the ordinary manner.

From the above description of the construction of my invention, it will be seen that upon turning the valve-stem *f* in one direction, that is, to the right, (as under the construction shown in the accompanying drawings,) the two valves will be caused to approach each other and close upon their seats, thus simultaneously and effectually cutting off both entrance and exit of steam.

Upon turning the valve-stem *f* in the opposite direction to that last mentioned, the induction and eduction-passages or ports are opened simultaneously, and flow through the valve permitted.

It will be seen that by the employment of my invention no person, however ignorant or careless he may be, can do otherwise than open and close both entrance and exit of the valve at once.

The importance of the invention will readily manifest itself to persons accustomed to the use of steam.

When the valves C and C' are both closed upon their seats, the collar is in such a position as to allow a free circulation of steam throughout the entire device, and keep back return-water from the radiator.

I claim as my invention—

1. The arrangement of the ports or passages *a a'*, *b b'*, *c c'*, and pipes *d d'*, when combined with the valves C and C' and the valve-chamber B, substantially as herein shown and described.

2. The arrangement of the valves C and C', stems *f f'*, and valve-seats *e e'*, substantially as shown and specified.

3. In combination with the ports or openings *a a'*, *b b'*, *c c'*, and *d d'*, and valve and valve-seats C C' and *e e'*, the interposed collar or abutment *m*, substantially as shown and set forth.

PAUL H. KENDRICKEN.

Witnesses:

FRED. CURTIS,
EDWARD GRIFFITH.