

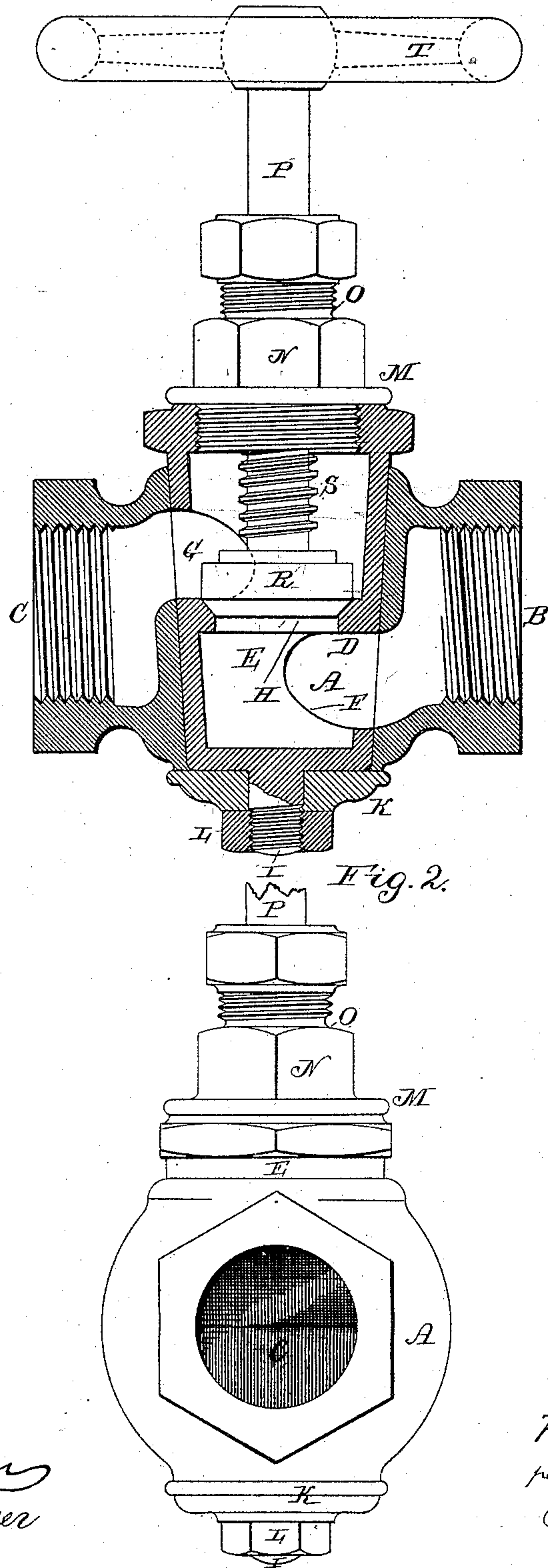
(No Model.)

M. B. FISHER.

STOP VALVE.

No. 316,766.

Patented Apr. 28, 1885.



Witnesses:

J. W. Garner
E. M. Kroger

Inventor:

M. B. Fisher,
per
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att'y.

UNITED STATES PATENT OFFICE.

MILTON B. FISHER, OF JOHNSTOWN, PENNSYLVANIA.

STOP-VALVE.

SPECIFICATION forming part of Letters Patent No. 316,766, dated April 28, 1885.

Application filed September 11, 1884. (No model.)

To all whom it may concern:

Be it known that I, M. B. FISHER, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Stop-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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in stop-valves; and it consists in the combination of the valve-casing having inlet and outlet openings, and having a central vertical socket with a port in its upper left-hand side and a port in its lower right-hand side, with a hollow bushing seated in said socket, and having ports adapted to register with the ports in the socket, a diaphragm having a seat in the center of the bushing, and a valve seated thereon, and having a stem and hand-wheel for operating the valve, the bushing being adapted to be turned in the socket to cut off the fluid while the valve is removed for repairs, as will be more fully described hereinafter.

In the accompanying drawings, Figure 1 is a side elevation of my invention, partly in section. Fig. 2 is a front elevation of the same.

A represents a valve-chamber, which is provided with an inlet-opening, B, and an outlet-opening, C. This chamber is bored out at its center, as at D, and in said chamber is located a slightly-conical bushing, E. This bushing is provided with an inlet-opening, F, corresponding to the opening B, an opening, G, corresponding to the opening C, and a valve-seat, H, which is located between the openings F and G. From the lower end of the center of this bushing projects a stem, I, which is screw-threaded at its lower end. A washer, K, is placed on the stem, and a hexagonal nut, L, screws upon the lower end of the stem I, and thereby secures the bushing firmly in place in the valve-chamber, but in such a manner as to allow said bushing to rotate therein.

In the upper end of the bushing E is screwed a cap, M, which is provided with a hexagon, N, that is adapted to be turned by a wrench. A

packing-box, O, of the ordinary construction, is formed in the upper part of the cap M.

P represents a valve-stem, which passes down through the packing-box and through the cap M, and is provided at its lower end with a valve, R, which is adapted to rest in the seat H. The lower end of the stem P is screw-threaded, as at S, where it passes through the cap M, and the cap is provided with a female screw that is adapted to receive it.

To the upper end of the stem P is applied a hand-wheel, T, of the ordinary construction.

The operation of my invention is as follows: When the wheel T is turned to the left, the valve rises from its seat and permits the steam or water to pass freely through the valve-chamber. Should it be necessary to repair the valve, the nut L and washer K may be removed from the lower end of the bushing, and the bushing may be lifted out and the valve repaired without the necessity of removing the valve-chamber from the pipes, which in valves of the ordinary construction is a necessity, and involves a great amount of time and labor. In the event that any injury to the valve stem or cap should be sustained which it is necessary to repair while the pressure of the steam or water is on the valve, the bushing may be given a half-rotation in its socket by means of a wrench applied to the hexagon, and thus cause the openings C and B to be closed, and preventing any pressure of the steam or water upon the valve. The cap M may then be removed from the bushing, together with the valve and valve-stem, and repaired, and then replaced in position, without the necessity of removing the bushing or the valve-chamber from position, and while the pressure of the steam or water is on the valve—an advantage which no other valve with the construction of which I am acquainted possesses, and which is a great convenience, and will save a loss of a great deal of time, labor, and money.

Having thus described my invention, I claim—

The combination of the valve-casing having inlet and outlet openings, and having a central vertical socket with a port in its upper left-hand side and a port in its lower right-hand side, with a hollow bushing seated in

said socket, and having ports adapted to register with the ports in the socket, and a diaphragm having a valve-seat in the center of the bushing, and a valve having a stem and
5 hand-wheel for operating it, the bushing being adapted to be turned in the socket to cut off the flow of fluid while the valve is removed for repairs, substantially as shown and described.

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

MILTON B. FISHER.

Witnesses:

HENRY WHANNELL,
THOMAS WATKINS.