G. Baker.

Steam Valve

No. 86,268. Patented Jan. 26, 1869.

Fig: 1.

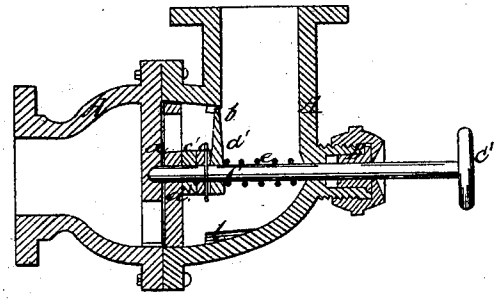


Fig: 2.

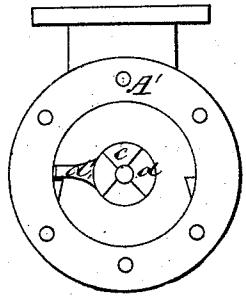


Fig: 3.

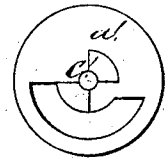
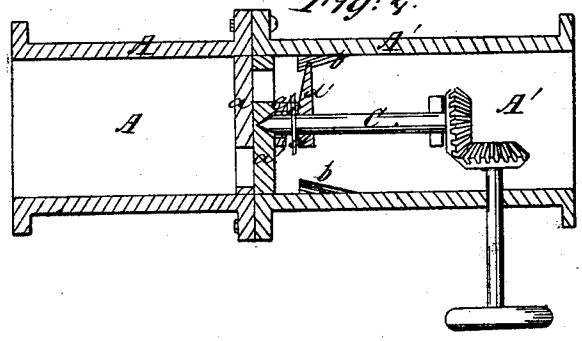


Fig: 4.



Witnesses.

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GEORGE BAKER, OF ROCHESTER, NEW YORK.*

Letters Patent No. 86,268, *dated January* 26, 1869.

IMPROVEMENT IN VALVES FOR STEAM AND OTHER ENGINERY.

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, GEORGE BAKER, of Rochester, in the county of Monroe, and State of New York, have invented certain new and useful Improvements in Throttle or Stop-Valves; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a central longitudinal section of a valve, and its shell or case, constructed in accordance with my invention;

Figure 2 is an end view of the valve-shell or top section, with the valve removed, for showing the arrangement of the clutch, stop-arm, and stops;

Figure 3 is a rear view of the valve detached, showing the clutch-face which connects the valve with the clutch on the valve-stem; and

Figure 4 represents the manner of applying the valve to a straight section of pipe.

Similar letters of reference denote corresponding parts in all the figures.

My invention relates to a novel arrangement of the valve, and its regulating-stops, in connection with the valve-stem and seat, whereby the valve is left free on its stem, and is made to bear or rest evenly on its seat in such manner as to avoid all cramping in any and all positions of adjustment of the valve.

In the accompanying drawings—

A A′ represent the two parts or sections of the valve-shell or case, the part A being provided with the valve-seat, cast in one piece therewith, or otherwise suitably attached thereto, and with flanges or other usual means for uniting it with the top or valve-section A′.

The part A′ is also cast in one piece, provided with the stuffing-box B, in which the valve-stem is mounted, and with the internal lugs or stops *b b*, which serve to regulate the extent of throw of the valve.

C is the valve-stem, passing through the stuffing-box B, and supported thereby, or by suitable bearings within the shell A′, as the construction of the shell or pipe may dictate or require.

In the drawing, fig. 1, the stem is represented as passing through the valve *a′*, and having a pivotal bearing in the valve-seat, but, ordinarily, I prefer to terminate the stem within the valve itself, as shown in fig. 4, so as to avoid perforating the valve, and to hold the valve to its seat by a central pivotal bearing only.

The valve *a′*, in either case, is left loose on its stem, and is made to turn with it by means of a clutch-face, *c*, matching with a corresponding face, *c′*, formed on a hub or collar, *d*, keyed, or otherwise secured to the stem.

A spiral spring, *e*, on the valve-stem, between the clutch-collar and the outer bearing or stuffing-box, serves to keep the clutch-faces properly engaged, and also to hold the valve to its seat.

The stem C, or hub *d*, is provided with an arm, *d′*, which turns with it, and is so arranged as to strike the lugs or stops *b b*, and thus regulate the throw or extent of movement of the valve-stem and valve.

C′ is a hand-wheel or lever, by means of which the valve is operated.

The socket in the valve, for the reception of the stem, should be made substantially as represented in fig. 4, so as to form a central pivotal bearing therefor, and the stops and stop-arm being disconnected from the valve, and operating in connection with the stem or clutch, as described, the valve is sustained in position against its seat by a central support only, and the force or pressure upon the valve, for holding it to its seat, is consequently exerted equally at all points of its surface in any position of adjustment of the valve.

It will be evident that the form and number of ports in the valve and valve-seat may be varied as required, and the angle of relation of the stops may be made to suit the arrangement of the ports, without departing from the invention herein described.

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

1. The valve *a′*, mounted loosely on its shaft or stem, and connected therewith by means of the clutch, as described, in combination with the stop-arm *d′* and stops *b*, located within the shell or case, and operating to control the throw of the valve, substantially as described.

2. The valve *a′*, operated by means of the stem C and clutch *c c′*, as described, in combination with the arm *d′*, stops *b b*, and spring *e*, all arranged substantially as described.

GEORGE BAKER.

Witnesses:
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