

P. MUNZINGER.

BY-PASS VALVES FOR GAS-WORKS.

No. 191,877.

Patented June 12, 1877.

Fig. 1

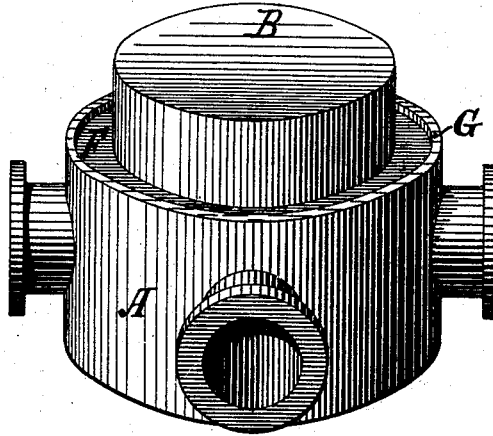


Fig. 2

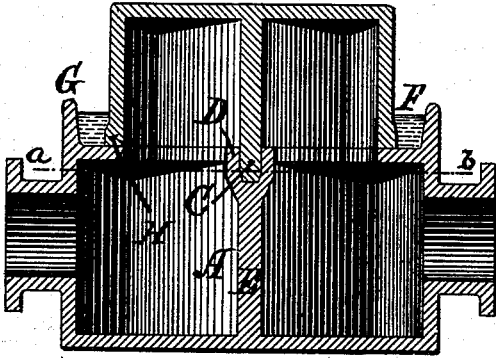
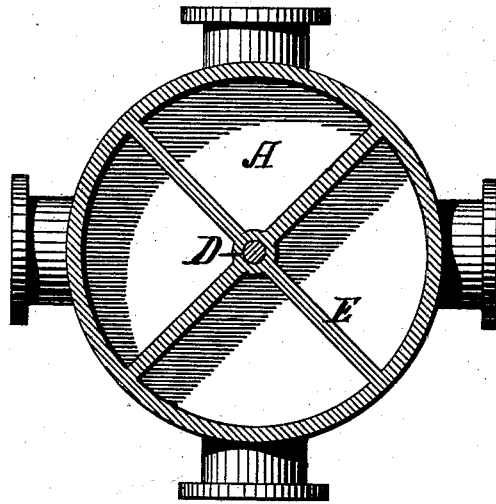


Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

PETER MUNZINGER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO MORRIS, TASKER & CO., (LIMITED,) OF SAME PLACE.

IMPROVEMENT IN BY-PASS VALVES FOR GAS-WORKS.

Specification forming part of Letters Patent No. **191,877**, dated June 12, 1877; application filed October 10, 1876.

To all whom it may concern:

Be it known that I, PETER MUNZINGER, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in By-Pass Valves for Gas-Works, of which I hereby declare the following specification to be a full, clear, and precise description, and sufficient to enable those skilled in the art to which my improvement appertains to comprehend and construct it, reference being had to the accompanying drawings, forming part of this specification, of which—

Figure 1 is a perspective view of my said improvement, showing the liquid-seal; Fig. 2, a central sectional elevation, showing the pivot and structure of seal-cup; and Fig. 3 a sectional plan on the line *a b* of Fig. 2, showing the bearing of the pivot.

Similar letters of reference indicate like parts wherever used.

My invention relates to that class of devices known as by-valves, by-pass valves, or center seals, which are employed in the manufacture of gas to direct the impure gas received into them from the condensers, through a system of purifiers, and thence into the holders; and has for its object the more perfect construction and greater efficiency of the rotary cap; to which ends it consists in the arrangement hereinafter explained and claimed.

My invention consists in pivoting the cap into a bearing formed upon or in the partitions in the purifier-fitting, and at or near their intersection, in such manner that it will rotate about the pivot, providing it circumferentially with a dressed bearing-surface, and surrounding it with an oil or liquid and fluid-tight seal, inclosed between the walls exterior of the cap itself and a vertical flange formed around the top of the purifier-fitting.

Referring to the drawings, A represents a combined inlet, outlet, and purifier fitting; B, the cap; C, a pivot formed upon it and jour-

naled in a bearing, D, upon the partitions E of the purifier fitting. F is the liquid-seal surrounding the cap; G, the seal-flange encompassing the seal; and H the circumferential polished bearing of the cap upon the purifier-fitting.

Such being its construction, it is obvious that while the pivot permits and insures the most perfect rotation, the seal prevents the possibility of leakage.

In the ordinary employment of the valve this seal is of little use, for the cap is made of great weight, and is so accurately fitted to its bearing that no ordinary pressure of gas can lift it or escape through it, even without liquid in the seal-cup; but the function of the seal and the design of its employment are to guard against leakage in the case of extraordinary pressures of gas, however arising, in which case the weight and density of the liquid, supplemented by the atmospheric pressure thereon, will overcome the pressure and prevent the escape of the gas.

The cap rotates without appreciable friction, being constantly lubricated by the seal, cannot become clogged up or get out of order, requires no nice original adjustment, and no attention to keep it in working order. While oil is preferable, any liquid may be employed for the seal.

Having thus described my invention, I claim, and desire to secure by Letters Patent of the United States—

The combination, in a by-pass valve for gas-works, of the pivoted cap B with the liquid-seal F, substantially as described.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

PETER MUNZINGER.

Witnesses:

J. BONSALE TAYLOR,
JOHN JOLLEY.