

(No Model.)

L. ROOVERS.
VALVE.

No. 419,076.

Patented Jan. 7, 1890.

FIG. 1.

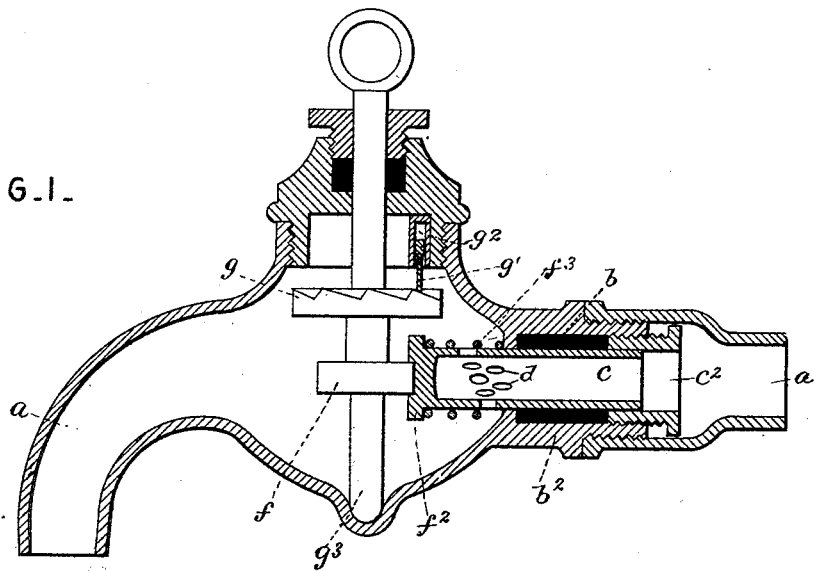
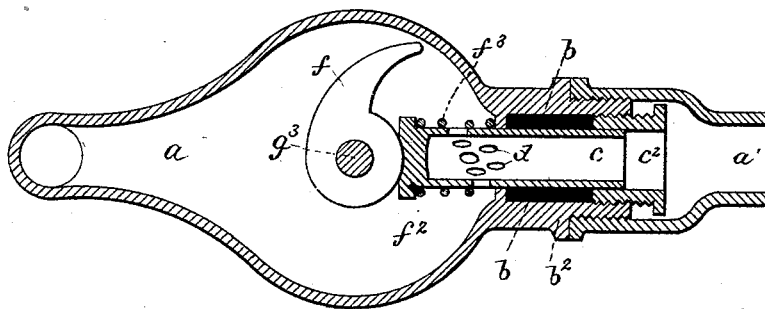


FIG. 2.



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UNITED STATES PATENT OFFICE.

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VALVE.

SPECIFICATION forming part of Letters Patent No. 419,076, dated January 7, 1890.

Application filed May 17, 1887. Serial No. 238,565. (No model.) Patented in Belgium December 19, 1885, No. 71,302; in Germany February 4, 1886, No. 36,254; in France May 13, 1886, No. 176,115; in England June 19, 1886, No. 8,159, and in Austria-Hungary October 31, 1886, No. 19,829.

To all whom it may concern:

Be it known that I, LOUIS ROOVERS, engineer, of Brussels, in the Kingdom of Belgium, have invented new and useful Improvements in Valves, Stop-Cocks, and the Like, (for which no patent has been obtained in any country except in Belgium the 19th of December, 1885, No. 71,302; in Germany the 4th of February, 1886, No. 36,254; in France the 13th of May, 1886, No. 176,115; in Austria the 31st of October, 1886, No. 19,829, and in England the 19th of June, 1886, No. 8,159,) of which the following is a specification.

My invention has for its object to provide a stop-cock or faucet which will be very efficient in checking the flow, and at the same time be easy of operation; and it consists in certain features of novelty hereinafter described with reference to the accompanying drawings, and particularly pointed out in the claim.

In the said drawings, Figure 1 is a vertical longitudinal section of a faucet embodying my invention, and Fig. 2 is a sectional plan of the same.

The shell or casing is represented at *a*, and the supply-pipe at *a'*. *c* represents a hollow reciprocating plug, whose outer end is closed and provided with an external flange *f*², and whose side is provided with a number of obliquely-arranged perforations *d*, which permit of the escape of the fluid from the said hollow plug. Held within the housing or neck *b*² of the casing *a* by means of a packing-ring *b*, through which the plug *c* passes, and surrounding the outer end of the plug is a spiral spring *f*³, which bears against the flange *f*² and the end of the housing or inner wall of the casing *a*. Thus it will be seen that the said spring will have a normal tendency to draw the plug *c* out of the packing, thereby uncovering the perforations *d* and permitting the fluid to escape through the hollow plug and its perforations into the casing *a*, from whence it runs by the spout. As a means for forcing the plug *c* back into the housing with its perforations covered by the packing-ring, I

provide a vertical stem or spindle *g*³, suitably stepped in the bottom of the casing, as shown in Fig. 1, and journaled at its upper end in a suitable packing-box *b'*, above which latter it is provided with any suitable operating lever or handle, and secured to this stem is a cam *f*, which bears in a groove in the outer end of the plug *c*, as shown in Fig. 1, and thus serves to support the said end of the plug when the latter is forced outward by the spring. The cam has the form shown in Fig. 2, and by which it will be seen that when the spindle or stem *g*³ is rotated in one direction the plug will be reciprocated by the conjoint action of the spring and cam, the latter serving to force it in, while the spring serves to force it out. The cam should, however, be rotated in but one direction, and therefore I restrict the rotation of the spindle by means of a ratchet-disk *g*, secured to the spindle, and a fixed pawl *g'*, fitted to slide vertically in a socket *g*², which rests on the said ratchet in engagement with its teeth, and thus the stem is prevented from being rotated in the wrong direction; and, also, the possibility of the action of the spring upon the cam forcing the valve open accidentally is precluded. Supposing, now, the point of the cam *f* to be bearing against the end of the plug and holding the perforations under the packing, it will be seen that should the cam be further rotated in the direction of the arrow the plug would be suddenly released, whereupon the spring would instantly force it outward into the position shown in Fig. 2. This action would cause a sudden opening, modified slightly by reason of the perforations *d* being arranged obliquely.

Having thus fully described my invention and in what manner the same is to be performed, what I claim is—

In a stop-cock, the combination, with the valve-housing, of a hollow plug open at one end and plugged at the other, fitted to reciprocate in said housing and having a number of perforations *d*, a packing-ring surrounding said plug, a flange on the outer end of said plug, a spring-bearing between said flange

and housing and adapted to draw the perforated end of said plug out of said packing, a vertical stem, a cam on said stem fitting against the end of said plug in a groove
5 therein, a disk on said stem having ratchet-teeth in its upper side, a socket g^2 , and a stationary pawl resting upon said ratchet-teeth

and fitted to slide vertically in said socket, substantially as set forth.

LOUIS ROOVERS.

Witnesses:

AUG. JOERISSEN,
JAC. STEINER.