

(No Model.)

W. C. WALDA.
SAFETY VALVE.

No. 432,459.

Patented July 15, 1890.

Fig. 1.

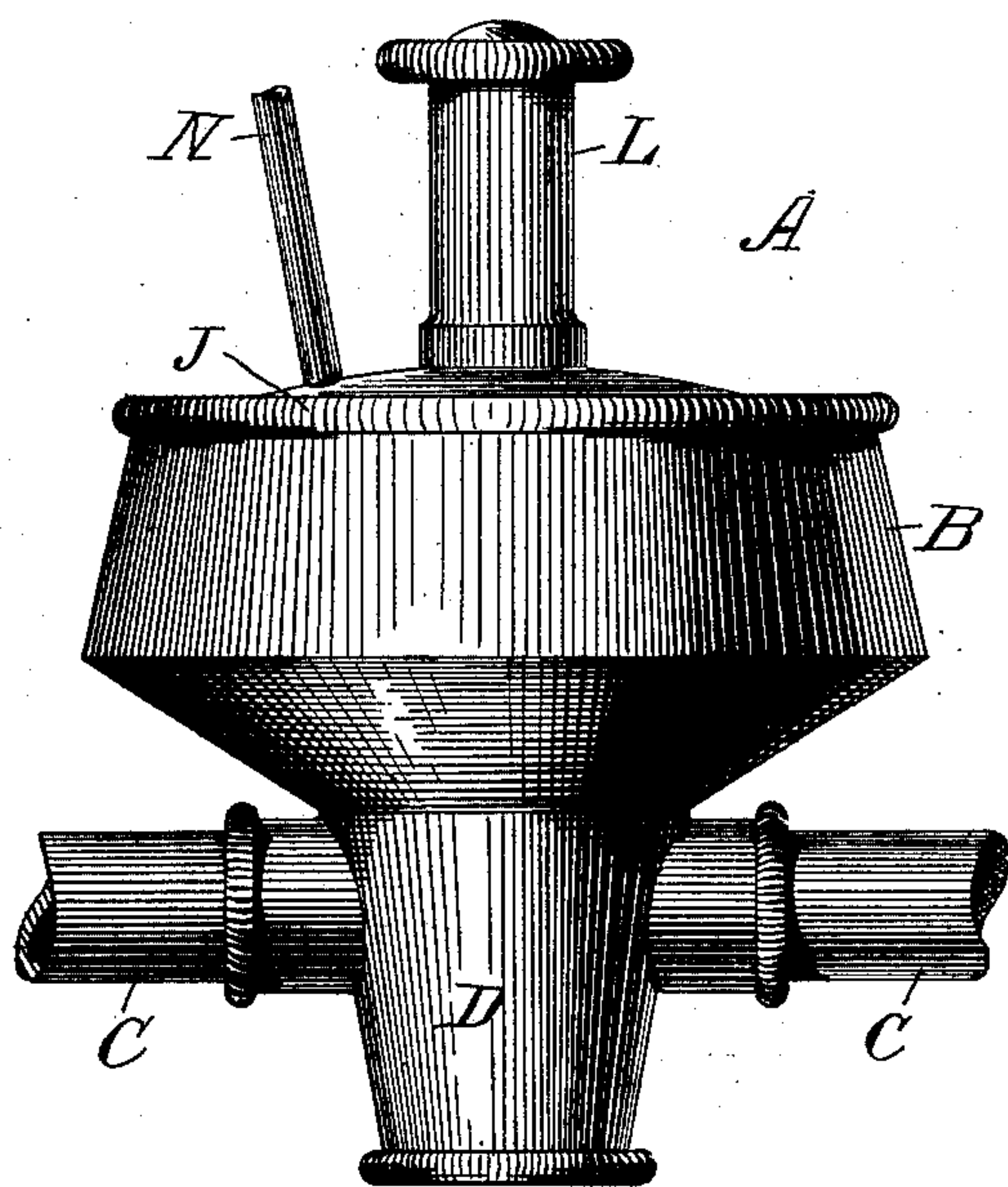
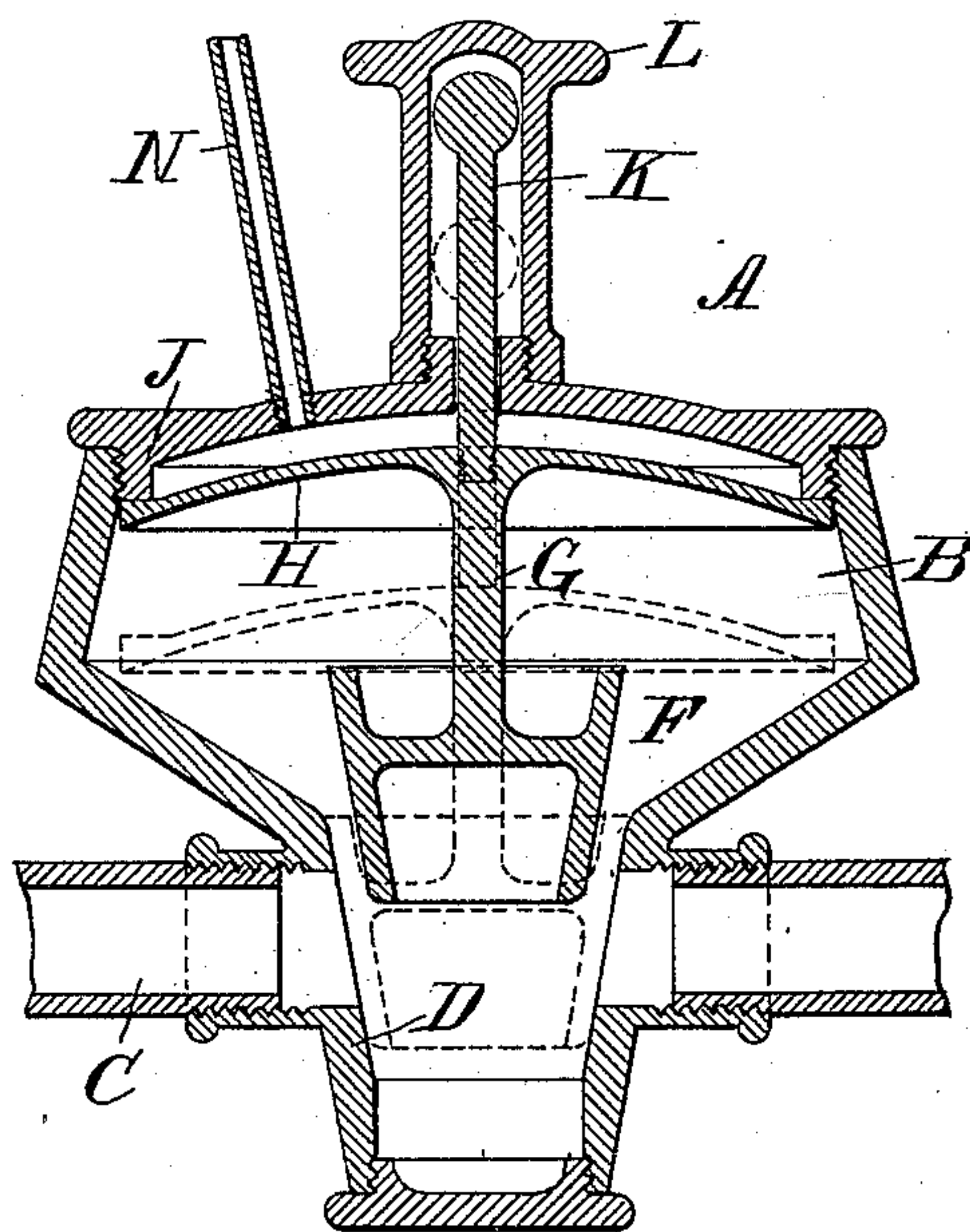


Fig. 2.



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WILLIAM C. WALDA, OF FORT WAYNE, INDIANA.

SAFETY-VALVE.

SPECIFICATION forming part of Letters Patent No. 432,459, dated July 15, 1890.

Application filed November 13, 1889. Serial No. 330,134. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. WALDA, of Fort Wayne, in the county of Allen and State of Indiana, have invented a new and Improved Safety-Valve, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved safety-valve which is simple and durable in construction and specially designed for automatically closing a pipe when the pressure within ceases.

The invention consists of certain parts and details and combinations of the same, as will be hereinafter fully described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a side elevation of the improvement, and Fig. 2 is a sectional side elevation of the same.

The improved safety-valve A is provided with a valve-body B, into which opens the line of pipe C, on which the safety-valve is applied. In the valve-body B is formed a conical valve-seat D, adapted to be engaged by a similarly-shaped valve F, serving to close the line of pipe C in case the pressure of the fluid passing through the pipe C ceases. The conical valve F is provided with a valve-stem G, extending upward and connected with a piston H, adapted to be seated on the under side of the cap J, screwing in the top of the valve-body B. The piston H is free to move in the valve-body B to permit the valve F to be seated on or unseated from its seat D. From the piston H extends upward a rod K, passing through the cap J and inclosed in a cap L, screwing on top of the cap J. From the latter leads a pipe N for carrying off any leaking fluid.

The operation is as follows: When the valve F is unseated and in the position shown in Fig. 2, its piston H rests on the under side of the cap J, being held flat by the pressure of the fluid passing through the line of pipe C and entering by the valve-seat D the interior of the valve-body B. In case the pressure of the fluid in the line of pipe C ceases the valve

F will slide downward by its own weight into the valve-seat D, thus closing the line of pipe C and preventing a flow of the fluid when the latter is again forced into the pipe. When the operator desires to again let the fluid under pressure pass through the line of pipe C, the cap L has to be unscrewed and the valve F unseated by the operator lifting the rod K, thus unseating the valve F, so that the fluid under pressure can again pass into the valve-body B underneath the piston H to force the same against the seat on the under side of the cap J. In case the safety-valve is applied on the outside of a building the pipe N opens into the open air, while in case the valve is applied inside of the building the pipe N is lead to a fire-place or to the outside of the building, so that the escaping fluid is burned up or can escape readily.

The safety-valve is principally intended for natural or artificial gas, but may be used in water-pipes, &c.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, in a safety-valve, with a valve-body having a central valve-seat and line-pipe openings leading through the side walls of said seat, of a gravity-valve, held open by the pressure and fitting in said seat, extending past and closing both of said openings, substantially as set forth.

2. The combination, in a safety-valve, with a hollow valve-body having in its bottom a central conical valve-seat and line-pipe openings through the side walls of said seat, of a conical valve fitting the seat and closing both of said openings, a disk-like piston on the valve-stem within the body and supported above the bottom thereof when the valve is in its seat, to permit any possible leakage to pass into the body, said body having a leakage-outlet above the highest point reached by the piston, substantially as set forth.

3. A safety-valve consisting in the body B, having downwardly and outwardly bulging side walls and a downwardly-inclined bottom terminating in the central conical valve-seat D, having line-pipe openings in its side walls, a screw-cap J, closing the top of the

body and provided with a tubular cap L and
outlet N, the valve F, fitting the valve-seat
and closing both of said openings, the disk-
like piston H on the valve-stem closing against
5 the flange of the cap J when in its uppermost
position and held above the bottom of the
body when in its lowermost position to per-
mit any leakage to pass around it to the said

outlet, and the operating-rod K, extending
through the cap J into the cap L, substan- 10
tially as set forth.

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Witnesses:

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