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A. W. JENCZEWSKY.

AUTOMATIC SAFETY VALVE FOR GAS SUPPLY PIPES.

APPLICATION FILED AUG. 21, 1905.

Fig. 1

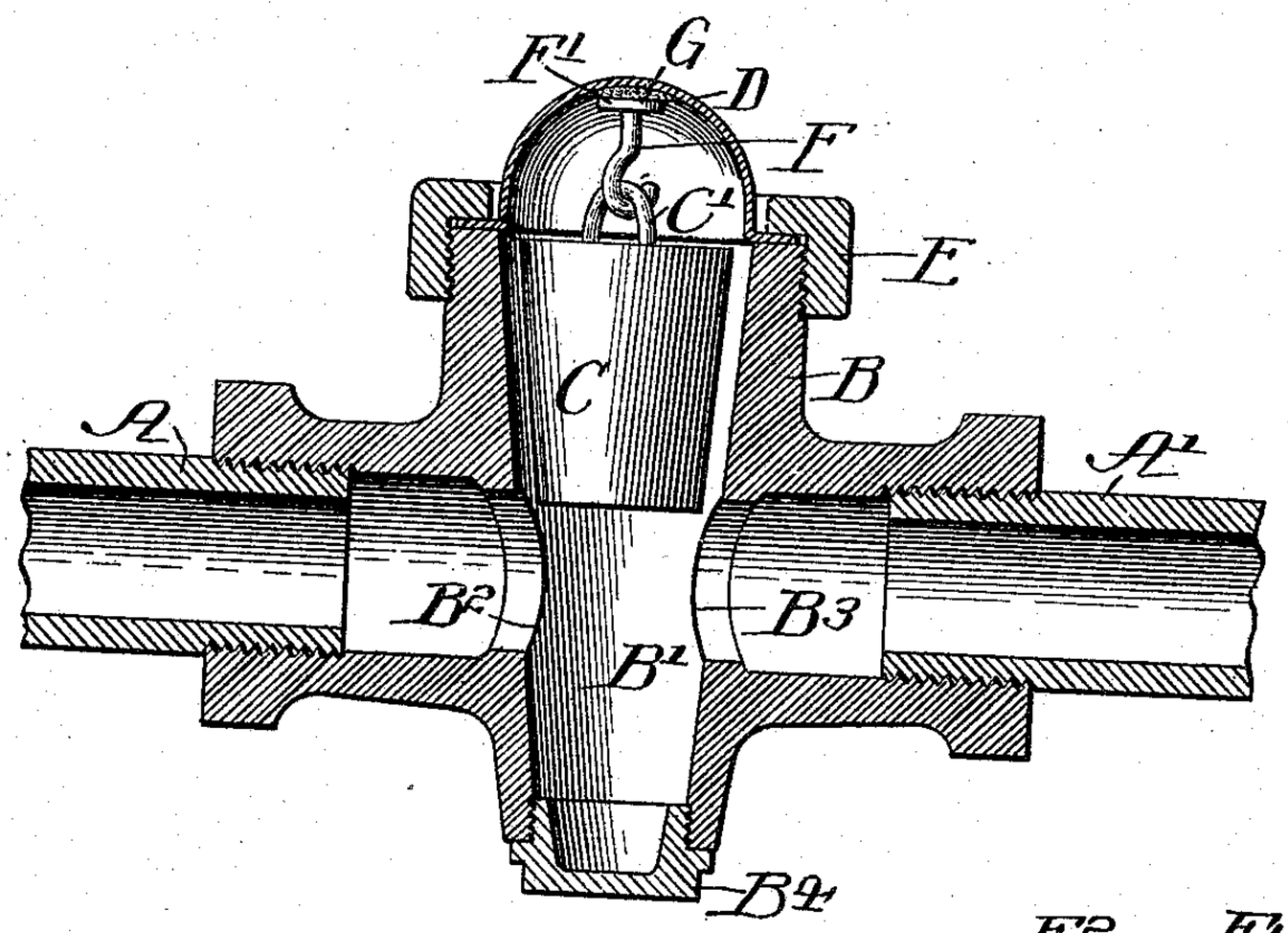


Fig. 2

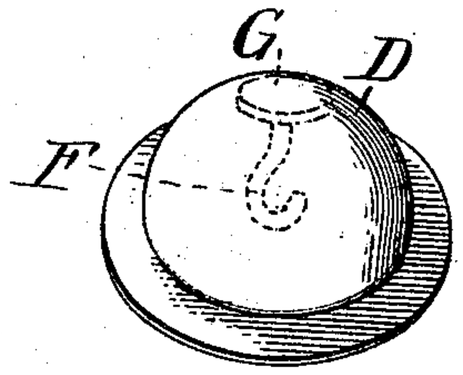
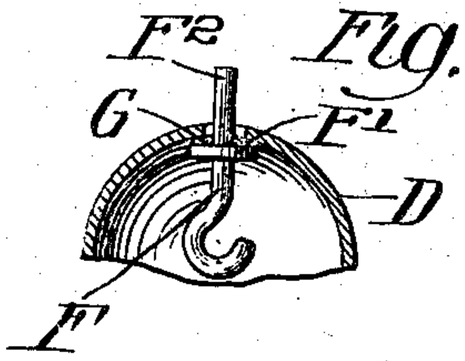


Fig. 3



Witnesses
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UNITED STATES PATENT OFFICE.

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AUTOMATIC SAFETY-VALVE FOR GAS-SUPPLY PIPES.

No. 840,772. Specification of Letters Patent. Patented Jan. 8, 1907.

Application filed August 21, 1905. Serial No. 275,054.

To all whom it may concern:

Be it known that I, ADOLPH W. JENCZEWSKY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automatic Safety-Valves for Gas-Supply Pipes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to an automatically-acting or self-closing safety-valve intended to be applied to a supply-pipe for illuminating-gas at a point within a house or building and adapted to close the pipe against the passage of gas from the main in case a fire occurs within said house or building.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

In applying my invention I provide the gas-supply pipe within the cellar or basement of the building between the gas-meter and the point where the pipe enters the building with a valve having a movable part or closure so constructed that it has a tendency to assume a closed position either by force of gravity or by means of an actuating-spring, together with means for holding the valve normally in its open position, embracing a support attached by a fusible metal connection to a sheet-metal cap or dome, the whole being so constructed and arranged that when the fusible connection is melted by heat or otherwise broken the valve-closure will be released and effectually close the valve. The sheet-metal cap is removably attached to the valve-casing by means of a flanged clamping-ring having screw-threaded connection with the casing and acting to clamp the edge of the cap against an annular surface of the casing, this construction permitting the replacement of caps which have been injured or their removal for the purpose of replacing the fusible connection.

The sheet-metal cap is made in the shape of a dome in order that the heat of a fire may be more readily conveyed to the fusible connection.

As illustrated in the accompanying drawings, Figure 1 is a view in central longitudinal section of a valve embodying my invention. Fig. 2 is a perspective view of the dome-shaped sheet-metal cap which closes the top of the casing. Fig. 3 is a detail section of the sheet-metal cap, showing a modified construction in the means for supporting the valve-closure.

As shown in said drawings, A indicates a supply-pipe leading into a building from a gas-main, A′ a pipe leading to a gas-meter or to the supply-pipe of the house, and B a valve-casing connecting the ends of the pipes A and A′. Said casing B has a vertically-arranged conical or tapered valve-chamber B′, which extends transversely across the main passage through the valve-casing and is provided in its lower part with opposite lateral ports B^2 B^3, constituting parts of said passage and closed at the bottom by a cap B^4. Within said valve-chamber is located a conical valve-plug C, which is movable vertically in said chamber and when in its lower position fits the conical valve-seat formed by the lower part of the chamber and closes the ports B^2 B^3. When the plug C is lifted to the upper part of the chamber, it stands above the said ports and permits the free passage of gas through the casing. The top of the valve-casing is closed by a sheet-metal cap D, which is formed in the shape of a dome and provided at its lower edge with an outwardly-extending annular flange. The said cap is detachably secured to the casing by means of a clamping-ring E, having screw-threaded engagement with the tubular top of the casing and provided with an inwardly-extending flange which overlaps the flange of the cap D and clamps the cap to the top edge of the tubular top of the casing. To the center of said cap D is attached, by means of solder or fusible metal, a hook F, which extends from the top of the cap downwardly into the casing and is engaged with a loop C′ on the top of the plug C. To facilitate the attachment of the hook F to the inner surface of the cap, the said hook is provided at the upper end of its shank with a flat integral disk F′, between which and the cap is a mass or layer G of solder or fusible metal, through which the disk is attached or made to adhere to the cap. Heat from a fire acting on the sheet-metal cap is quickly transmitted therethrough to the solder G and melting the same releases tne hook and permits the descent of the plug to its lowermost or closed position.

In the modified form of the plug-supporting means illustrated in Fig. 3 the hook F is provided with a rod F^2, which forms an up-

ward extension of the shank of the hook and extends from the disk F′ upwardly or outwardly through a central hole in the cap D, the hole formed in the cap for the passage of said rod being normally closed by the disk F′ and the solder by which the disk is secured to the cap. By striking downwardly on the rod F^2 the connection of the hook with the cap may be broken and the valve-plug thereby released. The rod F^2 enables the valve to be quickly closed by a fireman or an occupant of the building who may be in the neighborhood of the safety-valve before the fire reaches the latter and who by striking the projecting rod with a hammer or other implement may release the valve-closure, and thus effect the closing of the valve.

I claim as my invention—

1. A safety-valve comprising a valve-casing having a cast-metal body and a valve-chamber therein, a dome-shaped thin sheet-metal cap which extends outwardly from the cast-metal body and forms the end portion of the valve-chamber, said cap being provided with a marginal flange, a clamping-ring having screw-threaded connection with the cast-metal body and acting to clamp the marginal flange of the sheet-metal cap to said body, a movable valve-closure in the valve-chamber and means for holding the valve-closure in its open position embracing a support for the closure attached to the said sheet-metal cap by fusible metal.

2. The combination with a valve-casing and a movable valve-closure therein, of means for holding the valve-closure in its open position, embracing a sheet-metal cap forming part of the outer wall of the casing and provided with a hole, and a support for the valve-closure provided with a disk which is attached to the cap around the hole therein by fusible metal, said support being also provided with a rod which projects outwardly through said hole in the cap.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 11th day of August, A. D. 1905.

ADOLPH W. JENCZEWSKY.

Witnesses:

W. L. Hall,

G. B. Wilkins.