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J. MURRAY.

AUTOMATIC SAFETY VALVE FOR GAS SUPPLY PIPES.

APPLICATION FILED JUNE 10, 1907.

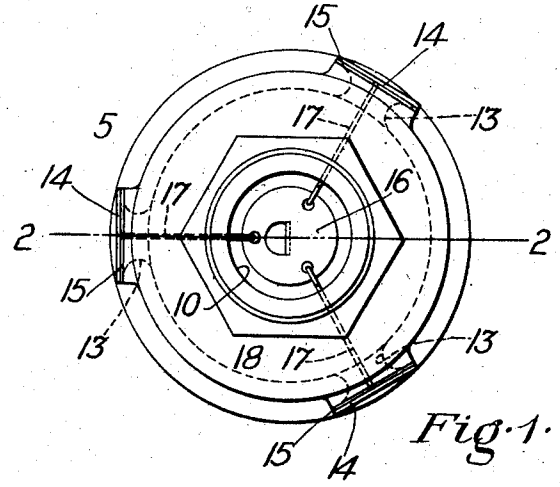

Fig. 1.

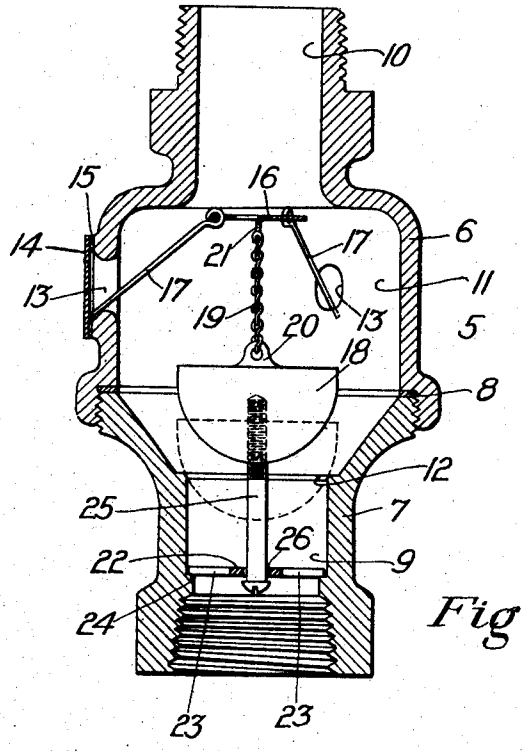

Fig. 2.

Witnesses:

William C. Glass.

Francis H. Bishop.

Inventor:

James Murray

by his attorney Charles N. Goodwin.

UNITED STATES PATENT OFFICE.

JAMES MURRAY, OF JAMAICA PLAIN, MASSACHUSETTS.

AUTOMATIC SAFETY-VALVE FOR GAS-SUPPLY PIPES.

No. 878,658. Specification of Letters Patent. Patented Feb. 11, 1908.

Application filed June 10, 1907. Serial No. 378,138.

To all whom it may concern:

Be it known that I, JAMES MURRAY, a citizen of the United States, residing at Jamaica Plain, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Automatic Safety-Valves for Gas-Supply Pipes, of which the following is a specification.

This invention relates to improvements in automatic safety valves for gas supply pipes and the object is to provide a valve which shall automatically shut off the supply of gas in case of fire in the building in which said valve is located.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the appended claims.

Referring to the drawings: Figure 1 is a plan of my improved valve. Fig. 2 is a sectional elevation taken on line 2—2 of Fig. 1.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 5 is a casing which is preferably formed in two parts 6 and 7 having screw-threaded engagement with each other, there being a gasket 8 formed of any suitable material such as rubber or leather interposed between the abutting surfaces of said parts. The casing 5 is provided with an inlet passage 9 and an outlet passage 10, said passages being separated by a chamber 11. A valve seat 12 is formed on the casing 5 and said casing is provided with a plurality of holes 13. A plurality of plates 14 formed of any suitable material are secured to the casing 5 preferably by a fusible material 15 having a low melting point. I prefer to employ for this purpose a soft solder which melts at about 175° F. If desired the plates 14 may themselves be formed of fusible material. A plate 16 is supported by a plurality of supporting members 17 which are pivotally connected at their upper ends to said plate and at their lower ends rest against the plates 14, respectively. A valve 18 is suspended from the plate 16 by a preferably flexible connection 19, such, for instance, as a chain, said chain being connected at its lower end to an ear 20 formed on the valve 18 and at its upper end to an ear 21 formed on the plate 16. A spider 22 having spokes 23 rests on and is secured to a flange 24 in any suitable manner, such, for instance, as by soldering. A guide rod 25 having screw-threaded engagement with the valve 18 extends through a hole 26 formed in the spider 22.

The operation of the device hereinbefore specifically described is as follows: Assuming that the inlet passage 9 is connected to a source of supply of gas and the outlet passage 10 is connected to the supply pipes of a building the gas normally flows upwardly through the passage 9, through the chamber 11, and outwardly through the outlet passage 10 to the supply pipes of the building. In case of fire as soon as the temperature has become raised to or above the melting point of the fusible material 15, said material melts and one or more of the plates 14 drop off, thereby releasing the supports 17 and allowing the valve 18 to fall into contact with the seat 12, thereby shutting off the supply of gas. The valve 18 will in practice be of sufficient weight to remain in contact with the seat 12 against the pressure of the gas.

Having thus described my invention, what I claim and desire by Letters Patent to secure is:

1. In a device of the character described, a casing provided with an inlet passage, an outlet passage, and a plurality of holes in the lateral wall thereof, a plurality of plates normally covering said holes, respectively, fusible material interposed between said plates and said casing, a plurality of supporting members adapted to normally rest against said plates, respectively, a valve seat, and a valve normally supported by said members out of contact with said seat.

2. In a device of the character described, a casing provided with an inlet passage, an outlet passage, and a plurality of holes in the lateral wall thereof, a plurality of fusible plates normally covering said holes, respectively, a plurality of supporting members adapted to normally rest against said plates, respectively, a valve seat, and a valve normally supported by said members out of contact with said seat.

3. In a device of the character described, a casing provided with an inlet passage, and an outlet passage, a plurality of plates secured to the lateral wall of said casing by fusible material, a plurality of supporting members normally supported by said plates, a valve seat, and a valve normally supported by said members out of contact with said seat.

4. In a device of the character described,

a casing provided with an inlet passage, an outlet passage, and a plurality of holes in the vertical wall thereof, a plurality of plates covering said holes and secured to said casing by fusible material, a plurality of supporting members adapted to normally rest against said plates, respectively, a plate supported by said members, a valve seat, a valve, and a flexible connection by which said valve is normally supported from said plate out of contact with said seat.

5. In a device of the character described, a casing provided with an inlet passage and an outlet passage, supporting means, a plurality of fusible elements fused to the lateral wall of said casing and adapted to normally support said supporting means, a valve seat located between said inlet and outlet passages, and a valve normally supported by said members out of contact with said seat.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES MURRAY.

Witnesses:
LOUIS A. JONES,
SADIE V. MCCARTHY.