D. AMBROSE.

SAFETY GAS VALVE.

APPLICATION FILED JUNE 27, 1908.

925,072. Patented June 15, 1909.

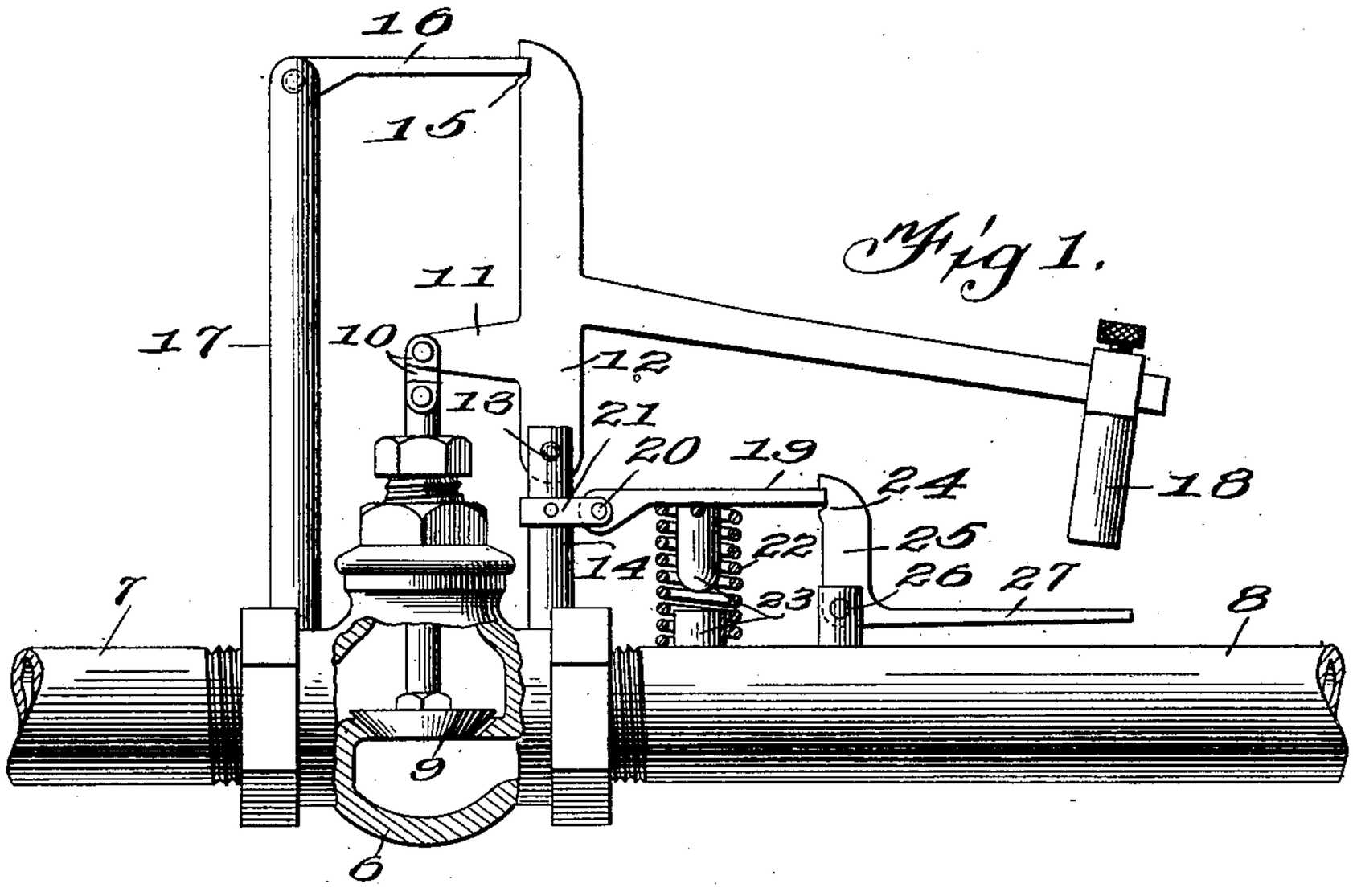

Fig 1.

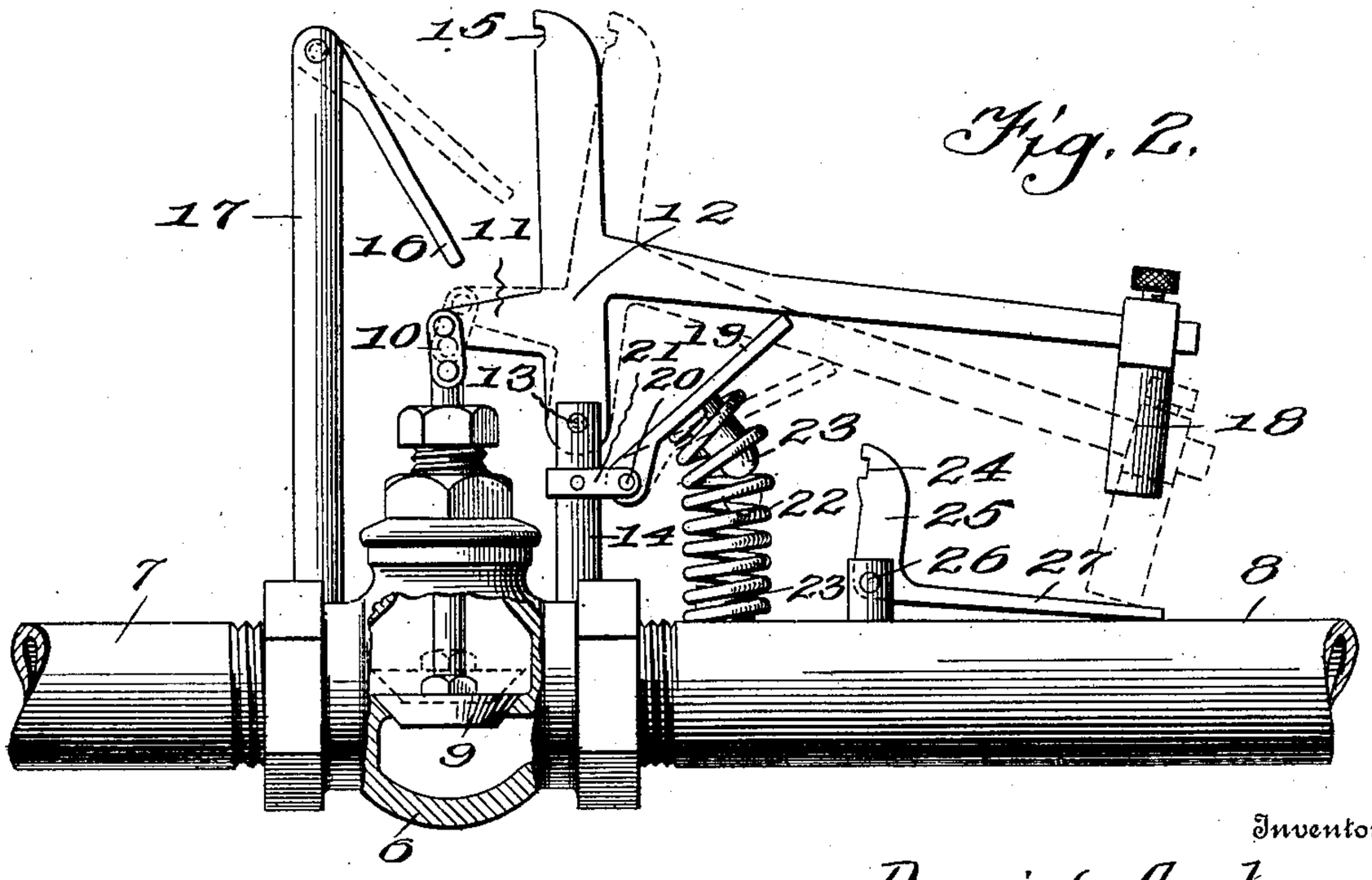

Fig. 2.

Witnesses

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DAVID AMBROSE, OF AMBRIDGE, PENNSYLVANIA.

SAFETY GAS-VALVE.

No. 925,072. Specification of Letters Patent. Patented June 15, 1909.

Application filed June 27, 1908. Serial No. 440,737.

To all whom it may concern:

Be it known that I, DAVID AMBROSE, citizen of the United States, residing at Ambridge, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Safety Gas-Valves, of which the following is a specification.

This invention relates to safety valves for gas pipes, and comprises a valve adapted to be attached to the gas main leading to a house or building and which will operate when the gas pressure is turned off or stopped, to close the main and hold the same closed until the valve is opened by hand.

The object of the invention is to prevent the escape of gas and to protect the lives of persons in the building. It sometimes happens that in consequence of a break in a gas main or for other reasons the gas flow ceases, and consequently a fire or light left burning in the house will go out, and on resumption of the flow, the gas will thus escape, with resulting danger to persons and property. By means of the present valve such danger is averted, since when the flow stops the valve will close and remain closed.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side view, partly in section, with the valve set or open; Fig. 2 is a similar view with the valve closed.

Referring specifically to the drawings, 6 indicates a valve casing with an inlet pipe 7 and an outlet pipe 8. The valve 9 opens against the pressure. Its stem is connected at the top by links 10 to an arm 11 projecting from a bent lever 12 which is fulcrumed at 13 on a post 14 set in the valve casing. The upper arm of the lever has a notch 15 adapted to receive a latch 16 pivoted to the top of a post 17 which is also set in the valve casing. When the latch is got in the notch the valve is held in slightly open position. The bent lever has a horizontal arm which carries an adjustable weight and hammer 18, which is adjustable along the arm so that it will be overbalanced by the ordinary pressure, or any pressure above a predetermined safety point. In other words, the pressure on the valve proper will ordinarily lift the weight and hold the bent lever with its notch in engagement with the latch 16.

A trip lever 19 is pivoted at 20 to a bracket 21 on the post 14 and is pressed from below by a coiled spring 22 in compression between the pipe 8 and the lever, the spring being held in position by lugs 23 on the pipe and lever respectively. The outer end of the lever is engageable in a notch 24 in a trigger 25 which consists of a bent lever fulcrumed at 26 on a stud on the pipe 8, and the tail 27 of the trigger projects into position under the hammer 18.

In operation, the valve is opened while the pressure is on, and the latch 16 is engaged in the notch 15, the pressure serving to hold the valve and the lever 12 in such position, as above explained. The trip lever 19 is also set and engaged by the trigger. As long as the pressure continues, the valve will remain in this position. When the pressure decreases so that the weight 18 overbalances the same, said weight will fall, releasing the latch 16, and when the weight strikes the tail of the trigger, the trip lever 19 will be released and then in consequence of the pressure of the spring 22, said trip lever will fly up and strike the under side of the horizontal arm of the lever 12 and lift the same, as shown in Fig. 2, thereby closing the valve, and the pressure of the spring will hold the valve closed until released by hand. The closure of the valve will be assisted, rather than opposed, by the pressure in case the gas flow is resumed, since, as stated above, the valve opens against the pressure. As a means of safety in cases of uncertain gas supply, especially in places where natural gas is used, the device will be found very useful. The working parts are all exposed and the device can be applied to a gas pipe without disconnecting the pipe.

I claim:

1. A safety gas valve having, in combination with a valve, a weighted lever connected to the valve and tending to open the same, said tendency being resisted by gas pressure on the valve, a latch engaging the lever to hold the valve open, a spring actuated trip arranged to strike the said lever and close the valve, and a trigger controlling the trip and arranged to be released by movement of the weighted lever incident to failure of pressure.

2. A safety gas valve having, in combination with a valve, a bent lever connected to the valve stem, said lever having an upright arm and a horizontal arm, a weight adjustable along the latter arm, a latch engageable with the upright arm to hold the valve open, a spring-actuated trip arranged to strike

the under side of the horizontal arm and close the valve, and a trigger engageable with the trip and controlling the same and located under the weight in position to be struck thereby and released when said weight drops.

3. The combination with a gas valve arranged to open against the gas pressure, of a weighted lever connected to the valve and tending to open the same, and means controlled by the pressure on the valve and actuated by the movement of said lever, in consequence of the failure of pressure, to close the valve.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID AMBROSE.

Witnesses:
FRED W. EMERICK,
JOHN LOCKE.