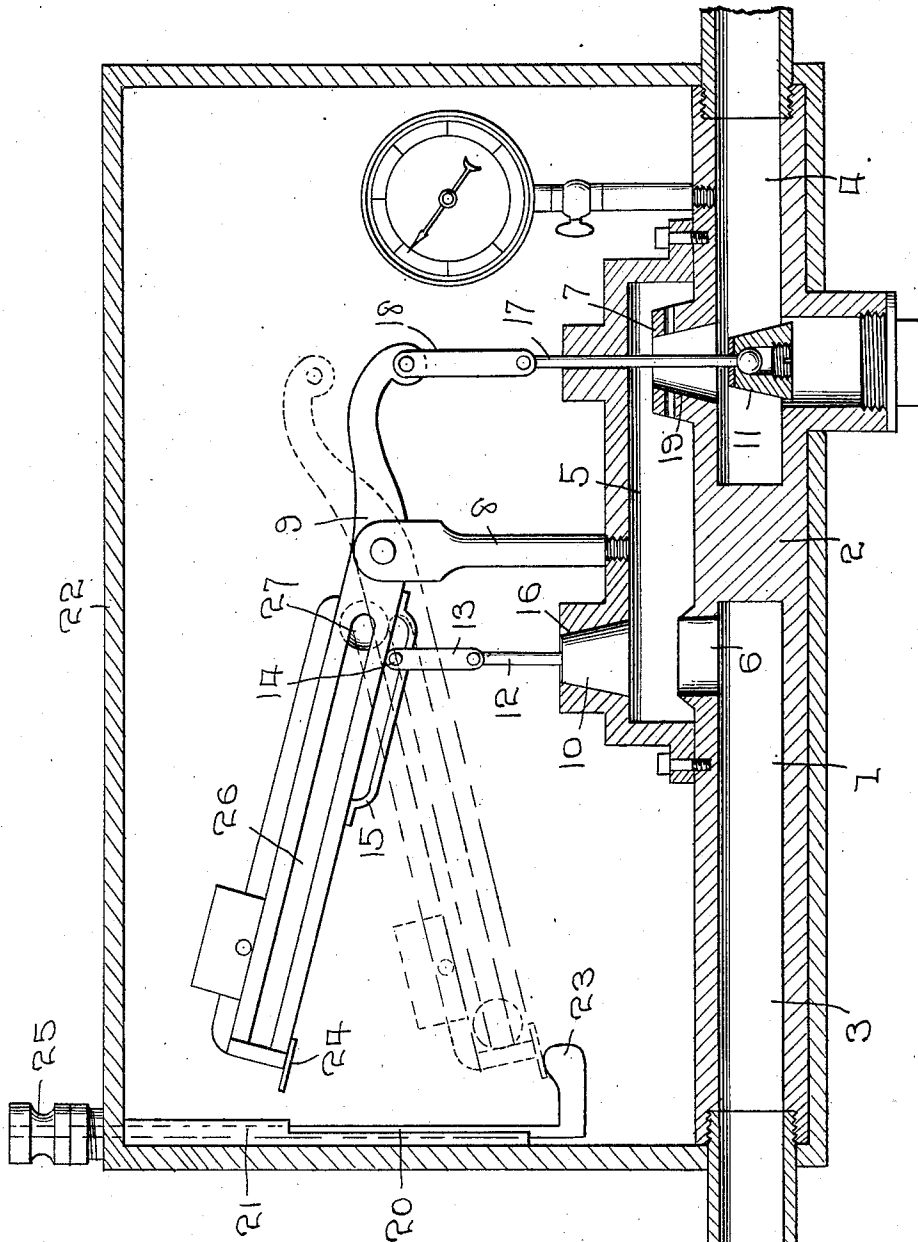


E. G. MARIN.
 AUTOMATIC CUT-OFF FOR GAS.
 APPLICATION FILED AUG. 4, 1911.

1,037,275.

Patented Sept. 3, 1912.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ERIC G. MARIN, OF SYRACUSE, NEW YORK.

AUTOMATIC CUT-OFF FOR GAS.

1,037,275.

Specification of Letters Patent.

Patented Sept. 3, 1912.

Application filed August 4, 1911. Serial No. 642,270.

To all whom it may concern:

Be it known that I, ERIC G. MARIN, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Automatic Cut-Offs for Gas; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to new and useful improvements in automatic cut-offs for gas and is more particularly an improvement on Patent 910,939 issued Jan. 26, 1909, and my object is to provide tapered valves and connect them to a rocking beam, said valves being adapted to control the flow of gas through the cut-off.

A further object is to provide means for connecting the valves direct to the rocking beam, and,

A further object is to provide improved means for manually operating the rocking beam.

Other objects and advantages will be hereinafter set forth and pointed out in the specification.

In the accompanying drawing, which is made a part of this application, the figure is a longitudinally vertical sectional view through the cut-off showing the rocking beam in one position, in full lines, and in the other position by dotted lines.

Referring to the drawing, 1 indicates the main pipe of the cut-off which is divided in its length by a partition 2 thereby providing a receiving and discharging end 3 and 4 respectively for the main pipe. As connection through the main pipe is stopped by the partition 2 I provide a passage 5 which extends a distance on each side of the partition and is attached in any suitable manner to the outer face of the main pipe, the gas entering the passage from the receiving end 3 through a port 6 and into the discharging end 4 through a nozzle 7, said nozzle extending upwardly from the main pipe 1 into the passage.

Extending upwardly from the casing forming the passage 5 is a standard 8, pivoted to the upper end of which is a rocking beam 9, said beam controlling valves 10 and 11 which serve to close the port 6 and the nozzle 7 respectively. The valve 10 is provided with a stem 12, the upper end of

which is pivotally connected to a link 13, and said link is attached to the rocking beam 9 by introducing a stud 14 through a loop 15 attached to the lower face of the rocking beam. The valve 10 is tapered and when in open position fits a tapered seat 16 in the casing forming the passage 5 and by tapering both the valve and the seat the valve will be prevented from sticking when engaged with its seat. The valve 11 is likewise provided with a stem 17 which is also connected at its upper end to a link 18 and said link is pivotally attached to one end of the rocking beam and on the opposite side of the standard from the point of connection between the valve 10 and the rocking beam. The valve 11 is likewise tapered and enters a tapered seat 19 in the nozzle 7 by which arrangement this valve will be likewise prevented from sticking when engaged with the seat.

That portion of the rocking beam to which the valve 10 is attached extends a distance beyond the valve and in the path of a lifting device which comprises a rod 20 which slides in a bearing 21, said bearing being in turn attached to the inner wall of a casing 22, which casing surrounds the main pipe 1 and the parts connected therewith. The lower end of the rod 20 is provided with an arm 23 which extends into the casing, in the path of a plate 24 carried by the end of the rocking beam 9 so that when an upward lift is given the rod, the beam will be rocked on its pivot and the valves opened thereby. The upper end of the rod extends through the casing and is provided with a knob 25 which may be readily grasped to move the rod upwardly.

In operation, when the gas is flowing at its full or normal force the pressure thereof will keep the valve 10 raised within the seat 16, thereby permitting the gas to flow from the receiving end of the pipe through the passage and into the discharging end of the pipe and the valves will be held in the position shown while the pressure of the gas remains normal. Should, however, the pressure of the gas be lessened to a predetermined extent the weight of the extended portion of the rocking beam will lower the valve 10 and position the same over the port 6 while the valve 11 will ascend and engage the seat 19, thereby completely stopping the flow of the gas through the pipe.

In order to securely hold the valves seat-

ed, the extended portion of the rocking beam is provided with a runway 26, in which is located a ball 27 which will move to the outer end of the runway when the valve 10 is in its lowered position, thus employing the weight of the ball to assist in holding the valve 10 in its lowered position. When, however, the beam is moved to its upper position the inclination thereof will cause the ball to move to the inner end of the runway, which terminates adjacent the standard 3, and in view of the fact that the ball is so near the pivot point of the beam and the weight thereof will not overcome the pressure of the gas to cause the valve to descend until the pressure of the gas is greatly weakened, it will be readily seen that by tapering the valves 10 and 11 and providing tapered sides therefor, the possibility of their sticking to the seat, caused by the elements of the gas adhering to the walls of the valves will be reduced to a minimum, and it will likewise be seen that by arranging the lifting device for the end of the rocking beam in the manner shown, said rod will instantly descend to its lowermost position as soon as the knob thereof is released, and it will further be seen that the arm 23 will always be in position to engage the plate on the end of the beam.

What I claim is:

1. In an automatic cut-off for gas the combination with a casing, of a pipe having a partition therein and having a port at one

side of the partition and a nozzle at the other side and having a passage connecting the port and nozzle, a rocking beam pivotally mounted in the casing, a pair of valves connected to the rocking beam on opposite sides of its pivot, one of said valves adapted to close the nozzle, the other valve being adapted to close said port, and a rod having a lateral arm on its lower end and a knob on its upper end, said rod extending down through the top of the casing and having its arm under an end of the rocking beam and adapted to contact with and raise said end through manipulation of said knob.

2. In an automatic cut-off for gas the combination with a body containing a gas inlet and a gas outlet and means embodying a pivoted beam for interrupting the flow of gas through the inlet and outlet, of a casing united with said body, and a vertically slidable rod having a lateral arm on its lower end for engaging with said beam and raising an end thereof when the rod is raised, and a knob on the top end of said rod for limiting its downward movement and constituting means by which the rod may be raised.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ERIC G. MARIN.

Witnesses:

ALBERT F. ECKEL,
HARRY H. HARTMAN.