

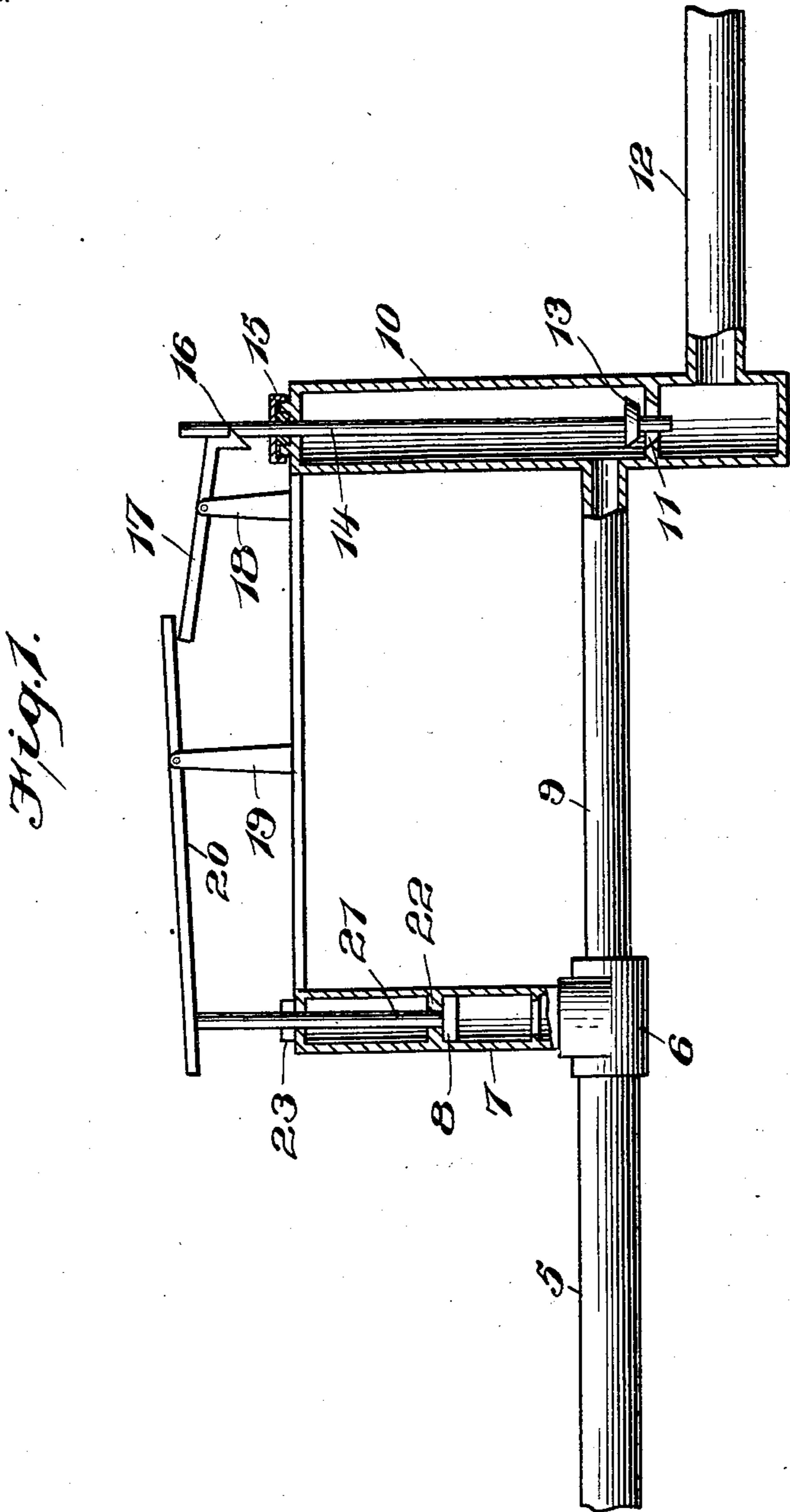
No. 730,977.

PATENTED JUNE 16, 1903.

B. M. SHEETS.  
AUTOMATIC GAS SHUT-OFF.  
APPLICATION FILED DEC. 12, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

*J. P. Brett*  
*Harry Ellis Chandler*

By

Inventor  
*B. M. Sheets,*  
*Charles Chandler*

Attorneys

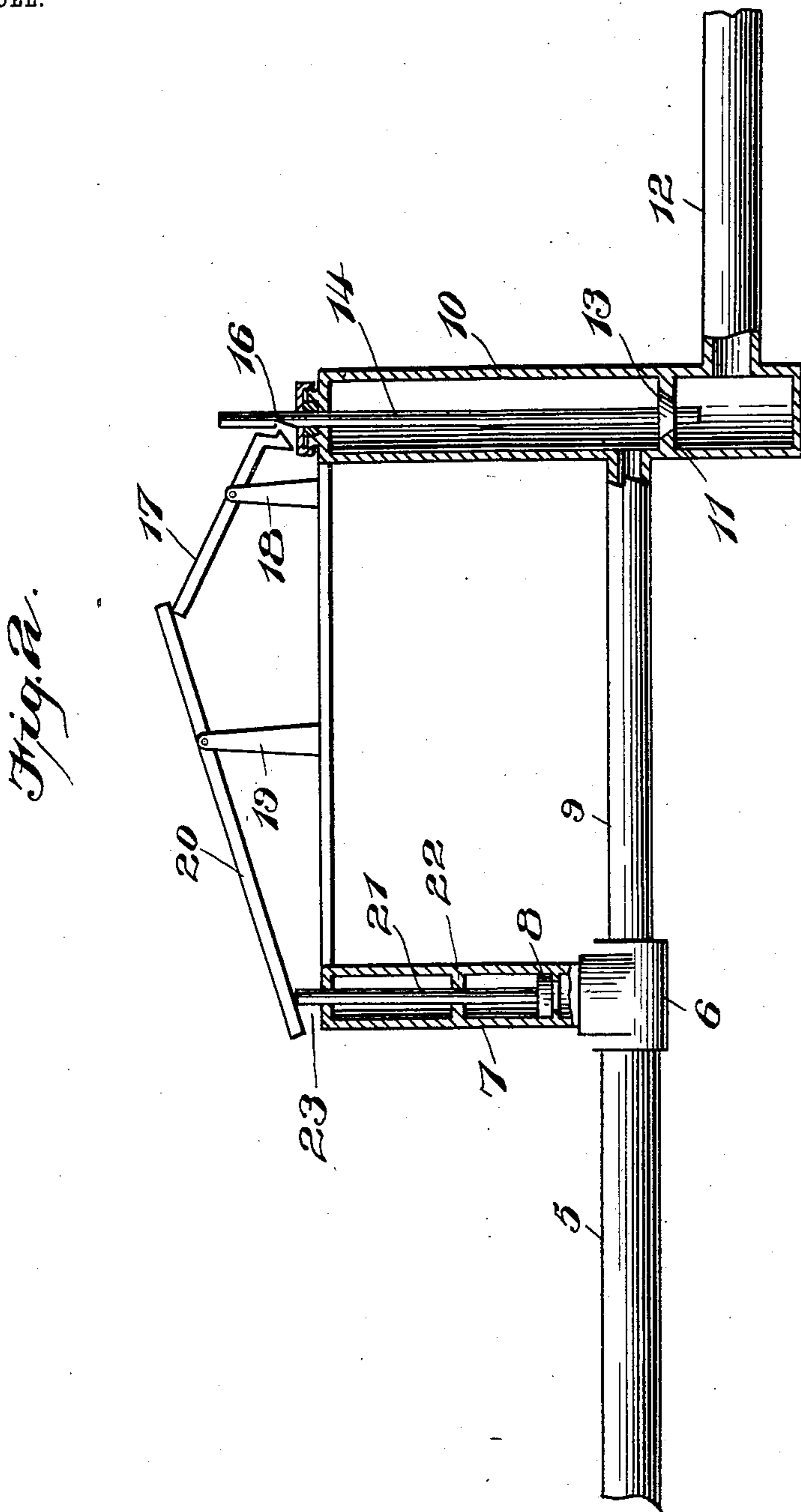
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# UNITED STATES PATENT OFFICE.

BRADY M. SHEETS, OF EUREKA, WEST VIRGINIA.

## AUTOMATIC GAS SHUT-OFF.

SPECIFICATION forming part of Letters Patent No. 730,977, dated June 16, 1903.

Application filed December 12, 1902. Serial No. 134,983. (No model.)

*To all whom it may concern:*

Be it known that I, BRADY M. SHEETS, a citizen of the United States, residing at Eureka, in the county of Pleasants, State of West Virginia, have invented certain new and useful Improvements in Automatic Gas Shut-Offs; 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.

This invention relates to automatic shut-offs; and it has for its object to provide a mechanism which may be employed in connection with a gas-supply pipe and which when the pressure within the pipe drops below a predetermined point will be operated automatically to cut off the supply of gas, thus shutting off the gas should a leak occur such as would permit the pressure to drop to the required degree.

A further object of the invention is to provide a construction which will be simple and accurate in its operation.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in both views, Figure 1 is a view partly in section and partly in elevation and showing the present shut-off mechanism set for operation. Fig. 2 is a view similar to Fig. 1 and showing the positions of the parts of the mechanism when the latter has operated to shut off the flow of gas.

Referring now to the drawings, there is shown a main 5, from which gas is supplied to a building and with which main is connected the casing 6, from which leads a cylinder 7, having a piston 8 therein, and which piston is adapted to be raised and held in raised position by the pressure of gas in the cylinder as maintained by the pressure in the main 5. From the casing 6 leads a pipe 9 to a second casing 10, at a point above the valve-seat 11 of the latter, and from which casing below the valve-seat leads the pipe 12, through which the gas passes to its point or points of consumption. In connection with the seat 11 is employed an upwardly-opening valve 13, having a stem 14, which passes upwardly in the casing 10 and outwardly through the stuffing-box, at the upper end thereof, the outwardly-lying portion of the valve-stem hav-

ing a notch 16 to receive the latch-lever 17, which is pivotally mounted upon a suitable support 18.

Upon a support 19 is pivoted a lever 20, one end of which lies above the end of the lever 17 opposite to the stem 14, so that when the lever 20 is rocked in one direction it will rock the lever 17 to engage it with the notch 16 of the valve-stem 14, said notch being in proper position for such engagement when the valve 13 is raised from its seat. By holding the lever 20 against return movement the lever 17 is held in a corresponding position in engagement with the notch 16 to hold the valve 13 raised from its seat. The piston 8 has a rod 21, which is passed upwardly through the guides 22 and 23 in the cylinder 7 and the upper end of which rod projects above the cylinder for engagement with the adjacent end of the lever 20 to rock the latter, the upward movement of the piston 8 being limited by the stop 22 when the piston-rod has rocked the lever 20 to a position to hold the lever 17 in position to engage the notch 16 when the valve 13 is raised from its seat, it being understood, however, that in practice the levers and the valve may be manipulated by hand and that, if desired, the piston-rod may be raised to position to support the lever 20 in its active position instead of waiting for the gas to move the piston and therewith the rod.

In the operation of this mechanism gas is admitted through the pipe 5 to the casings and cylinder, and the valve 13 is raised and set, as illustrated in Fig. 1 of the drawings, the gas-pressure holding the piston 8 in position, as will be understood. If, then, the pressure in the pipe 12 drops below a predetermined point, the gas will no longer support the piston 8 and the weight which presses thereon, the pressure of gas in the cylinder 7 being the same as that in the pipe 12, and as a result the piston 8 will move downwardly, permitting the lever 20 to rock and release the lever 17, which then moves into the position shown in Fig. 2 and releases the valve-stem 14, permitting the valve 13 to drop to its seat. When the valve 13 is seated, gas is cut off from the pipe 12, and the leakage stops soon thereafter, if the drop in pressure be occasioned by a leakage.

In practice modifications of the specific con-

struction shown may be made, and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

5 What is claimed is—

In an automatic gas shut-off, the combination with a casing having a vertical tube at each end and a pipe connecting said tubes, of a piston in one of the tubes above the pipe, a  
10 rod for the piston extending over the top of the tube, a valve-seat in the other tube below the pipe, the last-named tube having its upper end closed, a valve above the valve-seat and adapted to engage the valve-seat, a rod  
15 connected to the valve and extending upwardly through the top of the tube and having its outer end portion notched, an upright

upon the casing, a latch-lever pivoted to the upright and adapted to engage the notch of the valve-rod, a second upright upon the casing, a lever pivoted to the second upright and disposed with one end upon the first-named lever at the opposite end from the valve-rod and with its other end upon the piston-rod, a gas-supply pipe connected with the tube for  
25 the piston at a point below the piston, and a delivery-pipe leading from the other tube at a point below the valve-seat.

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

BRADY M. SHEETS.

Witnesses:

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