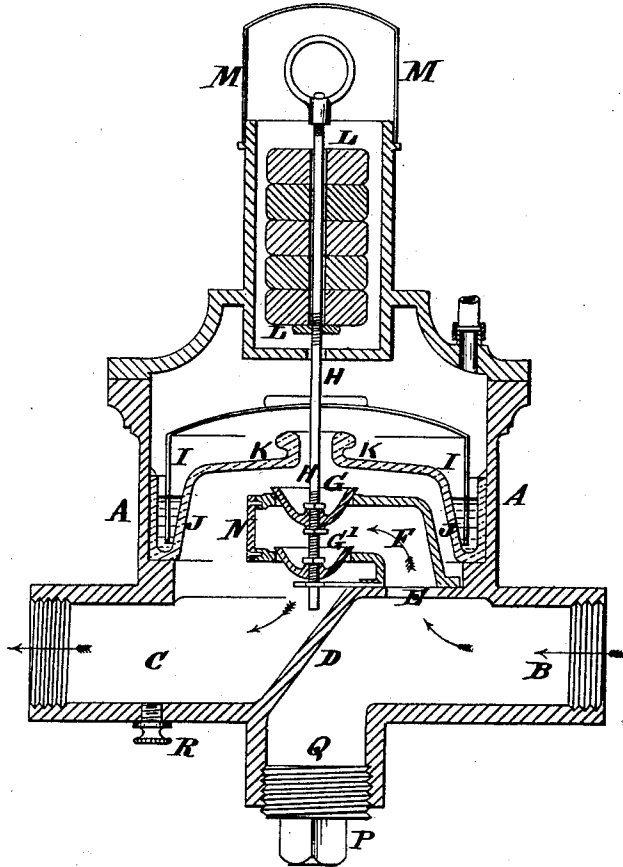


(No Model.)

J. STOTT.
STOP VALVE.

No. 361,908.

Patented Apr. 26, 1887.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES STOTT, OF LONDON, ENGLAND.

STOP-VALVE.

SPECIFICATION forming part of Letters Patent No. 361,908, dated April 26, 1887.

Application filed August 10, 1886. Serial No. 210,570. (No model.)

To all whom it may concern:

Be it known that I, JAMES STOTT, a subject of the Queen of Great Britain, residing at 174 Fleet street, in the city of London, England, have invented a new and useful Improvement in Stop-Valves, of which the following is a specification.

The object of my invention is to construct an apparatus to be affixed to a gas-supply pipe through which natural gas or ordinary gas is passed for lighting or for other purposes, so that, should the supply be shut off while the cocks of the burners are on, the apparatus closes and prevents any gas passing through to the burners, should the supply again be turned on, until the apparatus is personally set for action, and then the valves are kept open by the inflowing gas and by a float, which dips in mercury or other liquid in a cup, as in an ordinary liquid gas-regulator.

In many parts of the United States of America gas is used for lighting and other purposes known as "nataral gas" or gas generated naturally in the oil-wells. This gas is conveyed through main supply-pipes from these wells to the consumer at pressures varying from one to ten pounds to the square inch. In mining districts occasionally a large amount of leakage is formed from the settlement in the surface, which breaks the pipe-joints. Now, where this takes place the gas is turned off at the source of supply or at some intervening point. Consequently all lights go out, the cocks and jets still remaining on. This has been found a great source of danger, as when the gas is again turned on the taps of some of them are open, and rooms are filled with gas. Now, to prevent this, I apply my stop-valve, which valve may be fixed immediately after one of my or other suitable governors with a safety-valve or gas-jet fixed in between the said governor and stop-valve, so as to prevent the pressure from becoming the same on both sides of the governor. One-half foot per hour would be sufficient to pass through the jet to induce perfect working.

For the purpose of my invention I form or arrange within a shell a bell or float dipping into mercury, said bell being attached to a spindle carrying two cup-shaped valves to close apertures in a box through which the gas

passes, as in an ordinary gas regulator. The two valves have their apex downward and their broadest parts upward, to sit upon seatings formed in the box-casting. The spindle is weighted corresponding to the initial pressure of the gas.

My invention is represented in the annexed drawing, of which the figure is a vertical section through the center.

A is the casing; B, the inlet for the gas; C, the outlet, the two being divided by a screen, D. E is an opening in B for the passage of gas into the box F, between the two valves G G'.

H is the spindle, with valves G G' affixed, and carrying the float I, dipping into mercury in the vessel J, said vessel having a shield, K, to prevent spilling the mercury should the apparatus be tilted.

L L are weights on the spindle and contained within the upper part of the casing A, said weights corresponding to the initial pressure of the gas.

M is a shield-cap on the upper part, to be removed to enable the spindle H and valves G G' to be lifted. The valves are hollow coned hemispheres, and the lower valve, G', has a larger surface exposed in the valve-box than the upper, G. Consequently the two valves G G' would be kept upon their seatings by the weights L and by the gas-pressure until they are lifted, when the passage of gas into the float I would equilibrate them. The valve-box F is made with an open face, to allow of the valve being inserted from the end, which is afterward closed by a plate, N.

P is a plug, which can close the end Q or B, according to the position of the supply-pipe, to which the apparatus is affixed.

R is a screw-pin, the removal of which allows condensed water to flow out of C.

I claim—

1. The combination, in a stop-valve for gas-pipes, of the casing A, the hollow valve-box F, having the upper and lower valve-seats, and the valve-spindle H, having a weighted upper end, and provided at its lower end with two coned valves, G G', seating downwardly, respectively, upon the valve-seats in the hollow box, the said lower valve, G', being hollow, and having a larger surface exposed to the gas inside

the valve-box than the upper valve, and said valves held to their seats by the weighted spindle and gas-pressure, substantially as described.

2. The combination, in a gas-stop valve, of
5 the casing A, the hollow valve-box F, located therein, and having the upper and lower valve-seats, and the vertical valve-spindle H, weighted at its upper end, and having at its
10 downwardly, respectively, on the valve-seats in the hollow box, the lower valve being hollow, and having a larger surface exposed to the gas in the valve-box than the upper valve, and said valves held to their seats by the weighted

spindle and gas-pressure, with the mercury- 15 vessel J, having the protecting-shield K, and located in the casing above the valve-box, and the float I, dipping in the mercury-vessel and attached to the weighted valve-spindle to equilibrate the valves when lifted by the spindle 20 from their seats, substantially as described.

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