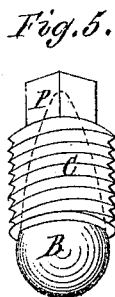
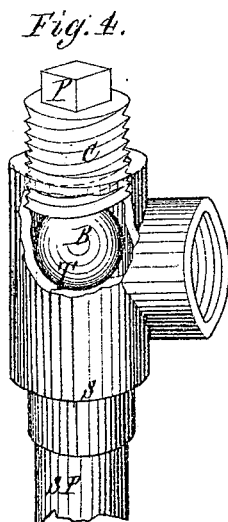
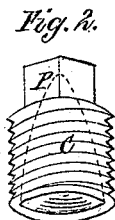
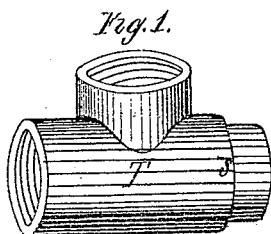


W. HUMPHREYS.

Improvement in Attachments to Gas-Service Pipes for
Automatically Cutting off the Gas in Case of Fire.

No. 114,144.

Patented April 25, 1871.



114,144. — ATTACHMENT TO GAS-SERVICE
PIPE FOR AUTOMATICALLY CUTTING OFF
THE GAS IN CASE OF FIRE.—William
Humphreys, Waterford, N. Y.

Claim.—1. A valve held separated from its seat
by cement or other suitable substance, which re-
mains solid at ordinary temperature, but which
will melt when heated above that, thereby releas-
ing the valve and allowing it to fall down to its
seat and shut off the supply of gas, substantially
as and for the purposes herein set forth.

2. A space within the fitting filled with some
substance which, when melted, will release the
valve or ball and flow around it in the valve-seat,
thus hermetically sealing the valve, substantially
as set forth.

Witnesses
John A. Ellis
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Inventor
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UNITED STATES PATENT OFFICE.

WILLIAM HUMPHREYS, OF WATERFORD, NEW YORK.

IMPROVEMENT IN ATTACHMENTS TO GAS-SERVICE PIPE FOR AUTOMATICALLY CUTTING OFF THE GAS IN CASE OF FIRE.

Specification forming part of Letters Patent No. 114,144, dated April 25, 1871.

To all whom it may concern:

Be it known that I, WILLIAM HUMPHREYS, of Waterford, in the county of Saratoga and State of New York, have invented certain new and useful Improvements in Automatic Gas Cut-Offs in Case of Fire; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

When buildings which are lighted with gas take fire, it frequently occurs that the lead pipe connecting the meter melts, and from the open pipes large quantities of gas are discharged into the burning building, aggravating the conflagration and entailing a heavy loss on the gas-manufacturer; and at such times the service-cock often cannot be approached on account of the heat, or is rendered useless by corrosion or by being covered with earth.

The object of my invention is to automatically arrest the flow of gas when the fire of the burning building melts the meter-connections; and it consists of a fire-acting gas-valve, composed of an ordinary gas-fitting called a "T," one end of which is so constructed as to form a valve-seat, another gas-fitting called a "plug," which is hollow, and a ball-valve secured in the mouth of the cavity of the plug by means of gas-fitters' cement or other suitable substance.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a view of an ordinary gas-fitting T. Fig. 2 is an ordinary gas-fitting plug. Fig. 3 is a ball-valve. Fig. 4 is a side view of the entire apparatus attached to the service-pipe, part of the T being broken, showing the ball-valve in position over the valve-seat S. Fig. 5 is a side view of the plug with the ball-valve secured in the mouth of cavity.

The gas-fitting T, as represented in Fig. 1, is milled or bored out at S to form a valve-seat. As now cast, a good valve-seat is formed by the shoulder at S; but to be perfect it should

be milled out. The cavity (of the plug P) marked C is filled with cement, and the ball-valve B heated and laid on the cement, which stick together when cooled. The plug, ball-valve, and cement may be screwed into the T, as in Fig. 4, and the apparatus is ready for attachment to the service-pipe. Now, it is evident that the ball B will remain fixed in the mouth of the cavity C, allowing a free passage to the gas, until heated to such a degree that the cement melts and releases it, when it falls upon its seat S and arrests the flow of gas, while the melted cement drops down and seals the joint.

It is not necessary that a T should be used under all circumstances—for instance, should more than one outlet be needed, then a cross or other suitable form may be used instead; also, under some circumstances, it may be desirable to use the ball-valve at the side where the outlet to the meter is represented, at O, and allowing the outlet to the meter to be either at the top where the plug and ball-valve are, as represented in Fig. 4, or at the bottom beneath the seat S.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A valve held separated from its seat by cement or other suitable substance, which remains solid at ordinary temperature, but which will melt when heated above that, thereby releasing the valve and allowing it to fall down to its seat and shut off the supply of gas, substantially as and for the purposes herein set forth.

2. A space within the fitting filled with some substance which, when melted, will release the valve or ball and flow around it in the valve-seat, thus hermetically sealing the valve, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM HUMPHREYS.

Witnesses:

H. S. M. BROECH,
D. M. VAN HOEVENBERGH.