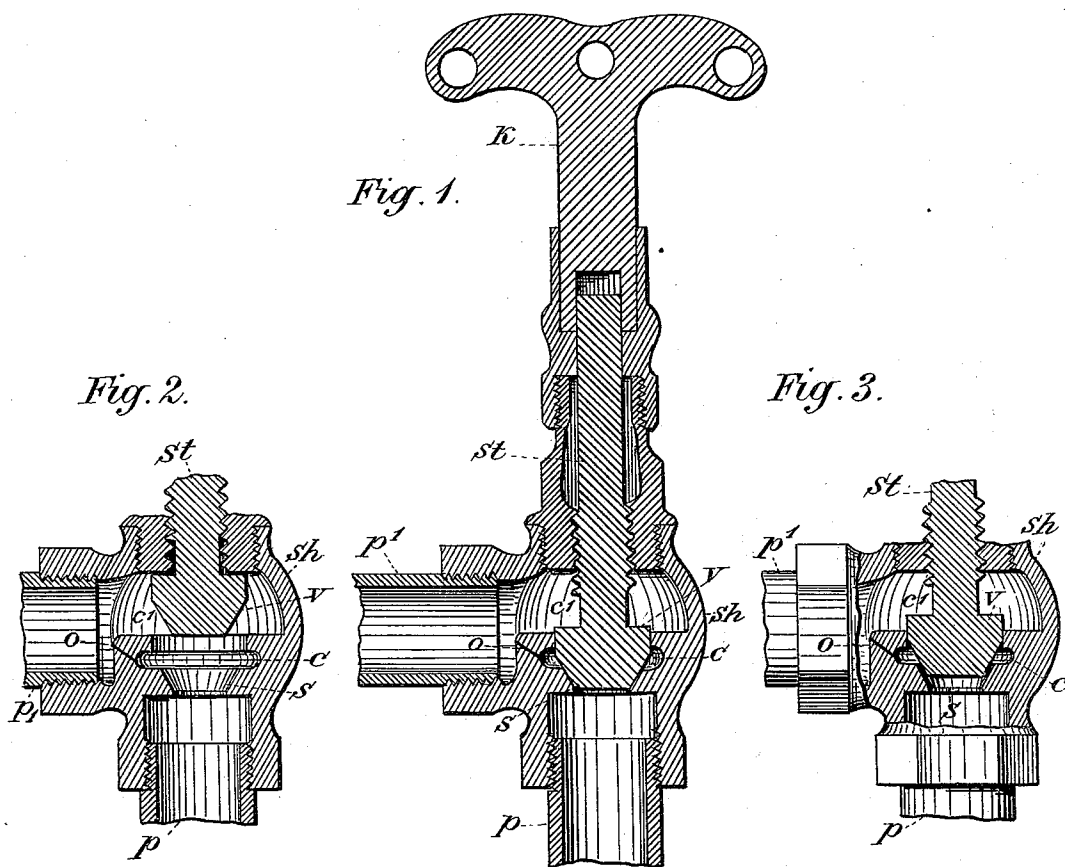


(No Model.)

F. C. BUTTZ.
GAS VALVE.

No. 427,152.

Patented May 6, 1890.



WITNESSES.

Gustav Bohn.
C. B. Griffith.

INVENTOR.

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Att'y.

UNITED STATES PATENT OFFICE.

FRANK C. BUTTZ, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF TO
JOSEPH R. JOHNSON, OF SAME PLACE.

GAS-VALVE.

SPECIFICATION forming part of Letters Patent No. 427,152, dated May 6, 1890.

Application filed July 26, 1889. Serial No. 318,790. (No model.)

To all whom it may concern:

Be it known that I, FRANK C. BUTTZ, of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful Improvements in Gas-Valves; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like letters refer to like parts.

My invention relates to the construction of gas - valves, and is intended to provide a safety-opening through which a small portion of gas may pass for lighting the fire before the full head is turned on, to prevent explosion, and will be understood from the following description.

In the drawings, Figure 1 is a vertical section of my device, showing the valve closed. Fig. 2 is a sectional view showing the valve open. Fig. 3 is a similar view, partly in section, showing the valve just lifted above its seat, so as to allow the gas to escape through the safety-opening.

In detail, *k* is the key fitting over and adapted to turn the squared end of the valve-stem *st*, which moves in an upright shank, as shown in Fig. 1. This valve-stem is threaded near its lower portion just above the valve *v*, the latter being made integral with the stem. The lower part of the valve is conical, and has its seat *s*, of corresponding shape, in the bottom of the shell *sh*, just over the opening in the inlet-pipe *p*. The main outlet-chamber is just above the valve at *c'*, while below this is an auxiliary safety-chamber *c*, from which a small opening *o* leads to the outlet-pipe *p'*. Thus by turning the key slightly, so as to just raise the valve from its seat in the position shown in Fig. 3, the gas will escape from beneath the valve into the chamber *c*, which is formed in the shell *sh* below the main chamber, and out through a small perforation or safety-opening *o* into the outlet-pipe *p'*, and thence into the stove, and the fire may be lighted by means of the small amount of gas which escapes through the safety-opening, and by turning the key still farther in the proper direction the valve is lifted and fully opened, taking the position shown in Fig. 2, and the gas will then rush

up through the main chamber *c'* into the outlet-pipe *p'* in full volume.

The inlet-pipe *p* connects through the floor or wall with the supply-pipe leading from the main. The valve may be made solid with the stem *st*, or it may be united to the stem by means of a swivel-joint in the ordinary manner, if desired; but this constitutes no part of my invention, which consists in a small auxiliary chamber below the main outlet-chamber, with a safety-opening leading from such auxiliary chamber into the outlet-pipe.

It will be readily seen that when the valve is lifted a little, as shown in Fig. 3, so that the gas can escape into the small chamber *c* and through the safety-opening *o*, the opening above leading into the main chamber *c'* is still closed, and the vertical part of the valve still bears closely against the walls of the chamber, making a gas-tight joint, and it is not until the valve is lifted higher by the further turning of the key that the valve will be raised out of the way, so as to allow the gas to escape through the upper opening of the shell into the main chamber *c'*.

I am aware that safety-valves have been constructed wherein needles have been used for closing an opening in the bottom of the valve, and that a second valve has been located in the outer valve, thus making, in fact, a compound or double valve of the device, and I do not claim such as my invention, for, as will be seen, both openings in my device are closed by the same valve, and no springs or other devices are necessary.

What I claim as my invention, and desire to secure by Letters Patent, is the following, viz:

1. A gas-valve comprising a shell *sh*, having a main chamber *c'*, and an auxiliary chamber *c*, formed below such main chamber in the shell and connected with the outlet-pipe by a smaller opening *o*, in combination with a valve *v*, having its seat in the main chamber above the inlet-pipe and provided with a tapering bottom, substantially as shown and described.

2. A gas-valve comprising a shell having main and auxiliary chambers, each having

separate openings connecting with an outlet-
pipe, in combination with a tapering valve
having its seat in such shell and connected
to a stem threaded to work in a screw formed
5 in the shank, such valve closing both the main
and auxiliary outlets by one and the same
mechanism, substantially as shown and de-
scribed.

3. A gas-valve comprising a shell having
10 main and auxiliary chambers, each having
its own outlet or connection to the discharge-

pipe, and a tapering valve seated in such shell
and adapted to open or close successively
both the auxiliary and main gas-chambers in
such shell, substantially as shown and de- 15
scribed.

In witness whereof I have hereunto set my
hand this 20th day of July, 1889.

FRANK C. BUTTZ.

Witnesses:

C. P. JACOBS,
J. Z. JOHNSON.