

F. G. NICOLAUS.
GAS VALVE.
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1,038,941.

Patented Sept. 17, 1912.

Fig. 1.

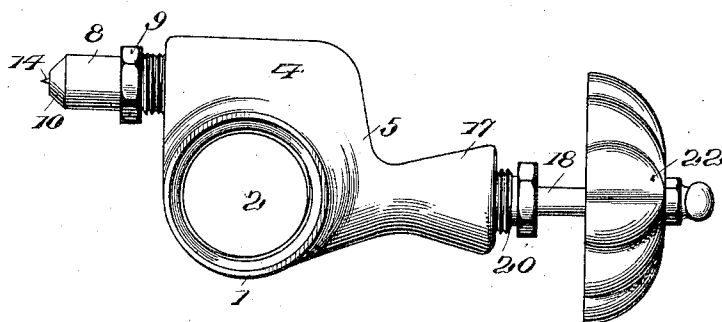
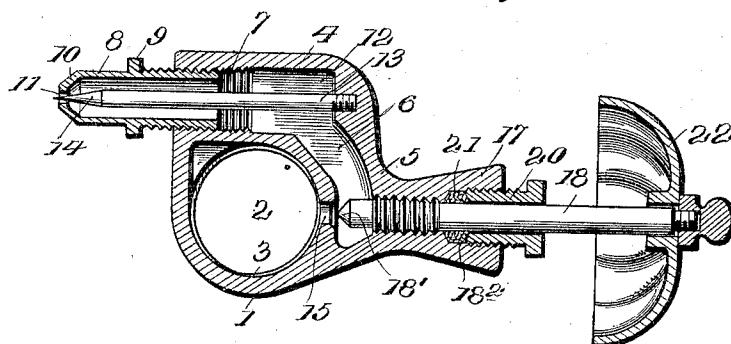


Fig. 2.



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UNITED STATES PATENT OFFICE.

FREDERIC G. NICOLAUS, OF CLEVELAND, OHIO, ASSIGNOR TO AMERICAN STOVE COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

GAS-VALVE.

1,038,941.

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To all whom it may concern:

Be it known that I, FREDERIC G. NICOLAUS, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Gas-Valves, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in gas valves, and pertains particularly to those used on gas stoves.

The object of my invention is to provide a valve which can be placed on a gas supply pipe and in which the flow of gas in the supply pipe is not retarded by the closing of the valve and the gas can be regulated to suit the pressure conditions in any locality without removing any part thereof.

Another object of my invention is to provide a more simple, cheap and effective valve having certain details of structure hereinafter fully described.

In the accompanying drawings: Figure 1 is a side elevation of my improved valve. Fig. 2 is a vertical longitudinal sectional view of my valve showing the parts in open position.

In valves of this character, as heretofore used on gas stoves, the valve stems of the valves controlling the supply of gas to the numerous burners extended across the gas supply and when a number of the valves were closed, the supply of gas was greatly retarded. By my improved structure and arrangement of parts, it will be seen that the valve stems do not extend through the gas supply and, therefore, the gas pressure is not reduced.

Referring now to the drawings, 1 represents my improved valve casing which is provided with a central transverse circular opening 2, internally screw-threaded at each end, as indicated at 3, and into which is screwed from opposite sides the short pipe sections forming the gas supply at the front of the stove. It will be understood that there is a valve case of this structure opposite each burner and, therefore, the supply pipe at the front of the stove will be made up of a series of sections.

The valve casing at the upper end is provided with an enlarged portion 4, which extends down around the front of the casing, as indicated at 5, and clearly shown

in the drawing. This enlarged portion is provided with a circumferential passage 6, having an open upper outer end which is screw threaded at 7. Screwed within said threaded portion of the casing is a nipple 8, which is provided with a squared portion 9, for receiving a wrench whereby the nipple may be moved in or out as will be hereinafter fully described. The outer end of said nipple is drawn inwardly, as shown at 10, and has an opening 11 through which the gas passes from the passage 6 to the burner which is of the ordinary Bunsen type. The casing 1, as shown, has an enlarged portion 12, which allows the nipple to be screwed inwardly for the purpose of regulating the flow of gas from the passage 6 through the opening 11. The rear wall of the enlarged portion 12 has screwed or otherwise secured therein a stem 13, which extends out through the nipple and has its outer end 14 tapering to extend through the opening 11 and controls the amount of gas passing through the opening 11.

From the foregoing it will be seen that by screwing the nipple in or out, the amount of gas fed to the burner may be regulated without reducing the pressure in the passage 6.

The lower end of the passage 6, has in its inner wall an opening 15 communicating with the opening 2, in the case 1, and whereby the gas may pass from the opening 2 into the passage 6. The outer end of said opening 15 is beveled, as indicated at 16 and forms a valve seat. The casing on the outside, opposite the opening 16, is provided with an extension 17 having a screw-threaded opening through which the valve stem 18 is screwed and said stem has a beveled inner end 18' adapted to fit the beveled seat 16 and completely and tightly close the opening 15 to shut off the flow of gas from the opening 2 to the passage 6.

The extension 17 has the enlarged opening 18² surrounding the stem 18 and internally screw-threaded, and into which is screwed the packing gland 20, which expands the packing 21 against the valve stem 18 and forms a tight joint to prevent the escape of gas from the passage 6. The outer end of the valve stem is provided with the usual operating wheel 22 or handle.

From the foregoing description it will be seen that the valve stems of the several valves

of the stove do not extend through the main gas supply and there is a free unobstructed passage of gas whether the valves are open or closed and which is not the case in the valves now in use on gas stoves.

5 Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A valve comprising a casing having a gas-opening therethrough, said casing having a passage partially around the opening and extending at right angles to the gas opening and having one end in communication with the gas opening and the opposite end of the passage having a discharge opening, and means passing into the passage for controlling the communication between the gas opening and said passage.

2. A valve comprising a casing having a gas-opening therethrough, said casing having a passage partially around the opening and in communication therewith and having a discharge opening at one end, means for controlling the said discharge opening, and means passing into the passage for controlling the communication between the gas opening and the passage.

3. A valve comprising a casing having a gas-opening therethrough and adapted to be connected to a gas-supply pipe, said casing having a passage extending partially around the opening and in communication at one end therewith, means passing into the passage for controlling the communication between the opening and passage, and a nipple secured within the passage and having a discharge opening for the passage.

4. A valve comprising a casing having a gas-opening therethrough and internally screw-threaded at each end and into which gas-supply pipes are adapted to be screwed, said casing having a passage extending partially around the opening and having one end in communication with the gas opening, means passing into the passage for controlling the opening between the gas-opening and the passage, a valve stem within the passage, and a nipple secured in the passage and adapted to cooperate with the valve stem to control the discharge of gas from the passage.

5. A valve comprising a casing, having a gas opening therethrough, the said casing having a passage partially around the gas opening and extending at right angles to the gas opening, having one end in communication therewith, a valve stem extending through the wall of the casing and into the passage end and controlling the communication between the passage and the gas opening, and the opposite end of the passage having a discharge opening.

6. A valve comprising a casing having a gas opening extending therethrough, means whereby the gas supply pipes may be se-

cured in said opening, the casing having a passage partially around the gas opening and having one end in communication therewith, a valve stem extending through the outer wall of the casing and into the passage and controlling the communication between the passage and the gas opening, and adjustable controlling means carried by the casing at the opposite end of the passage for controlling the supply of gas from the passage.

7. A valve comprising a casing having an opening therethrough, means for securing a pipe section in said opening, the casing having a passage extending partially around the gas opening and having one end in communication therewith, a valve stem extending into the passage and controlling the communication between the passage and the gas opening, a nipple adjustably secured in the opposite end of the passage, and means carried by the casing whereby the adjusting of the nipple regulates the flow of gas from the passage.

8. A valve comprising a casing having a gas opening therethrough, means whereby a gas supply pipe may be secured in the said opening, the said casing having a passage partially around the opening and having one end in communication with said gas opening, a valve stem extending into the passage and controlling the communication between the passage and the gas opening, a valve stem secured in said passage and extending outwardly beyond the casing, and a nipple having an opening in its end through which the last mentioned valve stem extends and adjustably secured in the passage whereby the movement of the nipple controls the flow of gas from the passage.

9. A valve comprising a casing having a gas opening therethrough and having its ends threaded, into which may be screwed the gas supply pipe, said casing having a passage extending partially around the gas opening, and having an opening communicating with the gas opening, said casing having an outwardly extending portion opposite the opening communicating with the gas opening and the passage and screw-threaded, a valve stem screwed within said outwardly extending portion adapted to control the opening communicating with the passage and the gas opening, a valve stem rigidly secured within the upper end of the passage and extending outwardly beyond the casing, and a nipple screwed within the outer end of the passage and having a reduced gas opening in its outer end and into which the last mentioned valve stem extends, whereby the adjusting of the nipple regulates the flow of gas from the passage.

10. A valve comprising a casing having a gas opening therethrough, and internally screw-threaded and adapted to receive a

gas supply pipe, said casing having a passage partially around the gas opening and having an opening at one end communicating with the gas opening, the said passage
5 having an internally screw-threaded opening at the opposite end, a valve stem rigidly secured within the passage and extending outwardly through the threaded opening, a nipple screwed within the threaded opening
10 of the passage, and adapted to control the discharge from the passage by cooperation with the valve stem, and a second valve stem

screwed within the casing and extending across the passage and adapted to control the communication between the gas opening 15 and the passage substantially as shown and described.

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

FREDERIC G. NICOLAUS.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
