L. A. MARSH.

MULTIPLE CONTROL VALVE.

APPLICATION FILED OCT. 25, 1915.

1,216,243. Patented Feb. 13, 1917.

Fig. 1.

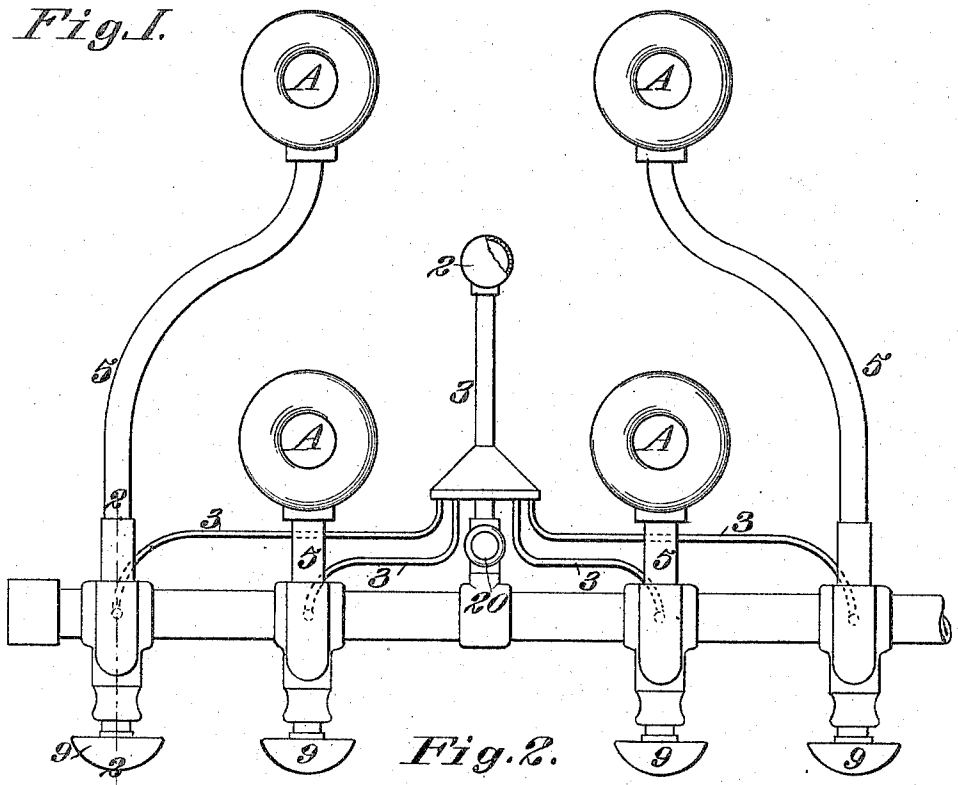



Fig. 2.

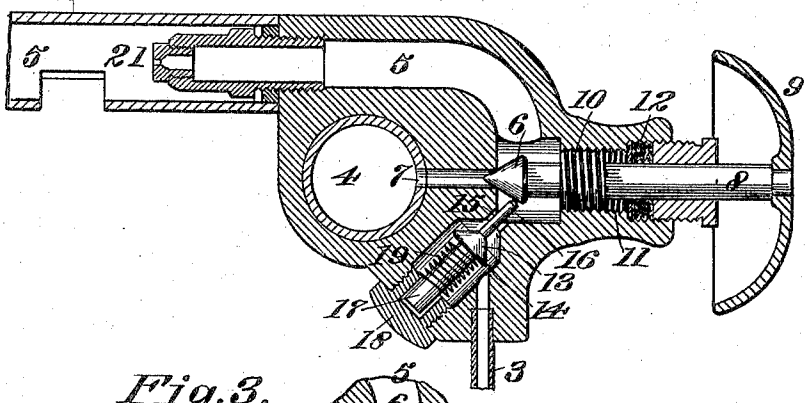
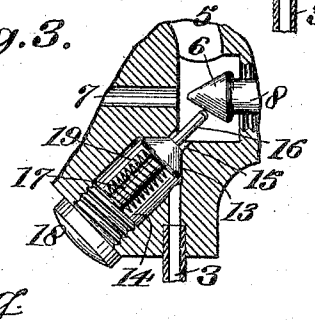



Fig. 3.




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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

LUCIEN A. MARSH, OF SAN FRANCISCO, CALIFORNIA.

## MULTIPLE-CONTROL VALVE.

1,216,243. Specification of Letters Patent. Patented Feb. 13, 1917.

Application filed October 25, 1915. Serial No. 57,774.

*To all whom it may concern:*

Be it known that I, LUCIEN A. MARSH, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Multiple-Control Valves, of which the following is a specification.

My invention relates to valves for the control of fluids derived from a single source of supply, to be divided and directed through two or more independent conductors and with varying quantity or pressure.

It consists of a puppet or needle valve movable to open or close a main passage from the manifold and in conjunction therewith, of a similar valve or valves actuated by and in unison with the main valve and controlling one or more independent conductors, also receiving from the main supply.

It also consists of details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a plan view of the heating and igniting portions of a gas stove, showing the arrangement of my invention.

Fig. 2 is a section on line 2—2 of Fig. 1, showing the main valve closed.

Fig. 3 is a fragmentary section, showing the main valve open and the supplemental valve closed.

In the conduction of fluids for valve purposes, it is often desirable to open two or more passages simultaneously and for different amounts of flow through them. In my illustration, I have adapted my valves to a supply for gas stoves, in which A represents the main burners of a gas stove; and 2 the pilot light or burner which is to be supplied from the manifold or source with the main burners through pipes 3. 4 represents the manifold or supply pipe with which each of the passages 5 leading to the main burners is to be connected when desired, while at the same time connection would be made with the pipe 3 leading to the pilot burner.

In order to properly control the admission of gas to these various passages, I have shown a valve 6 seating against and controlling an admission passage 7 from the main supply pipe 4. This valve has a stem 8 and a suitable turning handle 9, and the stem has a screw thread, as at 10 which is turnable in coacting threads 11, so as to actuate the valve 6 and either close or open the passage 7. The stem 8 is properly packed to prevent leakage as shown by the gland and stuffing box 12. 13 is a puppet valve movable in a chamber 14, which is connected by a narrow passage 15 with the chamber, in which the valve 6 is movable. From one side of this chamber 14 the pipe 3 leading to the pilot valve opens. The valve 13, has a stem 16 which passes from it through the passage 15 and rests against the conical valve 6, as shown. At the other end of the valve is a stem 17, guided and movable in a cap 18 which closes the valve chamber, and within this chamber is a spiral spring 19, which is compressed between the cap 18 and the back of valve 13 and normally tends to close the valve against its seat in the passage 15.

The operation will then be as follows: The pilot burner 2 is normally supplied with a small constant stream of gas from the cock 20, which opens directly into the manifold 4 and thus provides an independent supply. When it is desired to light any one or more of the burners, this may be done independently by turning the head 9 of that burner and the first action will be to slightly withdraw the valve 6 in the openiny 7, thus allowing gas to pass into the valve chamber. The valve 13 being fully opened at that time, the other valve 6 will allow gas to pass from the valve 13, thence out through the pipe 3 to enlarge the flame of the pilot light and cause a jet of such flame to be directed against the main burners which this valve supplies. The further opening of the valve 6 will cause the jet of gas to pass through the pipe 5 and through the jet opening 21 of the main burners where it meets the flame from the pilot head and is instantly ignited. Upon continuing to open this valve, the spring 19 acting against the valve 13 will gradually cause it to close on its seat, as shown in Fig. 3, so that when the valve 6 has been opened to fully supply the main burners, the valve 13 will have been closed, so that the pilot light will again shrink down to its normal small flame. It will be manifest that a number of jets may be controlled from the single main valve when the conditions of the apparatus with which the valves are connected makes such a plurality of connections neccessary.

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

1. In a valve mechanism, a main passage, a second passage leading therefrom, a spring seated valve arranged for closing the second passage, and a manually operable valve having a conical valve seating face for closing the main passage and on which the spring seated valve is adapted to directly engage for being unseated by said valve seating face and upon movement of the manual valve to closed position.

2. A valve mechanism consisting of a casing, a main valve and a secondary valve contained in the casing, said casing having a main supply passage, a branch passage leading therefrom controlled by the main valve and a second branch passage leading from the main passage and controlled by the secondary valve, the two branch passages arranged at an angle to each other, the secondary valve having an extension contacting with the face of the main valve, and a coöperating spring tending to seat the secondary valve, so that operation of the main valve operates the second valve.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

LUCIEN A. MARSH.

Witnesses:
A. J. HENRY,
G. T. MARSH.

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