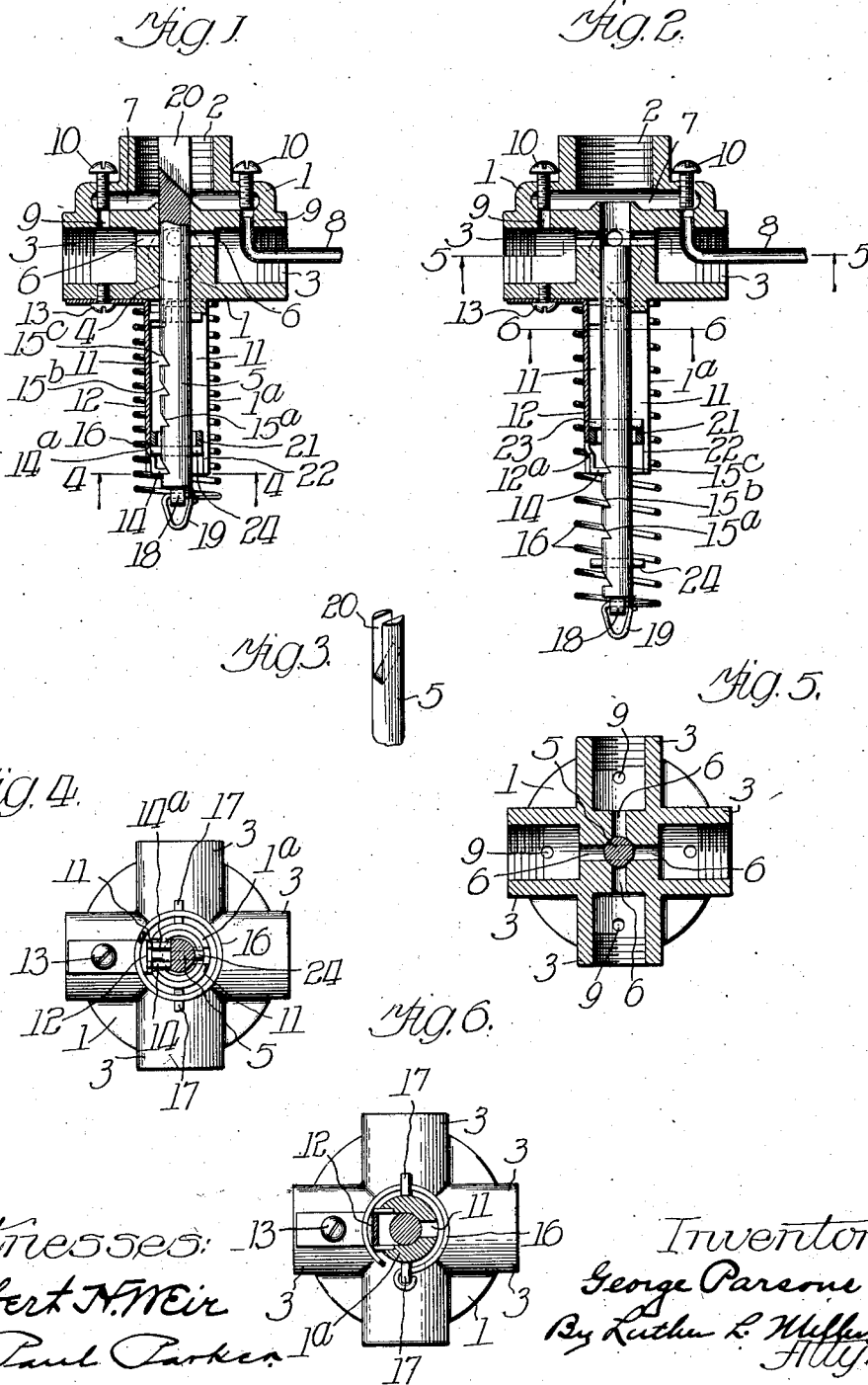


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VALVE.
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UNITED STATES PATENT OFFICE.

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VALVE.

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To all whom it may concern:

Be it known that I, GEORGE PARSONS, a citizen of the United States, residing at Winnebago, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Valves, of which the following is a specification.

This invention relates to valves of the type having a plurality of inlets or outlets, the embodiment herein shown being intended for use with "gas arc" lamps or other gas lamps having a plurality of burners, whereby the burners may be separately controlled.

One of the objects of the invention is to provide a means for holding the movable valve member in its various operative positions.

Another object is to provide means for moving the valve member into its closed position.

A further object is to provide means for rendering said holding means inoperative to permit the valve member to close.

The invention also relates to other features of improvement in valves, as will be more fully understood from the following description.

In the accompanying drawings, Figure 1 is a vertical central section through a valve embodying the features of my invention, the parts being shown in their closed positions. Fig. 2 is a similar view but showing the valve fully opened. Fig. 3 is a detail view of the upper end of the movable valve member. Fig. 4 is a section on line 4 4 of Fig. 1. Figs. 5 and 6 are sections on line 5 5 and 6 6, respectively, of Fig. 2.

The embodiment which I have herein shown by way of example comprises a body 1 having a nipple 2 at its upper side adapted to be attached to a gas supply pipe, and a plurality of laterally extending nipples 3 arranged for attachment to suitable pipes, not shown, leading to the respective burners of the lamp. The present embodiment is intended for use with a four-burner lamp and therefore has four nipples 3. Extending centrally through the body, and communicating with the nipple 2, is a vertical opening 4 in which is slidably mounted the movable valve member 5. A plurality of ports 6 connect the respective nipples 3 with

the central opening 4, said ports being arranged to be opened and closed by the valve member 5.

7 is a chamber in the upper part of the body 1, said chamber being in communication at all times with the nipple 2. A plurality of small pipes 8 (only one of which is herein shown) are fitted in openings 9 in the body 1, and serve to conduct gas from the chamber 7 to the small pilot lights of the lamps. As is commonly understood, these pilot lights are left burning all the time. The flow of gas through the pipes 8 may be regulated by means of set screws 10 seated in the body 1 and having their ends arranged to enter the openings 9.

The lower end 1^a of the body 1 is somewhat reduced in size and has slots 11 extending longitudinally thereof at opposite sides. Said lower end may be termed an extension of the body 1. A spring detent 12 secured at its upper end to the body 1 by means of a screw 13 is arranged to lie in one of the slots 11, the lower end 14 of said detent being adapted to engage in any one of a series of notches 15 in the valve member to hold the valve member in its various operative positions.

Surrounding the extension 1^a of the body 1 is a coiled tension spring 16 having its upper end secured to lugs 17 on the body, the lower end of said spring being attached to the lower end of the valve member 5 in any suitable way, as by passing the bottom coil of the spring through a lug 18 on the valve member 5, the end of said coil being bent to provide a loop 19 for convenience in attaching a chain (not shown) for operating the valve member 5. As will be observed, the spring 16 tends at all times to move the valve member 5 into position to close all of the ports 6.

In the upper end of the valve member 5 is a notch or kerf 20, the bottom wall of which is inclined, as clearly shown in Figs. 1 and 3. When the valve member 5 is drawn downwardly so that the detent 12 engages in the notch 15^a in the valve member, the nipple 3 at the right-hand side (see Figs. 1 and 2) will be placed in communication with the supply nipple 2 through the port 6 and the notch 20. It should be noted that in this position of the valve member, the portion of

the notch 20 at the left side of said member is not deep enough to register with the left-hand port 6, therefore gas is supplied to only one burner. In the next lower position
 5 of the valve member, in which the detent 12 engages in the notch 15^b, the notch 20 in the valve member is brought into register with the left-hand port 6, so that the second burner is lighted. When the valve member
 10 is moved into its lowermost operative position (shown in Fig. 2) the two remaining ports are uncovered to supply gas to the remaining burners of the lamp.

I have provided a means for holding the
 15 detent 12 out of engagement with the valve member 5 when it is desired to close the valve, said means comprising a ring 21 surrounding said valve member and lying in a recess 22 in the lower end of the body portion 1^a. Said ring 21 is normally supported
 20 in position by a shoulder 12^a upon the detent 12.

23 and 24 are pins or other suitable projections carried by the valve member 5.
 25 Assuming the parts to be in the position shown in Fig. 2, and it is desired to close the valve, the member 5 is pulled downwardly a short distance, the pin 23 engaging the ring 21 and carrying said ring downwardly past the shoulder 12^a on the detent 12, thus moving said detent out of engagement with the notch 15^c in the valve member. The spring 16 will now move the valve
 30 member upwardly to close the valve. Near the end of such upward movement, the pin 24 on the valve member 5 will engage the ring 21 and carry said ring upwardly into its normal position to permit the detent 12 to again engage the valve member, as seen
 40 in Fig. 1. The lower portion of the detent 12 may be slotted as at 14^a to permit the pin 24 to pass the shoulder 12^a and projection 14 on said detent.

While I have herein described my invention in considerable detail, I do not wish to be understood as limiting myself to the particular embodiment herein shown, for various modifications within the scope of my invention will occur to persons skilled
 50 in the art.

I claim as my invention:

1. The combination with a valve, of means tending to hold the valve closed; means comprising a stem on said valve and a co-
 55 acting spring catch for locking the valve open; and reciprocatory means operable by said stem upon a further opening movement of the valve for disengaging said locking means.

2. The combination of a valve casing; a valve member therein; means comprising a valve stem on said valve and a coacting spring catch for locking said valve member open; reciprocatory means operable by said
 60 stem upon a further opening movement of

said valve member for rendering said locking means inoperative; and means carried by said valve stem for operating the last mentioned means to restore said locking means to operative position. 70

3. In a valve, in combination, a body having an inlet, and a plurality of outlets; a valve member adapted to bring said outlets into communication with said inlet at different times; means tending to move said
 75 valve member into position to close said outlets; means for locking said valve member in position to open one of said outlets; and means for holding the second mentioned means in an inoperative position to permit
 80 the first mentioned means to close the valve.

4. In a valve, in combination, a body having an inlet and an outlet; a valve member controlling communication between said inlet and said outlet; means tending to hold
 85 said valve member closed; means engaging said valve member adapted to prevent closing movement thereof when open; and means operable by movement of the valve member for rendering the last mentioned
 90 means inoperative to permit the valve member to close.

5. In a valve, in combination, a body having an inlet and an outlet; a valve member controlling communication between said inlet and said outlet; means tending to close
 95 said valve member; means for holding said valve member open; means for rendering said holding means inoperative to permit the valve member to close; and means for
 100 restoring the last mentioned means to operative position.

6. In a valve, in combination, a body having an inlet and an outlet; a valve member controlling communication between said inlet and said outlet; means tending to close
 105 said valve member; means for holding said valve member open; means for rendering said holding means inoperative to permit the valve member to close; and means on
 110 the valve member for releasing the last mentioned means during the closing movement of said valve member.

7. The combination with a valve, of means tending to close said valve; means comprising a valve stem on said valve and a coacting spring catch for locking the valve open; and reciprocatory means for rendering said
 115 locking means inoperative to permit said valve to close, the last mentioned means being operable in the closing movement of the valve member to restore said locking means to operative position.

8. In a valve, in combination, a body having an inlet and a plurality of outlets; a
 125 slidable valve member arranged to open said outlets at different times to communication with said inlet, said valve member having a plurality of recesses therein; and a spring detent attached at one end to said body, the
 130

other end of said detent being bent to engage in said recesses for holding said valve member in its various operative positions.

9. In a valve, in combination, a body having an inlet and a plurality of outlets; a slidable valve member arranged to open said outlets at different times to communication with said inlet; a coiled spring surrounding said valve member and tending to hold it in position to close all of said outlets; said valve member having a series of notches therein; and a spring detent adapted to engage in said notches and hold said valve member in a plurality of positions, whereby one or more of said outlets will be opened.

10. In a valve, in combination, a body having an inlet and a plurality of outlets; a slidable valve member arranged to open said outlets at different times to communication with said inlet; a coiled spring tending to move said valve member into position to close all of said outlets, said valve member having a plurality of recesses therein; a detent adapted to engage in said recesses and hold the valve member in a plurality of positions to open one or more of said outlets; and means for holding said detent in an inoperative position to permit said valve member to close.

11. In a valve, in combination, a body; a valve member slidably mounted in said body; a coiled spring tending to hold said valve member in its closed position; a detent adapted to engage said valve member for holding it open, said detent having a shoulder thereon; a ring loosely surrounding said valve member adjacent to said shoulder; a projection on said valve member adapted to carry said ring against said shoulder for moving said detent out of engagement with said valve member; and a second projection on said valve member adapted to return said ring to its normal position when said valve member is being closed.

12. In a valve, in combination, a body having an inlet and a plurality of outlets and having an extension on its lower side; a valve member slidable in said body and said extension and adapted to open said outlets at different times to communication with said inlet; a coiled spring surrounding said extension and having its ends attached to the body and the valve member, said spring tending to hold said valve member in position to close all of said outlets, said valve member having a series of notches therein; a spring detent carried by the body and adapted to engage in said notches for holding said valve member in a plurality of positions to open one or more of said outlets; a shoulder on said detent; said extension having a longitudinal slot through one wall and having a recess in its lower end; a ring loosely surrounding said valve member and lying in said recess, the shoulder on

said detent extending into said recess and normally supporting said ring; a projection on said valve member arranged to travel in said slot, said projection being adapted to move said ring over said shoulder to disengage said detent from said valve member; and a second projection on said valve member adapted to return said ring to its normal position.

13. In a valve in combination, a body having a central opening therethrough communicating at one end with an inlet, and having a plurality of outlet ports communicating with the sides of said opening, and a valve member slidable in said opening, one end of said valve member having a slot therein, the bottom of which is inclined, whereby said valve in its initial movement will uncover one of said outlet ports, and in its second movement another outlet port, the end of the valve member uncovering a third port in its final movement.

14. In a valve, in combination, a body having a central opening therethrough communicating at one end with an inlet and having a plurality of outlet ports communicating with the sides of said opening; and a valve member slidable in said opening, one end of said valve member having a slot therein the bottom of which is inclined, whereby said valve member in its movement will uncover said outlet ports at different times.

15. In a valve, for multi-burner gas lamps, in combination, a body having a nipple on its top wall adapted for attachment to an inlet pipe; a plurality of nipples on the sides of said body adapted to be attached to pipes leading to the lamp burners; said body having a chamber therein beneath said inlet nipple, a vertical opening communicating at its upper end with said chamber, and ports connecting the sides of said opening with said outlet nipples; and a valve member slidable in said opening and adapted to place said ports in communication at different times with said chamber, said body having ports connecting said chamber with said outlet nipples and adapted to receive pipes leading to the pilot burners of the lamp.

16. The combination with a valve for multiple-burner gas lamps, said valve being arranged to admit gas to the burners at different times, of means for locking the valve open in different positions to permit the flow of gas to one or more burners, and means operable upon a further opening movement of the valve for disengaging said locking means to permit the valve to be closed.

17. The combination with a valve for multiple-burner gas lamps, said valve being arranged to admit gas to the burners at different times, of means tending to close the valve; means for locking the valve open in

different positions to permit the flow of gas to one or more burners; means operable upon a further movement of said valve for disengaging said locking means to permit
5 the valve to be closed; and means carried by said valve member and adapted to operate said disengaging means in the closing movement of said valve member to restore said locking means to operative position.

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