

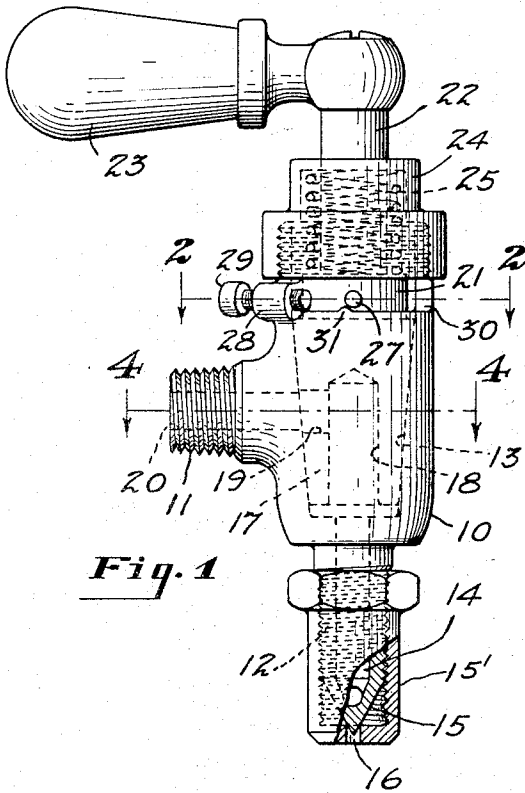
June 9, 1936.

J. T. MARVIN

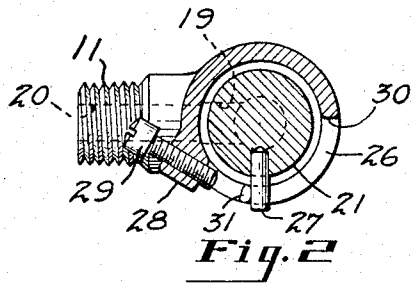
2,043,971

GAS COCK

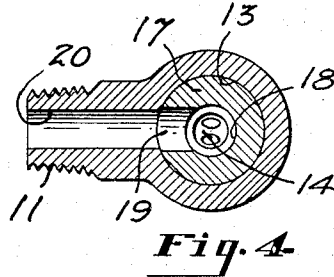
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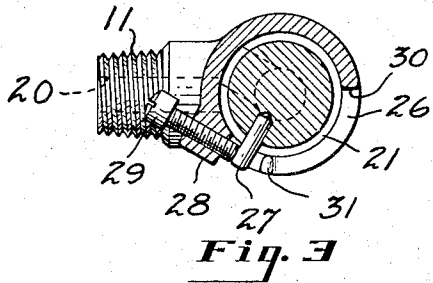
**Fig. 1**



**Fig. 2**



**Fig. 3**



**Fig. 4**

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# UNITED STATES PATENT OFFICE

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## GAS COCK

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1 Claim. (Cl. 251—163)

This invention relates to controls for gas-fired appliances and particularly to manually operated cocks for controlling the supply of gas to the individual burners of ranges.

5 The conventional gas cock supplied with ranges operates between full closed and full open position at the discretion of the user, and in order to obtain a low heat or simmering position for the flame it is necessary to visually observe the flame while adjusting the cock.

10 My invention contemplates the provision of a gas cock with a fixed simmering position which is pre-set to provide a predetermined minimum flame, which flame is selected in accordance with the type of gas being used.

15 Another object of the invention is to provide such a cock which has a means to indicate to the user when the cock has passed from its full open to simmering position.

20 A further object is to provide a cock having a single port for the passage of gas to the burner in either the full open position or the simmering position.

25 Still another object is to provide a gas cock which structurally requires little departure from the conventional cock, and which is therefore easy to assemble and cheap to manufacture.

30 An additional object is to provide means for adjusting and setting the simmer position in accordance with the various types of gas used with the range.

Other objects and advantages of the invention will be apparent from the following description and accompanying drawing wherein:

35 Fig. 1 is an elevation of a gas cock embodying one form of the invention;

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1 showing the cock in full open position;

40 Fig. 3 is a view similar to Fig. 2 showing the cock in the simmering position, and

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 1.

45 Referring to the drawing for a detailed description of the invention, 10 denotes a valve body provided with a threaded inlet fitting 11 and a threaded outlet fitting 12. The valve body is provided internally thereof with a tapered bore 13, and a smaller bore 14 extends from the bore 13, through the outlet fitting 12. The lower end of the outlet fitting terminates in a cone-shaped spud 15. An internally threaded cap member 15' cooperates with the fitting 12 and has a port 16 provided in its lower end. This port cooperates with the spud 15 to provide a

pre-set valve member for regulating the flow of gas to the burner as is well known in the art. Initially the cap member is adjusted on the fitting 12 and set to give the maximum efficiency to the burner when the main gas valve is fully open.

The movable portion of my improved valve comprises a tapered barrel member 17 which fits snugly inside the bore 13 and has an axial passageway 18 provided therein and extending from the surface of the member 17 to the passageway 18 is a radial passage 19. A passage 20 extends axially of the inlet fitting so as to convey gas to the passages 19, from where it flows through the passages 18, and 14 and the orifice 14 to the mixing tube of the burner (not shown). A reduced cylindrical portion 21 is provided at the larger end of the barrel 17, from which portion extends a stem 22 carrying a handle member 23. A cap 24 is disposed around the stem 22 and has an adjustable screw-threaded engagement with the valve body 10. A compression spring 25 also surrounds the stem between the cap 24 and the cylindrical portion 21 and thus serves when compressed by the cap 24 to prevent movement of the barrel with respect to the valve body.

The upper end of the valve body adjacent the cylindrical portion 21, has a cut-away portion 26 through which projects a pin 27 extending radially from the cylinder 21. At one end of the cut-away portion 26 is a projection 28 carrying an adjustable screw 29 which serves to limit the movement of the pin 27 and consequently the valve barrel 17 in one direction, its movement in the other direction being limited by the end wall 30 of the cut-away portion 26. A slight projection or lug 31 is formed in the cut-away portion 26 so that when the barrel 17 is being rotated the pin 27 will strike this lug. The lug is not large enough to prevent movement of the valve barrel 17 but merely serves as a means to indicate to the user the position of the valve barrel.

45 In the operation of my device and with particular reference to Figs. 2 and 3, let it be assumed that the valve handle has been turned counter-clockwise until the pin 27 contacts the stop 30 at which time the passage 19 is completely out of communication with the passage 20 and no gas passes through the valve. The handle 23 is then rotated counter-clockwise until the pin 27 contacts the lug 31 at which time, as the passages 20 and 19 are in complete registry, the gas

at the burner is fully on. This position is shown in Fig. 2. Should it be desired to operate the burner with a lower or simmering flame, it is only necessary to rotate the handle 23 further clockwise until the pin 27 has passed the lug 31 and contacts the stop 28 which I find should be made adjustable to take care of the various kinds of gas in use. In this position which is shown in Fig. 3 the passage 19 is in restricted communication with the passage 20 so that only a limited and predetermined amount of gas flows to the burner. It should be noted that in the movement of the valve from the full open to the simmering position, the passage 19 is in constant communication with the passage 20 so that the burner is constantly ignited.

A particular advantage of the invention as described lies in the fact that when the burner is intended to be ignited by the flash tube method it is necessary that the valve be first turned to the full open position, a condition desirable for the successful operation of such devices.

It will be apparent from the foregoing description that I have invented a gas cock which may be cheaply made and assembled, which provides a positive pre-set simmering position without any necessity for the user observing the flame, which positively indicates the full on position of the burner, and which is particularly adaptable for use with automatic ignition devices.

While I have shown and described a single embodiment of the invention, it will be apparent that other forms might be adopted, all coming within the scope of the appended claim.

I claim:

A gas cock including relatively fixed and movable members, said members having passageways arranged for registration and non-registration with one another, stops for limiting the movement of the movable member, said members when in one limited position having their passageways in non-registering position and when in the opposite limited position having their passageways in fractional registering position, said passageways being in substantial complete registration when the movable member is positioned intermediate the positions limited by the stops, a surmountable obstruction on said fixed member intermediate the stops for yieldingly resisting movement of the movable member when said passageways are in substantial complete register with one another, a single projection carried by said movable member and engageable with said limiting stops and with said surmountable obstruction, and means for moving the movable member from one limited position and beyond the intermediate position and to the other limited position.

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