

W. J. DOLAN.
SAFETY VALVE FOR GAS STOVES.
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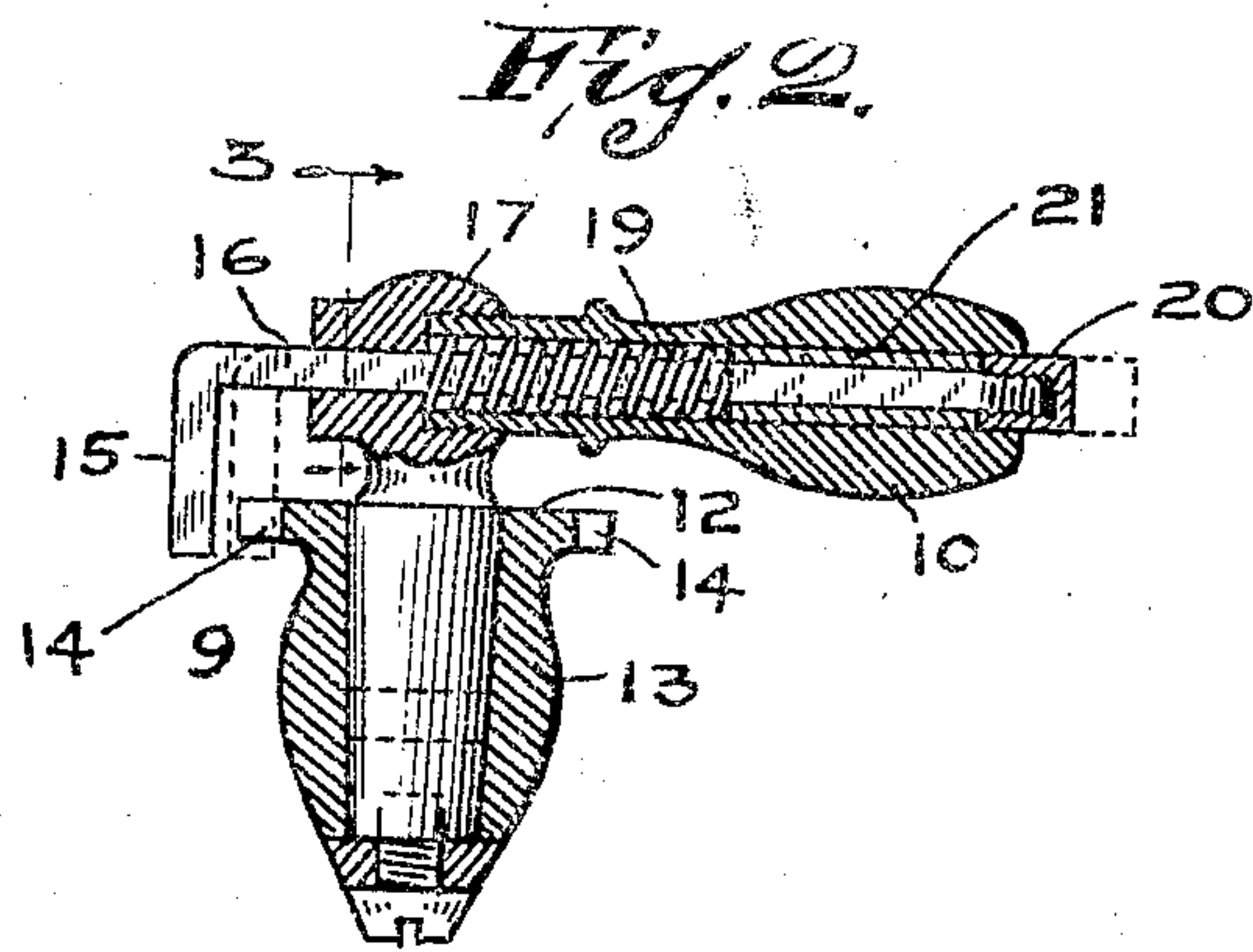
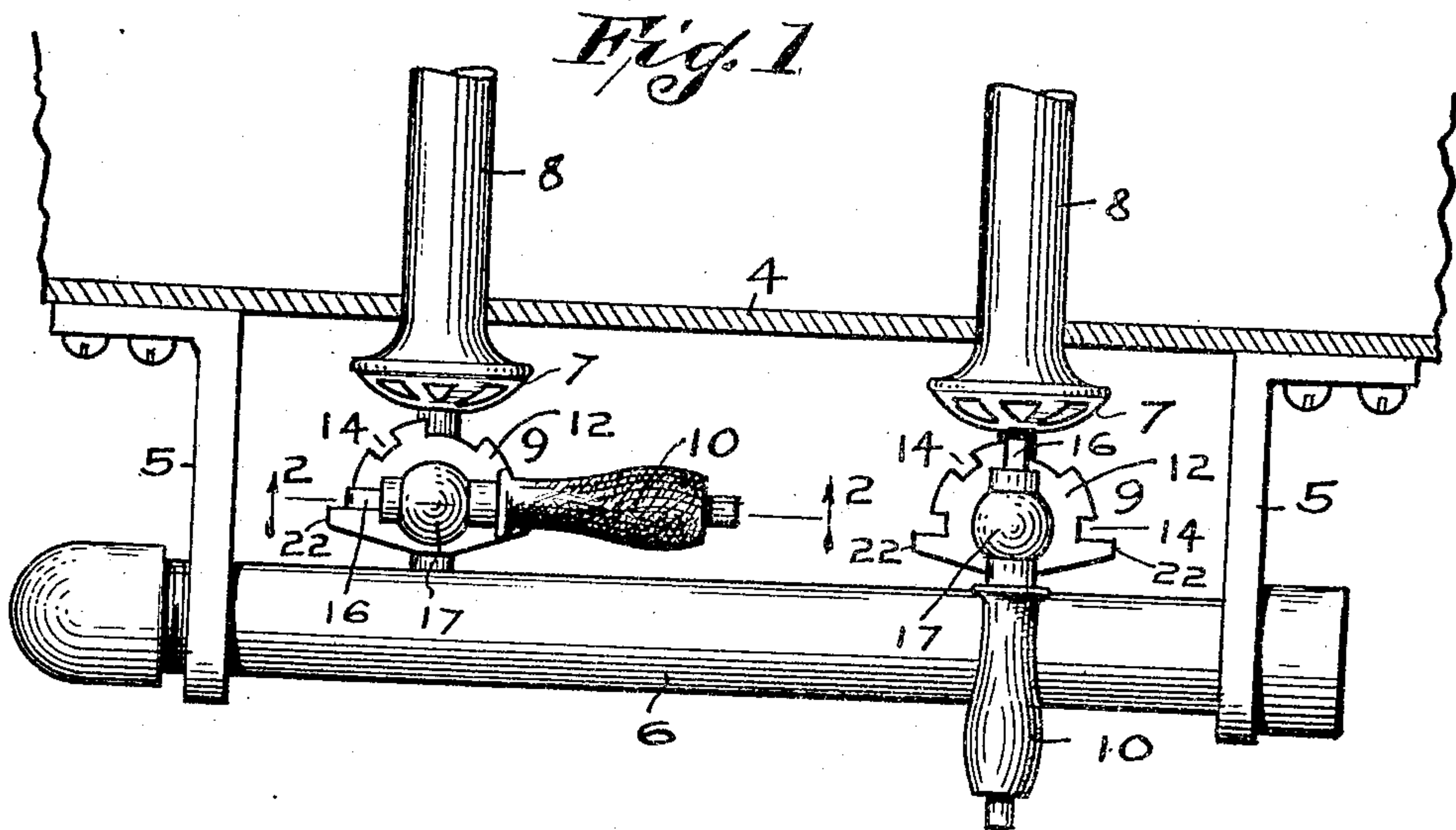


Fig. 3



Witnesses;
L. B. Moerner
Wm. Hurte.

Inventor,
William J. Dolan,
By Minter & Moerner,
Atys.

UNITED STATES PATENT OFFICE.

WILLIAM J. DOLAN, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF TWO-THIRDS TO
EMIL J. SCHMITT AND FRANK W. SHARP, OF INDIANAPOLIS, INDIANA.

SAFETY-VALVE FOR GAS-STOVES.

951,878.

Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed June 21, 1909. Serial No. 503,399.

To all whom it may concern:

Be it known that I, WILLIAM J. DOLAN, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Safety-Valves for Gas-Stoves, of which the following is a specification.

This invention relates to improvements in gas stoves which are heated by suitable burners and it has for its object to provide means for locking the valves which control the flow of gas to the burners to obviate the possibility of the accidental opening of the valve when the gas is not lighted and the danger of explosion under the conditions of such accidental opening of the valve. This accidental opening is frequently occasioned by the brushing against the valve handle of the dress of the housewife or cook and this is particularly dangerous when the valve is sufficiently loose to turn easily.

To these and other ends my invention consists in certain improvements in combinations of parts, all as will be hereinafter more fully described and the novel features pointed out in the claims at the end of the specification.

In the accompanying drawings, Figure 1 is a horizontal sectional view through a portion of a gas stove, showing my invention applied thereto. Fig. 2 is a longitudinal vertical section through the valve handle turned in a position to close the valve and is taken on the line 2—2 of Fig. 1, and Fig. 3 is a cross section on the line 3 of Fig. 2.

Similar reference numerals in the several figures indicate like parts.

In the drawings I have shown my invention applied to a well known form of gas stoves, of which 4 is the side of the stove, 5 brackets attached thereto, which support the supply pipe 6.

7 are the mixers having the pipes 8 which lead to suitable burners (not shown). The flow of gas from the supply pipe 6 through mixer 7 and pipe 8 is controlled by the valves or cocks 9.

10 are the valve-handles by means of which the valves are rotated or rocked in the usual manner to open and close them. These valves are usually located at one side of the stove where they may be accidentally opened in numerous ways and gas allowed

to escape into the stove without the fact being known to the operator of the stove until an attempt is made to light the burner, when the volume of collected gas is ignited, causing an explosion which may result disastrously.

It very frequently happens that the valves work very freely in their seats so that but a very slight pressure is required on their handles to open them, which pressure may be readily applied by the contact therewith of the person's dress who is working about the stove. To obviate this accidental opening of the valve I provide a plate 12 on the body 13 in which the valve seat is formed. The plate 12 is semicircular in shape adjacent the mixer and is provided with a series of indents or notches 14 to engage the bent end 15 of a locking bar 16 which extends longitudinally of the handle 10 and has a longitudinal adjustment whereby it is made to engage with or is disengaged from said notches 14 in the plate 12. That portion of the bar 16 which passes through the head 17 of the valve stem is square or angular in cross section to fit a correspondingly shaped hole in head 17 whereby the location of the bar is prevented and the bent end 15 thereby kept in proper position to enter one of the notches 14 of plate 12. The bore through handle 10 for the insertion of the locking bar 16 is enough larger than the bar to allow the introduction around said bar of a spirally wound spring 19. The outer end of the locking bar 16 is screw-threaded to receive the internally screw-threaded cap 20 which is screwed thereon, but before the cap is placed on the bar a sleeve 21 is preferably introduced around the bar between the spring 19 and the cap 20. The spring will have its bearing at one end against the bottom of the socket which receives the handle in the head 17, and the opposite end of the spring will have its bearing against the sleeve 21. The cap 20 will normally project beyond the outer end of the handle 21 in the position shown in full lines in Fig. 1 and in dotted lines in Fig. 2, and when in this position to which it is normally forced by spring 19, the bent end 15 will be seated in one of the notches 14 of the plate 12. In order to release the lock thus formed by the engagement by bent end 15 with one of the notches

14, it is first necessary to press the locking bar 16 longitudinally by a pressure exerted against the protruding cap 20. This pressure is easily applied when the handle is grasped by the operator and the pressure against cap 20 will be continued until the valve has been opened to the desired position as indicated by one of the notches 11. The notches 14 may be as numerous as desired and may be placed at any desired part of the circular periphery of plate 12. One of the notches will always be placed however, at the position which will lock the handle 10 so as to insure a complete cutoff of the gas by the valve.

When the handle 10 has been turned to the desired position the release of cap 20 by taking the finger off the cap will release spring 19 causing the locking bar 16 to be moved longitudinally and its bent end 15 forced into one of said notches 14.

To prevent the turning of the handle 10 beyond the desired limits of its movement, I provide the lugs 22 at each end of the semicircular portion of plate 12, and these lugs 22 are extended far enough to engage the bent end 15 of locking bar 16 when the latter is at its innermost adjustment and thereby prevent a further movement of handle 10.

It will be noted that one of the notches 14 is approximately double width and this is for the purpose of affording a finer adjustment of the gas flame than could be had by a notch of single width.

While I have shown and described the preferred embodiment of my invention it will be understood that I do not wish to be limited to the precise construction herein set forth, since various changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus fully described my inven-

tion what I claim as new and wish to secure by Letters Patent of the United States, is—

1. A stop-cock for gas-burners comprising a body, a valve seated in said body having a stem and a handle at the outer end of the stem by which the valve is rocked, a fixed semicircular plate through which the valve-stem passes said plate having marginal notches in its semicircular edge said edge terminating with lugs extending beyond said semicircular portion, a locking-bar having longitudinal adjustment within the handle of the valve, the inner end of said bar being extended and bent to engage the notches in said semicircular plate, and a spring to move the bar in a direction to engage the notched plate with the bent end of the bar.

2. A stop-cock for gas-burners comprising a body, a valve having a stem and a handle on the stem to be moved in opening and closing the valve, a semicircular notched plate through which the valve stem passes, a locking-bar angular in cross section mounted in a similar shaped longitudinal hole in said handle, the inner end of said bar being bent down to engage the notches of said semicircular plate, the outer end of said bar being screw-threaded, a cap on the outer end of said screw threaded bar, a sleeve on the bar next said cap, a spring on said bar bearing against the inner end of the hole and against said sleeve to press the bar normally outward whereby its bent end will be in engagement with said notched plate.

In witness whereof, I have hereunto set my hand and seal at Indianapolis, Indiana, this 12th day of June, A. D. one thousand nine hundred and nine.

WILLIAM J. DOLAN. [L. s.]

Witnesses:

FRANK W. SHARP,
EMIL J. SCHMITT.