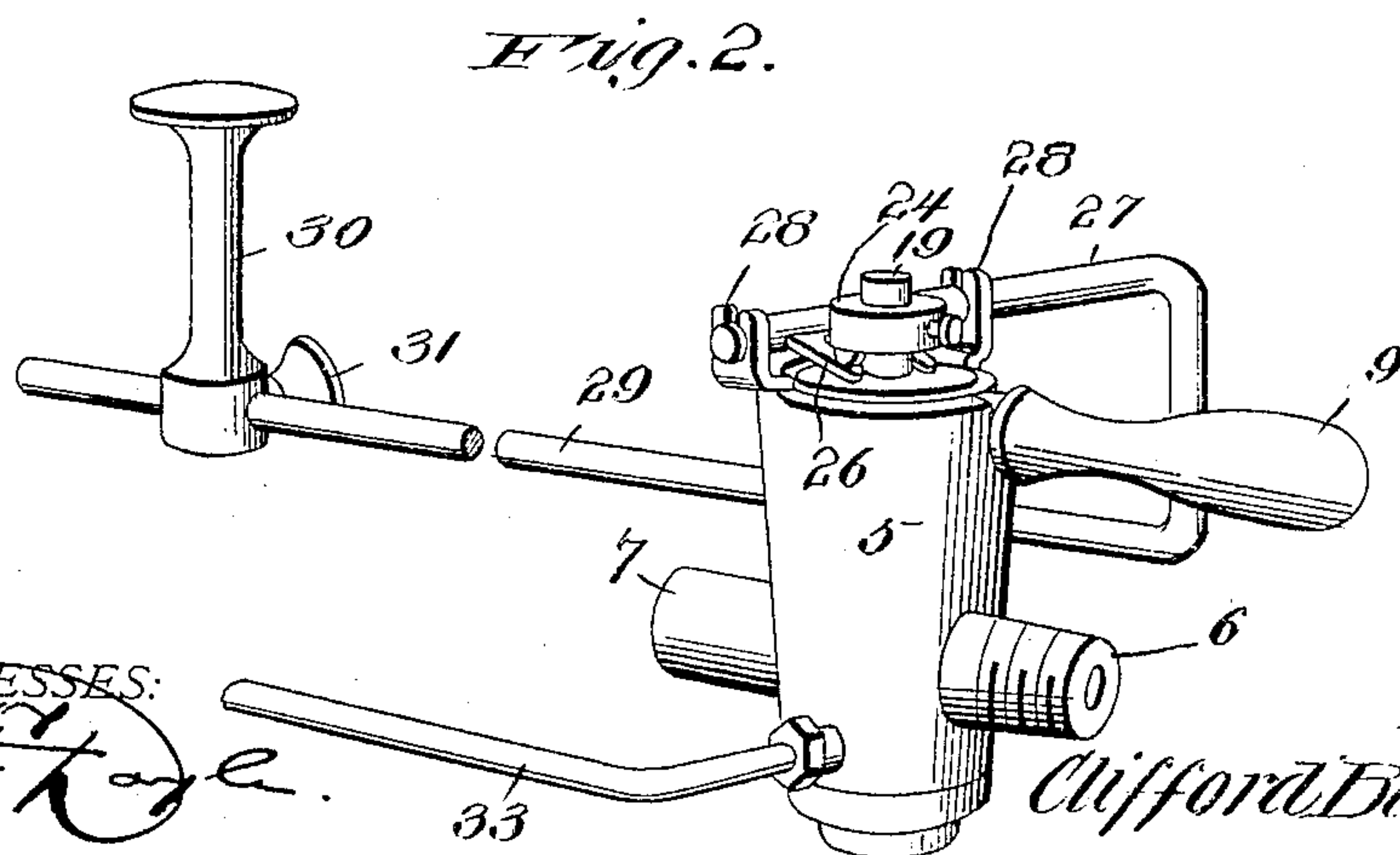
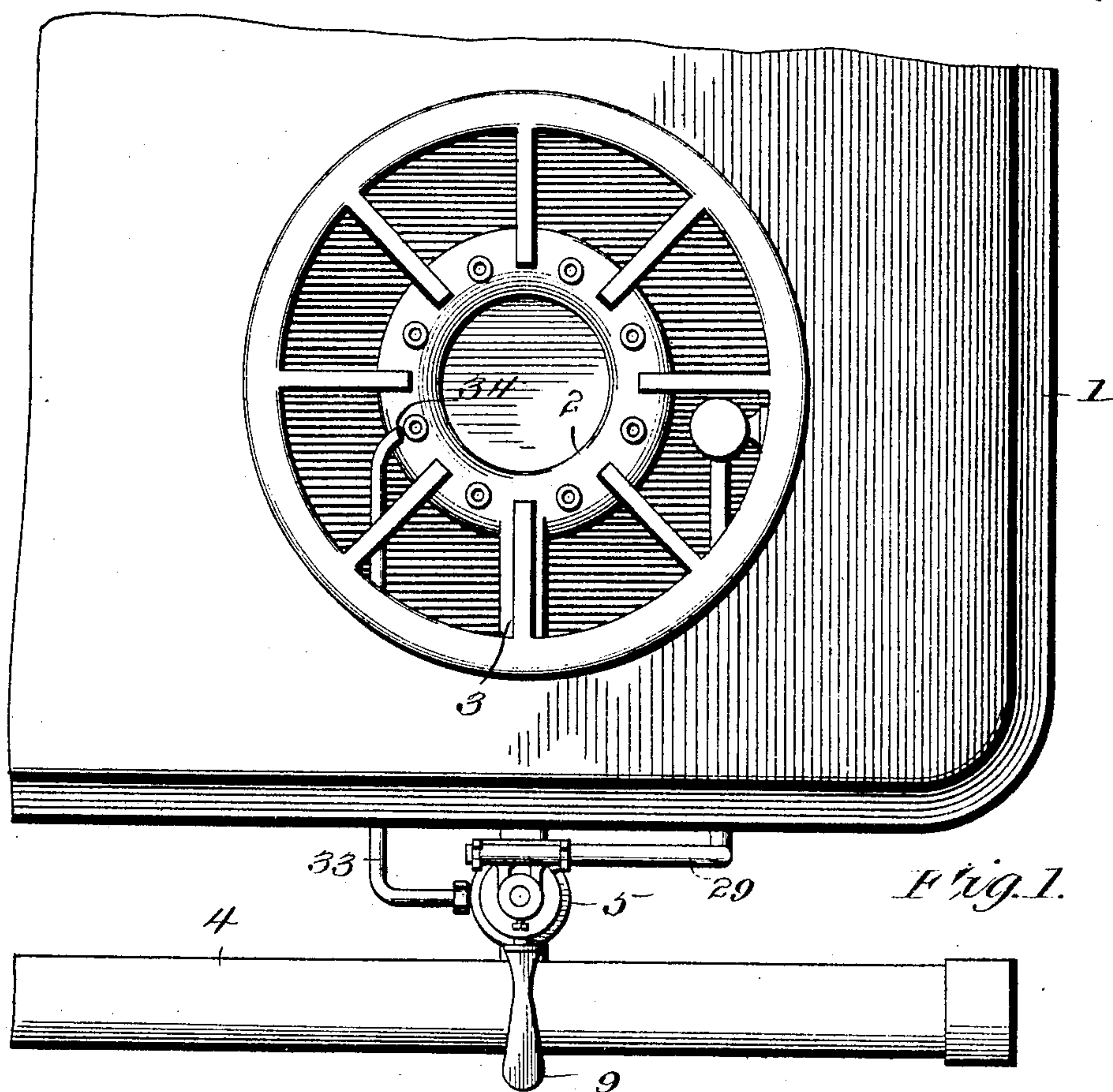


No. 803,965.

PATENTED NOV. 7, 1905.

C. BARGAMIN.
CUT-OFF FOR GAS STOVES.
APPLICATION FILED FEB. 2, 1905.

2 SHEETS—SHEET 1.



~~WITNESSES:~~

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No. 803,965.

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2 SHEETS—SHEET 2.

Fig. 3.

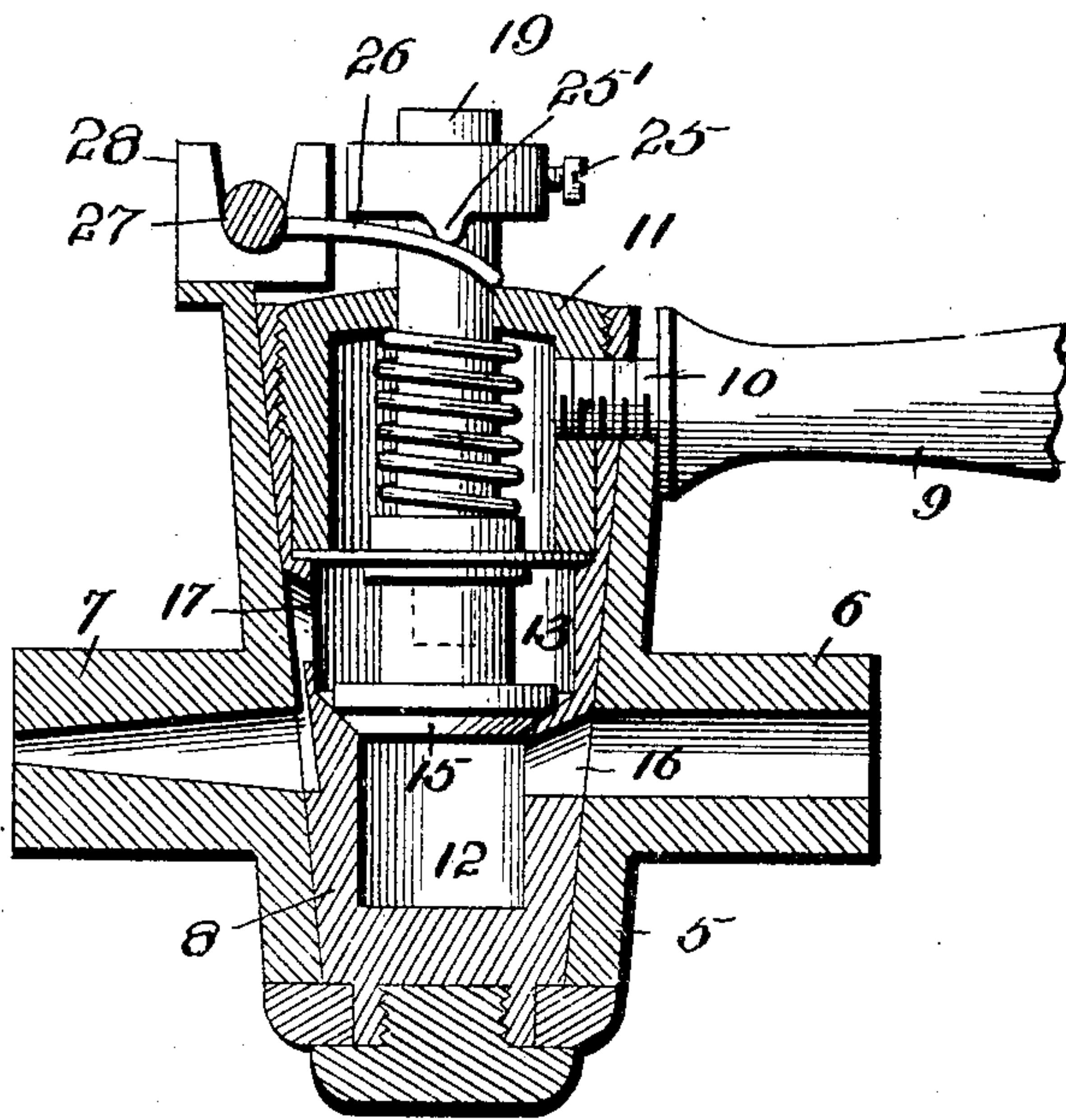


Fig. 4.

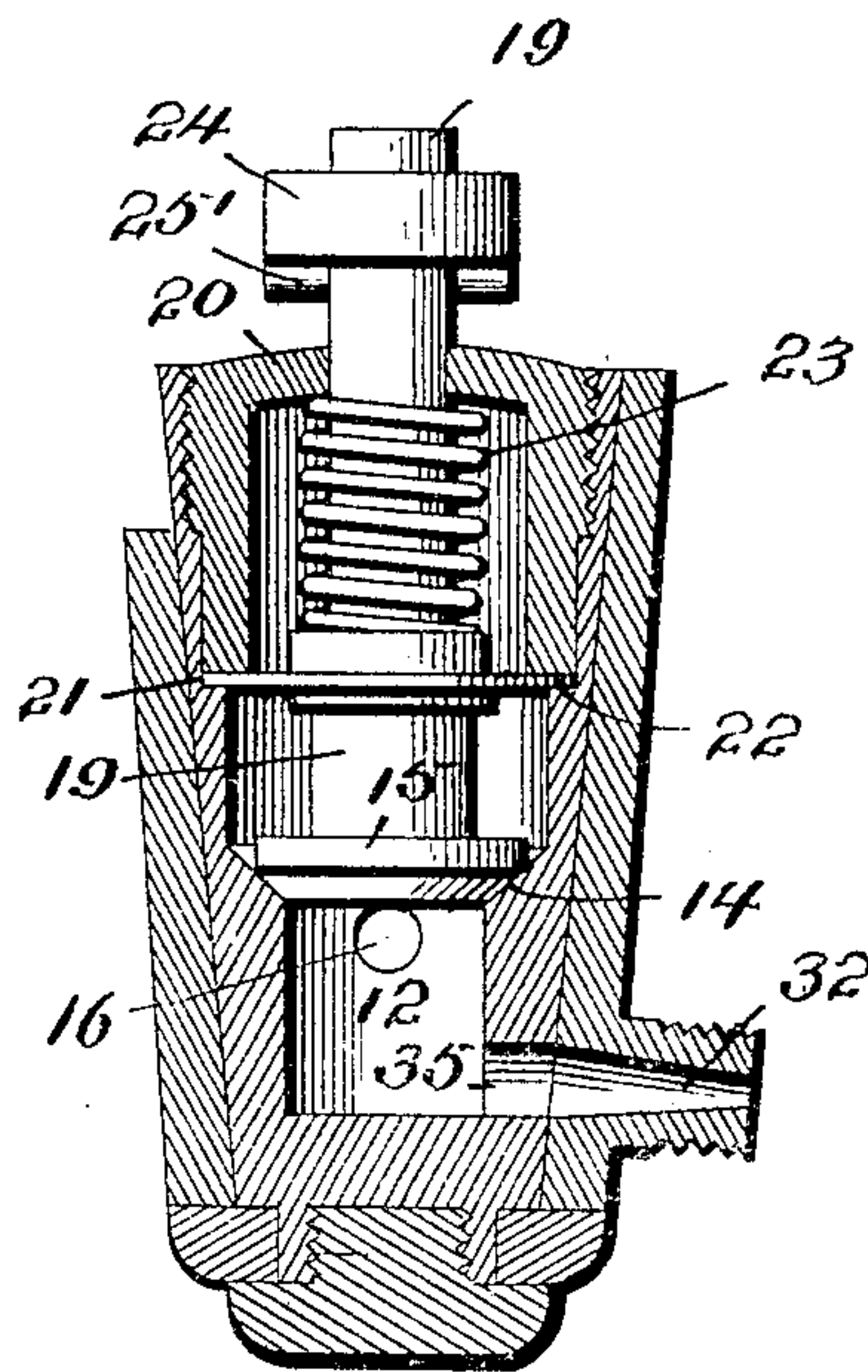


Fig. 5.

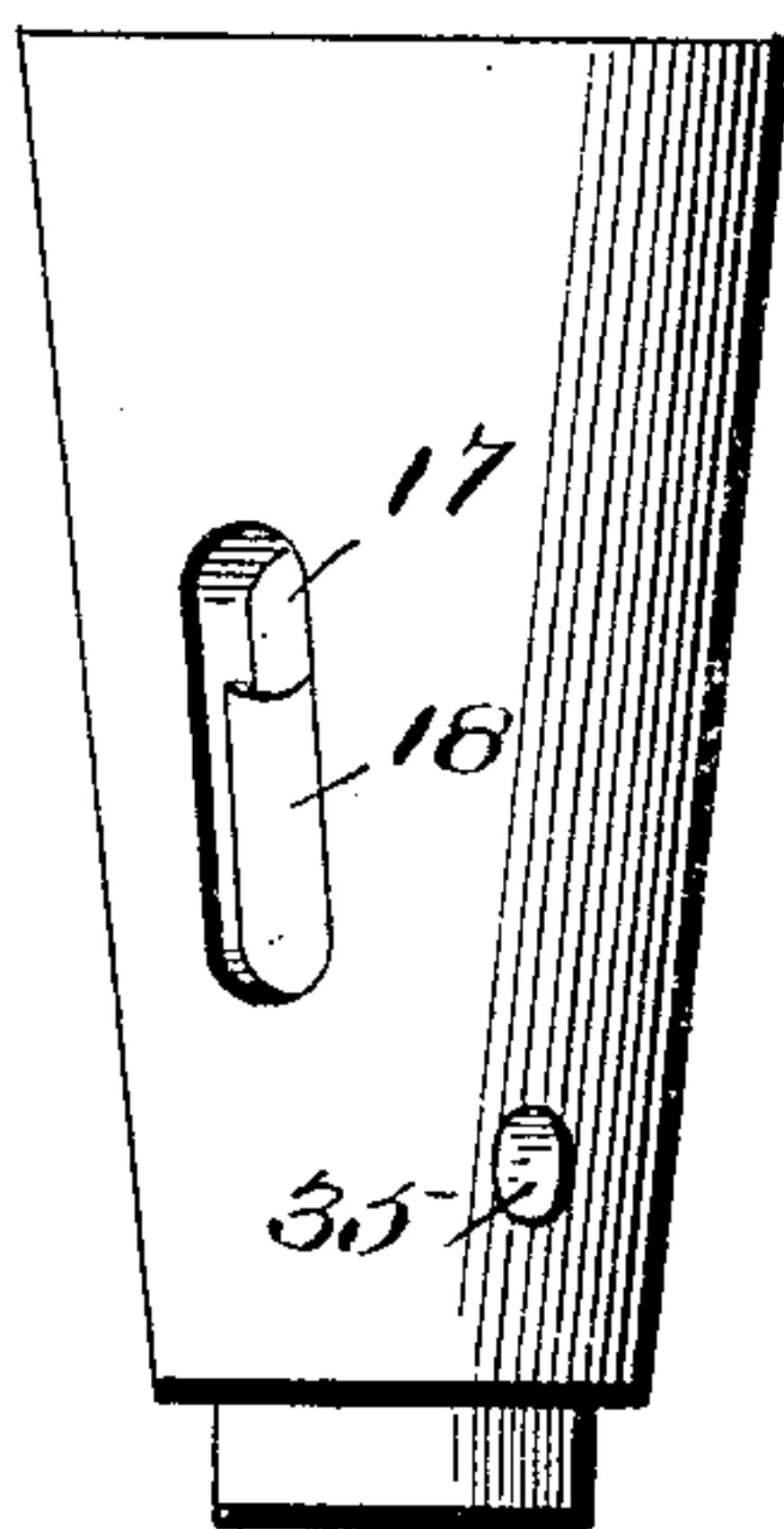


Fig. 6.

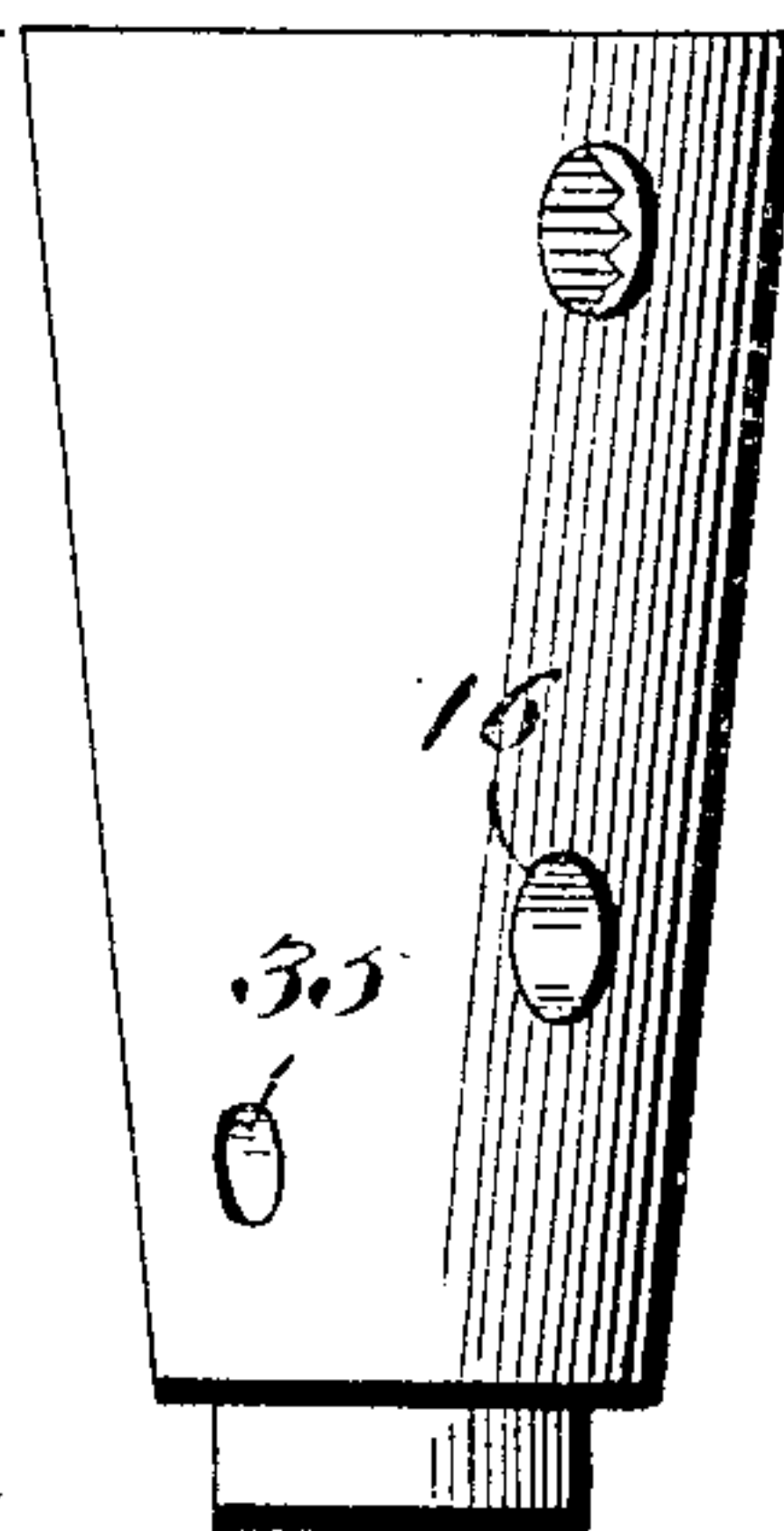
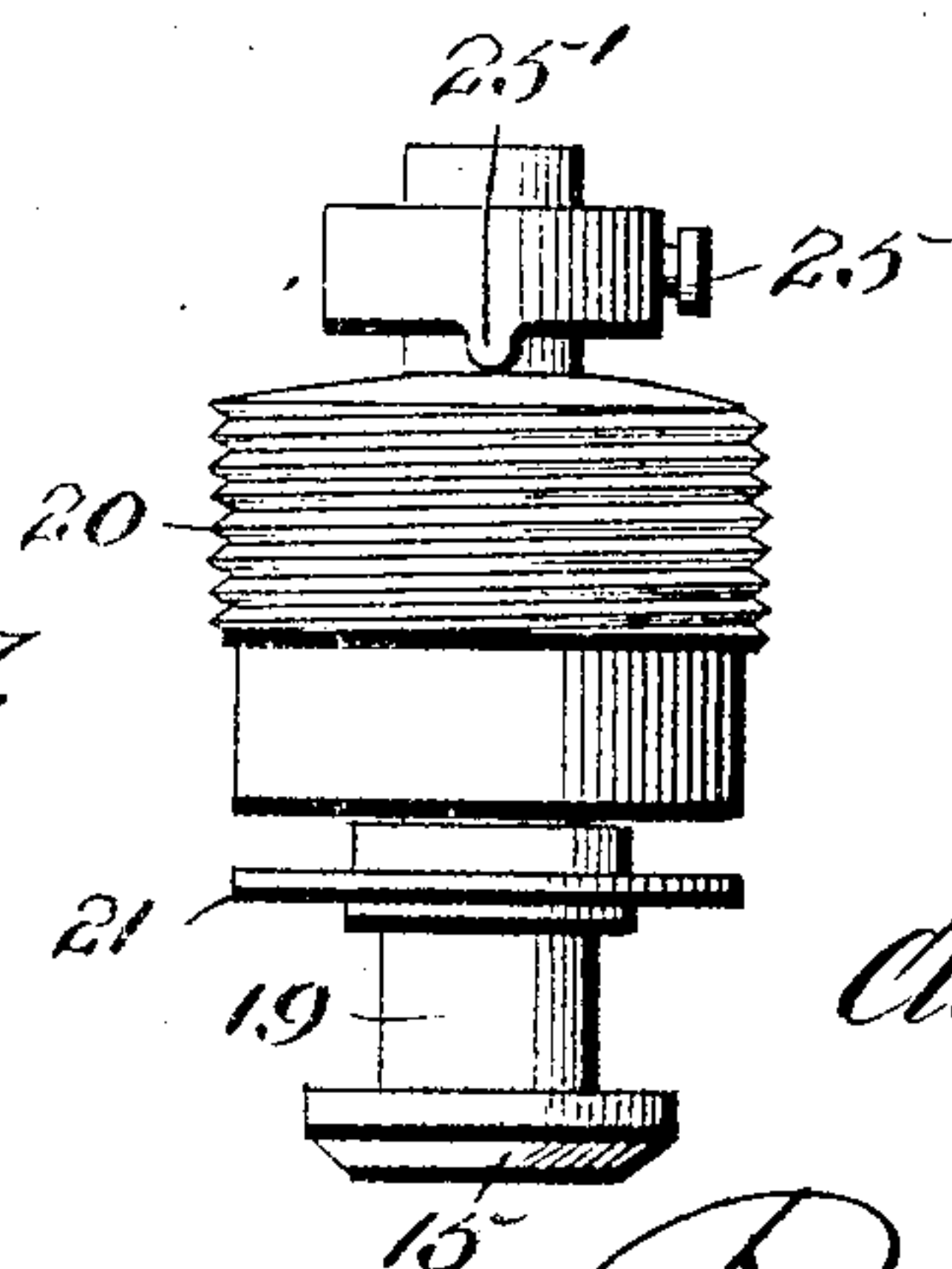


Fig. 7.



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CUT-OFF FOR GAS-STOVES.

No. 803,965.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed February 2, 1905. Serial No. 243,793.

To all whom it may concern:

Be it known that I, CLIFFORD BARGAMIN, a citizen of the United States, residing at Newport News, in the county of Warwick and State of Virginia, have invented a certain new and useful Cut-Off for Gas-Stoves, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to automatic cut-offs for gas-stoves, and is in the nature of an improvement on the construction disclosed in my copending application filed June 24, 1904, Serial No. 214,005.

15 It has been found in actual practice that when the gas is turned down very low with the ordinary gas-burner a slight current of air wafted across the burner will blow out the flame, permitting the escape of unconsumed gas. The present invention overcomes this objection by utilizing a pilot tube or burner so related to and connected with the cut-off device and its parts that when a cooking utensil is removed from the main burner the flow of gas to said burner will be entirely cut off; but a small pilot-burner will be ignited close to the main burner, and, having a jet of considerable strength, it will remain burning until the gas is again turned on full to the main burner, which occurs automatically when the same or another utensil is placed on the stove over the burner. This operation is entirely automatic and requires no thought whatever on the part of the attendant.

35 When the stove is not in use, the manually-operated main cut-off valve is turned, and this entirely cuts off the gas-supply from the stove, including both the main burner and pilot-burner.

40 In starting the stove the manually-operated cut-off valve is opened and a lighted match applied to the pilot-burner to ignite the latter. After this is done the mere placing of a utensil on the main burner automatically turns on the gas to said burner, which ignites from the pilot-burner or jet.

45 With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination,

and arrangement of parts, as hereinafter fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a plan view of a sufficient portion of a gas-stove to illustrate the application thereto of the present invention. Fig. 2 is a perspective view of the cut-off attachment. Fig. 3 is a vertical diametrical section through the same. Fig. 4 is a similar section taken at right angles to Fig. 3. Figs. 5 and 6 are detail views of the main cutoff valve in different positions. Fig. 7 is a view in elevation of the valve which automatically controls the supply of gas to the burner and the valve-cap.

Like reference-numerals designate corresponding parts in all figures of the drawings.

For the purpose of illustration I have shown in Fig. 1 a portion of an ordinary gas-stove 1, having any usual or ordinary form of burner 2, which communicates, by means of the usual burner-tube 3, with the gas-supply pipe 4. Connected with the burner-tube 3 at a point between the pipe 4 and the stove 1 is a valve-casing 5, provided at opposite points with a gas-inlet 6 and a main gas-outlet 7, as shown in Fig. 3, said inlet and outlet being in direct communication with the burner-pipe 3. The casing 5 is provided with a ground taper bore, in which is fitted a correspondingly ground and tapered main cut-off valve 8, which is manually operated by means of a handle 9, provided with a screw-threaded shank 10, which screws through an opening in the side of the valve 8 and into an opening in the valve-cap, as shown in Fig. 3.

The upper end of the valve 8 is internally screw-threaded to receive an exteriorly-threaded valve-cap 11, which normally closes that end of the valve. The valve 8 is hollowed out to form a gas-circulating chamber 12 13, and at a point intermediate the length of said circulating-chamber is formed a valve-seat 14 for the reception of an automatic cut-off valve 15, which when seated divides the circulating-chamber into primary and secondary compartments 12 and 13, respectively. The primary compartment 12 has a main inlet-port 16, adapted to be thrown into and out of register with the main gas-inlet 6. The secondary compartment 13 is provided

with a main outlet-port 17, adapted to be moved into and out of register with the main outlet 7. The port 17 being in a higher plane than the outlet 7, the outer surface of the valve is recessed, as shown at 18, to allow the gas to pass from the opening 17 to the main outlet 7, as shown in Figs. 3 and 5. Thus the gas passing from the supply-pipe 4 to the burner has to pass by the automatic cut-off valve 15.

The valve 15 is provided with a stem 19, which extends outward through an opening in the valve-cap 20. Extending around the stem is a gas-tight diaphragm 21, which is held, by means of the inner end of the cap 20, against an annular shoulder 22, thus effectively preventing the escape of gas through the upper end of the valve. Encircling the valve-stem above or outside of the diaphragm 21 is a tension-spring 23, which holds the valve normally seated. Upon the outer end of this stem 19 is a collar 24, adjustable by means of a set-screw 25. This collar is provided on its under side with a cam projection or rib 25', extending diametrically across the same and adapted to cooperate with a tappet-finger 26, extending laterally from a rock-shaft 27, journaled in suitable bearings 28 on the valve-casing 5. The rock-shaft 27 is provided with an arm 29, which extends inward to the burner 2 and is provided with a presser-foot 30, rendered adjustable on the arm 29 by means of a set-screw 31, whereby the presser-foot 30 may be brought into the desired proximity to the burner to be acted upon by a cooking utensil placed on the stove, the presser-foot extending normally slightly above the plane of the stove-top, so as to insure its depression by the utensil when placed thereon.

When a cooking utensil is placed upon the stove over the burner, it depresses the presser-foot 30, rocks the shaft 27, and through the connections described unseats the valve 15, thus allowing the gas to pass directly to the burner. Upon removing the cooking utensil the spring 23 immediately seats or closes the automatic cut-off valve 15, thereby shutting off the gas and at the same time elevating the presser-foot 30 and restoring it to its normal position. The manually-operated main cut-off valve 8 is turned, by means of the handle 9, so as to throw the ports 16 and 17 out of register with the main inlet and outlet of the valve-casing 5, thus entirely cutting off the supply of gas. The valve-casing 5 is also provided with a pilot-outlet 32, to which is connected a pilot burner-tube 33, tipped at its extremity to form a pilot-burner 34, the said pilot-burner being preferably arranged close up to the main burner 2, so as to direct its flame to the gas escaping through the perforations of the burner. It will be observed that the pilot-tube communicates di-

rectly with the primary gas-circulating chamber 12 by means of a pilot-port 35. Thus the pilot-burner is supplied with gas as long as the main cut-off valve 8 is open, irrespective of whether the valve 15 is opened or closed.

In order to start the stove, the main cut-off valve 8 is turned to an open position, as shown in Fig. 3, thus admitting gas to the pilot-burner, which is then lighted. By now placing a cooking utensil on the stove the presser-foot 30 is depressed, thus opening an automatic cut-off valve 15 and allowing gas to pass to the burner 2, where it is immediately ignited by the pilot-light or jet. Upon removing the cooking utensil the valve 15 is reseated, thus cutting off the gas-supply from the main burner and leaving the pilot-burner lighted ready for subsequently igniting the main burner. When the stove is not in use, the main cut-off valve 8 is turned to its closed position, thus entirely cutting off the gas from the stove.

When the valve 8 is open, the cam projection 25' acts to depress the tappet-finger 26 and rock the presser-foot 30 upward, as previously described. When the valve 8 is closed, the projection 25' moves out of engagement with the tappet-finger 26, and thus allows the presser-foot 30 to fall below the plane of the stove-top, thus avoiding any liability of injury to the automatic cut-off valve connections.

The cut-off device hereinabove described is adapted to be applied to and used in connection with any of the ordinary forms of gas-stoves now in common use by simply introducing the valve-casing 5 in the burner-tube at the proper point. The single pilot-burner or jet enables a strong though small flame to be retained adjacent to the main burner, thus avoiding the liability of blowing out the gas where the stove is subjected to a draft or strong current of air.

Having thus described the invention, what is claimed as new is—

1. An automatic cut-off attachment for gas-stoves comprising a valve-casing, a manually-operated main cut-off plug-valve therein hollowed out to form a gas-circulating chamber and internal valve-seat, an automatic cut-off valve dividing said chamber into primary and secondary compartments, a diaphragm in said chamber to which the stem of the automatic valve is secured, a main burner-tube communicating with one of said compartments, gas-inlet and pilot-burner tubes communicating with the other compartment, and utensil-controlled connections carried by the valve-casing for operating the main cut-off valve.

2. An automatic cut-off attachment for gas-stoves comprising a valve-casing, a manually-operated main cut-off plug-valve therein hollowed out to form a gas-circulating

chamber and internal valve-seat, an automatic cut-off valve dividing said chamber into primary and secondary compartments one of which has a gas-inlet port and a pilot-supply outlet-port and the other of which has a gas-outlet port for the main burner, a diaphragm in said chamber to which the stem of the automatic valve is secured, and utensil-controlled means carried by the valve-

casing for operating the automatic cut-off valve.

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

CLIFFORD BARGAMIN.

Witnesses:

O. D. BATCHELOR,
J. REED CURRY.