

No. 738,037.

PATENTED SEPT. 1, 1903.

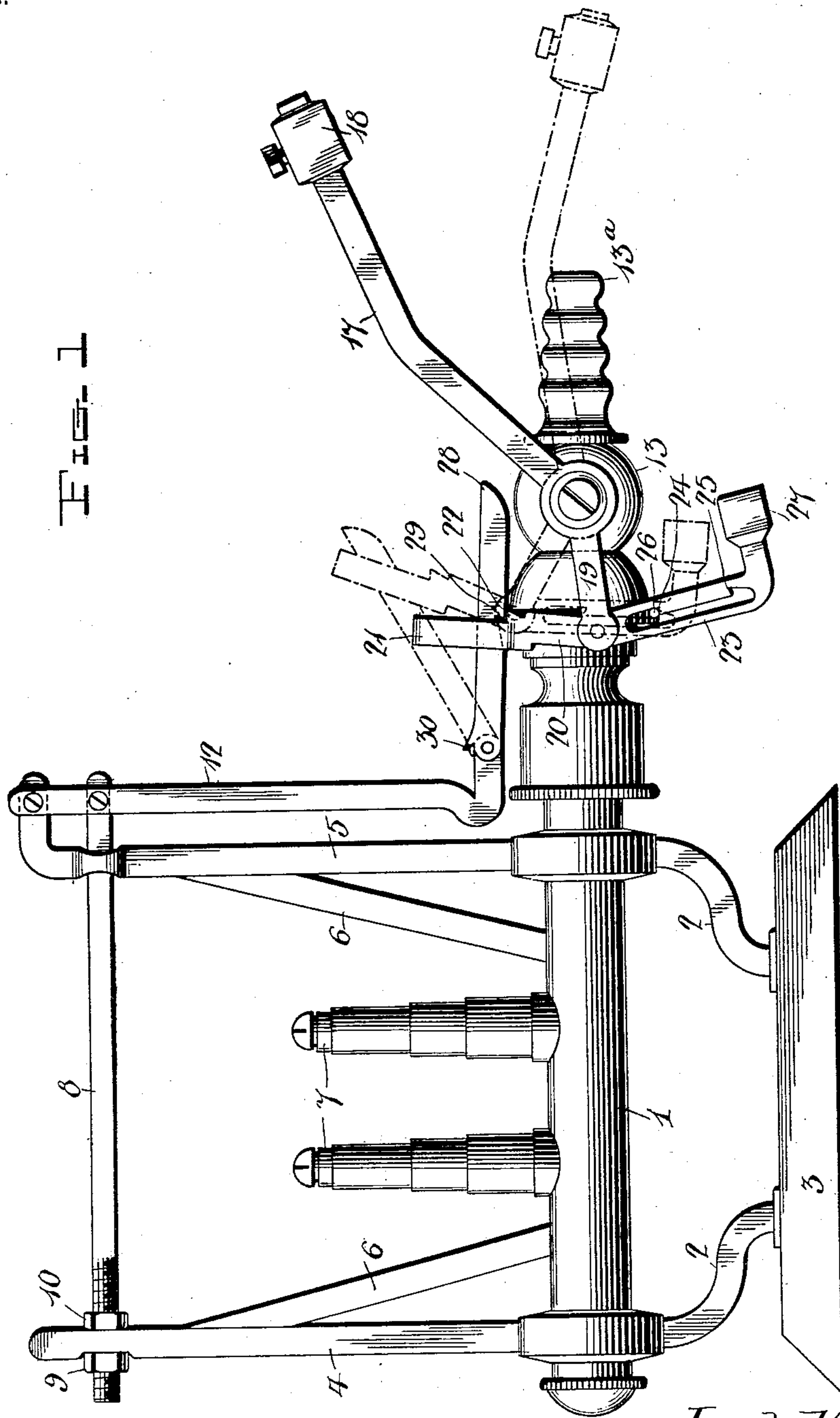
J. HENTZ, JR.

AUTOMATIC CUT-OFF FOR GAS BURNERS.

APPLICATION FILED JUNE 22, 1903.

NO MODEL.

2 SHEETS--SHEET 1.



Inventor

Jacob Hentz, Jr.

By

A. B. Wilson

Attorney

Witnesses

24. *Johnston*
Ed. Wilson

No. 738,037.

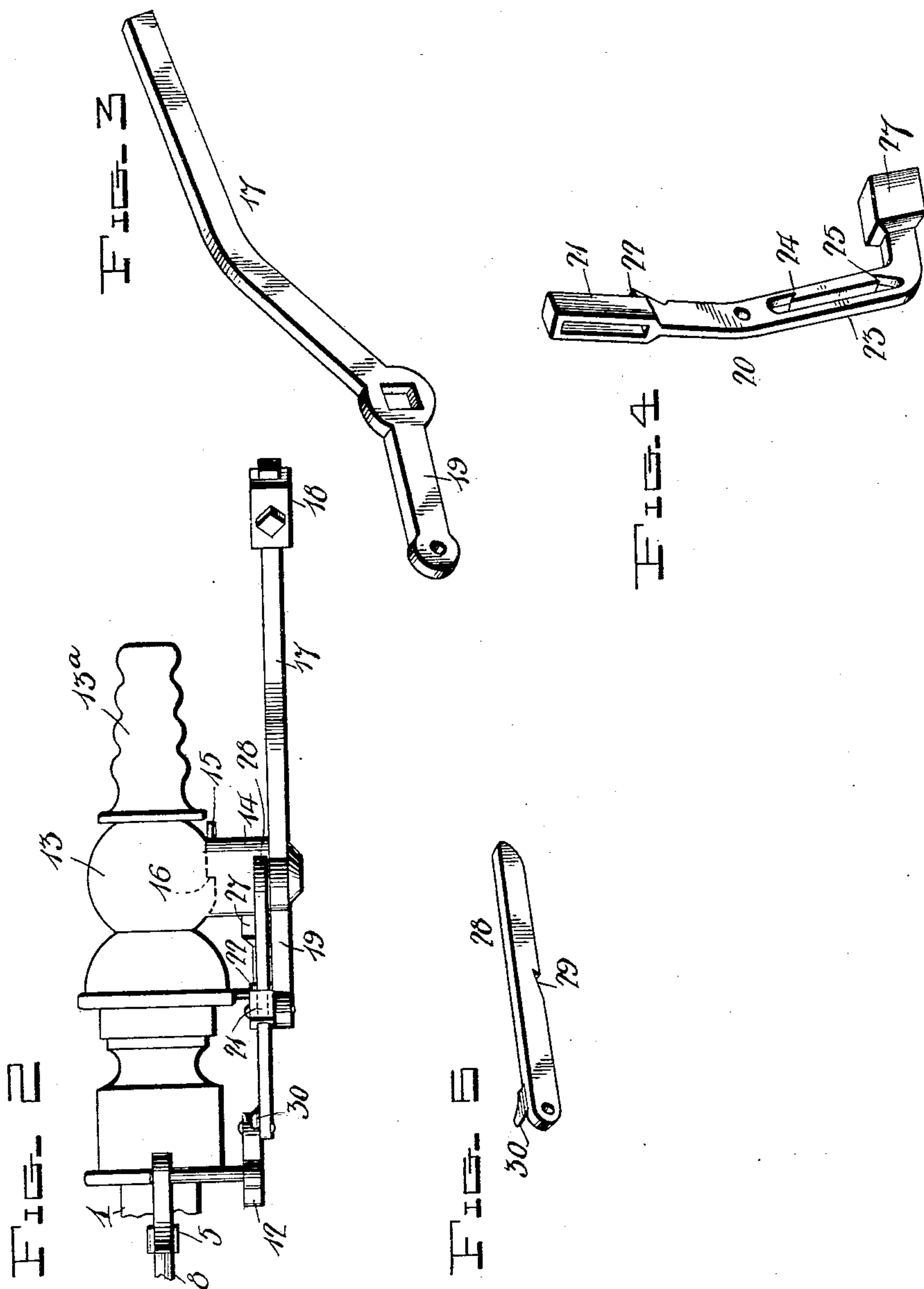
PATENTED SEPT. 1, 1903.

J. HENTZ, JR.
AUTOMATIC CUT-OFF FOR GAS BURNERS.

APPLICATION FILED JUNE 22, 1903.

2 SHEETS—SHEET 2.

NO MODEL.



Witnesses

J. H. Brown
A. B. Wilson

Inventor

Jacob Hentz, Jr.

By

A. B. Wilson

Attorney

UNITED STATES PATENT OFFICE.

JACOB HENTZ, JR., OF PHILADELPHIA, PENNSYLVANIA.

AUTOMATIC CUT-OFF FOR GAS-BURNERS.

SPECIFICATION forming part of Letters Patent No. 738,037, dated September 1, 1903.

Application filed June 22, 1903. Serial No. 162,653. (No model.)

To all whom it may concern:

Be it known that I, JACOB HENTZ, Jr., a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Cut-Offs for Gas-Burners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in automatic cut-offs for gas-burners.

The object of the invention is to provide an attachment for gas-burners whereby should the light be accidentally put out from any cause without turning off the gas the attachment will be actuated to cut off the supply of gas, and thereby prevent the escape of the same.

Another object is to provide a gas cut-off which will automatically "set" itself after the gas has been turned on and lighted.

A further object is to provide a device of this character which will be simple in construction, reliable, efficient, and well adapted to the use for which it is designed.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a side elevation of the device, showing the same applied to the burners of a gas-radiator, showing in full and broken lines the two positions of the parts. Fig. 2 is a top plan view of the same. Fig. 3 is a detail view of the operating-arm detached. Fig. 4 is a similar view of the trigger. Fig. 5 is a similar view of the trip-arm.

Referring more particularly to the drawings, 1 denotes the burner-pipe of a gas stove or radiator. 2 denotes brackets fixed at their lower ends to a suitable base 3 and adapted to support said burner-pipe in a horizontal position above the base.

4 and 5 denote vertical standards fixed at their lower ends to the brackets 2. In the upper ends of the standards 4 and 5 are formed aligned apertures, and the upper end of the standard 5 is bent over at right angles to the length of the same, as shown.

6 denotes braces fixed at their upper ends to the standards 4 and 5 and at their lower ends to the burner-pipe 1.

7 denotes burners arranged on the burner-pipe between the standards 4 and 5. There may be any desired number of burners, two being shown in the drawings.

8 denotes a thermostatic bar arranged above the burners 7 and supported in the apertures formed in the upper ends of the standards 4 and 5. The end of the bar 8, which passes through aperture in the standard 4, is threaded, and upon said threaded end are secured nuts 9 and 10, one on each side of the standard 4, whereby the bar 8 is adjustably held in position.

12 denotes a swinging arm pivoted at its upper end to the angularly-bent end of the standard 5, the lower end of the arm 12 being bent laterally and forwardly, as shown, to the arm 12. Near the upper end is pivotally connected the free end of the thermostatic bar 8, as shown.

13 denotes a valved coupling connected at one end to the end of the burner-pipe and formed on its opposite end with a corrugated nipple 13^a, to which may be connected the usual rubber gas-pipe, (not shown,) or this end of the coupling may be threaded, if desired, for connection with a metal gas-pipe. In the coupling 13 is arranged the usual plug-valve 14, having a limit-pin 15, which is adapted to engage a stop-shoulder 16 to limit the movement of the valve and operating-lever when the gas is turned all the way on or off.

17 denotes an operating-lever having a fixed connection with the stem of the valve 14. On the end of the longer arm of the lever 17 is arranged an adjustable weight 18, and to the oppositely-projecting short arm 19 of the lever is pivotally connected a trigger or catch 20. The trigger 20 consists of an upper arm 21, slotted longitudinally and provided with a shoulder which forms a tooth 22, and a lower arm 23, which is slotted laterally, and in one wall of the slot are formed notches 24 and 25, which are adapted to engage a pin 26, which projects laterally from the side of the coupling 13. To the lower end of the lower arm 23 is connected a weight 27.

28 denotes a trip-arm pivoted at its inner end to the lower forwardly-bent end of the swinging arm 12. In the lower edge of the trip-

arm is formed a notch 29. On the inner pivoted end of the trip-arm is formed a projecting curved finger 30, which when the trip-arm is raised will engage the end of the arm 12 and limit the upward movement of the same, as will be understood. The trip-arm is adapted to have a sliding engagement with the upper arm 21 of the trigger 20 through the slot in the same.

10 The operation of the device is as follows: Assuming the parts to be in the position when the gas is turned on, as shown in full lines in Fig. 1, in which position the lever 17 is raised and the lower slotted arm 23 of the trigger
15 pushed down until the notch 24 in the same engages the pin 26, which projects from the side of the valve-casing 13, the arm being thus held connected to the pin by the weight 27. As soon as the gas is lighted the thermostatic
20 bar 8 will be heated and caused to expand, and thereby increasing its length, which will swing the arm 12 outwardly, thereby pushing the trip-arm 28 through the slot in the upper trigger-arm 21 until the notch 29 in the trip-
25 arm drops into engagement with the tooth 22 on the trigger. With the parts in this position if from any cause the gas should be unintentionally put out the thermostatic bar 8 would immediately cool and retract, thereby
30 swinging the arm 12 inwardly and drawing on the trip-arm 28, which will rock the trigger-arm and release the notch 24 in the same from engagement with the pin 26, allowing the weight 18 to pull the operating-lever 17
35 down to the dotted position shown in Fig. 1, which turns off the gas. When the parts are brought to this position, the notch 25 in the lower arm of the trigger engages the pin 26 and locks the lever 17 against upward move-
40 ment until the trigger-arm is rocked to release the notch 25 from the pin 26. When the lever 17 is down, the upper arm of the trigger is swung upwardly and raises the trip-arm 28, as shown; but the upward movement
45 of the trip-arm is limited by the stop-finger 30, and the same is prevented from being entirely withdrawn from the slot in the arm 21.

By adjusting the nuts 9 and 10 on the end of the thermostatic bar the same may be
50 lengthened or shortened, which will increase or diminish the time of operation of the parts.

In the arrangement of the parts as herein described it will be seen that the operation of the same is entirely automatic and that the
55 parts are not liable to get out of order and can be relied upon to operate in event of the gas being blown or otherwise inadvertently put out.

From the foregoing description, taken in
60 connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion,
65 and the minor details of construction may be resorted to without departing from the prin-

ciple or sacrificing any of the advantages of this invention.

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

1. In a device of the character described, the combination with a burner-pipe and gas-burner, of a thermostatic bar arranged above the same, a coupling provided with a con-
75 trolling-valve and connected to said burner-pipe, an operating-lever connected to said valve, means for actuating the operating-lever, a trigger-arm carried by said lever to lock the same in its upper and lower posi-
80 tion, and means actuated by said thermostatic bar whereby said trigger is released to allow said operating-lever to turn off said valve, substantially as described.

2. In a device of the character described, 85 the combination with a burner-pipe and burner of an adjustable thermostatic bar arranged above the same, a coupling provided with a controlling-valve and connected to said burner-pipe and having formed thereon
90 a stop-pin, a weighted operating-lever connected to said valve, a trigger pivotally connected to the inner end of said lever to automatically engage the stop-pin on said valve-coupling to hold said lever in its upper and
95 lower position, and means actuated by said thermostatic bar to trip said trigger and release said operating-lever when in its raised position to permit the same to lower and turn
100 off said valve, substantially as described.

3. In a device of the character described, the combination with a burner-pipe and burner of an adjustable thermostatic bar arranged above the same, a coupling provided
105 with a controlling-valve and connected to said burner-pipe and having formed thereon a stop-pin, a weighted operating-lever connected to said valve, a trigger pivotally connected to the inner end of said lever and hav-
110 ing upper and lower slotted arms, notches formed in the slot of said lower arm to automatically engage the stop-pin on said coupling to hold said lever in its upper and lower
115 position, a tooth formed on said upper arm, a swinging arm pivotally connected to said thermostatic bar, and a trip-arm pivotally connected to said swinging arm and having
120 a notch to automatically engage the tooth on the upper arm of said trigger, upon the expansion of said thermostatic bar whereby upon the retraction of said bar said trip-arm
will rock said trigger and release the oper-
ating-lever to permit the same to lower and
turn off said valve, substantially as described.

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

JACOB HENTZ, JR.

Witnesses:

FRANCIS J. DOYLE,
MARY C. DOYLE.