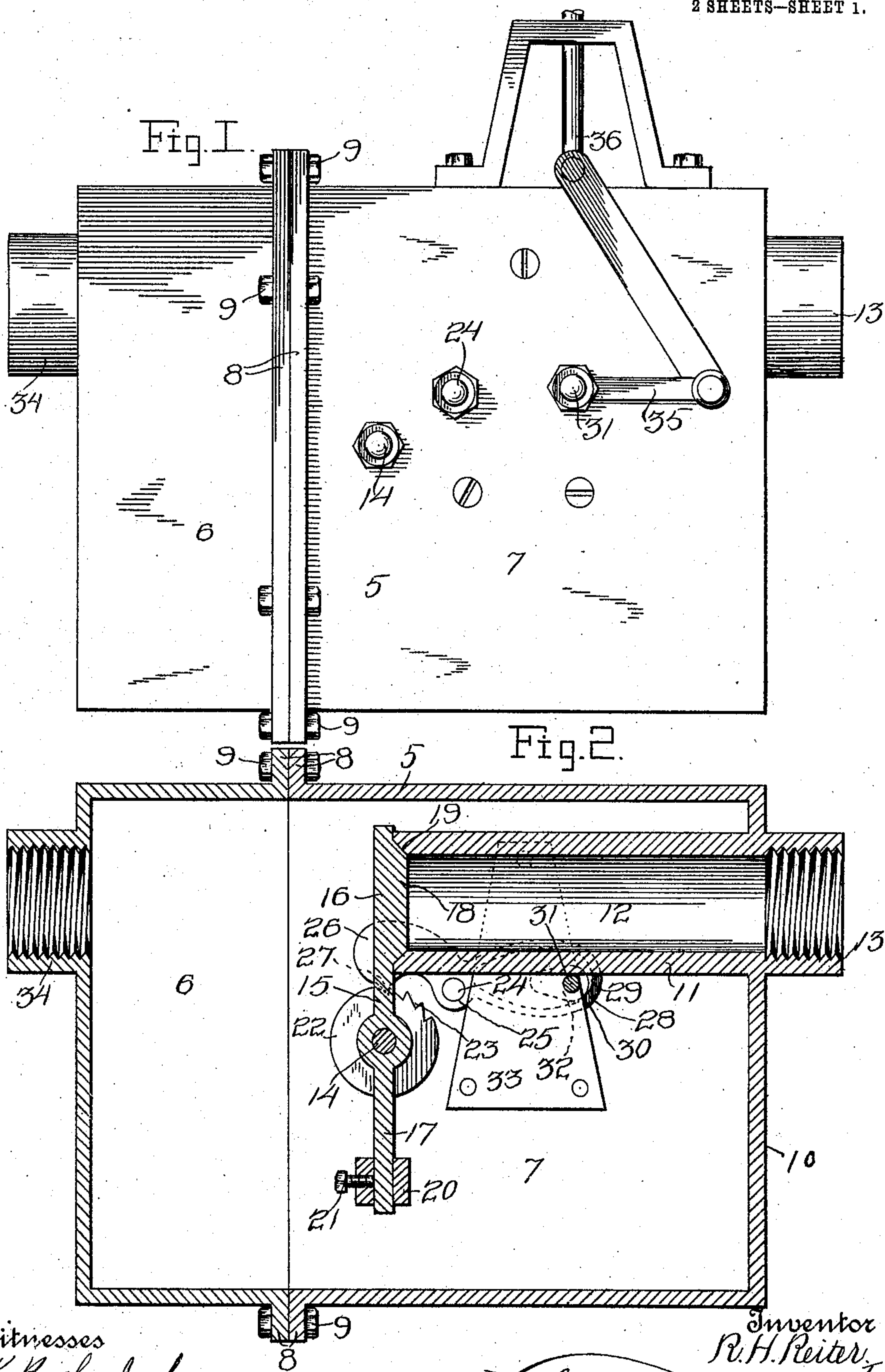


No. 806,366.

PATENTED DEC. 5, 1905.

R. H. REITER.
AUTOMATIC GAS CUT-OFF.
APPLICATION FILED JAN. 4, 1905.

2 SHEETS—SHEET 1.



Witnesses
G. K. Reichenbach
H. M. Baldwin

Inventor
R. H. Reiter
by
Charles Chandler
Attorneys

No. 806,366.

PATENTED DEC. 5, 1905.

R. H. REITER.
AUTOMATIC GAS CUT-OFF.
APPLICATION FILED JAN. 4, 1905.

2 SHEETS—SHEET 2.

Fig. 3.

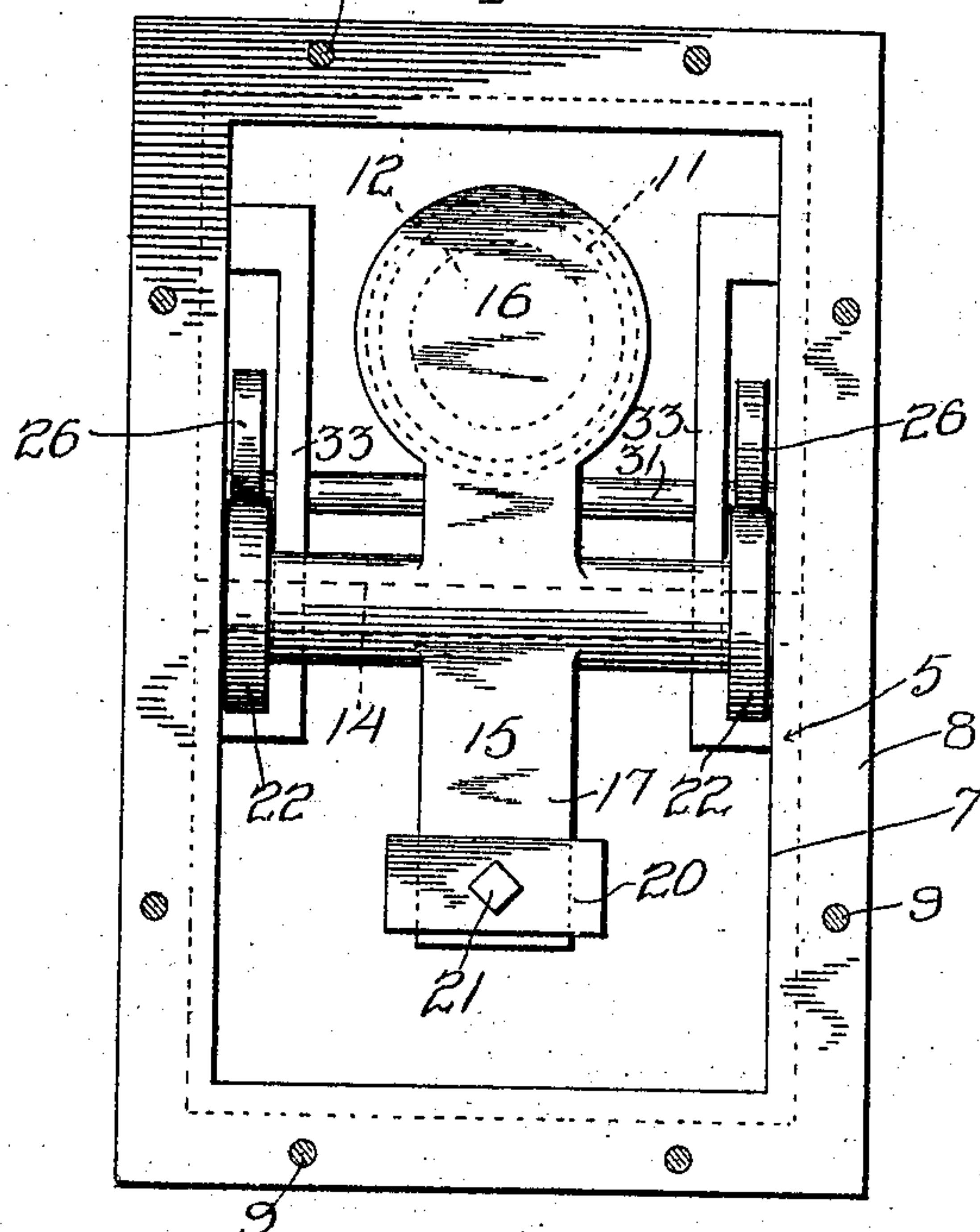
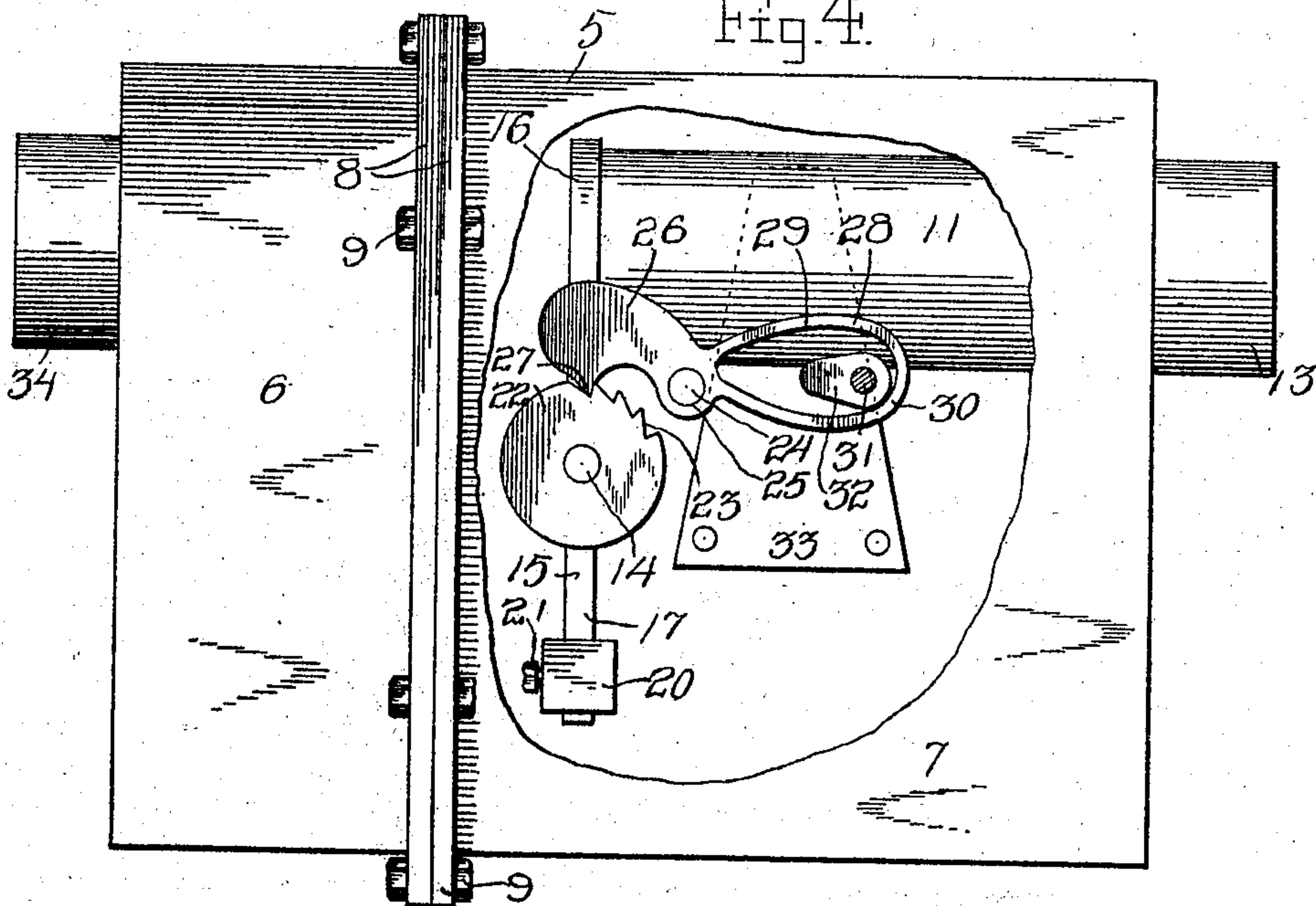


Fig. 4.



Witnesses
C. K. Reichenbach.
H. M. Baldwin

Inventor
R. H. Reiter
by
Charles Chandler
Attorneys

UNITED STATES PATENT OFFICE.

RALPH H. REITER, OF WEST BRIDGEWATER, PENNSYLVANIA.

AUTOMATIC GAS CUT-OFF.

No. 806,366.

Specification of Letters Patent.

Patented Dec. 5, 1905.

Application filed January 4, 1905. Serial No. 239,610.

To all whom it may concern:

Be it known that I, RALPH H. REITER, a citizen of the United States, residing at West Bridgewater, in the county of Beaver, State of Pennsylvania, have invented certain new and useful Improvements in Automatic Gas Cut-Offs; and I do hereby 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 valves, and more particularly to automatic cut-off valves for gas systems, and has for its object to provide a valve which will be held in an open position when the pressure of gas is at a certain point, but which will automatically close when the pressure falls below this point, means being provided to prevent reopening of the valve when the pressure again increases.

A further object is to provide a valve embodying these features which may be adjusted to suit different conditions and which will be so constructed that it may be opened manually from a point distant from the valve.

Other objects and advantages will be apparent from the following description, and it will be understood that modifications of the specific construction shown may be made and any suitable materials may be used without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation of the present invention. Fig. 2 is a longitudinal section through the valve and the supply-passage. Fig. 3 is a view showing the forward section of the casing removed. Fig. 4 is a view showing a portion of one side of the casing removed and illustrating the valve and retainer in side elevation.

Referring now to the drawings, the present invention comprises a casing 5, including a forward minor section 6 and a rearward major portion 7, the two sections having mutually-engaging flanges 8 at their meeting ends in which attaching-bolts 9 are engaged.

Extending inwardly from the rearward end wall 10 of the section 7, adjacent to the upper edge thereof, there is a cylindrical projection 11, formed integral with the casing and having a supply-passage 12, formed longitudinally therethrough, opening through its inner end and through the rearward end wall 10 of the casing. Formed integral with the casing and

extending outwardly from the wall 10 there is a flange 13, which surrounds the passage 12, and this flange is provided with interior threads for engagement by a section of the piping of the gas system.

Journaled transversely of the casing at a point below the free end of the projection 11 there is a shaft 14, upon which there is secured a valve member 15, having an upwardly-extending head 16 and a downwardly-extending stem 17. The head 16 carries upon its rearward face a valve 18 of a size to close the forward end of the passage 12, and the valve member is movable to bring the valve into and out of position to thus close the passage, the projection being provided with a beveled valve-seat 19 at its free end. The arrangement of the valve member is such that when the head 16 and stem 17 are extending vertically the valve 18 lies in operative position, and to hold the valve member normally in this position the stem 17 is provided with a weight 20, which is slidably engaged therewith for longitudinal movement thereupon, and the weight is provided with a set-screw 21, by which it may be held at different points of its movement. It will be apparent that when the weight 20 is at the upward limit of its movement it will require a minimum of pressure against the valve to rotate the shaft 14 and that the necessary amount of pressure will increase as the weight 20 is moved downwardly.

Adjacent to one of the side walls of the casing the shaft 14 is provided with a concentrically-mounted disk 22, having the upper portion of its periphery provided with a plurality of ratchet-teeth 23, the straight faces of which are directed toward the forward end of the casing. Rearwardly of the shaft the wall of the casing adjacent to which the disk 22 lies is provided with an inwardly-extending cylindrical lug 24, which is engaged in a perforation 25, formed in the rearward end of a forwardly-extending retainer 26, this retainer having a finger 27 upon its lower edge which lies normally in engagement with the ratchet-teeth 23 of the disk to hold the disk and the shaft against forward movement. The forward end of the retainer is so proportioned that the finger 27 is held by gravity in its normal position. The retainer has a rearwardly-extending portion 28, the interior portion of which is cut away, as shown at 29, to form a narrow rim 30, and lying within the inclosure of this rim adjacent to the rearward end of the rearwardly-extending portion is

the inner end of a shaft 31, which extends outwardly through the side wall of the casing for a purpose to be presently described, and secured to the inner end of this shaft there is
 5 a cam-finger 32, which when the shaft is rotated in one direction comes into engagement with the rim 30 to move the rearward portion of the retainer downwardly, thus bringing the finger 27 out of engagement with the
 10 teeth 23 to permit of free movement of the shaft 14 and the valve member. A shield 33 is disposed over the rearward portion of the retainer and the shaft 31 with its cam-finger 32. Formed through the forward end of the
 15 casing there is an outlet-passage 34, provided with threads for the engagement of a gas-pipe therein. The shaft 31 outwardly of the casing is provided with a crank 35, which is connected with a shift-rod 36, mounted in a
 20 suitable bracket, and by means of this shift-rod the shaft may be operated to move the retainer, as will be readily understood.

In operation the weight 20 is so adjusted upon the stem 17 that the valve 18 will open
 25 when the desired pressure of gas is in the passage 12. The shaft 31 is then operated to move the retainer out of engagement with the teeth 23, which will permit the valve to open under the pressure of the gas, and when the
 30 valve has opened sufficiently the retainer is permitted to return to its normal position and prevents further opening of the valve, as will be readily understood. Should the pressure of gas fall, the weight 20 will cause the valve
 35 to close, the weighted portion of the retainer being sufficiently light to permit of its being raised by the weight, and the retainer will prevent the valve from reopening should the pressure of gas rise. The forward section 6
 40 of the casing may be removed, as will be readily understood, to permit of adjustment of the mechanism.

What is claimed is—

1. A mechanism of the class described comprising a casing having an inlet-port, a pivotally-mounted closure for the inlet-port, a weight adjustably connected with the closure and arranged to hold it normally in closed position, said closure being adapted to be held
 50 in inoperative position by pressure in the inlet-port, a ratchet-disk carried by the closure, and a retainer movable into and out of engagement with the ratchet-disk, said retainer being arranged to hold the closure at times
 55 positively in operative position, and means extending outwardly of the casing for moving the retainer into and out of operative position.

2. A mechanism of the class described comprising a casing having an inlet-port, a transverse shaft in the casing, a valve member pivotally mounted upon the shaft, a valve carried
 60 by the valve member and lying normally in

position to close the inlet-port, adjustable means for holding the valve member yieldably with the valve in operative position, and
 65 means for holding the valve member at times positively with the valve in operative position.

3. A mechanism of the class described comprising a casing having an opening therein, a closure for the opening, movable into and out
 70 of operative position, means for holding the closure yieldably in operative position, a ratchet-disk, said ratchet-disk being connected with the closure for rotation when the closure is moved, and a retainer disposed for en-
 75 gagement with the ratchet-disk to hold the latter against rotation, said retainer lying normally in engagement with the ratchet-disk and being movable out of its operative position.

4. A mechanism of the class described, comprising a casing including two detachably-connected sections, one of said sections having an inlet-port, and the other section having an outlet-port, a shaft journaled in the first-named
 80 section, a valve member secured to the shaft, a valve carried by the valve member and movable into and out of position to close the inlet-port when the shaft is moved, a stem carried by the valve member, a weight adjustably engaged with the stem, said weight being
 85 disposed to hold the shaft with the valve in operative position, a ratchet-disk carried by the shaft, a retainer pivoted in said first-named section of the casing, and lying yieldably in engagement with the disk, said re-
 90 tainer being disposed to hold the disk with the valve against movement out of its operative position, and means for moving the retainer out of operative position.

5. An apparatus of the class described comprising a casing having an opening therein, a closure for the opening, said closure being
 100 movable into and out of operative position, a ratchet-disk connected with the closure for rotation when the closure is moved, and means cooperating with the ratchet-disk for holding the closure at times against movement.

6. In an apparatus of the class described, the combination with a pipe, of a pivotally-mounted valve member, a valve carried by the member and movable therein into and out of position
 110 to close the pipe, a stem carried by the member, a weight adjustably mounted upon the stem and arranged to hold the member yieldably with the valve in operative position, and means movable into and out of operative
 115 position for holding the valve member at times against movement.

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

RALPH H. REITER.

Witnesses:

WALTER C. THOMPSON,
 CHARLES W. SWAGER.