No. 672,861. Patented Apr. 23, 1901.

V. H. SLINACK.

STREET LAMP.

(Application filed Aug. 4, 1899.)

(No Model.) 2 Sheets—Sheet 1.

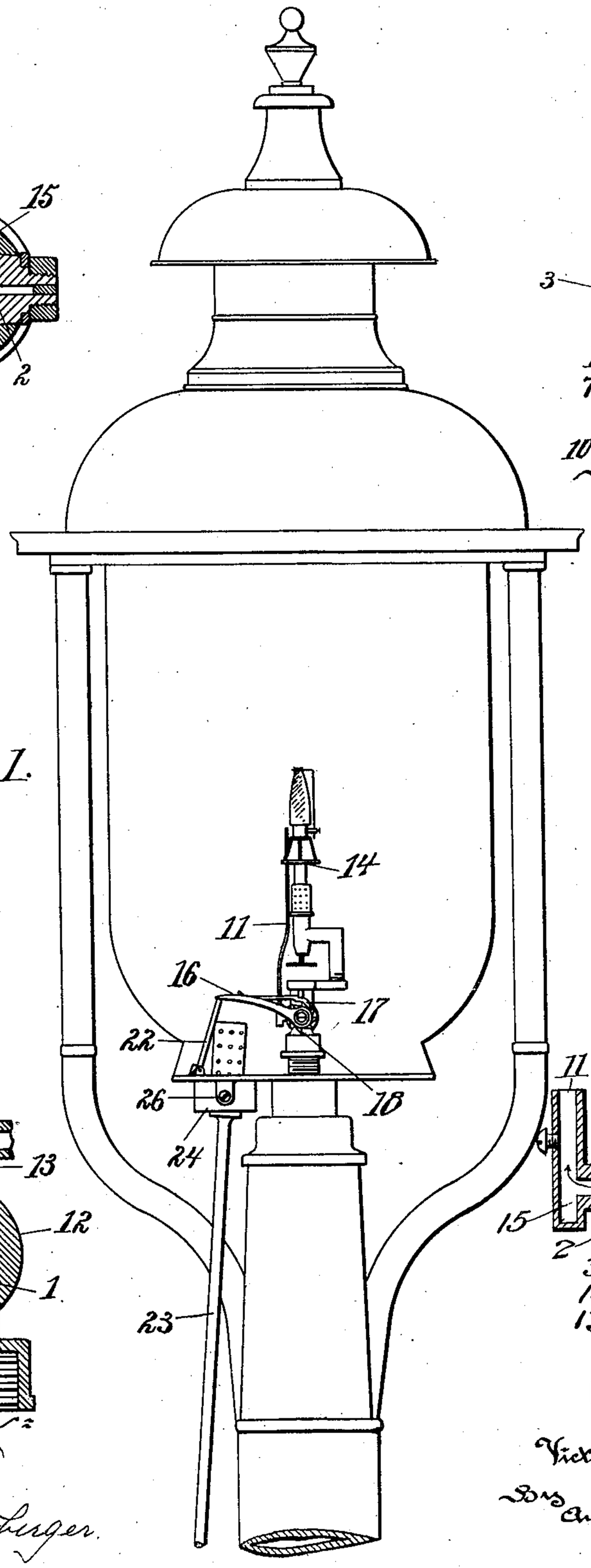

Fig. 1.

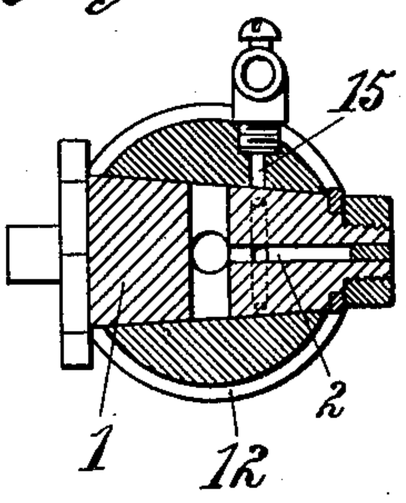

Fig. 7

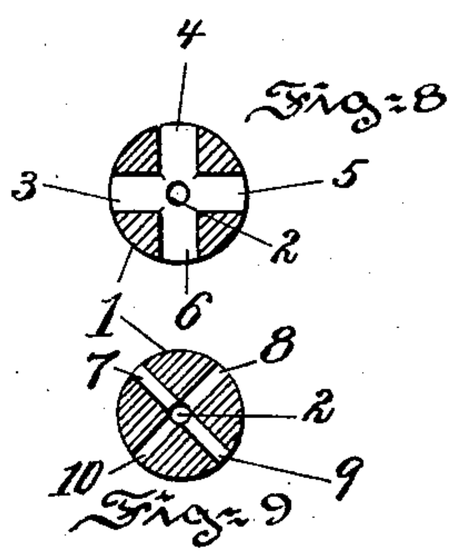

Fig. 8

Fig. 9

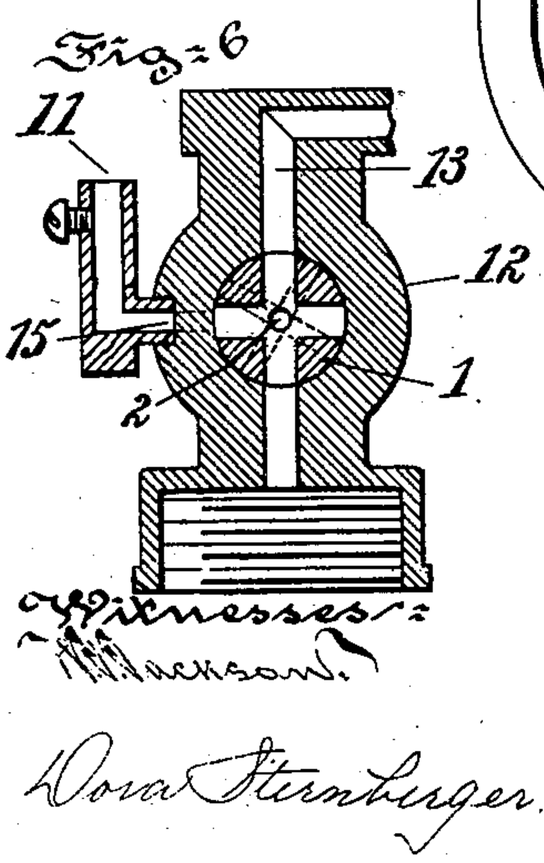

Fig. 6

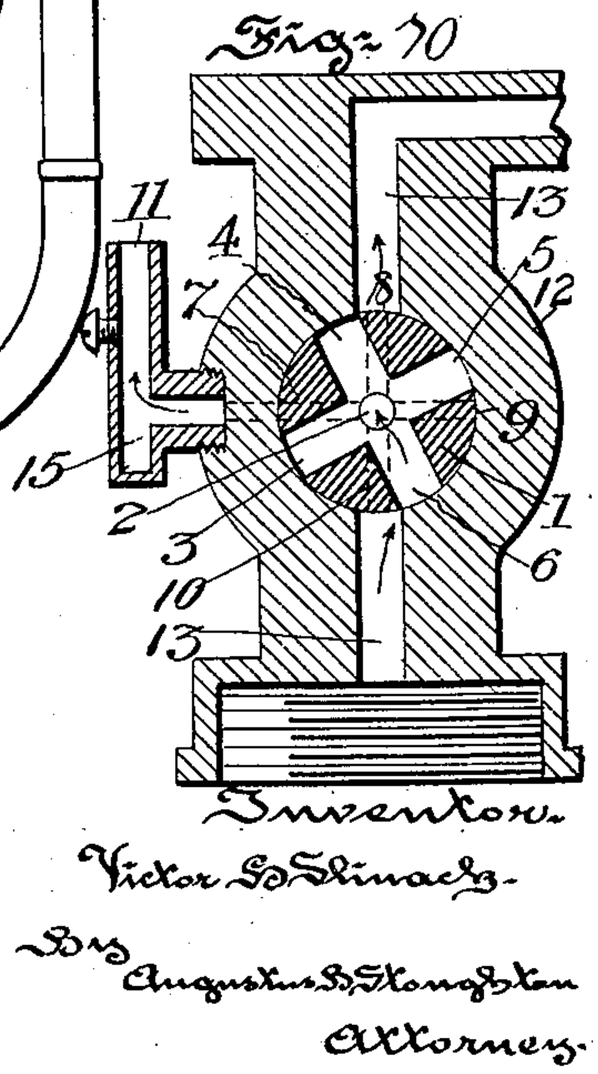

Fig. 10

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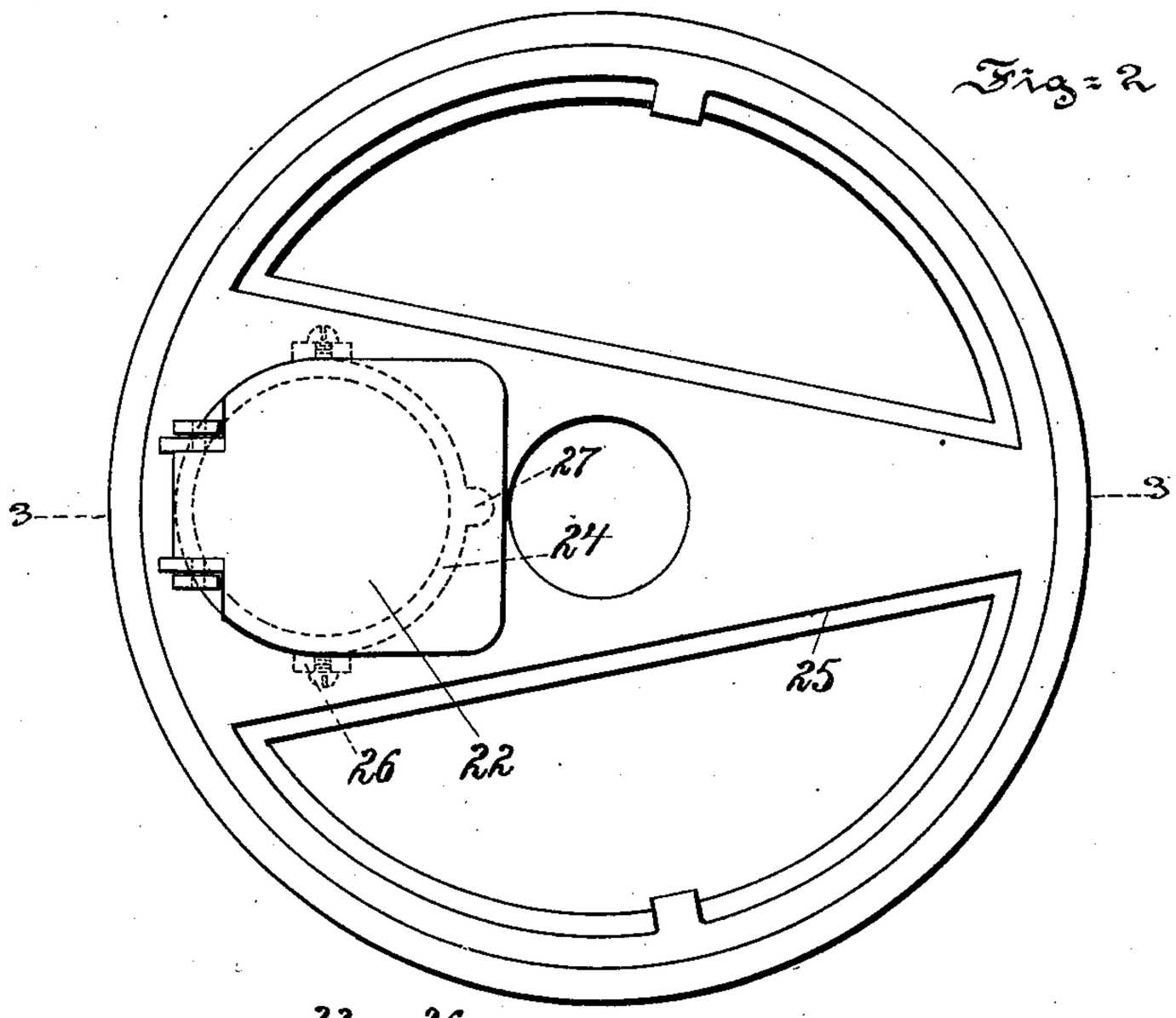
Fig. 2.



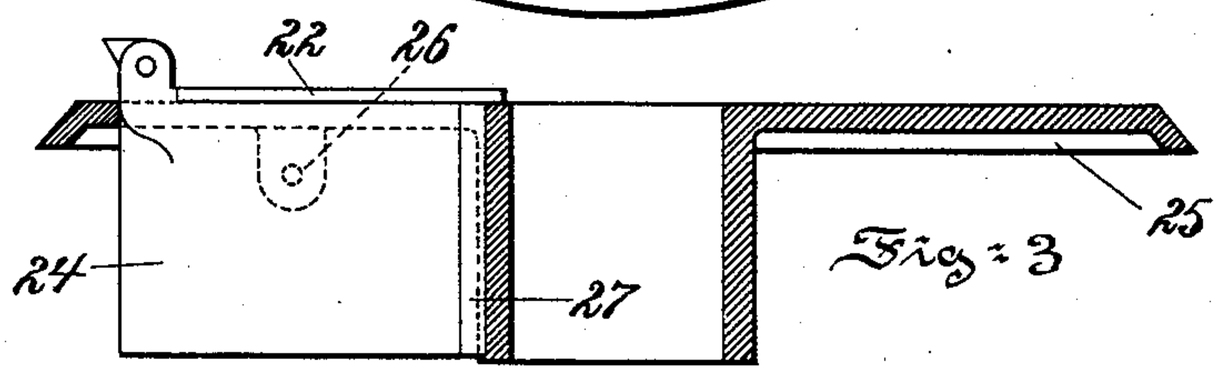


Fig. 3.

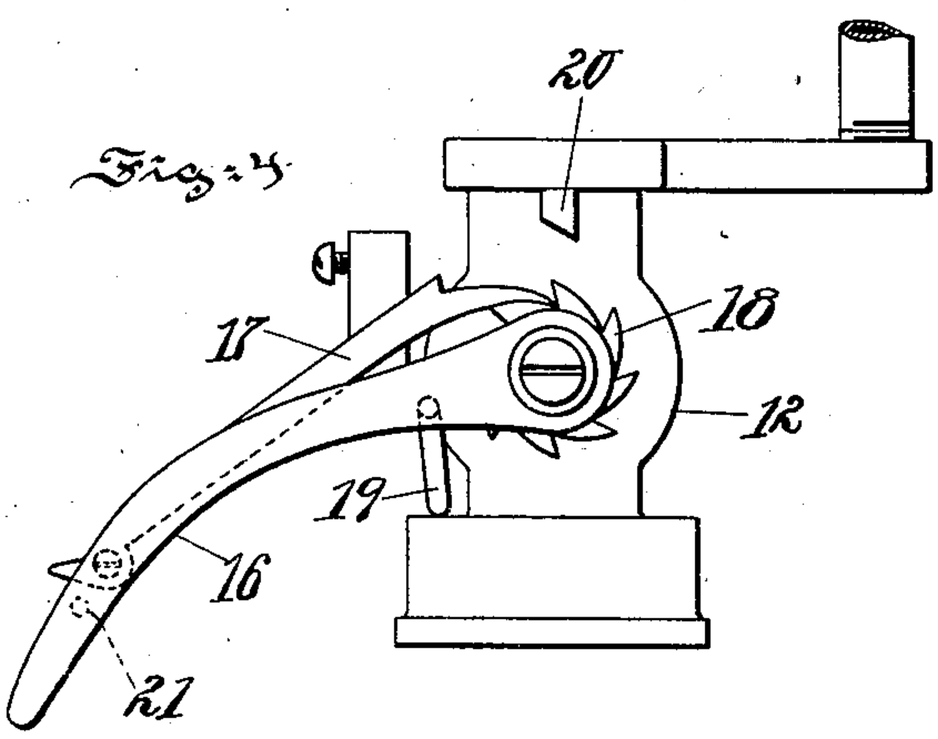
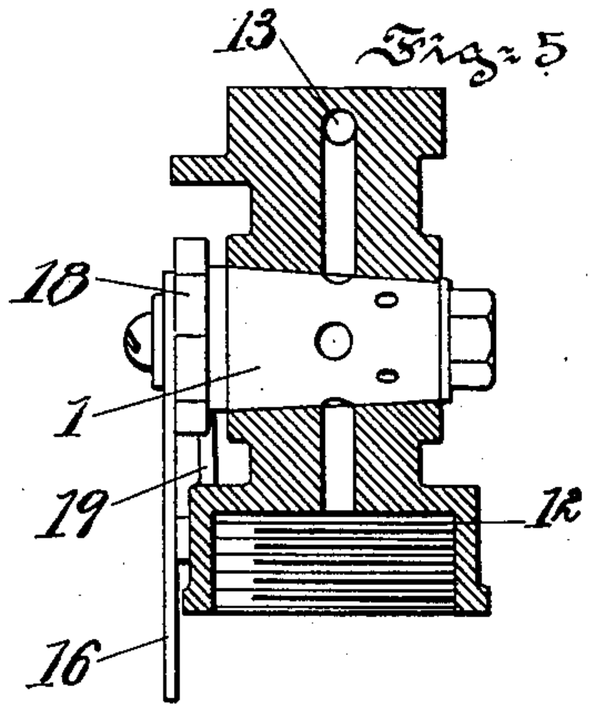


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

VICTOR H. SLINACK, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO PENNSYLVANIA GLOBE GAS LIGHT COMPANY, OF SAME PLACE.

STREET-LAMP.

SPECIFICATION forming part of Letters Patent No. 672,861, dated April 23, 1901.

Application filed August 4, 1899. Serial No. 726,132. (No model.)

To all whom it may concern:

Be it known that I, VICTOR H. SLINACK, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Street-Lamps, of which the following is a specification.

One object of my invention is to provide for the lighting or extinguishment of Welsbach and other incandescent street-lights in a rapid, expeditious, and satisfactory manner.

Another object of my invention is to enable the operator to accomplish either of the described operations, including the control of the pilot-light or climbing lighter, by a single stroke or thrust of his lighting torch or stick.

To these and other ends hereinafter referred to my invention comprises the improvements hereinafter described and claimed.

The nature, characteristic features, and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is an elevational view of a street-light embodying features of my invention. Fig. 2 is a view drawn to an enlarged scale and illustrating in plan the floor or base of the lantern. Fig. 3 is a sectional view taken on the line 3 3 of Fig. 2. Fig. 4 is a side view of the lever which operates the gas-valve. Fig. 5 is a transverse sectional view taken on the center line of Fig. 4. Fig. 6 is a sectional view of Fig. 4, taken in a plane parallel with the plane of the paper. Fig. 7 is a horizontal sectional view taken through the center of the valve or plug shown in Fig. 4. Fig. 8 is a view illustrating a transverse section of the plug, taken through the burner-supply openings. Fig. 9 is a similar view taken through the climbing-lighter-supply openings, the plug having been slightly turned; and Fig. 10 is a diagrammatic view illustrating a position assumed by the plug during its rotation and in which gas is supplied to both the main and pilot burners.

The plug or barrel 1 of the valve is provided with a longitudinally-ranging internal passage 2. From this passage extend radial openings 3 4 5 6 for the main burner and also other radial passages 7 8 9 10 for the climbing lighter. The passages 7, 8, 9, and 10 are smaller than and alternate with the passages 3, 4, 5, and 6, so that in turning the plug there is presented, for example, first the passage 3, then the passage 7, then the passage 4, then the passage 8, then the passage 5, then the passage 9, then the passage 6, and then the passage 10. The number of passages chosen for the purpose of illustration is four for the main burner and four for the pilot-light or climbing lighter 11. The valve-casing 12 is provided with an opening 13, which supplies gas to the burner 14. The opening 13 is in the same plane with the openings 3, 4, 5, and 6 in the plug. The valve-casing 12 is also provided with an opening 15, that leads to the climbing lighter 11 and is arranged in the same plane with the openings 7, 8, 9, and 10 of the plug and, as shown in the drawings, at right angles with the opening 13 for supplying the burner. The opening 15 is smaller than the opening by which gas is admitted, and the passages 7, 8, 9, and 10 are so placed in relation to the passages 3, 4, 5, and 6 and to the gas-inlet opening 15 and are so proportioned that when the plug is turned and as one of the large passages 4 6 or 3 5 comes into alinement with the passage 13 one of the smaller passages 7 9 or 8 10 passes completely across the opening 15. The result of this is that at one point in the travel of the plug the parts occupy the position shown in Fig. 10, and by reference to that figure and to the arrows thereon it is plain that gas reaches both the main and pilot burners for a sufficient length of time to accomplish their lighting by means of the torch, and as the large passage is shifted into alinement with the passage 13 the small passage passes out of alinement with and consequently shuts off the opening 15.

16 is a rocking lever journaled to the end of the plug 1 and provided with a pawl 17, adapted to mesh with the teeth of a ratchet-wheel 18, keyed or otherwise secured to the plug, so that when the lever 16 is lifted its pawl 17, acting upon the teeth of the ratchet-wheel 18, turns the plug. When released, the lever 16 falls until arrested by a suitable stop, as 19, and its pawl acting under the influence of gravity falls into another tooth. The plug 1, however, remains at rest.

20 is a stop for limiting the range of motion of the lever 16, and a stop 21 may be provided for limiting the range of motion of the pawl.

There is in the base of the lantern a hinged door 22, so positioned that when lifted its free edge collides with the end of the lever 16, and thus turns it upward. The door 22 under the influence of gravity tends to close; but of course the action of gravity may be replaced in the device by the action of springs. The free edge of the door may be advantageously made somewhat rectangular, as shown in Fig. 2, in order to concentrate flames from a torch or lighting-stick, as 23, upon the climbing lighter 11. The door 22 may be advantageously hinged to a sleeve 24, which extends through an opening in the base 25 of the lantern and is held to place by means of set-screws 26, fitted through lugs depending from the base of the lantern and adapted to engage the sleeve.

To insure accuracy in assembling the parts, the sleeve may be provided with a rib 27, adapted to a gutter formed in the curved wall of the opening in the base of the lantern through which the sleeve passes. Accuracy of adjustment of the sleeve is obviously important. Otherwise the door might fail to coöperate properly with the lever 16.

Assume that the light is extinguished, the door 22 is closed, the lever 16 is in depressed position, and the plug 1 is in such position that solid portions of its curved surface overlie and close the opening 13 to the main burner and the opening 15 to the climbing lighter. It may be here remarked that a climbing lighter consists of a perforated pipe through the perforations of which gas escapes and burns, thus operating to light a burner at some distance from the point of application of a light. To light the lamp, the attendant thrusts the lighted end of the torch 23 through the sleeve 24 and immediately withdraws it. The entrance of the lighting-stick lifts the door 22, the latter collides with and lifts the lever 16, and the latter causes the pawl 17 to operate upon a tooth of the ratchet-wheel 18 and to thus turn the plug 1. As the plug 1 is first turned, gas is admitted to the chamber 2 in its interior, for example, by way of the radial opening 6. From the chamber 2 gas escapes, for example, by way of the radial opening 7 and reaches the climbing lighter by way of the opening 15, and as the plug is turned to bring the passage 6 into alinement with the large gasway 13 the opening 7 passes away from the opening 15, and thus interrupts the supply of gas to the climbing lighter; but the gas continues to reach the main burner by way of, for example, the radial opening 4, which is left in alinement with the opening 13. As soon as gas reaches the climbing lighter 11 it escapes at the base thereof and is ignited by the torch, and the gas escaping from the climbing lighter carries the light up to the burner, which is thereby lighted. As the torch is withdrawn the door 22 closes and the lever 16 falls into its original position without shifting the plug. To extinguish the burner or main light, an unlighted torch or stick is thrust into the lantern in a similar manner, and the consequent lifting of the door 22 operates the lever 16 to cause the pawl-and-ratchet connections to again turn the plug. This movement of the plug shifts the solid portion of its surface opposite the gasways, and thus interrupts the passage of gas, and consequently extinguishes the light.

It will obvious to those skilled in the art to which my invention appertains that modifications may be made in details without departing from the spirit thereof. Hence I do not limit myself to the precise construction and arrangement of parts hereinabove set forth, and illustrated in the accompanying drawings; but,

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a main burner and its complemental climbing lighter, a valve-casing having an opening for the reception of gas, an opening for conducting gas to the climbing lighter, and an opening for conducting gas to the main burner, said main-burner and climbing-lighter openings being in different planes and out of alinement and the former larger than the latter, a plug provided with an internal chamber and with two sets of four radial openings, each set arranged in different planes and the four openings of one set being larger than the four openings of the other set, and means for rotating said plug in one direction to cause one of its smaller radial openings to pass the climbing-lighter opening while one of its larger openings is coming into alinement with the main gasway, substantially as described.

2. The combination with a lamp-casing, of a main burner and its complemental climbing lighter, a plug-valve mounted within the lamp-casing and having openings for conducting gas to said main burner and climbing lighter, respectively, said openings being disposed in different planes and out of alinement, a pivotal lever and its pawl-and-ratchet connections for rotating the plug in one direction, and a door disconnected from the pivotal lever and hinged at the bottom of the lamp-casing to open inward and collide with the pivotal lever, substantially as described.

3. In combination, a lantern provided with an opening having a grooved wall, a sleeve fitted to said opening and provided with a rib adapted to the grooved wall, a door hinged to said sleeve, and a valve-operating lever in range of the door, whereby accuracy in operation of the described parts is insured, substantially as described.

In testimony whereof I have hereunto signed my name.

VICTOR H. SLINACK.

In presence of—
W. J. JACKSON,
A. B. STOUGHTON.