

C. DE W. LUKENS.
VALVE.
APPLICATION FILED FEB. 11, 1910.

987,000.
Fig. 1.

Patented Mar. 14, 1911.

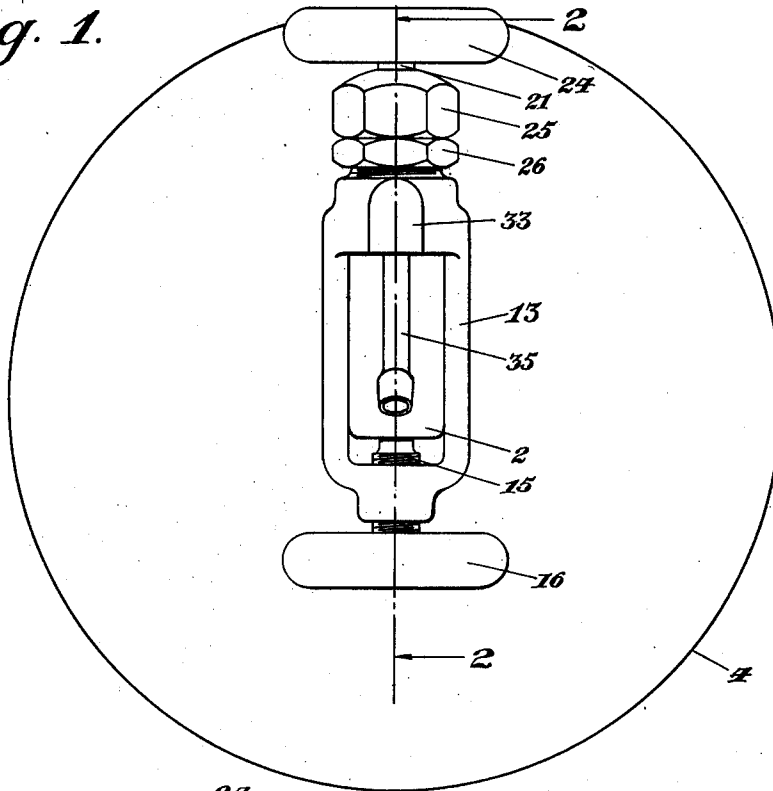
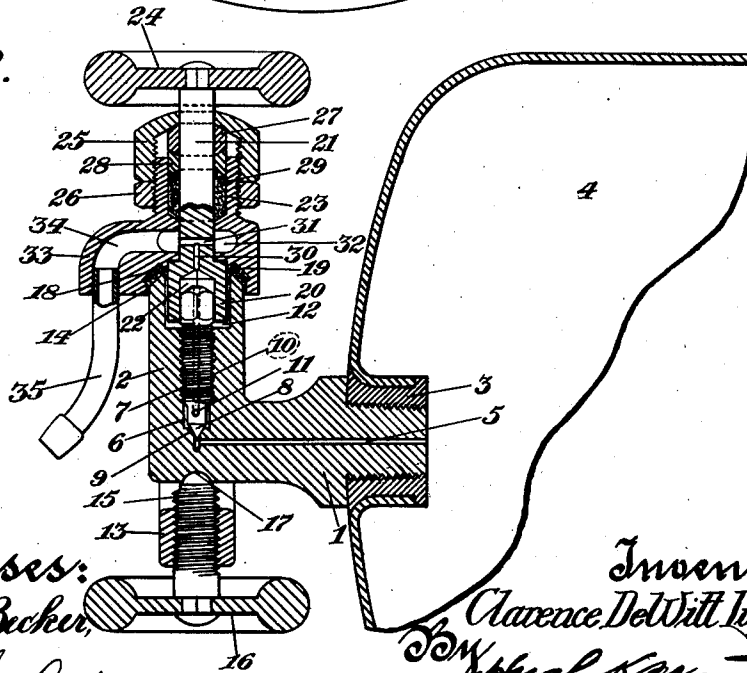


Fig. 2.



Witnesses:
Chas. A. Becker,
George G. Anderson.

Inventor:
Clarence DeWitt Lukens
By Hugh N. Wagner,
His Attorney

UNITED STATES PATENT OFFICE.

CLARENCE DE WITT LUKENS, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO
DAVID L. SOLOMAN, OF ST. LOUIS, MISSOURI.

VALVE.

987,000.

Specification of Letters Patent. Patented Mar. 14, 1911.

Application filed February 11, 1910. Serial No. 543,214.

To all whom it may concern:

Be it known that I, CLARENCE DE WITT LUKENS, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Valves, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to valves and has for its object to provide a valve which is adapted to control the passage of gas or liquid from a reservoir and which is particularly intended to be used to control the passage of acetylene or other gas from a reservoir in which the gas is stored or generated for the purpose of supplying the lamps of an automobile, railway coach, head-light of a locomotive, boat, etc.

In the drawings forming part of this specification, in which like numbers of reference denote like parts wherever they occur, Figure 1 is an end elevation of a reservoir to which this valve is attached; and Fig. 2 is a sectional view on the line 2—2, Fig. 1.

The neck 1 of the main valve-body 2 is preferably screw-threaded to fit in a screw-threaded bushing 3 of the reservoir 4. A passage 5 in neck 1 communicates with the interior of reservoir 4 and, also, with an opening 6 in the main valve-body 2. A portion of opening 6 is screw-threaded to receive a screw-threaded stem 7 of a needle valve 8, which is movable toward and away from the valve-seat 9 in said opening 6. A passage 10 extending longitudinally in stem 7 terminates in an aperture 11 which extends transversely through said stem. Said aperture communicates with opening 5, and, when valve 8 is moved away from seat 9 in the manner hereinafter described, the gas passes from passage 5 into opening 6 and enters aperture 11 from which it passes through passage 10. The upper end of stem 7 is preferably squared and extends into the cup 12 in the upper end of valve-body 2.

A yoke 13 encircles the valve-body 2, and is dished at 14 to fit over the upper end of said valve-body. A screw 15, bearing a hand-wheel 16 for the purpose of turning same, extends through a screw-threaded opening in yoke 13. An end of said screw seats in a depression 17 in the lower end of valve-body 2 and holds said yoke firmly in place on said valve-body. When the

hand-wheel 16 is turned in the direction to draw the end of screw 15 out of depression 17, the yoke 13 can be removed from the valve-body 2. An ordinary packing ring 18, which is placed in an annular groove 19 in the dished portion 14 of yoke 13, is held snugly against the upper end of valve-body 2 and prevents the gas from leaking out of cup 12.

A socket 20 on the end of stem 21 projects into cup 12. Said socket is provided with a squared opening 22 into which the squared end of stem 7 extends, and, when said socket is rotated, stem 7 is caused to rotate therewith, thereby moving valve 8 toward or away from seat 9. Said stem 21 extends through a stuffing box 23 in the upper end of yoke 13, a hand-wheel 24 being fastened to the upper end of stem 21 for the purpose of turning same. A cap 25, which encircles stem 21, is screw-threaded to fit the screw-threaded upper end of yoke 13, and is held in any desired position on said upper end of yoke 13 by means of a lock-nut 26. Said cap presses a split ring 27 against a packing ring 28 which retains the packing 29 in the stuffing-box 23. The upper end of ring 28 is preferably tapered to form a seat for the tapered lower end of split ring 27, so that the pressure of cap 25 causes said ring 28 to press ring 27 snugly around stem 21.

A passage 30 in stem 21 communicates with the opening 22 in socket 20 and terminates in an aperture 31. Said aperture 31 extends transversely through stem 21 and communicates with a chamber 32 within the valve-body 2. A lug 33 on yoke 13 is provided with a passage 34, which communicates with chamber 31. A pipe 35 is fastened in passage 34, and is arranged to deliver the gas to a pipe or hose (not shown in the drawings) which leads to the lamps.

The operation of the valve is as follows: When the hand-wheel 24 is turned in one direction, the socket 20 rotates the stem 7, thereby causing valve 8 to move away from its seat 9. The gas passes through passage 5 into opening 6, then through aperture 11 and passage 10 into the opening 22, from which it passes through passage 30 and aperture 31 into chamber 32 and then out through passage 34 and pipe 35. When the hand-wheel 24 is turned in the opposite direction, the socket 20 rotates the stem 7,

whereby the valve 8 is caused to move against its seat 9 in order to retain the gas in passage 5.

I claim:

5 1. In a valve, a casing formed with a chamber at its outer end, a valve having a longitudinal passage threaded in the casing and having a head which extends in said chamber, a packing engaging wall surrounding said chamber, a member having
10 an end seating on the packing of said wall, said member being formed with a chamber and an outlet communicating with said last named chamber, a valve rotating member
15 carried by said first named member and having an end thereof formed to engage said valve head to rotate same, said valve rotating member being formed with a passage which communicates with both of said
20 chambers, and means to hold said first named member in engagement with said casing.

2. In a valve, a valve body having a threaded opening, a valve threaded in said
25 opening and formed with a longitudinal passage, a body secured to the valve body and formed with a chamber, and means carried by the second named body to rotate said valve, said valve rotating means being
30 formed with a passage which communicates with the valve passage at one end and with the chamber of the second named body at its opposite end.

3. In a valve, a casing having a threaded
35 opening therein with a chamber at each end of said opening, a valve threaded in said opening having an angular head on its stem which projects in one of said cham-

bers, said valve stem being formed with a longitudinal passage which extends from
40 a point at the inner end of the valve through said angular head thereof to thereby establish communication between said chambers through the valve stem, a body engaged with said casing and formed with a cham-
45 ber, and a valve operating member rotatably carried by said body, said member having a stem formed with a socket on its lower end, said socket conformably receiving and engaging over said angular head of said
50 valve, said stem of said member being formed with an aperture which communicates with the body chamber, and with a passage which establishes communication between the socket and aperture.
55

4. In a valve, a casing having a chamber therein and a threaded opening communicating with the chamber, a valve threaded in the opening having an angular head which projects into the chamber, said valve
60 having a longitudinal passage, a body secured to the casing and formed with an outlet, and a rotatable member carried by said body to actuate said valve, said member having a socket which conformably fits over
65 said angular head of the valve to grip same, said member having a passage which communicates with the outlet at one end and extends into said socket to communicate with said valve passage.
70

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

CLARENCE DE WITT LUKENS.

Witnesses:

GLADYS WALTON,

DAVID LEON SOLOMAN.