No. 618,631. Patented Jan. 31, 1899.

F. V. WINTERS.

TURNING PLUG OR VALVE.

(Application filed Feb. 6, 1897. Renewed July 26, 1898.)

(No Model.)

Fig. 1.

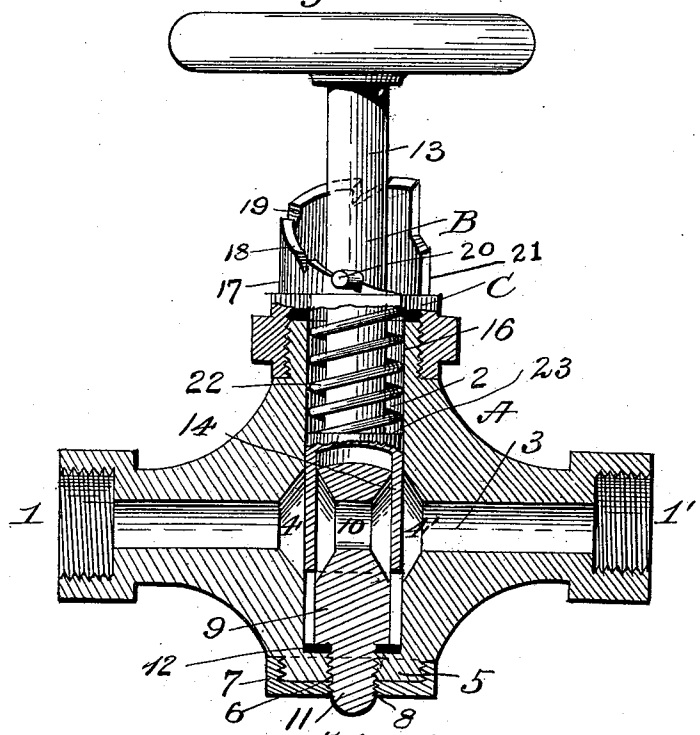
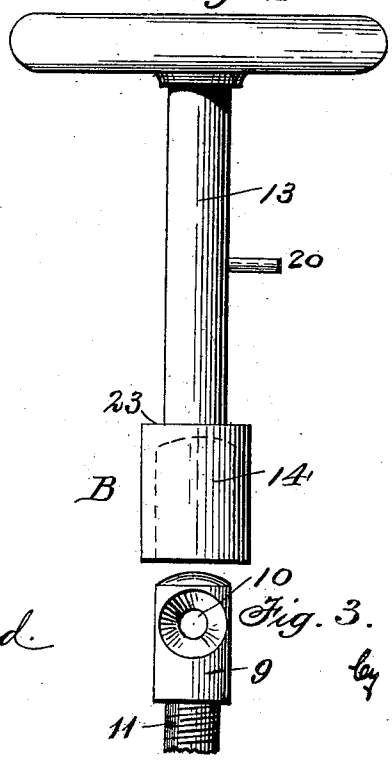


Fig. 2.



Witnesses
Franck L. Ourand.
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Fig. 3.

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THE NORRIS PETERS CO., PHOTO-LITH., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FREDERICK V. WINTERS, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO JOHN A. YORK, OF SAME PLACE.

TURNING PLUG OR VALVE.

SPECIFICATION forming part of Letters Patent No. 618,631, dated January 31, 1899.

Application filed February 6, 1897. Renewed July 26, 1898. Serial No. 686,939. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK V. WINTERS, a citizen of the United States of America, residing at New York city, in the county and State of New York, have invented a new and useful Valve for Regulating the Flow of Gas to a Vessel or other Receptacle, of which the following is a specification.

My invention has relation to improvements in valves; and the object is to provide a device of the kind named and for the purposes intended which will regulate the flow of gas to a receptacle or through the valve, so that the flow may be diminished or increased at the will or desire of the person or to suit the objects for which the gas is to be delivered.

In the drawings, Figure 1 is a view, partly in longitudinal and vertical section, showing the complete device. Fig. 2 is a view in elevation of the valve-stem and valve. Fig. 3 is a detail view of the valve-plug.

A designates the body of the device, made of suitable metal and of such dimensions as to meet the objects of its use and being preferably of double conical shape in lengthwise direction, as shown, and provided at each end with threaded caps, whereby it may be connected to communicating pipes, as at 1 1'. Through the body A in vertical direction is formed a round hole 2, in which the valve-stem and valve are disposed, and longitudinally through the body is formed a gasway 3, intersecting the vertical way or hole 2 and formed at the ends opening into the vertical way flaring or conical, as at 4 4'. On the lower end of the body is formed a threaded extension 5, having a central aperture 6, and over this threaded extension 5 is fitted a threaded cap 7, having a central threaded aperture 8, registering with the aperture 6 in the body of the device. In the vertical valve-stem way 2 at the lower portion is fitted and fixed a plug 9, having a gas way or port transversely through it, as 10, having flaring ends, as shown, which register with the gasway through the body. The plug 9 is formed with a threaded extension 11 at its lower end, which passes through the aperture of the extension on the body and engages with the threaded aperture in the cap 7. By means of the cap the plug is drawn down on its seat in the body and held firmly and securely. A packing 12 is arranged in the body below the base of the plug to make the connection gas-tight.

B designates the valve-stem, consisting of a metal stem 13, of smaller diameter than the hole in which it operates and formed at its lower end with a hollow shell or open end tube 14, constituting the valve, the lower end of which stands normally a short distance above and free from the lower edges of the conical openings in the body and plug, as indicated in the drawings, and the wall of the valve intersecting the gas port or way through the body and plug of the valve to provide for a minimum flow of gas to the burner or heater, and thus maintain a low flame continuously, if desired.

On the upper face of the body is formed an extension 16, having exterior screw-threads, on which a cap C engages and is held. The cap C consists of a hollow cap having interior screw-threads and formed on its top with a vertical circular extension 17, formed with a cam edge 18, provided with a plurality of steps 19 therein, so that a pin 20 projected from the valve-stem will engage and ride on the cam edge and engage and lodge in the notches or steps therein and hold the valve-stem at the desired height, and consequently raise the valve at the lower end of the stem, so as to admit the desired flow of gas. When the stem has been raised to its limit and it is desired to return it to its lowest position, the stem is turned until the pin runs off the cam edge and drops down the step 21 into normal position. To accomplish this, I arrange a spring 22 on the stem between the under face of the cap C and the shoulder 23, formed in the valve-stem.

The operation and use of my regulating-valve are readily perceived from the description of its uses and purposes. The valve is especially intended to be interposed in a gas-pipe or gasolene-pipe for conducting the fluid to a stove-burner or similar outlet used to heat water to produce steam in a vessel or nest of pipes to be conducted to a radiator or boiler. It will be seen that at the lowest position of the valve but a small quantity of gas will be admitted, and that when the valve is raised to a higher position the flow will be

correspondingly increased. It is not intended that the valve shall be used to entirely cut off the flow, but to regulate the quantity, so that the flow being turned on at its source it can be regulated and the burning insured at the burner continuously, whether the quantity emitted be great or small. If it is intended to entirely stop the flow, that is done by shutting it off at the source of entrance to the pipe feeding the valve.

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

The valve herein described, comprising a body having a vertical stemway through it and a longitudinal gas port or way therethrough having flaring ends opening into the vertical way, a plug in the lower part of the vertical way having a gas-port formed with flaring open ends, a valve-stem in the vertical way formed with a tubular lower end fitting over the said plug and closing the port therein, and means to raise and lower the valve-stem, substantially as described.

In witness whereof I have hereto set my hand in the presence of two attesting witnesses.

FREDERICK V. WINTERS.

Attest:
A. G. HEYLMUN,
JNO. A. YORK.