

VALVE.

1,009,962.

Patented Nov. 28, 1911.

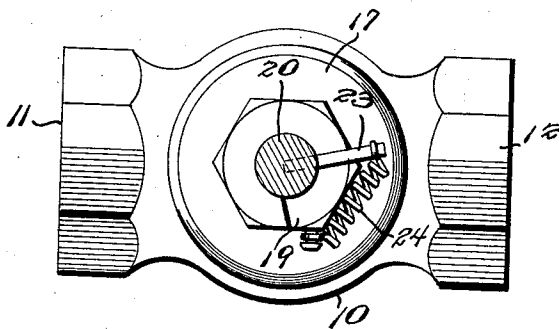
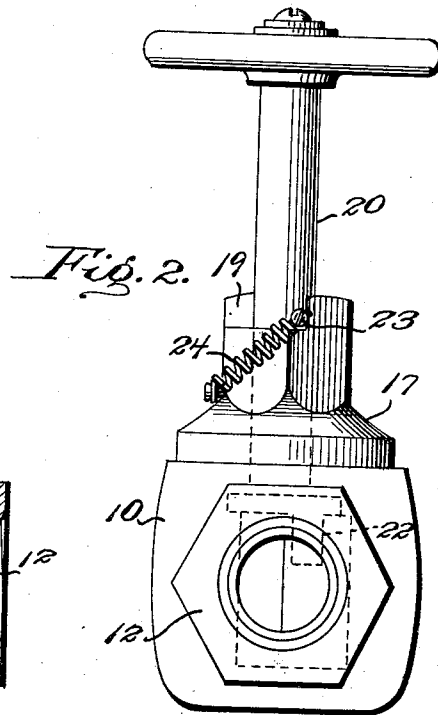
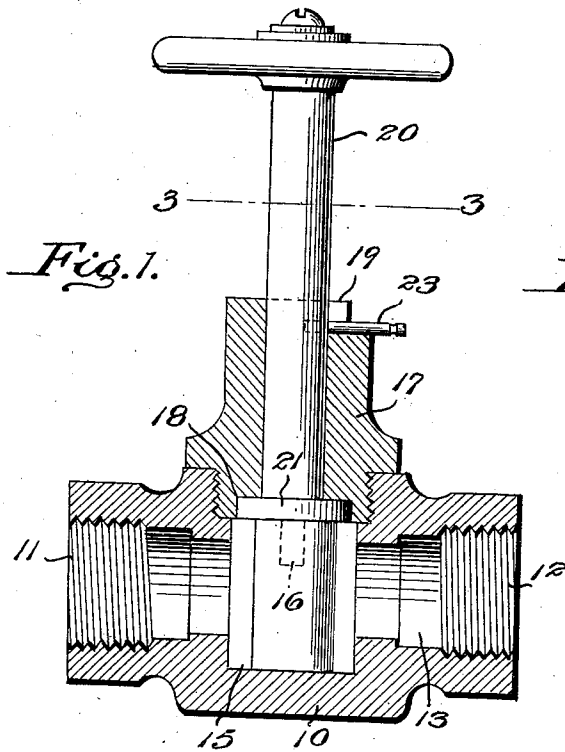


Fig. 3.

Fig. 4.

Witnesses
W. J. Woodson
Cora N. Handy.

Inventor
J. C. Ezze.

By

Whitney, Attorneys

1,009,962. VALVE. JOHN C. EZZELL, Rock Mart, Ga. Filed Apr. 26, 1911. Serial No. 623,504.

To all whom it may concern:

Be it known that I, JOHN C. EZZELL, citizen of the United States, residing at Rock Mart, in the county of Polk and State of Georgia, have invented certain new and useful Improvements in Valves, of which the following is a specification.

This invention relates to improvements in valves and particularly to a class of throttle

valves, and has for one of its objects to provide a simply constructed valve wherein provision is made for automatically opening the valve to allow the drainage of the same when the pressure is removed.

With these and other objects in view the invention consists in certain novel features of construction as hereinafter shown and described, and then specifically pointed out in the claim, and in the drawings illustrative of the preferred embodiment of the invention. Figure 1 is a longitudinal sectional view of the improved valve. Fig. 2 is an end elevation of the same. Fig. 3 is a plan view in section on the line 3--3 of Fig. 1. Fig. 4 is a plan view of the valve, detached.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawing by the same reference characters.

The improved device comprises a body or shell 10 having a threaded inlet 11 at one end and a threaded outlet 12 at the other end and with an internal valve-seat 13 at the inner end of the outlet 12. Bearing against the seat is a valve 15 of the oscillating form and provided with a socket 16 in its upper end. Formed in the upper side of the body 10 is a threaded opening in which a combined cap or sleeve 17 is secured, the cap having a seat 18 in its lower end and a lateral recess 19 in its upper end. The combined sleeve and cap 17 is formed with a central bore to receive a stem 20 having a collar 21 at its lower end to engage in the seat 18 and with a stud 22 to engage in the socket 16. The socket as indicated in Fig. 3 extends to one side of the center of the valve and the pin 22 is likewise at one side of the center of the stem, so that when the stem is oscillated the valve will be oscillated therewith and caused to bear against the seat 13 or to be moved to one side of the same, as will be obvious. Thus when the stem 20 is in one position, the valve will be closed and when the stem is in its other position the valve will be opened. The recess 19 is slightly greater than one-fourth of a circle, and secured in the stem 20 and projecting through the recess is a stop-pin 23, the pin thus being adapted to engage alternately against the end walls of the recess. By this arrangement when the stem is oscillated in one direction the pin bears against one end wall of the recess and against the other end wall of the recess when moved to its other position. Thus

when the pin 23 is at one end of the recess the valve 15 will be open and will be closed when the pin is rotated to the opposite end of the recess. A spring 24 is connected at one end to the combined sleeve and cap 17 and at the other end to the pin 23 and exerts its force to maintain the valve normally open and operates to automatically open the valve when the pressure is removed or when the steam "goes down," and thus provides for the effectual draining of the valve and the pipe leading thereto.

The spring is of sufficient strength to actuate the valve when no pressure bears against it, but will not be strong enough to move the valve when the steam pressure is applied thereto. Thus, so long as the pressure is present in the intake pipe and operating against the valve the spring will be maintained in inoperative condition, and will become operative only when the pressure is removed.

The improved device is simple in construction, can be applied without material increase of expense and effectually prevents the accumulation of water in the valve or the pipes leading thereto when the steam pressure is removed, as for instance at night or at other times when the generator is not employed.

It will be noted that the stem 20 has no threads and that the device requires no "packing," as the stop shoulder or collar 21 coacting with the seat 18 effectually prevents all leakage around the stem.

Having thus described the invention what is claimed as new is:—

A valve body having a chamber and with oppositely directed passages communicating with the chamber, one of said passages having a valve-seat at its junction with the chamber, a valve within said chamber and engaging said seat, a cap engaging said body and having a central bore and with a seat at its lower end and a lateral recess in its upper end, a stem extending through the bore of the cap and provided with a lug engaging in the socket of said valve, a collar carried by the stem and bearing in the seat of said cap, a pin extending laterally from said stem and projecting through the recess of the cap and bearing alternately against the inner walls of the same, and a spring connected to said pin and operating to open the valve when the pressure against the same is removed.

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

JOHN C. EZZELL. [L. S.]

Witnesses:

I. F. MUNDY,
G. W. PEACOCK.