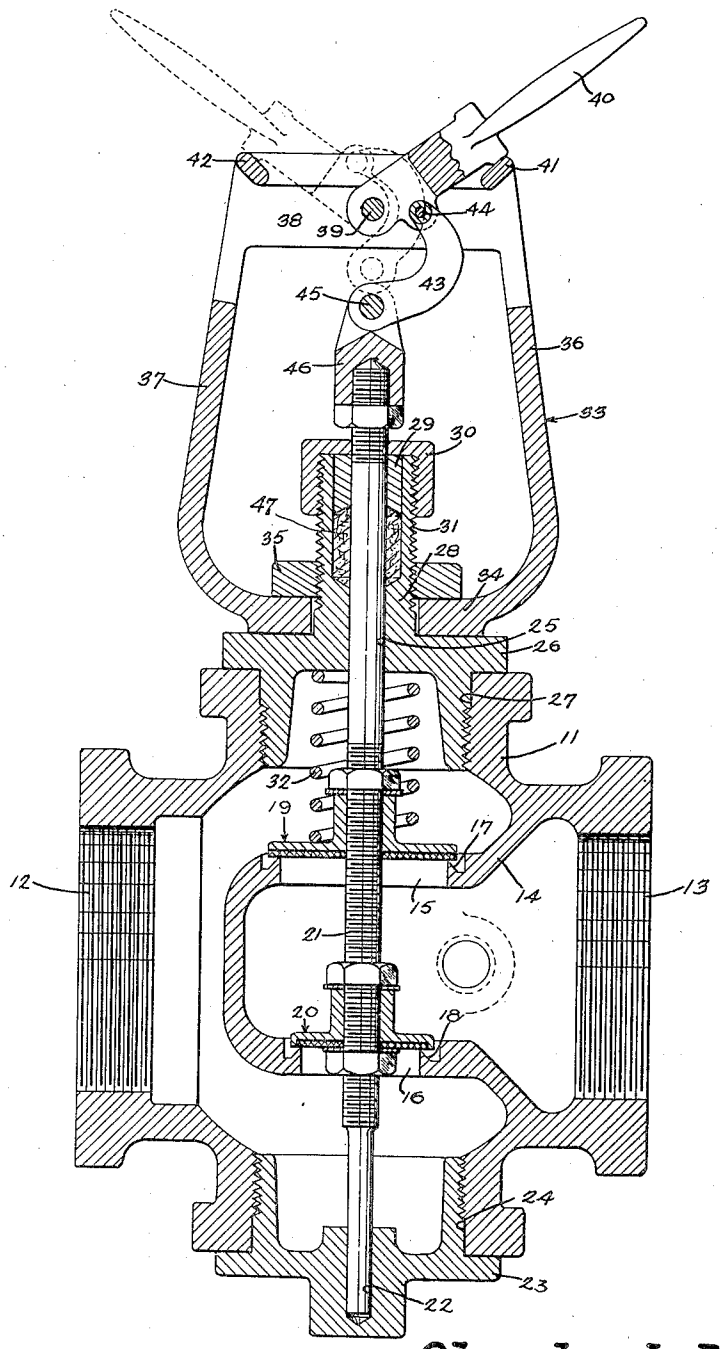
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C. L. BRYANT

VALVE

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Charles L. Bryant
Inventor
by Smith and Freeman
Attorneys

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UNITED STATES PATENT OFFICE.

CHARLES L. BRYANT, OF CLEVELAND, OHIO.

VALVE.

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My invention relates to valves, and particularly to cut-off valves, and the particular object of my invention is to provide a new and improved valve of this type arranged to rest only in fully open or fully closed position. In the drawings accompanying this specification and forming a part of this application I have shown, for purposes of illustration, one form which my invention may assume, and in these drawings the single figure is a central vertical section through this embodiment of my invention.

The valve herein shown comprises a body 11 provided with an inlet 12 and an outlet 13 separated by means of a partition 14 provided with apertures 15 and 16 terminating in valve seats 17 and 18 arranged to be closed by valves 19 and 20 mounted upon a valve stem 21 reciprocably supported in a recess 22 in a plug 23 closing an aperture 24 in the lower side of the valve casing 11 and in an aperture 25 formed in a plug 26 closing a corresponding aperture 27 in the upper side of the casing 11 and provided with a cylindrical projection 28 recessed about the valve stem 21 to receive packing 47 held in position through a gland 29 by means of a cap 30 provided with screw-threads cooperatively engaging the screw-threads 31 on the exterior surface of the projection 28.

Interposed between the lower face of the plug 26 and the upper face of the valve 19 is a compression spring 32 biasing the valves 19 and 20 into closed position, as shown.

Surmounting the casing 11 is a frame 33 provided at its lower end with an annular portion 34 encircling the base of the projection 28 and held firmly in position by means of a nut 35 overlying the annular portion 34 of the frame 33 and engaging the screw-threads 31 of the projection 28.

Extending upwardly from the base portion 34 of the frame 33 are a pair of side members 36 and 37 connected at their upper end by means of a pair of cross members 38 carrying a pivot rod 39 on which is mounted a control lever 40 movable between the "off" position shown in full lines herein wherein it is in engagement with a lug 41 on the side member 36, and the "on" position shown herein in dotted lines wherein it is in engagement with the lug 42 carried by the side member 37, and extending between the control lever 40 and the valve stem 21 is a link 43 pivoted directly to the control lever 40 at 44 and pivoted at 45 to a cap 46 screw-threaded to the upper end of the valve stem 21, the link 43 being curved as shown to permit it to pass about the pivot rod 39 when the parts are in the "on" position, and the lever 40 and link 43 being so proportioned and connected that when the parts are in the "on" position the lever 40 is thrown slightly past center position to retain the parts in this position, with the valves 19 and 20 open, against the closing action of the compression spring 32.

From the above description it will be understood that in this full open position the lever 40 is effective to hold the valves 19 and 20 open against the action of the spring 32, and that in all other positions the lever 40 is ineffective to hold the valves 19 and 20 raised from the valve seats 17 and 18, that the spring 32 is effective to move the valves 19 and 20 to full closed position in all positions of the lever 40 except the position shown in dotted lines herein wherein the control lever 40 is past center position and the valves 19 and 20 are maintained full open against the action of the spring 32, and that the lever 40 cannot be set to hold the valves 19 and 20 in any intermediate position.

It will therefore be understood that the construction herein shown avoids the wear and scoring of the valves 19 and 20, and valve seats 17 and 18, resulting from partial opening or closing of the valve and effective to detract from the efficiency of the valve or even render it entirely worthless.

At the same time it will be obvious to those skilled in the art that the particular embodiment of my invention herein shown and described may be variously changed and modified without departing from the spirit of my invention or sacrificing the advantages thereof and it will therefore be understood that the disclosure herein is illustrative only and that my invention is not limited thereto.

I claim:

1. A cut-off valve unit comprising a valve casing, a valve seat therein, a valve arranged to cooperate with said valve seat, biasing means biasing said valve to closed position, and operating means for said valve comprising a lever pivoted on said casing and a link connecting said valves and said lever, said lever being arranged to throw past center position in valve-open position to hold

said valve open against the action of said biasing means, and being ineffective to so hold said valve open otherwise.

2. A cut-off valve unit comprising a valve casing, a valve seat therein, a reciprocating valve arranged to cooperate with said valve seat, biasing means biasing said valve to closed position, and operating means for said valve comprising a lever pivoted on said casing and a link connecting said valve and said lever, said lever being arranged to throw past center position in valve-open position to hold said valve open against the action of said biasing means, and being ineffective to so hold said valve open otherwise.

In testimony whereof I hereunto affix my signature.

CHARLES L. BRYANT.