

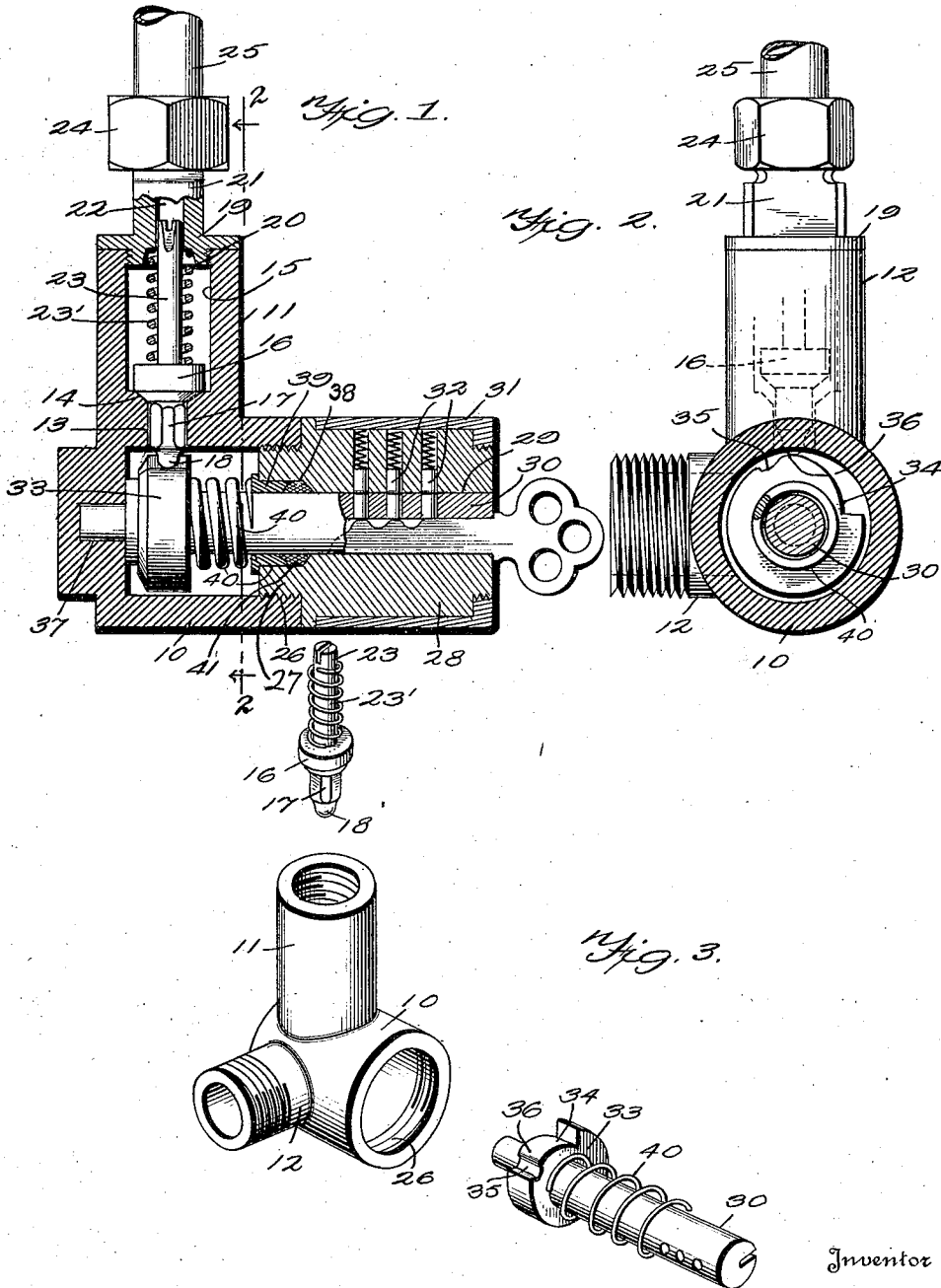
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M. CHRISTMAN

VALVE

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Inventor  
*Matthias Christman,*

By *Ch. Parkin*  
Attorney

## UNITED STATES PATENT OFFICE.

MATTHIAS CHRISTMAN, OF SPRINGFIELD, MISSOURI.

## VALVE.

Application filed February 21, 1920. Serial No. 360,306.

*To all whom it may concern:*

Be it known that I, MATTHIAS CHRISTMAN, a citizen of the United States, residing at Springfield, in the county of Greene and State of Missouri, have invented certain new and useful Improvements in Valves, of which the following is a specification.

This invention relates to improvements in valves, and more particularly to improvements in locking valves.

An important object of the invention is to provide a valve of this type which is positive in action and the parts of which may be readily assembled.

A further object is to provide means whereby the leakage commonly present in any valves of this type is eliminated.

Other objects and advantages will become apparent throughout the course of the following description.

In the accompanying drawings wherein for the purpose of illustration is shown a preferred embodiment of my invention and wherein like numerals designate like parts throughout.

Figure 1 is a section taken through a lock embodying my invention.

Figure 2 is a section taken on the line 2—2 of Figure 1.

Figure 3 is a combined perspective showing the operating parts of the lock detached.

Referring now more particularly to the drawings the numeral 10 indicates a suitable hollow casing provided with an inlet conduit 11 and an outlet conduit 12. These conduits communicate with the interior of the casing 10.

The communication between the inlet conduit 11 and the interior of the casing 10 is a port 13 which is provided upon its outer end with a seat 14 facing the bore 15 of the inlet conduit 11.

Mounted to reciprocate within the bore of the inlet conduit is a valve 16 having a face adapted to coact with the seat 14 and provided upon its inner end with a fluted guide stem 17 projecting into the bore 13. The inner end of the fluted guide stem 17 is provided with a tappet 18 for a purpose presently to appear.

The outer end of the inlet conduit 11 is closed by a head 19 provided with a flange 20, having threaded connection with the interior of the conduit 11. The head 19 is provided with a conduit 21 within the bore 22 of which is slidably mounted the stem 23

of the valve 16, the stem 23 being suitably reduced to allow of the escape of fluid passing the same. A spring 23' extends intermediate the valve 16 and the head 19 and normally holds the valve seated. The outer end of the conduit 21 is provided with a union coupling 24 or other means whereby the feed conduit 25 may be attached thereto.

One end of the casing 10 is open and is interiorly threaded as at 26 for the reception of an exteriorly threaded flange 27 formed on the barrel 28 of the lock. The barrel 28 is provided with a bore 29 in which is rotatably mounted the key operated member 30. A casing 31 is provided which covers the openings through which the tumblers 32 of the lock are inserted and which is secured to the barrel 28 in any desired manner.

The inner end of the rotatable key operated member 30 is provided with a cam 33 embodying a low spot 34 and a notch 35, this notch being a shallow depression formed in the periphery of the cam. From the low spot 34 the metal of the cam extends outwardly slightly beyond the level of the bottom of the notch to form one side 36 of the notch. Against this cam the tappet 18 of the valve 16 bears. When the cam is so turned that the tappet engages the low spot 34 of the cam the valve is seated and when the cam is so turned that the tappet engages in the notch 35 the valve is open and allows of the flow of fluid through the casing 10 and the exhaust conduit 12.

The extreme inner end of the key operated member 30 is seated in a recess 37 formed in the wall of the casing 10. The bore 29 of the barrel 28 is enlarged at its inner end as at 38 and receives a packing gland 39. A spring 40 extends intermediate the cam 33 and the gland 39 and serves the double purpose of holding the cam 33 firmly in position and forcing the gland 39 outwardly to compress the packing 41 about the rotatable member 30.

It will be obvious that there may be no leakage of the fluid passing through the casing 10 around the key operated member 30. While I have shown the valve 16 as being positioned in the inlet conduit it will be readily understood by those familiar with the art that in placing the assembled valve in position in a line where there is little pressure upon the fluid passing

through the valve the conduit 11 might form the exhaust conduit and the conduit 12 the inlet conduit without in any manner affecting the operation of the device.

5 It is to be understood that the form of my invention herein shown and described is to be taken as a preferred example of the same and that various changes in the shape, size and arrangement of parts may be re-  
10 sorted to within departing from the spirit of the invention or the scope of the sub-joined claim.

What I claim is:

15 A valve comprising a casing, inlet and outlet conduits connected with said casing, a valve seat, a valve engaging said seat, a

tappet carried by said valve and extending within the casing, a rotatable cam mounted within the casing and engaging said tappet, said cam being provided with high and low 20 portions whereby said valve is shifted to opened and closed position, the high point of said cam being provided with a notch adapted to receive the end of the tappet  
25 to maintain the valve in opened position.

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

MATTHIAS CHRISTMAN.

Witnesses:

C. S. ROGERS.

RALPH W. LANGSTON.