May 20, 1924. 1,494,808

N. ROUSSEAU

FAUCET

Filed March 19, 1921

Fig. 1.

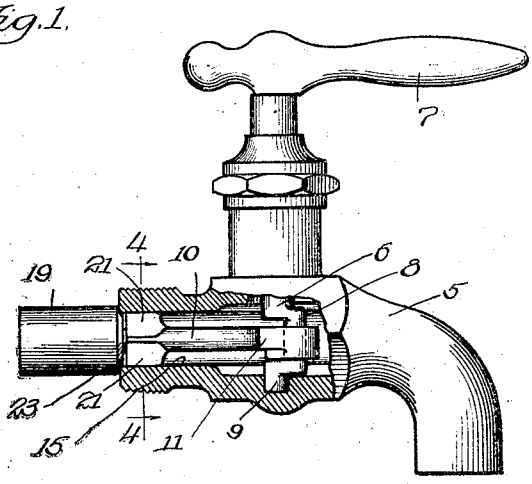


Fig. 2.

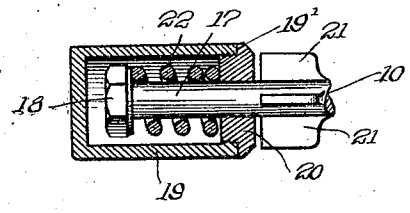


Fig. 3.

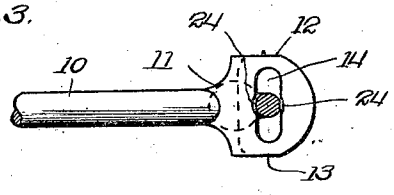
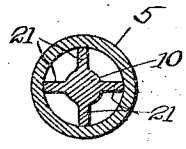


Fig. 4.



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Patented May 20, 1924. 1,494,808

UNITED STATES PATENT OFFICE.

NECTAIRE ROUSSEAU, OF CHICAGO, ILLINOIS.

FAUCET.

Application filed March 19, 1921. Serial No. 453,720.

To all whom it may concern:

Be it known that I, NECTAIRE ROUSSEAU, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Faucets, of which the following is a specification.

The invenion relates to improvements in faucets, bibb cocks and similar valves.

One of the objects of the invention is to provide an improved faucet with a spring pressed valve.

Another object is to provide a faucet of the bibb type, having a metallic spring pressed valve in which the valve is moved always and only in a path parallel with the opening thru the rear end of the faucet.

Another object is to provide a spring pressed valve faucet of the bibb type, adapted for use in kerosene and other barrels in which the valve is ground to its seat and in which the valve is never permitted to move out of axial alignment with the axis of the seat.

Other, further and more particular objects of the invention will become readily apparent, to persons skilled in the art from a consideration of the following description when taken in conjunction with the accompanying drawing forming a part hereof, wherein:—

Fig. 1 is a side elevation of the faucet showing parts in section.

Fig. 2 is an enlarged sectional view of the valve and valve stem.

Fig. 3 is an enlarged plan view of the front end of the valve stem.

Fig. 4 is a transverse section taken on line 4—4 of Fig. 1.

In all the views the same reference characters are employed to indicate similar parts.

An ordinary bibb cock having a yielding rubber ball valve will not under any circumstances answer for a bibb or faucet for controlling liquids, such as kerosene, gasoline, crude petroleum and other similar liquids destructive to rubber.

The mechanism, operable by a handle for controlling the valve in an ordinary bibb cock is well adapted for the purpose, but in valves in which the compressibde rubber ball is used, the ball is permitted to drop down out of alignment with the axis of its port when the valve is open.

The non-alignment of a yielding compressible ball is not a matter of material importance, but where the valve is ground to its seat it must be moved at all times in straight lines.

In the embodiment of the invention the valve and stem are moved in a similar manner as in bibb cocks, only that in the new structure the stem is guided so that it can be moved only in straight axial lines so that the valve will invariably be brought back true to its seat.

In the drawings 5 is the body part of the faucet having a rotatable shaft 6 turned by a handle 7. The shaft has a crank 8 for moving the valve and its stem and has a step bearing 9 in the body 5. Both ends of the shaft 6 having aligning bearings, less stress is imposed on the shaft to throw it out of true vertical alignment.

The valve stem 10 has a flat front end 11 with rounded side edges 12 and 13. It also has a transversely extending slot 14 to contain the crank 8. The round edges 12 and 13, of the horizontal flat part 11, fit in the bore which is a continuation of the bore 15, the opening on each side of the bore being larger than the bore. The rear end 17 of the stem 10 is round and threaded for the nut 18. A valve disk 20 centrally perforated is slidable over the end 17 of the valve stem 10 and is spring pressed into normal contact with the four radially extending wings 21 by the spring 22, adjustably held in place by the nut 18. The cap 19 is threaded to the disk 20, as at 19′.

The wings 21 and the flat part 11 serve as guides so that the crank 8 can move the valve stem 10 only in a straight line in axial direction. The sides of the slot 14 has small notches 24 into which the crank 8 enters when the valve is open or is closed, the notches serving as checks to resist movement of the valve handle, especially when in its closed position.

When the handle 7 is moved to close the valve 20, the spring 22 is slightly compressed by the valve stem and the valve finds its seat before the handle has been moved one-half revolution. Thus the spring holds the valve on its seat and the handle of the valve may be moved to a greater or less extent after the valve has been seated, which compensates for variations and inaccuracies in manufacture.

A cap 19 encloses the spring and nut and protects the interior mechanism of the cup.

I am aware that spring pressed valves have heretofore been moved by cranks, but in such structures the valves were not moved in straight axial lines. The valves being yieldable the necessity for such refinement was not present. In such structures the front end of the valve stem was movable laterally by and with the crank. Therefore the valve was not brought into alignment with its seat. A ground valve must be located in true alignment with its seat or otherwise it will permit leak of liquid thru the port which it is supposed to control.

While I have herein shown a single embodiment of my invention for the purpose of clear disclosure, it will be manifest to persons skilled in the art, that many changes may be made in the configuration and disposition of the parts, within the scope of the appended claims.

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

1. A valve body having an axial bore, a bisecting, transversely disposed opening and a step bearing for a crank shaft in alignment with said opening; a valve stem movable only in axial directions in said bore and having a transversely extending slot to receive a crank and having a slight enlargement of the slot to receive the crank when the valve is closed and a valve axially movable on the stem; a spring bearing at one end on the stem and adapted to hold the valve on its seat and to hold the crank when the stem is moved into valve closing position in the enlarged part of the slot to resist rotation of the crank.

2. In combination with a valve body having a port to be closed by a valve, of an axially movable valve stem; a disk valve slidable on the stem; a spring on the stem to yieldingly hold the disk valve on the seat provided about the port; a nut on the stem to adjust the tension of the spring and a cup enclosing the spring and nut, threaded to said disk valve.

In testimony whereof I hereunto subscribed my name.

NECTAIRE ROUSSEAU.