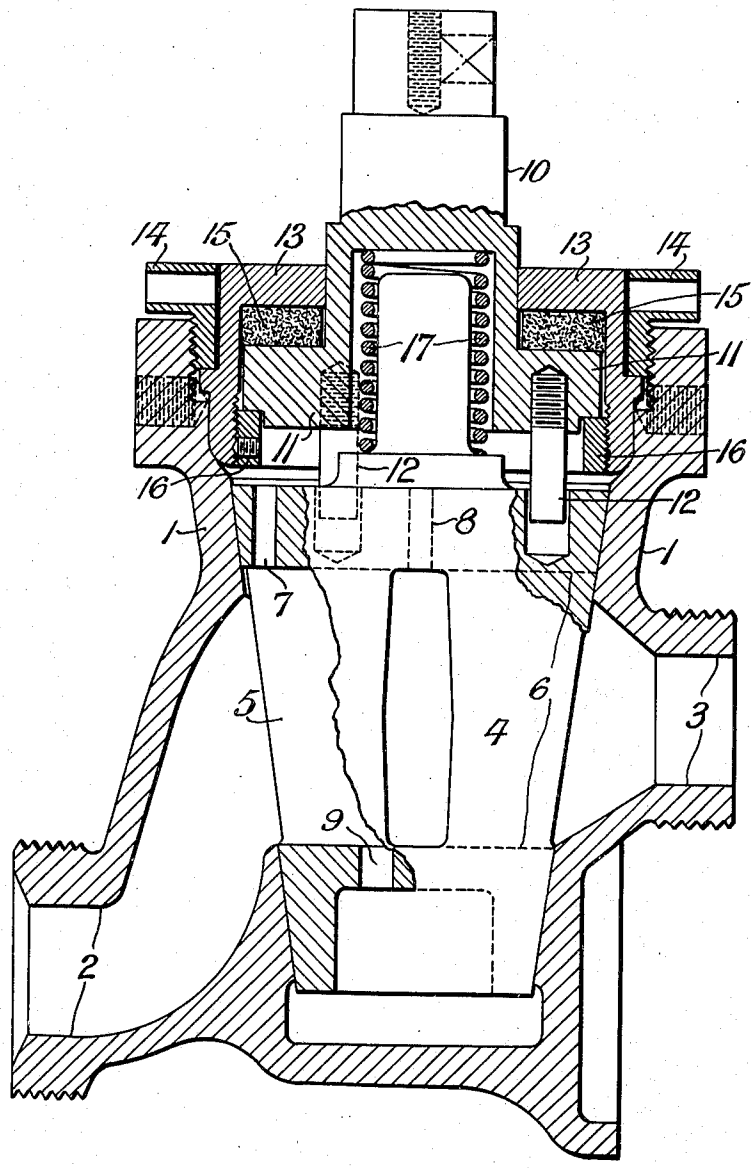
Nov. 24, 1925. 1,563,093

J. LAWSON

SPIGOT COCK

Filed June 29, 1925 2 Sheets-Sheet 1

Fig. 1.



INVENTOR
JOSEPH LAWSON
By his Attorneys,
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Nov. 24, 1925. 1,563,093

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SPIGOT COCK

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Fig. 2.

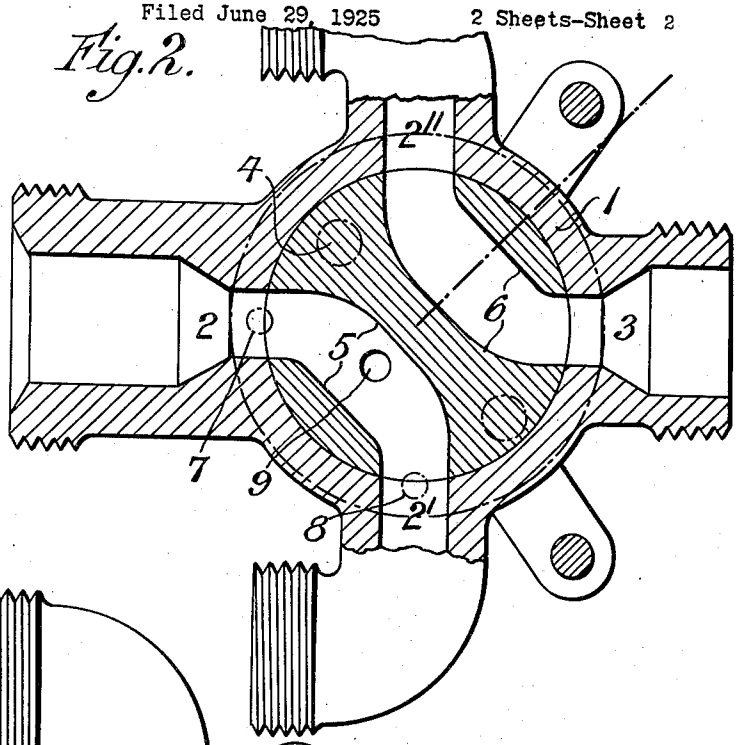


Fig. 3.

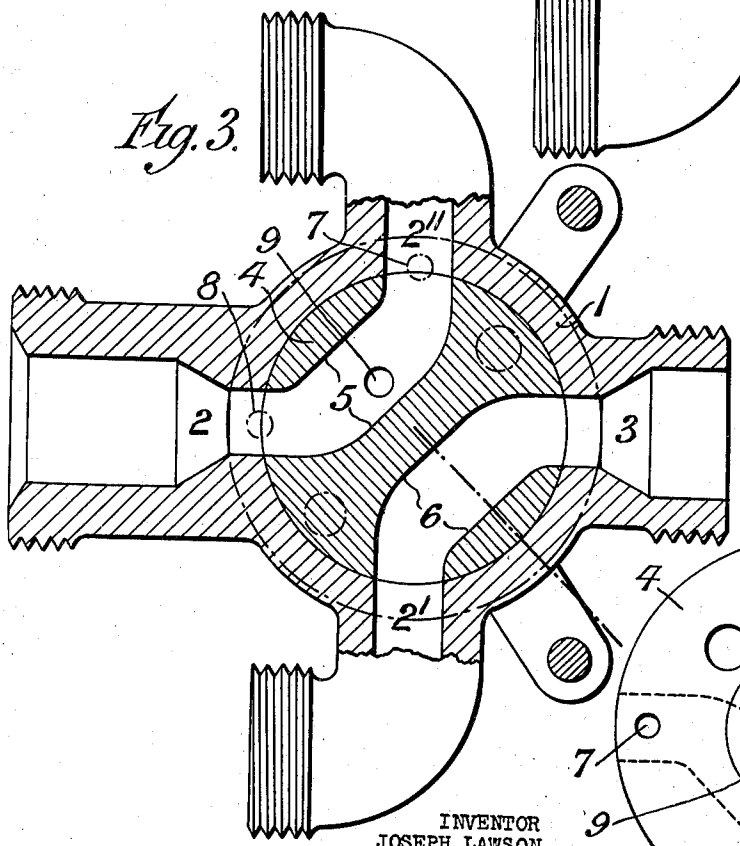
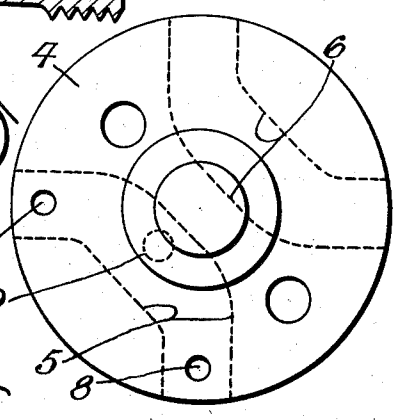


Fig. 4.



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By his Attorneys
Wheeler Wright

Patented Nov. 24, 1925. 1,563,093

UNITED STATES PATENT OFFICE.

JOSEPH LAWSON, OF GREAT ST. HELENS, LONDON, ENGLAND, ASSIGNOR TO THE ASIATIC PETROLEUM COMPANY, LIMITED, OF GREAT ST. HELENS, LONDON, ENGLAND.

SPIGOT COCK.

Application filed June 29, 1925. Serial No. 40,336.

To all whom it may concern:

Be it known that I, JOSEPH LAWSON, a subject of the King of Great Britain, residing at St. Helens Court, Great St. Helens, London, England, have invented new and useful Improvements in Spigot Cocks, of which the following is a specification.

The main object of the present invention is to provide a cock suitable for controlling a liquid, such as petrol.

Considerable difficulty has been experienced in designing such a cock. I have found that if, when employing a spigot cock of ordinary construction, a light spring be employed, the cock is apt to leak, while, if a strong spring be relied upon to keep the plug on its seating, there is risk of the plug seizing.

According to one feature of the present invention, I provide a cock in which the plug tends to be held on to its seating by the pressure of the liquid acting on the wide end of the plug or acting differentially on each end of the plug, with a light spring just sufficiently strong to keep the plug on to its seating when the plug is not subjected to the pressure of the liquid.

Preferably the spring is also employed to act upon and position packing adapted to prevent leakage of liquid past the plug actuating spindle.

According to another feature of the invention, the actuating spindle itself is provided with a flange between which and the cock casing, packing is interposed.

In the preferred form of construction, the arrangement is such that after the spindle and packing have been assembled, they are retained in relative position by a locking ring by means of which a certain degree of pressure is imparted to the packing.

The accompanying drawings show one form of spigot cock constructed according to my invention, the said cock being adapted to fill two containers alternately with liquid and discharge it therefrom.

In these drawings, Figure 1 is a longitudinal section, Figures 2 and 3 are horizontal sections showing the plug in its two positions, and Figure 4 is a plan of the plug.

1 is a casing having an inlet port 2 which may conveniently be connected to a pump or other convenient source of supply (not shown), an outlet or delivery port 3, and ports 2′ and 2″ connected to a pair of measuring vessels or containers (not shown). 4 is a plug having supply and delivery passages 5, 6 respectively.

The upper or wide end of the plug 4 is provided with passages 7 and 8 which communicate with the passage 5, and the lower end of the plug is provided with a passage 9 which also communicates with the passage 5.

10 is an actuating spindle having at its lower end a flange 11 provided with studs 12 which loosely engage corresponding recesses in the plug 4. 13 is a gland which is held in position by a retaining ring 14. Interposed between the gland 13 and the flange 11 is a packing ring 15 which can be put under pressure by a ring 16 screwing into the gland 13. 17 is a light spring located in a recess in the spindle 10 and serving to keep the plug 4 on to its seating when the cock is not in use.

The area of the top of the plug 4, which is subjected to the pressure of the liquid through the passages 7 and 8 when the cock is in use, is greater than the area of the bottom of the plug 4 which is subjected to the pressure of the liquid through the passage 9.

What I claim is:—

1. In a spigot cock for controlling the flow of a fluid, the combination of a casing, an inlet to the casing and an outlet therefrom, a taper plug rotatably mounted therein, a spindle for actuating said plug, said spindle being separate from said plug, means for allowing slight relative movement between said plug and actuating spindle, a cap for retaining the actuating spindle in position, means for securing the cap to the casing, means for admitting the fluid to the wide end of the plug, a flange on said actuating spindle, a packing interposed between said flange and said cap and adapted to prevent leakage of the fluid past the actuating spindle, an adjustable ring on said cap adapted to move the flange on the actuating spindle towards said cap, whereby a certain degree of pressure is imparted to the packing, means for admitting the fluid to said flange whereby the packing is compressed between said flange and cap, and a spring which holds the plug on to its seating, said spring being light but sufficiently strong to prevent the plug from leaving its seating.

2. In a spigot cock for controlling the

flow of a fluid, the combination of a casing, an inlet to the casing and an outlet therefrom, a taper plug rotatably mounted therein, a spindle for actuating said plug, said spindle being separate from said plug, means for allowing slight relative movement between said plug and actuating spindle, a cap for retaining the actuating spindle in position, means for securing the cap to the casing, means for admitting the fluid to the wide end of the plug, a flange on said actuating spindle, a packing interposed between said flange and said cap and adapted to prevent leakage of the fluid past the actuating spindle, an adjustable ring on said cap adapted to move the flange on the actuating spindle towards said cap whereby a certain degree of pressure is imparted to the packing, means for admitting the fluid to said flange whereby the packing is compressed between said flange and cap, and a spring which presses the flange on the actuating spindle towards the cap on the casing so that the packing is compressed and which holds the plug on to its seating, said spring being light but sufficiently strong to prevent the plug from leaving its seating.

3. In a spigot cock for controlling the flow of a fluid, the combination of a casing, an inlet to the casing and an outlet therefrom, a taper plug rotatably mounted therein, a spindle for actuating said plug, said spindle being separate from said plug, means for allowing slight relative movement between said plug and actuating spindle, a cap for retaining the actuating spindle in position, means for securing the cap to the casing, means for admitting the fluid to the wide end of the plug and to the narrow end of the plug, a flange on said actuating spindle, a packing interposed between said flange and said cap and adapted to prevent leakage of the fluid past the actuating spindle, an adjustable ring on said cap adapted to move the flange on the actuating spindle towards said cap, whereby a certain degree of pressure is imparted to the packing, means for admitting the fluid to said flange whereby the packing is compressed between said flange and cap, and a spring which holds the plug on to its seating, said spring being light but sufficiently strong to prevent the plug from leaving its seating.

4. In a spigot cock for controlling the flow of a fluid, the combination of a casing, an inlet to the casing and an outlet therefrom, a taper plug rotatably mounted therein, a spindle for actuating said plug, said spindle being separate from said plug, means for allowing slight relative movement between said plug and actuating spindle, a cap for retaining the actuating spindle in position, means for securing the cap to the casing, means for admitting the fluid to the wide end of the plug and to the narrow end of the plug, a flange on said actuating spindle, a packing interposed between said flange and said cap and adapted to prevent leakage of the fluid past the actuating spindle, an adjustable ring on said cap adapted to move the flange on the actuating spindle towards said cap whereby a certain degree of pressure is imparted to the packing, means for admitting the fluid to said flange whereby the packing is compressed between said flange and cap, and a spring which presses the flange on the actuating spindle towards the cap on the casing so that the packing is compressed and which holds the plug on to its seating, said spring being light but sufficiently strong to prevent the plug from leaving its seating.

5. In a spigot cock for controlling the flow of a fluid, the combination of a casing, an inlet to the casing and an outlet therefrom, a taper plug rotatably mounted therein, a pair of additional ports in the casing, a pair of passages in the plug each of said additional ports being placed in one extreme position of the plug in communication by one of said passages, either with the inlet to or with the outlet from the casing, a spindle for actuating said plug, said spindle being separate from said plug, means for allowing slight relative movement between said plug and actuating spindle, a cap for retaining the actuating spindle in position, means for securing the cap to the casing, means for admitting the fluid to the wide end of the plug and to the narrow end of the plug, a flange on said actuating spindle, a packing interposed between said flange and said cap and adapted to prevent leakage of the fluid past the actuating spindle, an adjustable ring on said cap adapted to move the flange on the actuating spindle towards said cap whereby a certain degree of pressure is imparted to the packing, means for admitting the fluid to said flange whereby the packing is compressed between said flange and cap, and a spring which presses the flange on the actuating spindle towards the cap on the casing so that the packing is compressed and holds the plug on to its seating, said spring being light but sufficiently strong to prevent the plug from leaving its seating.

In testimony that I claim the foregoing as my invention, I have signed my name this 12th day of June 1925.

JOSEPH LAWSON.