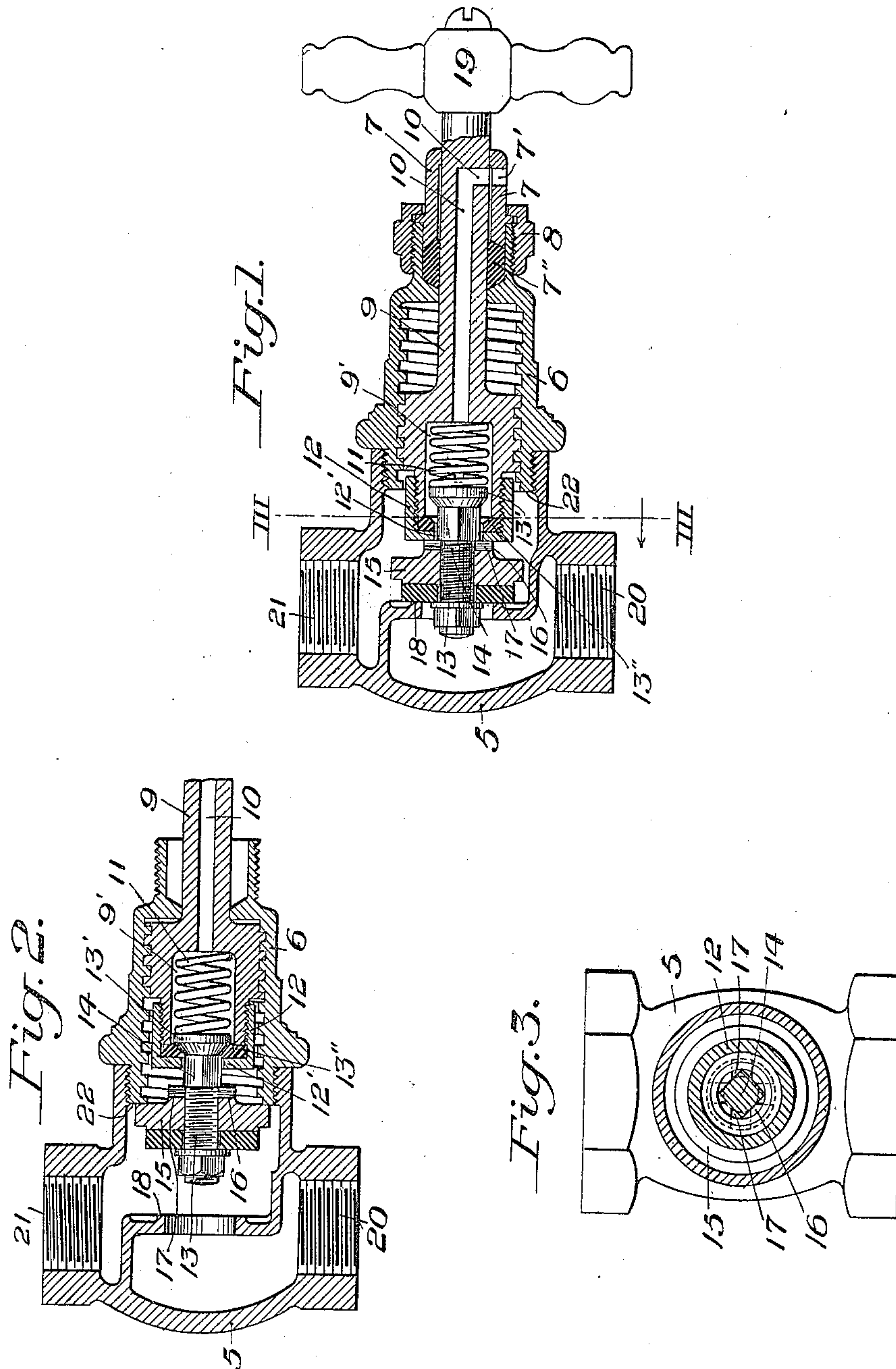


J. M. BEGGS.  
STOP AND WASTE COCK.  
APPLICATION FILED FEB. 18, 1910.

994,110.

Patented June 6, 1911.



WITNESSES  
*T. Bertram Humphreys.*  
*A. D. P. Miller.*

INVENTOR  
*John M. Beggs.*  
*By John F. Power*  
*Attorney*



# UNITED STATES PATENT OFFICE.

JOHN M. BEGGS, OF CRAFTON, PENNSYLVANIA.

## STOP AND WASTE COCK.

994,110.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed February 18, 1910. Serial No. 544,578.

*To all whom it may concern:*

Be it known that I, JOHN M. BEGGS, a citizen of the United States, resident of Crafton, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Stop and Waste Cocks; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a novel and useful improvement in stop and waste cocks.

The object of my invention is to construct a stop and waste cock wherein each of the functions may be effected independently of the other, so that the stop may be completely closed before any waste is possible and thereby intercept the water in the supply pipe from communication with the waste outlet during the operation of the same.

And a further object of my invention is to construct a stop and waste cock wherein the stop may be operated, if desired, without involving the opening of the waste outlet.

In the accompanying drawings, Figure 1 is a view, in sectional elevation, showing the valve closed and the waste open. Fig. 2 is a similar view of a portion of the valve showing same in open position. Fig. 3 is a sectional view on line III—III of Fig. 1, looking in direction of arrow.

The reference numerals in the following specification refer to like parts in the drawings, in which the valve casing comprises a body 5 having a bonnet 6 threadedly secured thereon, to the upper end of which is similarly secured a cap 7 having a waste outlet 7' therein and inclosing a packing ring in the countersink 7'' in the top of said bonnet to which said cap is suitably secured by the nut 8. Threadedly carried within the bonnet is a valve stem 9 having an opening 9' communicating with a passage 10 the upper end of which terminates laterally in communication with the circular space 10'. A spring 11 is provided within the opening 9' surrounding which on the outside of the valve stem is threadedly secured a cup 12 having a suitable circular opening 12' from which is freely suspended the small stem 13 by the head 13' thereof engaging the circumference of said opening which is suitably provided with packing 13'' for engagement by the head 13'. Immediately below the head 13' the stem 13 is squared as at 14 (Figs. 1 and 3) to fit within the circular opening 12' so as to leave some clearance be-

tween the squared sides of the small stem 13 and the circumference of the circular opening (Fig. 3). To the lower end of the small stem 13 is threadedly secured the valve head 15, the upper side of which has a small hub 16 around its center and in said hub are grooves 17 cut transversely therein to the direction of the stem 13, the lower end of the valve head being suitably provided with packing for effecting a closure upon the seat 18 in the valve casing 5 by operation of the stem 9 which is provided with the cross-bar 19.

With the parts of my invention constructed and arranged as shown and described, the operation is as follows: The stem 9 is operated in the usual way, the downward movement thereof carrying the valve head 15 down upon the seat 18 thereby closing the valve to a water supply from a connection at 20, the normal tension of the spring 11 holding the head 13' in position against the packing 13'' in the cup 12 sufficiently to resist the compression incidental to the seating of the valve head thereon. If it is desired to drain the water from a connection at 21, then the stem 9 must be operated further and against the spring 11 whereby the cup 12 is forced down to bear against the hub 16 and compress the valve head 15 on the seat against the pressure of the supply independently of the spring 11, and the cup and packing 13'' is carried from the head 13' thus allowing the water to drain back from a connection at 21 between the valve head and the cup and through the grooves 17 which communicate with the spaces between the squared sides 14 of the stem 13 and the circular opening 13'', into the opening 9 and through the passage 10 to the space 10', with which the passage is always in communication, to waste from the outlet 7'. The reverse movement of the stem will draw the cup back to register against the head 13' and close the drain passages, and a further upward movement of the stem 8 will raise the valve head 15 against the lower end 22 of the bonnet 6 and thereby draw the head tightly upon the packing 13'' to sustain the pressure from the supply, independently of the spring (Fig. 2) during the free passage of the water through the valve.

It will be apparent that the drain may be effected directly from the valve stem, if desired, by extending the passage therein and that various changes and modifications may



be made in the construction and operation of the invention herein shown and described without departing from the spirit of the invention.

5 What I claim as my invention and desire to secure by Letters Patent, is:

1. In a stop and waste cock, a casing having inlet and outlet circulation passages and a waste outlet therein, a valve seat, a valve-  
10 stem having a passage therein for communicating with said outlet opening, a dependent member carried by the valve stem and movable relatively thereto and having oppositely disposed parts for operating upon  
15 the valve seat and upon the valve stem respectively to close the valve and the passage in the valve stem by the operation of the valve stem.

2. In a stop and waste cock, a casing having inlet and outlet circulation passages and a waste outlet therein, a valve seat, a valve  
20 stem having a passage therein for communicating with said outlet opening, a dependent member carried by the valve stem and movable relatively thereto and having oppositely disposed parts, a spring arranged to  
25 compress said dependent member so as to cause its oppositely disposed parts to close the valve and the passage in the valve stem respectively, by the operation of said stem.

3. In a stop and waste cock, a valve casing, a waste outlet in said casing, a valve seat within the casing, a valve stem, a passage in the valve stem communicating with  
35 said outlet in the casing, a valve head carried on the valve stem and having its upper portion operatively disposed to open and close communication between the passage in the valve stem and the valve casing, said  
40 valve stem operating to seat the valve head on the valve seat, and to effect communication of the passage in the valve stem with the valve casing and with the waste outlet, by a subsequent movement of the stem after  
45 the seating of the valve head.

4. In a stop and waste cock, a valve casing, a waste outlet in the casing, a valve seat within the casing, a valve stem, a passage in the valve stem, a dependent member carried by the valve stem for closing the pas- 50  
sage in said valve stem from communication with the casing, a valve head carried on the dependent member, said valve stem operating to seat the valve head on the valve seat, and to move from its position relative to the 55  
dependent member so as to effect communication of the passage in the stem with the valve casing and the waste outlet, by the subsequent operation of the valve stem, after seating the valve head on the valve seat. 60

5. In a stop and waste cock, a valve casing having a waste outlet, a valve seat within the casing, a valve stem, a passage in the valve stem communicating with said outlet in the valve casing, a movable dependent 65  
member, means for depressing the dependent member to close the passage in the valve stem from communication with the valve casing, a valve head carried by the dependent member, said valve stem operating to 70  
seat the valve head on the valve seat, and to effect communication of said passage with the valve casing, by the subsequent operation of the valve stem after the seating of the valve head on the valve seat. 75

6. In a stop and waste cock, a valve casing, a valve stem, a passage in the valve stem, a movable dependent member, a valve head carried on the lower end of the dependent member, and means within the casing to 80  
engage the dependent member and force it tightly on the valve stem to close the passage in the stem from communication with the valve casing when the valve is open.

In testimony whereof I, the said JOHN M. BEGGS, have hereunto set my hand. 85

JOHN M. BEGGS.

Witnesses:

J. L. TREFALLER, Jr.,

A. D. P. MILLER.