

E. E. MURPHY.
DISPENSING FAUCET.
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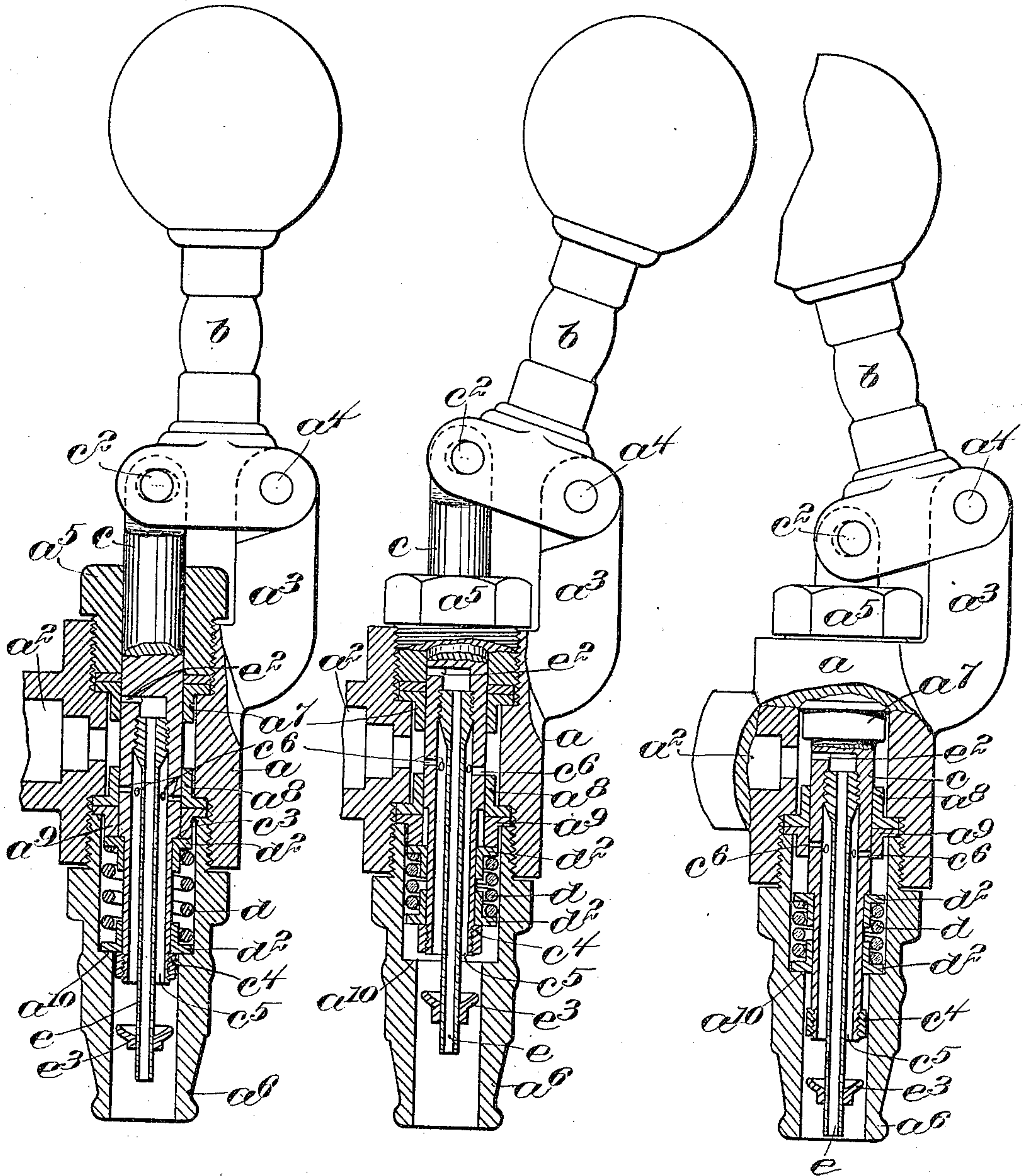
960,675.

Patented June 7, 1910.

Fig. 1.

Fig. 2.

Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDWARD E. MURPHY, OF WINCHESTER, MASSACHUSETTS, ASSIGNOR TO PUFFER MANUFACTURING COMPANY, A CORPORATION OF MAINE.

DISPENSING-FAUCET.

960,675.

Specification of Letters Patent.

Patented June 7, 1910.

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To all whom it may concern:

Be it known that I, EDWARD E. MURPHY, a citizen of the United States, residing in Winchester, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Dispensing-Faucets, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The present invention relates to a dispensing faucet of the kind commonly used for dispensing carbonated water and the like, in which it is desirable at times to have a comparatively free flow of the water, and at other times to have a restricted flow, so that a fine stream will issue with considerable force.

The invention is embodied in a construction in which a single movable valve member is employed having an actuating device, the arrangement being such that the large orifice or the small orifice may be opened by moving the actuating device to two different positions.

In accordance with the invention, the faucet is provided with a main nozzle having a large orifice, this nozzle being at the end of a valve chamber provided with an inlet for the liquid. Within the nozzle and movable in the valve chamber is a tubular valve member suitably packed at the ends and provided with differently located lateral inlets, so that the longitudinal movement of the said valve member will open or close the said inlets selectively. The valve member is also provided with a small nozzle which communicates with one inlet or set of inlets when the others are closed, so that when the valve is in this position the liquid will be dispensed in a fine stream. The faucet is so arranged that when the actuating member is in an intermediate position the faucet will be closed, and the fine stream or the copious stream may be obtained by moving the actuating member in opposite directions from the closed position.

Figure 1 is a vertical section of a dispensing faucet embodying the invention, the actuating member being shown in elevation and in its normal or closed position; Fig. 2 is a similar view showing the valve moved to the position in which the copious stream may be supplied; Fig. 3 is a similar view

showing the valve moved to the opposite position to dispense the fine stream.

In the construction shown, the valve casing a is cylindrical in form, and provided with a lateral inlet a^2 , and an arm or supporting member a^3 projecting upward to receive and support an actuating handle or lever b which is pivoted to the support a^3 at a^4 . The valve chamber a is closed at the top by means of a packing gland a^5 through which extends the valve member c , the lower end of the valve chamber being provided with a nozzle a^6 , which is of sufficient size to discharge the copious stream. The valve member c is shown as a longitudinally movable cylindrical member pivotally connected at c^2 with the handle b , so that a rocking movement of said handle upon its pivotal support a^4 will produce a longitudinal movement of the valve member c in one direction or the other. Within the valve chamber a the valve member c is provided with cup leather packings a^7 and a^8 above and below, the upper cup leather being held in position by the gland a^5 , and the lower one by the nozzle a^6 .

The valve member c is normally held in the closed position, that is to say, the position shown in Fig. 1, by means of a spiral spring d which seats at opposite ends upon flanged collars d^2 surrounding the lower portion of the valve member c , and being located between fixed shoulders c^3 and c^4 upon said valve member. The upper of said flanged collars d^2 also bears against a retaining collar a^9 which holds the lower cup leather a^8 in position, while the lower flanged collar d^2 bears against an annular shoulder a^{10} formed in the nozzle member a^6 . The spring d , therefore, tends to spread the collars d^2 and to hold them in the position shown in Fig. 1, in which they are separated by a distance substantially equal to the distance between the shoulders c^3 and c^4 of the valve member c . By this construction, as will be seen from Figs. 2 and 3, a movement of the handle b in either direction to move the valve member c up or down will compress the spring d , the tendency of which in either case, when released, will be to restore the valve member to the closed position shown in Fig. 1. The inlet a^2 to the valve casing a allows the liquid to fill the space around the valve member c be-

tween the cup leather packings a^7 and a^8 , and the outlet from the valve casing is through the valve member c which is bored to form a main longitudinal passage c^5 with
 5 which communication is made from the valve chamber through a series of lateral inlets c^6 formed in the wall of the valve member c .

The restricted outlet nozzle e consists of
 10 a tube connected with the valve member c , being herein shown as threaded in the upper portion of the bore in said valve member, so as to close the space therein above the ports c^6 .

15 Communication is opened with the nozzle e through a lateral inlet port e^2 shown as a small opening made in the wall of the valve member c above the nozzle e . The lateral ports above described, when the valve is in
 20 its normal closed position, are all closed by the cup leather packings, a longitudinal movement of the valve member, however, in one direction or the other bringing one port or the other past the cup leather packing
 25 and into communication with the valve chamber. By moving the valve handle b to the right, as shown in Fig. 2, the valve member c is lifted, so that the ports c^6 are brought above the lower cup leather a^8 , thus allowing
 30 the liquid to flow from the valve casing into the main orifice c^5 through the valve member c , and thence out through the large nozzle a^6 . The liquid passes down through the valve member, around the small nozzle
 35 member e , and in order to break up the stream, the said nozzle member e is shown provided with a cup e^3 which extends toward the walls of the nozzle member a^6 , so that the liquid falls in said cup and over-
 40 flows around the side thereof, thus producing a stream of considerable size, but with comparatively small velocity of flow.

The movement of the handle b to the left, as shown in Fig. 3, produces a downward
 45 movement of the valve member c , carrying the port e^2 below the upper cup leather a^7 , so that the said port is in communication with the valve casing admitting the liquid to the outlet nozzle e .

50 In the construction shown, only a single port e^2 is employed, and that of comparatively small capacity, so that the flow of liquid is largely throttled, causing a fine stream to pass through the nozzle e with consider-
 55 able velocity.

As previously stated, the movement of the handle b in either direction compresses the spring d , so that when the handle is released the faucet will return to its normal
 60 closed position, shown in Fig. 1.

Claims.

1. In a dispensing faucet, a valve casing provided with a main outlet nozzle; a tubular valve member longitudinally movable in

said casing and packed above and below the 65 lateral inlet to said casing and constituting a nozzle; a supplemental nozzle located within said valve member, said valve member being provided with separate ports lead-
 ing respectively to said supplemental nozzle 70 member and to the space around the same; and means for producing a longitudinal movement of said member to uncover either of said ports.

2. The combination with a valve casing 75 provided with a lateral inlet and cup leather packings above and below said inlet; of a tubular valve member passing through said casing and through said cup leather pack-
 ings, said valve member constituting a noz- 80 zle, and being provided with lateral inlet ports, said ports normally being closed by contact with the cup leather packings; a supplemental nozzle within and concentric
 with said valve member, one of the inlet 85 ports of the valve member communicating with the supplemental nozzle; and means for producing a longitudinal movement of said valve member to uncover either of said
 ports, as desired. 90

3. The combination with a valve casing provided with an inlet; of a longitudinally movable tubular valve member extending
 through said casing, and provided with two 95 sets of ports leading through the wall of said member, said ports being normally closed by packing within the casing; separate nozzles supplied respectively by said
 ports; means for moving said valve member 100 in either direction to uncover either of said ports to the exclusion of the other; and a spring adapted to be compressed by a movement of said valve member in either direc-
 tion.

4. The combination with a valve casing 105 provided with a lateral inlet; of a tubular valve extending through said casing and provided with lateral inlets in different vertical planes; cup leather packings at oppo-
 site ends of said casing normally covering 110 said inlets respectively; a supplemental restricted nozzle member consisting of a tube contained in said tubular valve, the upper
 end of said member separating said inlets, 115 and the member itself being supplied through the upper inlet; and means for producing a longitudinal movement of said tubular valve member to uncover one of said
 ports or the other according to the direction 120 of movement.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD E. MURPHY.

Witnesses:

JAS. J. MALONEY,
 M. E. COVENEY.