No. 844,065. PATENTED FEB. 12, 1907.

J. WARES & A. HOLMAN.

FAUCET.

APPLICATION FILED AUG. 29, 1906.

2 SHEETS—SHEET 1.

Fig 1

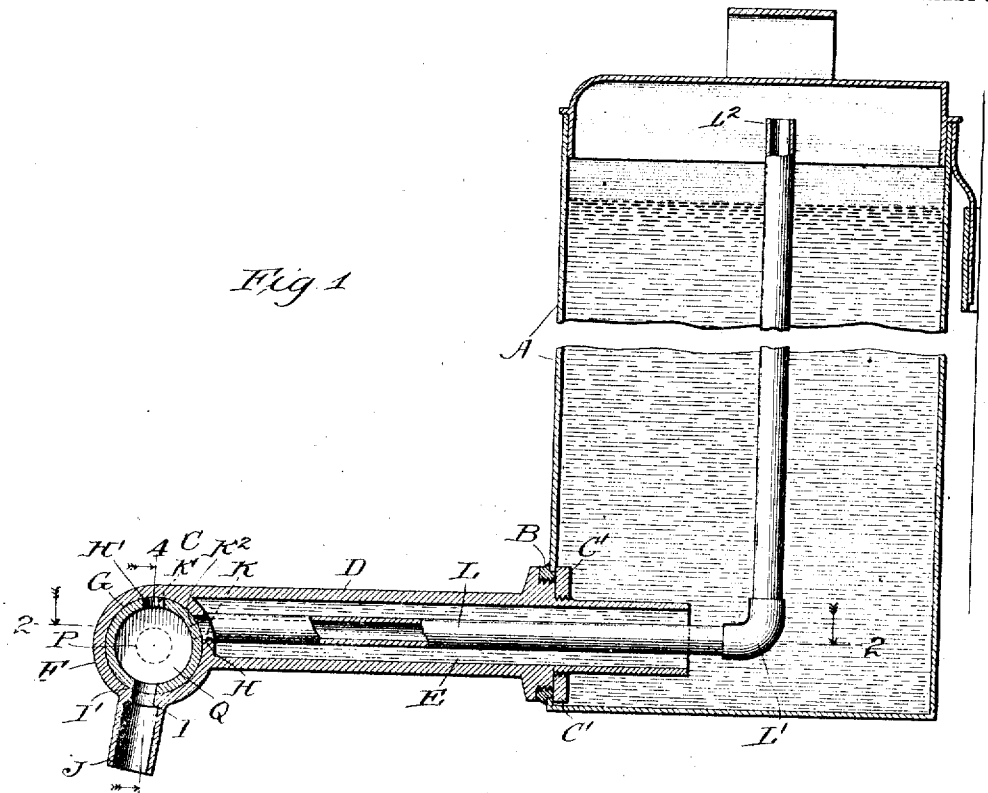


Fig. 2.

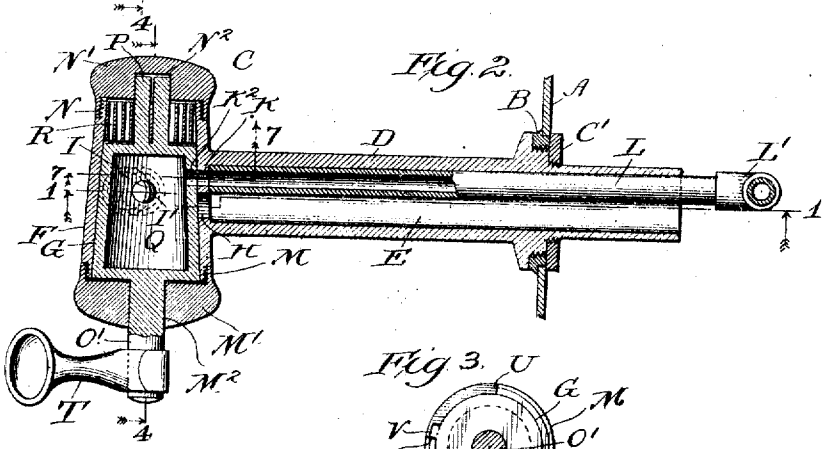
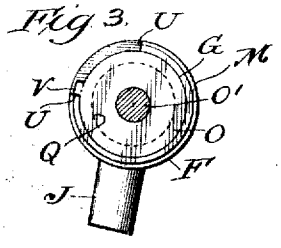


Fig 3.



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2 SHEETS—SHEET 2.

Fig 4.

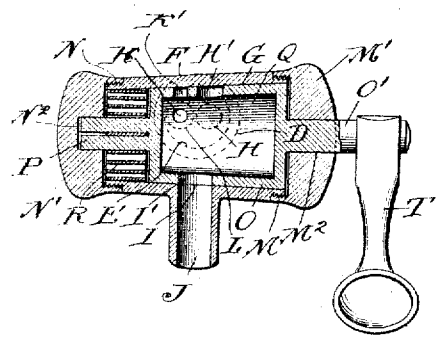


Fig 5.

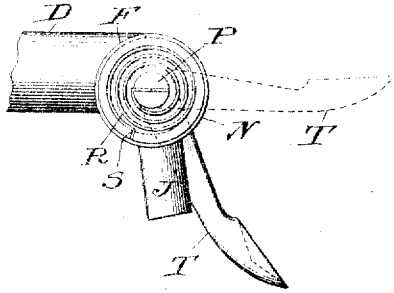


Fig 6.

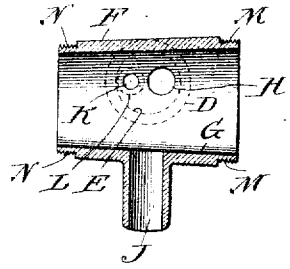
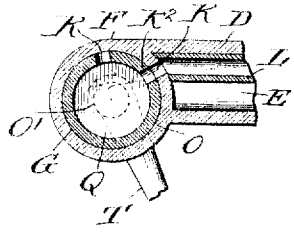


Fig 7.



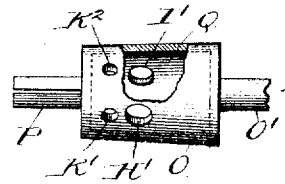


Fig 8.

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UNITED STATES PATENT OFFICE.

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FAUCET.

No. 844,065. Specification of Letters Patent. Patented Feb. 12, 1907.

Application filed August 29, 1906. Serial No. 332,517.

To all whom it may concern:

Be it known that we, JAMES WARES and ADOLPH HOLMAN, citizens of the United States, and residing at 233 Watt street and 3104 Fox street, respectively, in the city of Chicago, county of Cook, and State of Illinois, have invented a new and useful Improvement in Faucets, of which the following is a specification.

Our improvement relates particularly to that class of faucets used in public places for drinking, washing, and other purposes.

The object of our invention is to provide a faucet that will prevent waste by limiting the quantity of liquid passing from it each time it is opened, to prevent waste by making it impossible for users to leave it open, to prevent contagion by limiting contact with the material passing from the faucet to each individual using it.

The manner in which we accomplish our object is set forth in the following specification and illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical sectional view showing a supply-tank and faucet attached therein. Fig. 2 is a horizontal longitudinal sectional view of the interior of the faucet on the line 2 2, Fig. 1. Fig. 3 is an end view on the line 3 3, Fig. 2, the cap being removed to show the stop-lug on the plug and the stop-shoulders on the barrel. Fig. 4 is a central sectional view on the line 4 4, Fig. 2, showing the plug of the faucet in the position for the discharge of its contents. Fig. 5 is a left end view, the cap being removed to show the coiled spring attached to the plug inside the barrel. Fig. 6 is a longitudinal section of the barrel, showing the relative positions of the fluid passage-way and the air-vent. Fig. 7 is a sectional view on the line 7 7, Fig. 2, showing the vent-holes in the plug and barrel in position when the contents are being discharged. Fig. 8 is a view of the plug, showing the fluid-passage and the vent-holes.

In the drawings, A indicates a tank adapted in size and shape to be set up over a wash-stand and to hold a supply of fluid soap or other liquid. Affixed in the lower part of this tank is a threaded bushing B. Supported in this bushing is a faucet C, which is secured in position by a nut C', which is screwed onto the faucet inside the tank. The diameter and length of the body D of the faucet is adapted in its proportions to the particular place and use for which it is designed.

The interior E of the body part is preferably cylindrical in form and as large in cross-section as the strength of the material used will permit. At the end of the body D and constituting an integral part thereof is a transverse part F, the interior of which forms a barrel G. This barrel is taper and extends through the part F and is at a right angle to the length of the body part D. Extending through the wall of this barrel are three apertures. One of these apertures, H, forms a passage for the fluid from the interior E of the faucet into the barrel G. Another aperture, I, forms the interior of the spout J of the faucet. The other is a vent-hole K in the vent-tube L. The tube L is affixed permanently in the wall of the barel. This vent-tube L extends from the wall of the barrel through the interior E of the faucet into the interior of the tank and is threaded at that end and provided with an elbow L'. Vertically supported in this elbow is a vent-pipe L^2. This pipe is adapted in length to extend above the maximum fluid-line in the tank, as shown in Fig. 1.

The tube in the interior E is firmly affixed to the body D in the position shown in Fig. 2 and is thereby made a permanent part of said body. The external ends M and N of the part F are threaded, and thereby adapted to support caps M' and N'. The cap M' has a central aperture M^2 adapted to support the stem of the plug of said faucet. The cap N' has a recess N^2 adapted for the support of the spring end of the plug, as shown in Fig. 2. In the barrel G is a taper plug O. This plug has a stem O' and pivot end P, the stem O' extending through the aperture M^2 in the cap M' and being provided with a lever. The end P is slotted longitudinally and is supported in the recess N^2 in the cap N', as shown in Figs. 2 and 4.

Within the plug O is a chamber Q, adapted to contain the amount of fluid to be discharged at each operation of the faucet. Extending through the wall of the plug are four apertures. One of these apertures, H', is adapted to register with the aperture H in the barrel G and forms the passage for the fluid from the tank into the chamber Q in the plug when the faucet is closed in the normal position under spring-pressure. Another aperture, I', is adapted to register with the outlet I into the spout J when the faucet is

opened by finger-pressure on the lever and the plug thereby forced into the position shown in Figs. 1, 4, and 5, in which position the aperture H′ is closed, as shown in Fig. 1. The other two apertures are air-vents, the aperture K′ registering with the vent-hole K in the barrel G when the faucet is closed and the aperture K^2 registers with the vent-hole K when the faucet is open, as shown by the dotted lines in Fig. 1 and the solid lines in Fig. 7. When the faucet is closed, the open vent K and K′ provides for the escape of the air from the interior of the plug and to thereby allow the fluid to flow freely from the tank into the chamber Q. The vent K and K^2, opening when the faucet is open, allows the air-pressure to enter the chamber, and thereby force the fluid from the plug out through the spout J.

Between the end cap N′ when in position on the barrel and the end of the plug is a space adapted to contain a spring. Inclosed in this space is a flat coil-spring R. The inner end of this spring is secured in the slot in the pivot end P of the plug O. The outer end of the spring is secured in a slot S in the end N of the barrel G, as shown in Fig. 5. This spring is adapted to exert a normal pressure on the plug sufficient to keep it in the closed position and to instantly return the plug from the open to the closed position when the manual pressure applied to open the faucet is removed and the plug released therefrom. Attached to the end of the stem O′ of the plug O is a lever T. When the faucet is closed, this lever is in a horizontal position, as shown by the dotted lines in Fig. 5. To open the faucet, this lever is pressed by the finger or thumb down to the position shown in Fig. 5. For the purpose of limiting the rotary movement of the plug and to insure the registration of the apertures in the plug and barrel in the open and closed positions of the faucet the front edge of the barrel is recessed to form two stop-shoulders U. These are adapted to be engaged by a stop-lug V, affixed in the plug, as shown in Fig. 3. This recess and lug are covered by the cap M′ when the several parts of the faucet are put together.

When the faucet is constructed as described and illustrated and affixed in the tank and the tank in position filled with fluid soap, the lever can be depressed by the thumb while the hand is extended beneath the spout to receive the fluid, or the finger or thumb of one hand may be used to operate the lever while the other hand is under the spout.

It is obvious that the lever may be adjusted in other positions in attaching it to the stem of the plug and that the position of the spring could be changed from the small to the large end of the plug by slight changes in the construction. As these changes are mere details of construction, we reserve the right to make them.

What we claim as new, and desire to secure by Letters Patent, is—

1. In combination with a tank of the kind described having a threaded bushing, a faucet having a threaded part and being supported thereby in said bushing and tank and by a nut secured on said threaded part and engaging the interior of said tank, said faucet consisting of a main longitudinal hollow body projecting horizontally from said bushing and tank and ending in a horizontal transverse cylindrical head having a spout and forming the body part of a valve, said valve consisting of a taper barrel formed by the interior of said head adapted to support a plug, said barrel having three apertures, one of said apertures constituting an inlet from said tank into said barrel, another adjacent to said inlet and constituting an air-vent, said aperture being connected with the air-space above the fluid-line in said tank by a vent-pipe affixed in the interior of the main body of said faucet and extending vertically in said tank, the other aperture connecting the interior of said barrel with said spout forming the outlet of said valve; a plug supported in said barrel adapted to be rotated therein, said plug having a stem and lever thereon and a pivot end adapted for connection with a spring, and an interior chamber, said chamber being connected with the interior of said barrel by four apertures in said plug, two of said apertures being adapted to register at the same time with said inlet and said vent in said barrel, the other two apertures being adapted to register at the same time, one with the outlet and one with the vent in said barrel; two shoulder-stops in the large end of said barrel formed by a recess therein and adapted to engage a stop in said plug; a stop-lug in said plug adapted to engage one or the other of said shoulders and to thereby limit the rotative movement of said plug and thereby insure the registration of said apertures in said barrel and plug in the closed and in the open positions of the valve; a flat coiled spring supported within said barrel and attached to the pivot end of said plug and to said barrel, said spring being adapted to hold said plug under its pressure in the closed position and to return it thereto when released from the pressure on the lever by which it is forced into the open position; caps adapted to fit on the ends of said head and to close the ends of said barrel as described.

2. In a faucet adapted to be inserted in a supply-tank, the combination with a main body having a transverse head with a spout, said head forming a barrel adapted to support a plug, said barrel having three internal apertures, one forming an inlet from said tank into said barrel, another an air-vent

from said barrel into said tank and the other an outlet from said barrel into said spout; a plug supported in said barrel, said plug having a stem and operating-lever on said stem, and a pivot end adapted to support a spring, said plug having an interior chamber with four apertures therein, two of said apertures being adapted to register, one with the inlet and one with said vent in said barrel when said plug is in the closed position, the other two apertures being adapted to register, one with the outlet and the other with the vent when the plug is in the open position; a spring inclosed in said barrel and attached to said plug and to said barrel, said spring being adapted to hold said plug under pressure in the closed position, and to return it to said position whenever released from the pressure on the lever applied to open said faucet; shoulders on said barrel and a stop-pin in said plug adapted to be engaged by said shoulders and to thereby limit the rotative movement of said plug and insure the registration of said apertures in said barrel and said plug when the faucet is closed and when it is opened; caps adapted to be attached to the ends of said barrel and to hold said plug and spring in position in said barrel as described.

3. In a faucet adapted to be inserted in a tank of the kind described, the combination consisting of a hollow main longitudinal body having a transverse head provided with a spout, said head forming a barrel adapted for the support of a plug and having three internal apertures, one of said apertures forming an inlet into said barrel from said tank, and another aperture forming an outlet from said barrel into said spout, the third aperture forming the opening in said barrel of an air-vent; an air-vent consisting of a pipe affixed in said main body and extending from the interior of said barrel into said tank above the fluid-line therein; a plug supported in said barrel adapted to be rotated therein, said plug having an interior chamber provided with four apertures, two of said apertures being adapted to register alternately with the air-vent in said barrel, and the other two apertures being adapted to register, one with said inlet, and one with said outlet; means for rotating said plug in said barrel; means for limiting the rotative movement of said plug and thereby insuring the registration of the apertures therein with the apertures in said barrel; a spring inclosed in said barrel and attached thereto and to said plug, said spring being adapted to hold said plug in the closed position under the pressure of said spring and to return said plug to the closed position when released from the pressure applied to open said faucet; a cap or caps adapted to close the end or ends of said barrel as described.

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