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J. W. GOFF

2,817,355

DRINKING FOUNTAIN FOR POULTRY AND THE LIKE

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Fig. 1

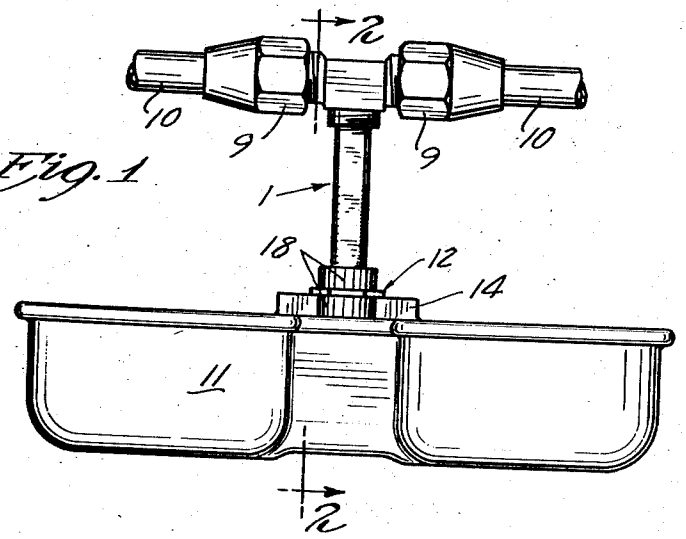


Fig. 3

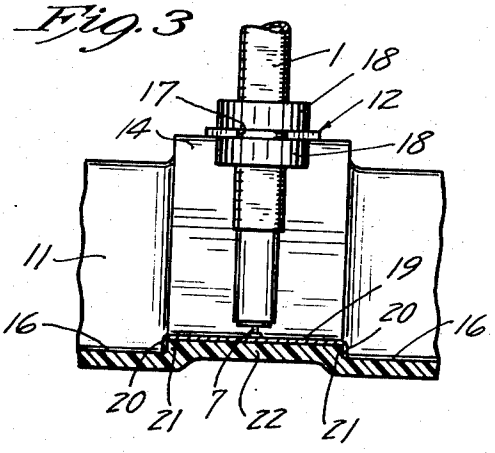
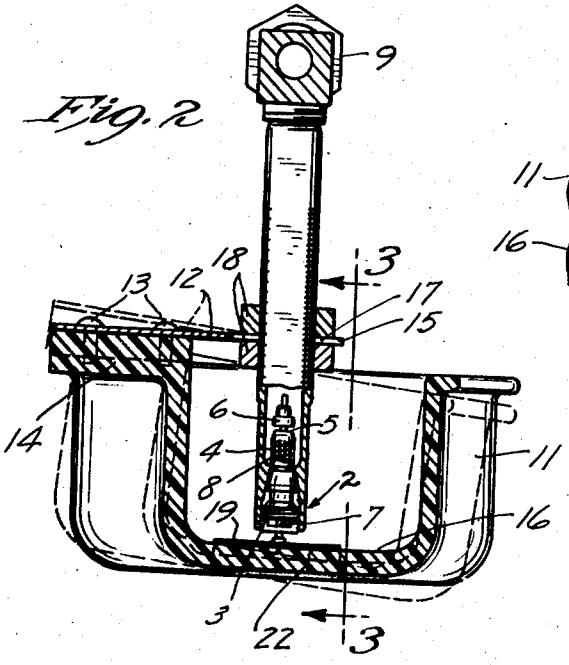


Fig. 2



INVENTOR.
John W. Goff
BY
Merchant & Merchant
ATTORNEYS

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DRINKING FOUNTAIN FOR POULTRY AND THE LIKE

John W. Goff, St. Paul, Minn., assignor to United Screw Products & Mfg. Co., St. Paul, Minn., a corporation of Minnesota

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3 Claims. (Cl. 137—408)

My invention relates to drinking fountains for poultry and the like. More specifically my invention is in the nature of an improvement upon drinking fountains of the general character disclosed and claimed in my Patent 2,714,391 wherein a water receptacle is pivotally mounted on a vertical, rigid supply tube for swinging movements on a generally horizontal axis above the lower end portion of said tube, the interior of said receptacle being in receiving communication with the lower end portion of said supply tube, plus yielding means urging the receptacle in an upward direction, a self-closing valve within and controlling flow through said tube, said valve comprising a yieldingly outwardly biased valve plunger projecting outwardly from the lower end portion of said supply tube and responsive to inward movements of which the valve is opened, the bottom of said receptacle engaging said valve plunger and moving same in an upward direction to open said valve responsive to upward movements of the receptacle when same approaches an empty condition, and moving in a direction away from and allowing outward movement of said valve plunger to valve closed position responsive to downward swinging movements upon a predetermined volume of fluid being received within the receptacle. It will be noted that in accordance with my previous patent, the yielding means is independent of the means for attaching the receptacle to the vertically disposed supply tube.

The primary object of my present invention is to simplify the structure of my previous Patent 2,714,391 without in any manner detracting from the efficiency of operation thereof.

A further object of my invention is the provision of a device of the class above described which by virtue of its simplicity is easy to assemble and disassemble and which is less expensive to produce.

The above and still further objects of my invention will become apparent from the following detailed specification, appended claims, and attached drawings.

Referring to the drawings wherein like characters indicate like parts throughout the several views:

Fig. 1 is a view in rear elevation of my novel structure;

Fig. 2 is a view in vertical section as seen substantially from the line 2—2 of Fig. 1; and

Fig. 3 is an enlarged fragmentary view in section as seen substantially from the line 3—3 of Fig. 2.

Referring with greater particularity to the drawings, a generally vertically disposed externally threaded tubular water supply conduit section is identified by the numeral 1. This tubular conduit section is substantially identical to the tubular valve stems used on pneumatic vehicle tires and is equipped with a valve mechanism, identified in its entirety by 2, of the type generally employed in pneumatic vehicle tires. This valve mechanism 2 is referred to in the vehicle tire industry as a valve core and comprises an externally screw-threaded anchoring head 3, which mates with internal screw threads in the lower or discharge end of the tubular conduit section 1. As is well known, these valves 2 are of the self-closing variety and further comprise a tubular body 4, integral with the anchoring head 3 and defining at its upper end, a valve seat 5, and a valve head 6 normally seated against the valve seat 5 and mounted fast on the valve plunger 7 that projects through and beyond the lower discharge end of the valve body and conduit section 1. The valve head is yieldingly urged toward closed position by a coil spring 8 and is opened by forced inward movements of the plunger 7. The upper or receiving end of the supply tube 1 is adapted to be connected to a suitable source of water under pressure by a suitable coupling or couplings 9 and pipe or pipes 10.

The receptacle, which is preferably and as shown in the form of an open-topped bowl 11, is suspended from the supply tube 1 through the medium of a horizontally disposed leaf spring 12 having one end rigidly secured, as by rivets or the like 13, to a side portion 14 thereof. The free end 15 of the leaf spring 12 projects laterally outwardly in overlying spaced relationship to the bottom 16 of the receptacle 11. As shown particularly in Fig. 2, the free end portion 15 of the leaf spring 12 is provided with an aperture 17 for the snug reception of the threaded intermediate portion of the supply tube 1. Opposed burrs or lock nuts 18 make possible vertical adjustments of the leaf spring 12 with respect to the supply tube 1 to vary the relationship between the bottom 16 of the bowl 11 and the downwardly projected lower end portion of the plunger 7. The proper relationship between the bottom 16 and the bowl 11 and the operating plunger 7 is illustrated in Fig. 2 wherein the full lines show the leaf spring 12 as yieldingly biasing the bowl 11 and plunger engaging bottom 16 thereof in a direction to move plunger 7 upward whereby to unseat the valve head 6 from the seat 5, whereby to permit passage of water therethrough and into the receptacle 11 when the receptacle 11 is empty or approaches an empty condition. The dotted line showing of Fig. 2 illustrates rocking of the receptacle 11 after a predetermined amount of fluid has been received therein whereby to move the bottom 16 of the receptacle 11 in a direction away from the extended lower end of the operating plunger 7, thus permitting the valve head 6 to come into engagement with the valve seat 5 and close the flow of water into the receptacle 11.

Preferably, the bowl 11 is formed from molded plastic or like material. Therefore, I have found it desirable to provide the bottom 13 with a wear plate 19 formed from relatively hard smooth material such as stainless steel. Preferably, and as shown in Fig. 3, the wear plate 19 is provided with depending side flanges 20 which engage opposite side portions 21 of an upstanding boss 22 which underlies the supply tube 1, said flanges 20 exerting a yielding clamping action on the sides 21 of the boss 22 whereby to retain said wear plate 19 in operative position on the boss 22 for engagement with the projected lower end portion of the operating plunger 7. This arrangement assures smooth continuous operation without the necessity of readjusting the clamping nuts 18.

My invention has been thoroughly tested and found to be completely satisfactory for the accomplishment of the above objects and while I have shown a preferred embodiment thereof, it should be clear that my invention is capable of modification without departure from the scope and spirit of the appended claims.

What I claim is:

1. In a device of the class described, a generally vertical water supply tube adapted for fixed mounting and for connection of its upper end portion to a source of water under pressure, a valve controlling flow through said supply tube and comprising a valve plunger extend-

ing generally axially from the lower end of said tube, said valve being of the self-closing type and opening responsive to upward movements of said plunger, an upwardly opening receptacle, a leaf spring having one end rigidly secured to a side portion of said receptacle and having the free end portion thereof projecting generally horizontally therefrom in overlying spaced relationship to the bottom of said receptacle, means mounting said supply tube to the free end portion of said leaf spring with said valve plunger in engagement with the bottom of said receptacle when said receptacle is empty, said leaf spring exerting sufficient yielding bias on said container when said container approaches an empty condition to move said plunger upwardly by engagement thereof with said bottom but yielding under the weight of a given amount of fluid in said receptacle to permit rocking of the receptacle to move the bottom thereof in a direction away from said plunger, thereby permitting downward valve closing movements of said plunger.

2. The structure defined in claim 1 in which the means for mounting said supply tube to said leaf spring permits vertical adjustments of said tube with respect to said leaf spring.

3. The structure defined in claim 1 in which the bottom of said receptacle is formed to provide an upstanding boss in underlying relationship to said supply tube, and in further combination with an inverted U-shaped wear plate, the opposite side portions of which engage opposite sides of said boss and exert a yielding clamping action thereon.

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