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2,307,220

DRINKING VALVE

Original Filed Oct. 7, 1940

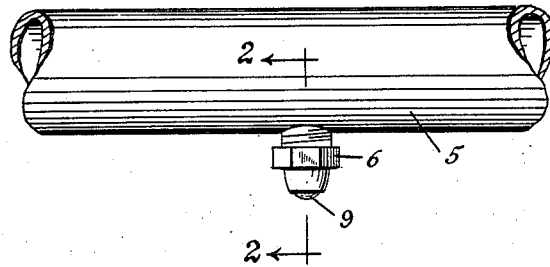


Fig. 1

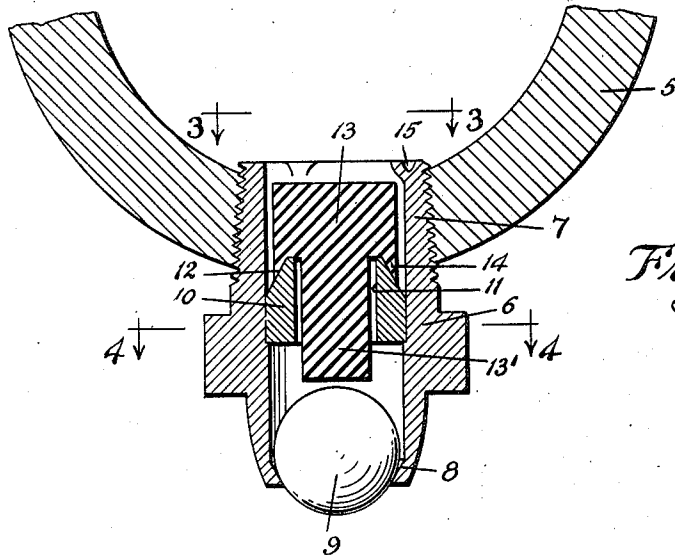


Fig. 2

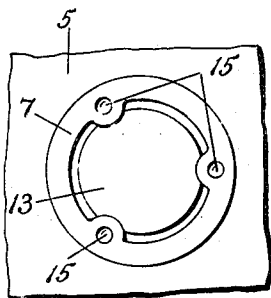


Fig. 3

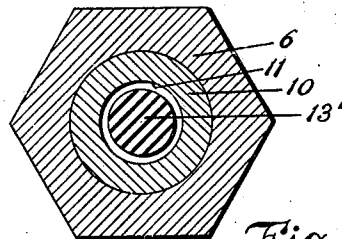


Fig. 4

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UNITED STATES PATENT OFFICE

2,307,220

DRINKING VALVE

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Substituted for abandoned application Serial No. 360,106, October 7, 1940. This application November 29, 1941, Serial No. 421,077

5 Claims. (Cl. 119—72.5)

My invention relates to that type of drinking valves adapted to be put in the bottom of a reservoir for water, or in a pipe, to project downwardly so that poultry, rabbits and the like can drink directly from said drinking valve, and without taking any part of the valve into their mouths.

This application is a substitute for the application, Serial No. 360,106, filed Oct. 7, 1940, and which has become abandoned.

Among the salient objects of my invention are: To provide a drinking valve of the character referred to which is sensitive to the touch of the chicken or rabbit and at the same time so closes the outlet that there is no leakage or seepage of water through said valve; to provide a drinking valve of the character referred to in which there is a double valve feature, one valve element being hard and the other of resilient material; to provide in such a device a ball device projecting slightly through its valve seat, sufficiently to be engaged by the beak of the chick, or by the nose of a rabbit, so that the slightest touch will move the valve slightly from its seat and will also engage and move the second valve up inside the body so as to permit water in a very small quantity to flow out through the valve body; to provide in a device of the character referred to a ball valve in a valve seat which will not only close on the valve seat by gravity and by the pressure of the water above, but will be washed and kept clean from small particles of food and foreign matter which might otherwise get into the valve seat and prevent tight closing of the ball valve.

Other objects and advantages of my invention will appear from the following detailed description of one practical embodiment thereof, taken with the accompanying sheet of drawing, in which—

Figure 1 is a view of a water pipe with my drinking valve therein;

Figure 2 is an enlarged view taken on line 2—2 of Fig. 1;

Figure 3 is a plan view of the drinking valve on line 3—3, Fig. 2; and

Figure 4 is a sectional view taken on line 4—4 of Fig. 2.

Referring now in detail to the drawing, I have shown my drinking valve applied to a water pipe 5, rather than showing it in the bottom of a tank or reservoir. It is usually mounted in a pipe or in the bottom of a reservoir sufficiently high so that poultry, rabbits, and the like can move thereunder and by reaching their beaks up

and touching the valve member, it will be moved sufficiently to permit necessary leakage of water for drinking. It will be noted that the chick does not take the valve in its beak, nor can it, for it projects only sufficiently to be engaged by the point of the beak or by the nose of a rabbit.

The drinking valve in the shown embodiment, includes a body 6, having a threaded end 7, adapted to be screwed into the pipe 5, and having in its lower end a valve seat 8, in which is seated a ball valve 9.

Mounted within the body 6 is a valve element 10, having a passageway 11 therethrough, and having its upper end tapered or made conical, as at 12, and forming a conical valve seat on the upper end of said valve element.

Mounted upon said valve element 10 is a valve member 13, preferably made of rubber, or other suitable resilient material, and having a stem portion 13' adapted to extend down through the passageway 11, and having its head or upper end provided with an overlying, annular lip 14, adapted to fit down over the upper tapering or conical end of said valve member 10, as indicated in the enlarged sectional view in Fig. 2.

The upper end of the valve body 6, is shown provided with three punch indents, at 15, 15, to prevent the valve member 13 from falling out when the assembled drinking valve is handled, shipped or the pipe is turned.

The inserted valve element 10 is designed to be pressed or forced into the body 6, and is shown as seated on a slight annular shoulder formed in the body 6.

It will be seen that the water pressure will not only hold the valve member 13 down on the conical valve element 10, but that the water pressure will also press the annular overlying lip 14 more tightly down over the tapered end of said valve element.

In operation, it will be understood that when a little chick, or an older chicken, or a rabbit, or any other animal touches the ball valve 9, it will raise it slightly, and in turn this will engage and lift the valve 13 sufficiently to unseat the annular lip 14 thereof, and thus allow water to seep to and through the valve element 10 and through the passageway 11 and into the lower part of the body 6, and around the ball valve 9, which tends to wash and keep said ball valve clean and free of dirt or small particles of feed.

Where there is constant seepage or leakage, it amounts to a considerable loss of water in time, but with my improved double valve feature, and my improved construction and arrangement, I

have done away with all unintended leakage and have provided a valve which the smallest chick can easily operate and can drink directly from the ball valve as its beak is placed thereagainst.

This not only avoids waste of water, but it does away with the wet, sloppy floor or ground under the pipe or reservoir.

I am aware that changes in details of construction and arrangement can be made in my invention as here illustrated for explanatory purposes without departing from the spirit thereof, and I do not, therefore limit my invention to the showing here made, except as I may be limited by the hereto appended claims.

I claim:

1. In a drinking valve, a body adapted to be connected with a source of water supply and having an outer end, a valve element seated in said outer end, a seat within said body, and a member seated on said seat and having a part engageable by said valve element, whereby said member is unseated upon inward movement of said valve element.

2. In a drinking valve, a body adapted to be connected with a source of water supply and having an outer end, a valve element seated in said outer end, a seat within said body, and a member seated on said seat and having a stem portion extended through said seat and positioned to be engaged by said valve element when the latter is moved inwardly, whereby to unseat said valve element and said member sufficiently to permit leakage of water.

3. A drinking valve adapted to be connected with a source of water supply and having an outer end, a floating valve element seated in said outer end to protrude therethrough, a member within said valve forming a seat within the same, a valve element seated on said member and having a portion extended through said member to be

engaged by said floating valve element when the latter is moved inwardly, whereby to unseat said floating valve and said valve element within the valve to permit leakage of water through said valve.

4. A drinking valve including a body to be connected with a source of water supply and having an outer end, a valve seat within said body of conical form, a valve element within said body having an annular overlying lip adapted to seat down upon said conical valve seat, whereby water pressure seats said valve element down upon said seat and presses said annular lip upon said conical seat, said valve element having a part extending downwardly through said valve seat, and a floating valve element in the outer end of said body adapted to be moved inwardly to engage with said part extending through the valve seat, whereby movement of said floating valve element inwardly by a chick moves said inner valve element to cause leakage of water from said body.

5. A valve mechanism including a body having means for connecting it with a source of water supply and having a passageway therethrough, an annular valve seat of conical form in said passageway, a valve element of flexible material within said body and seated upon said conical valve seat and having an annular overlying lip portion to fit down over said conical valve seat with a portion extended through said annular valve seat, whereby water pressure seats said valve element down upon said conical valve seat and presses said annular lip portion inwardly upon said conical seat, to prevent leakage through said body, and means in the outer end of said body adapted to be moved inwardly by engagement therewith, said inward movement causing said means to engage and move said valve element to cause leakage through said body.

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