Dec. 29, 1953

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2,664,069

ANIMAL OPERATED DRINKING BOWL

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Fig. 1.

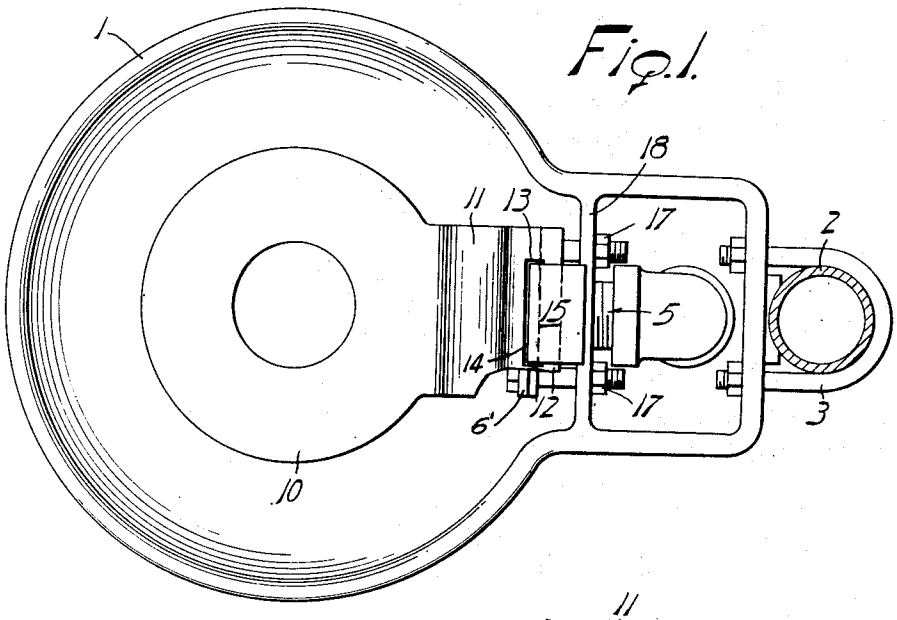


Fig. 4

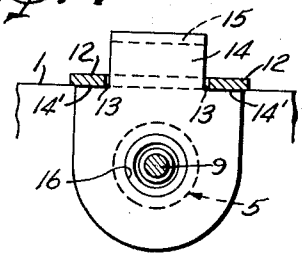


Fig. 3.

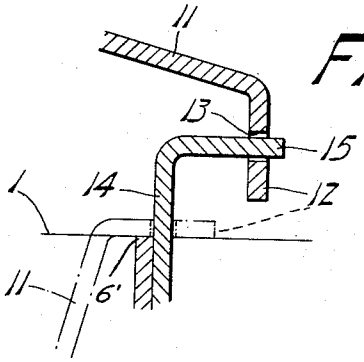
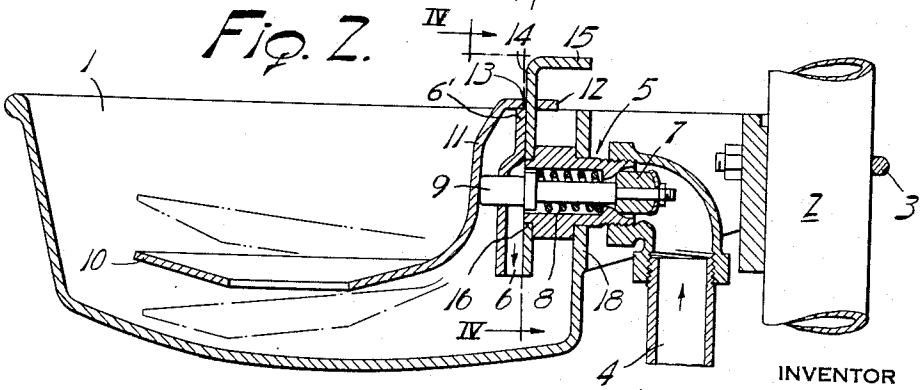


Fig. 2.



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ANIMAL OPERATED DRINKING BOWL

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4 Claims. (Cl. 119—75)

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This invention relates to an animal drinking fountain of the type embodying a pivotally mounted presser plate or lever designed to open a water supply or replenishment valve when depressed by contact with the animal's nose as it seeks to drink the small amount of residual water found in the bowl. This depression of the valve actuating plate serves to open a spring closed valve, the spring of which normally holds the plate in an elevated position. The pivotal mountings for these presser plates have been of various designs, some more practical than others in the attempts to preclude accidental displacement of the plate by the animal. Heretofore the parts have been in the form of castings, hinges, bolts, and the like, and these parts have necessarily increased the cost of production as well as the maintenance of the drinking system.

The primary object of the present invention is to provide a drinking fountain which is practical and yet economical of production. A further object of the invention is to provide a construction, the parts of which are readily assembled and simply interlocked to prevent unauthorized displacement of the presser plate.

The invention further resides in a durable construction of stampings all tending toward economy and simplicity of manufacture and efficiency in operation.

The foregoing and other objects will manifest themselves as the following description progresses, reference being had to the accompanying drawing, wherein:

Fig. 1 is a top plan view of the improved drinking fountain, with a portion of the presser plate broken away;

Fig. 2 is a medial vertical sectional view through the drinking fountain;

Fig. 3 is an enlarged fragmentary sectional view depicting the manner of mounting the presser plate upon the bowl; and

Fig. 4 is a transverse sectional view more clearly showing the mounting of the presser plate.

Referring more particularly to the drawing, the numeral 1 designates the drinking bowl body which is suitably anchored to a supporting upright 2 by means of a suitable fastener 3. A water supply pipe 4 opens through a valve 5 and a downwardly directed spout 6 into the bowl. The valve has a valving member 7, normally urged to a closed position by a spring 8, and a stem 9 which protrudes into the bowl and bears against the animal actuated presser plate 10. This plate is movably or pivotally mounted so

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that as the animal seeks to drink the water remaining in the bowl from the previous use its nose will depress the plate against the urge of the valve spring 8 and open the water line to replenish and admit the demanded volume of water.

Heretofore, the presser plate and the bowl have been more expensive and complicated castings to withstand continued rough usage. The pivotal mountings for the presser plates must be rugged since the animal is likely to engage its tongue or mouth therewith and move or lift the same to subject the pivotal mounting to abnormal strain and unnecessary wear and tear. It is therefore necessary that the pivotal mounting be well constructed to withstand these abnormal strains.

According to the present invention the presser plate is in the form of a stamping and may therefore be economically produced. The mounting is such that the presser plate locks itself against accidental displacement by the animal. To this end the bowl and the presser plate are provided with cooperating parts which enable one to be telescoped over the other in a manner to utilize the well-known transom-type lock wherein one of the members, when tilted upon the other, will jam or bind against the companion part to secure the two parts interlocked in a firm manner, and yet at the same time when the abnormal stress is removed from the presser plate, the latter will be free to function under the nose-imparted pressure of the animal for opening the water valve.

In the present disclosure the presser plate stamping is provided with a mounting shank 11 which extends upwardly from within the bowl and terminates in an angularly displaced flange 12 having a transverse slot 13. This flange is shaped to provide offset corners at opposite sides and is designed to slidably receive in the slot or opening 13 an upstanding anchor lug 14 fixed to the bowl with sufficient clearance to enable the necessary though limited pivotal movement of the presser plate for opening the valve. Beyond this small amount of pivotal movement the offset corners of the walls of the recess 13 will bite into the opposite side faces of the anchor lug 14 to resist sliding displacement therefrom. The slot 13 actually constitutes a slidable bearing for mounting the presser plate on the upright support 14, the latter having lateral shoulders 14' providing fulcrum support for the plate. However, upon the release of this binding pressure, the plate will gravitate and assume its normal position wherein the shank 11 rests against and

upon the valve stem 9. In this position of rest, the flange 12 is supported on the seat 6' out of locking engagement with the anchor lug from which it may be depressed to open the valve.

As a further means of precluding accidental displacement of the presser plate from the bowl, the upper end of the anchor lug 14 is deflected laterally to provide a stop or retaining shoulder 15 which necessitates the presser plate being lifted bodily out of the bowl and then swung about the shoulder to effect total displacement, as indicated in Fig. 3. To mount the presser plate, the leaf 12 is passed over the free end of the shoulder 15 and thereafter moved over onto the upright portion to dispose the presser plate properly within the bowl.

The anchor lug 14 is preferably stamped from sheet metal stock and formed with an opening 16 to receive the outer end of the body of the valve 5 in providing a sturdy construction. The spout 6 is likewise preferably stamped from sheet metal and seats upon the body plate of the anchor lug where the two parts are secured together by suitable means, such as the fasteners 17. This provides for simplicity in construction in which the two plates 6 and 14 cooperate to form a water conduit, with the valve 5 being interposed between the composite nozzle thus formed and the back wall 18 of the bowl to which the valve and nozzle are secured by the fasteners 17. The back wall 18 has an opening in which to seat the valve 5 therein. Consequently, the fasteners 17 securely interlock the supporting anchor lug 14 and the valve 5 to the side wall 18.

The construction is simple and economical with the vertically slidable presser plate having sufficient clearance for the necessary pivotal movement to open the valve. Any attempt to displace the presser plate by swinging it upwardly will serve to cause its flange 12 to grip the upright support 14 against displacement. The presser plate herein referred to is also protected from lateral movement to hold this presser plate in perfect alignment in relation to the inside of the water bowl. The simple combination of the presser plate, slot and vertical support, therefore, is new and well constructed to withstand the abnormal strains natural with this type of equipment.

While the foregoing description has been given in detail, it is without thought of limitation since the inventive principles involved are capable of assuming other physical embodiments without departing from the spirit of the invention and the scope of the appended claims.

What is claimed is:

1. In an animal drinking fountain including a bowl, a water supply pipe, a valve assembly connected adjacent the end of the water supply pipe for controlling the discharge of water into said bowl, said valve assembly including a valve, a spring normally seating said valve, and a valve stem for said valve, said valve stem having an end portion within said bowl, an upstanding anchor lug supported within the bowl and having an opening through which said valve stem extends, said anchor lug including inner and outer side face portions and laterally extending shoulders, and a swingable presser plate in said bowl, said presser plate including a flange portion, said flange portion being formed with a slot to receive said anchor lug, said flange including lateral projecting portions at each side of its slot for seating engagement upon said shoulders, the slot in said flange being slightly greater than the upstanding lug extending therethrough to permit the swinging movement of the presser plate upon said shoulders to a position for operative engagement with said valve stem and frictional gripping engagement between the walls of the flange slot and the inner and outer face portions of said lug, whereby the presser plate is secured against vertical movement on said lug during opening movement of the valve.

2. In an animal drinking fountain, a bowl, a water supply pipe extending horizontally through a wall of the bowl for discharging water therein, a valve assembly at the discharge end of said supply pipe, said valve assembly including a valve body having a seat, a valve, a spring normally seating said valve on said seat, and a valve stem connected to the valve and projecting outwardly of the end of the supply pipe, an upstanding anchor lug supported within the bowl and having an opening through which the valve stem extends, said anchor lug including inner and outer side face portions and laterally extending shoulders, a swingable presser plate in said bowl, said presser plate including a horizontal flange portion, said flange portion being formed with a slot to receive said anchor lug, said flange having lateral projecting portions at each side of its slot for seating engagement upon said shoulders, said slot in said flange being slightly greater than the upstanding lug extending therethrough to permit the swinging movement of the presser plate upon the shoulders to a position for operative engagement with said valve stem, a spout member fixed to said anchor lug for receiving the flow of water from said supply pipe and directing same downwardly, and a stop member at the upper end portion of said anchor lug for limiting the upward movement of said presser plate.

3. The structure of claim 2 characterized in that the valve body is fixed in the wall of the bowl and the anchor lug is fixed to the outer end of the valve body.

4. The structure of claim 2 characterized in that the spring normally seating the valve engages a shoulder on the valve stem to normally urge the valve stem outwardly for operative engagement with the presser plate.

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