Oct. 21, 1924. 1,512,628

P. MUELLER ET AL

ANTIFREEZING DRINKING FOUNDATION

Filed Nov. 12, 1919 5 Sheets-Sheet 1

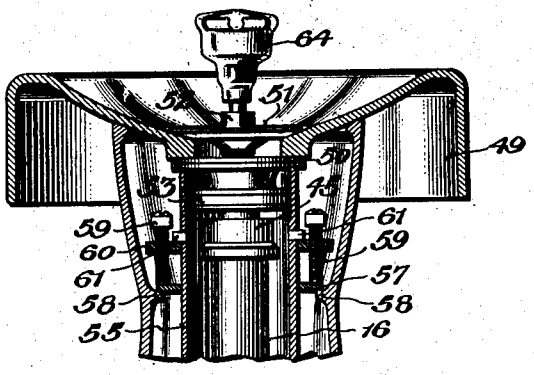


Fig. 1.

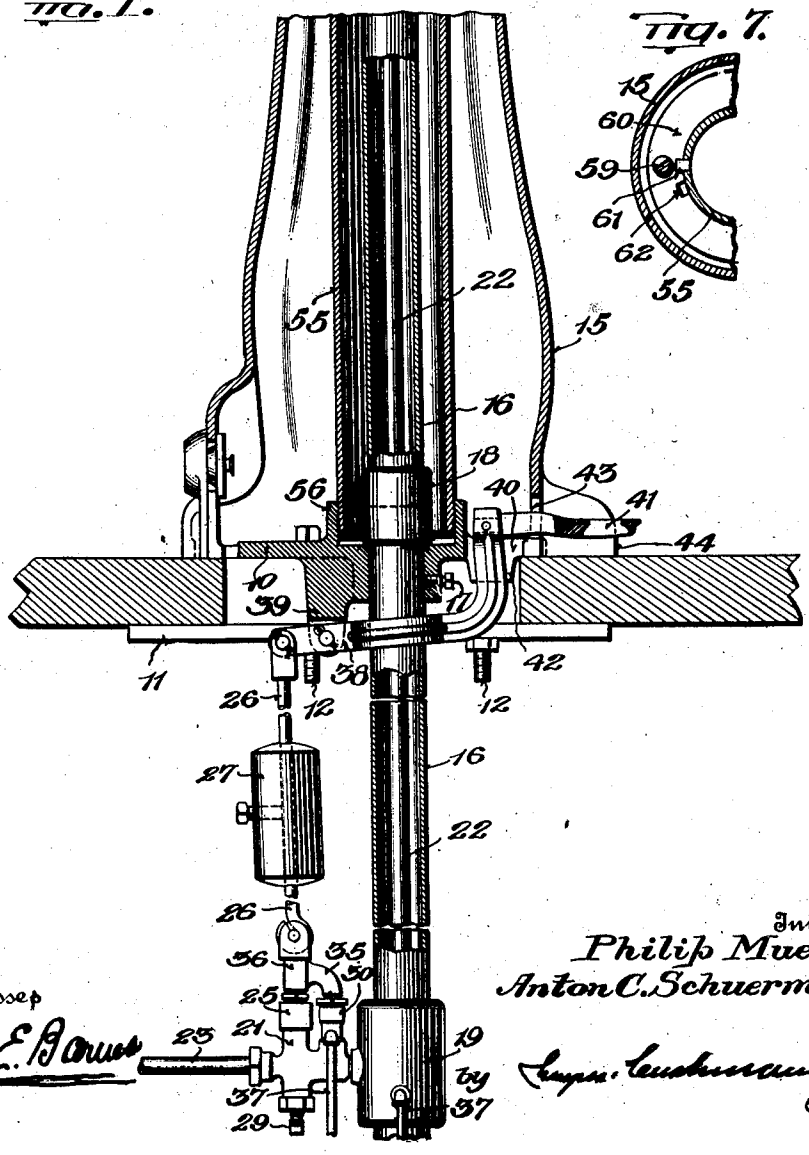


Fig. 7.

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ANTIFREEZING DRINKING FOUNTAIN

Filed Nov. 12, 1919 5 Sheets-Sheet 2

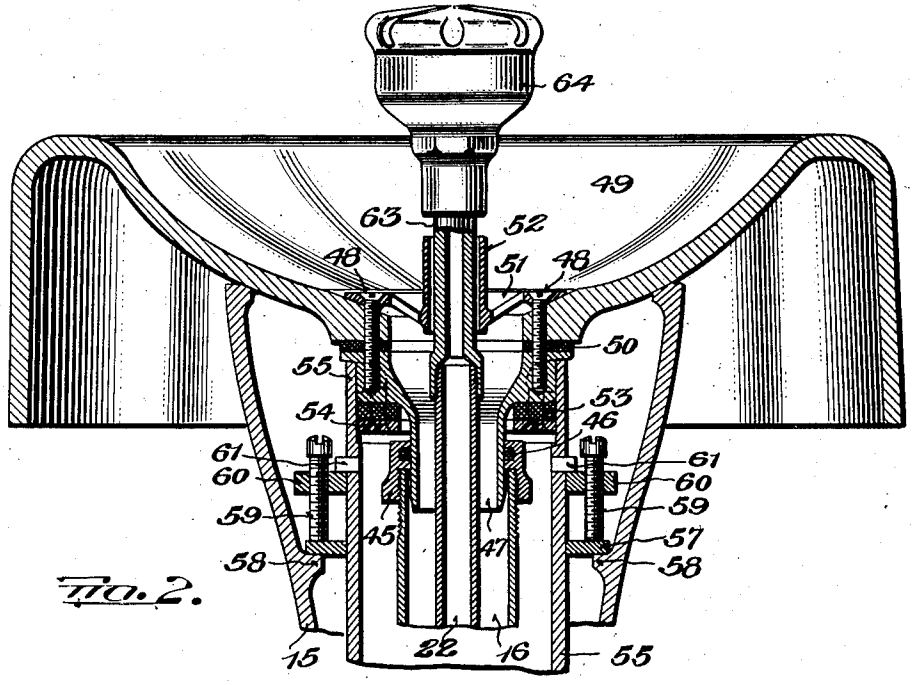
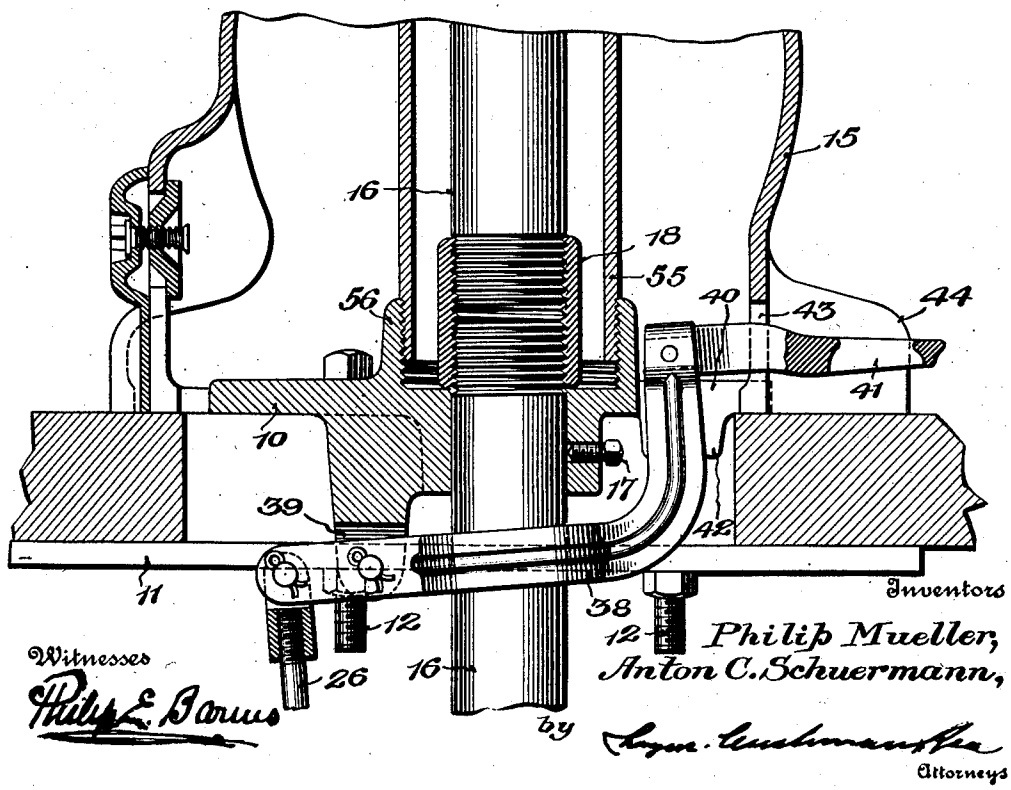


FIG. 2.



Witnesses

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ANTIFREEZING DRINKING FOUNTAIN

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Fig. 3.

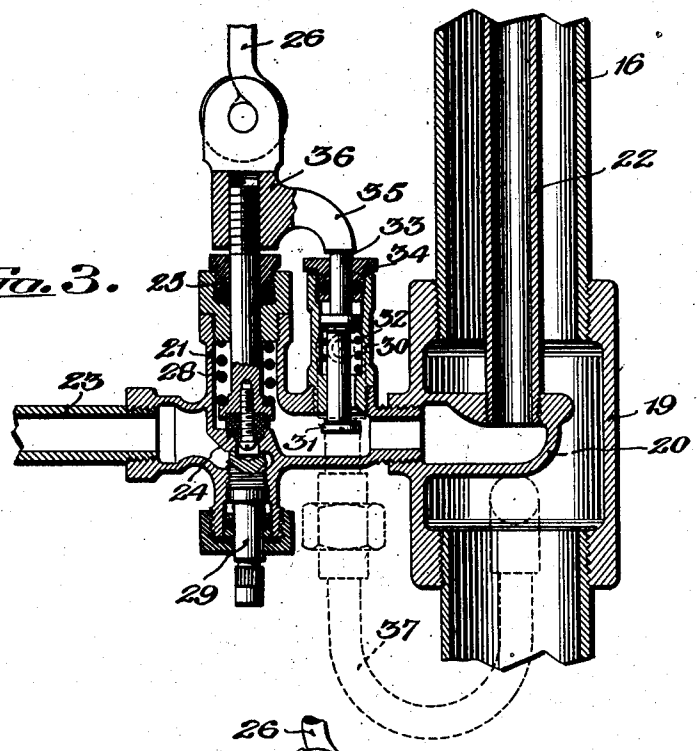
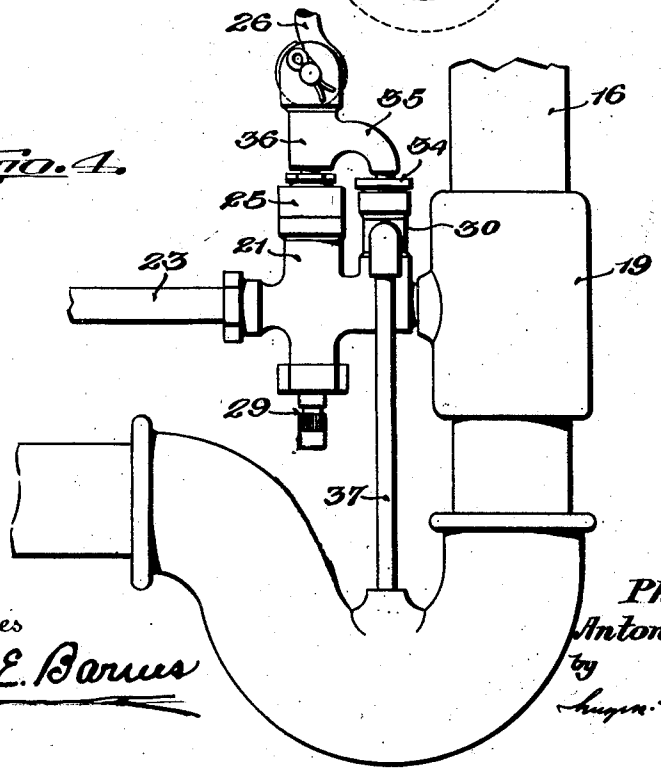


Fig. 4.



Witnesses

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Oct. 21, 1924. 1,512,628

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ANTIFREEZING DRINKING FOUNTAIN

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Fig. 5.

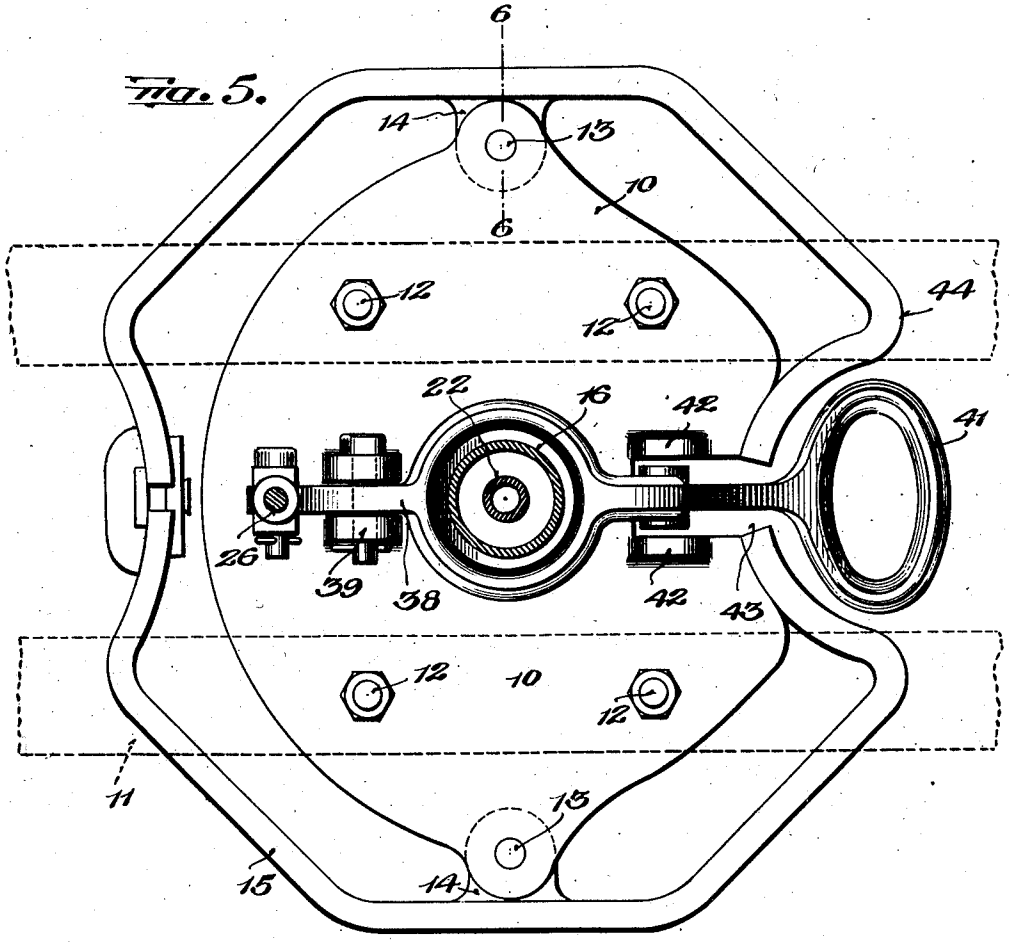
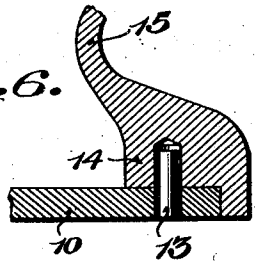


Fig. 6.



Witnesses
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Oct. 21, 1924. 1,512,628

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ANTIFREEZING DRINKING FOUNTAIN

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Fig. 8.

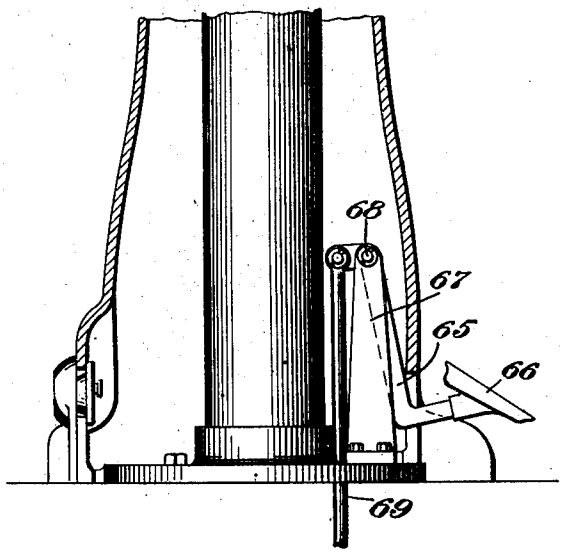
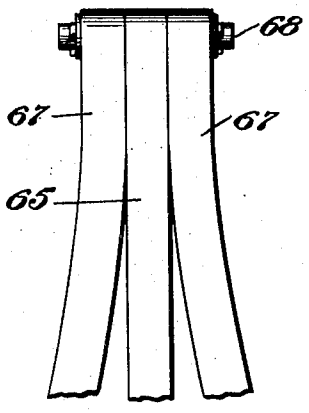


Fig. 9.



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Patented Oct. 21, 1924. 1,512,628

UNITED STATES PATENT OFFICE.

PHILIP MUELLER AND ANTON C. SCHUERMANN, OF DECATUR, ILLINOIS, ASSIGNORS TO ADOLPH MUELLER, TRUSTEE, OF DECATUR, ILLINOIS.

ANTIFREEZING DRINKING FOUNTAIN.

Application filed November 12, 1919. Serial No. 337,493.

To all whom it may concern:

Be it known that we, PHILIP MUELLER and ANTON C. SCHUERMANN, citizens of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented new and useful Improvements in Antifreezing Drinking Fountains, of which the following is a specification.

The present invention relates to sanitary drinking fountains and while it is disclosed in connection with a particular type of bubbler-head, pedal-operated supply fountain, it will be understood that the features disclosed and claimed may be applied to other and various types of fountains.

It has for its object to provide a fountain, in which the drinking supply and waste may be adequately controlled and taken care of, and in which sanitary conditions are observed, and, furthermore, provides a fountain, which is calculated to withstand low temperatures without danger of freezing either the supply or waste.

In the drawings herewith is illustrated one embodiment of the invention and in said drawings:—

Figure 1 is a side view of a fountain made in accordance with the invention, parts thereof being in section for clearness of illustration,

Figure 2 is a vertical sectional view on an enlarged scale of the bowl, pedestal, and base,

Figure 3 is a sectional view of the supply cock and its connections,

Figure 4 is a view in elevation of a supply pipe drain,

Figure 5 is a bottom plan view of the pedestal and its anchoring means,

Figure 6 is a view in section of the pin connection between the pedestal and base,

Figure 7 is a detail view to illustrate the pedestal clamping means,

Figure 8 is a view in section of the lower part of a fountain similar to that shown in Figure 1 illustrating a different type of operating pedal,

Figure 9 is a detail view showing the mounting of the pedal lever.

Referring to the drawings by numbers, like numbers indicating like parts in the several views, 10 denotes a base-plate, which may be of the form shown in plan in Fig. 5, which base-plate, as indicated in Figs. 1 and 2, rests upon the curbing of the well or pit into which portions of the supply and waste depend. The base-plate 10 may be secured in any suitable manner, a convenient way of securing it, where conditions are suitable, being the crossbars 11 and the bolts 12, which pass through apertures in the base plate and clamp said bars and base-plate tightly to the cover of the well or pit. The base-plate is provided also with locating and holding pins 13 designed to engage apertured lugs 14 on the interior of the pedestal 15.

The said base-plate 10 has a central aperture through which passes the lower section of the waste pipe 16, this being held therein by screw 17, the upper end of the waste pipe section being threaded in the present disclosure and coupled to the upper section of the waste pipe by the coupling sleeve 18 as shown in Fig. 2. The lower end of the waste pipe 16 will extend into the well or pit to any desired distance and has at its lower end a coupling chamber 19 for sewer connection, said coupling chamber 19 having preferably formed integral therewith, the radially disposed supply chamber 20, which connects through the wall of the chamber 19 with the supply cock 21, the inner end of the supply chamber 20 delivering to the supply pipe 22, which rises vertically in the waste pipe 16 to the bowl and bubbler head presently to be described.

The supply cock is coupled with any suitable supply 23 and is provided with an automatically closing valve 24, the stem of which passes through a stuffing nut 25 and is connected at its upper end with a link 26 upon which is secured adjustably a weight 27 as shown, this weight being designed to counterbalance the valve operating parts presently to be described. The valve 24 is preferably provided with a closing spring 28 (see Fig. 3) so that when released the valve will, by the spring and weight, automatically close. Mounted in the cock body on the other side of the valve seat is a stop and regulator 29 by means of which the flow may be regulated or entirely cut off if desired, as indicated in Fig. 3.

In order that the supply pipe 22, which will, of course, be filled with water upon

opening the valve 24, may be properly drained and no water left standing in that pipe, the cock body is provided with a drain comprising the chamber 30, which communicates with the outlet side of the cock and has therein a spring closed valve 31, the stem 33 of which valve may be eccentrically placed or otherwise formed so as to give free water passage past the valve. The spring 32 surrounding the valve stem bears against a flange on said stem and normally tends to close the valve. The upper end of the valve stem 33 passes through a suitable stuffing nut 34 and said stem is actuated by a finger 35 projecting from the coupling head 36, which connects the stem of the valve 24 with the link 26. With this arrangement it will be seen that when the valve 24 is opened, the finger 35 will be raised, releasing the stem 33 and the valve 31, which valve will be immediately closed by its spring and the water will pass to the supply chamber 20 and the supply pipe 22. When the valve 24 is closed the finger 35 will force the stem 33 and valve 31 downwardly against the spring 32 opening the valve and permitting the water to drain into the chamber 30, from which chamber it passes by the drain pipe 37 to the coupling chamber 19 of the waste pipe, the drain connection 37 being bent as shown in Fig. 3 to form a water seal.

If desired, the drain pipe 37 for the cock can be led directly to the sewer trap as shown in Fig. 4.

With this arrangement the supply pipe 22 is drained at its lowest point, no water being left standing therein, and as the water passes through the drain cock in the manner described, it will, of course, create a vacuum through the entire length of the supply pipe 22 and draw in fresh air, thus aerating the pipe at each operation of filling and draining, which tends to create and preserve a highly sanitary condition of the supply pipe.

The link 26 is adjustably connected at its upper end with the pedal lever 38, which pedal lever is hung from depending lugs 39 on the underside of the base plate, the lever, for compactness, being preferably arranged as shown, surrounding the waste pipe 16 with its opposite end curved upwardly and passing through an aperture 40 in the base plate, a foot pedal 41 being pinned or secured in any suitable manner to the upwardly curved end of the lever 38. Preferably the base-plate will be provided with depending guiding lugs 42 to control and guide the movements of the lever 38 and prevent any side movements thereto. The pedal 41 projects outwardly through a narrow slot 43 in the wall of the pedestal at the base 44 of the pedestal, into the pedestal crescent so that it may be readily manipulated by the foot.

With this arrangement it will be seen that when the pedal 41 is depressed, the lever 38 will, through weighted link 36, open the supply valve, permit the waste to close and water will flow to the supply pipe 22. Immediately on release of the pedal 41, the weight and spring will rock the lever 38, permit the supply valve to close and open the waste for draining.

The upper section of the waste pipe 16 is provided with a cap nut 45, which is recessed at its upper end to form a gasket-receiving groove in which a suitable gasket 46 is placed, and provides a slip joint union with the bowl waste 47, the lower end of which bowl waste is tapered so that it may be slipped into the cap nut and past the gasket readily, and when brought to position will form a water and gas tight slip joint. The bowl waste 47 is secured to the bowl by the screws 48, which pass through the bowl 49 and engage the head of the bowl waste 47, a packing 50 being interposed between the head of the bowl waste and the bottom of the bowl as shown in Fig. 2. Said screws 48 serve also to fasten the strainer 51 in place, which strainer comprises any suitable grated portion and a central sleeve 52 rising to a considerable distance above the bottom of the bowl and surrounding the supply pipe.

Secured to the underside of the bowl waste head is a packing, which, as shown, comprises a gasket 53 of any suitable material and which is held by the annular ring 54 and suitable holding screws, this packing engaging the upper end of a sleeve 55 which surrounds the waste pipe, as best shown in Fig. 2, said sleeve 55 at its lower end being threaded into a boss 56 on the base-plate 10 so as to be firmly anchored thereto. When the bowl 49 with its attached waste pipe and the packing just described is dropped into place, the packing 53 will effectually seal the upper end of the pipe 55 and a dead air chamber is thus formed by the pipe 55, surrounding the waste pipe and its contained supply pipe, and surrounding this dead air chamber will be the pedestal 15 with its relatively large and practically closed air chamber.

The bowl 49 not only rests upon and seals effectually the pipe 55, but it rests also on the upper part of the pedestal 15 as shown and may be secured thereto by any suitable means (not shown). In order to lock the pedestal and its associated parts in place, it is preferably, after being located on the pins 13 in the base-plate, secured by means of a clamping plate 57 surrounding the pipe 55 and bearing against lugs 58 on the inner wall of the pedestal. The said clamping plate 57 is forced downwardly to clamp the pedestal firmly in position by means of screws 59 passing through a plate 60, which plate bears against pins or lugs 61 projecting outwardly from the pipe 55. For con-

venience in assembling, the plate 60, which is apertured to slip over the pipe 55, is provided with radial slots 62, which will pass over the pins 61, and the plate 60 can then be rotated so as to carry the slots out of line and give a bearing for the plate against the pins when the screws are set up. From the foregoing it will be seen that, upon adjusting the plates within the pedestal and about the dead air chamber pipe and then setting up the screws 59 the pedestal and the parts carried thereby will be firmly clamped, and furthermore, that the arrangenmet is such that by simply removing the bowl 49 the parts are readily accessible for dismantling and taking down the fountain.

The supply pipe 22 extends upwardly into the bowl waste and is there coupled with the bubbler head pipe 63 which in turn carries any suitable bubbling head 64.

From the foregoing it is clear that a drinking fountain is provided in which the supply and waste are so disposed that danger of freezing is eliminated; in which the supply is protected from contamination; which may be readily assembled and taken down for inspection and repair; and in which automatic flow and drain occurs on manipulation of the supply-valve operating devices.

In the construction shown in Figures 8 and 9, we have illustrated a slightly different form of pedal lever and valve operating mechanism.

Instead of the lever arrangement shown in Figures 1 and 2, we provide the bell crank lever 65 having the foot pedal 66, said lever 65 being mounted in standards or supports 67 by means of the pivot pin 68. The upper end of the lever 65 is pivotally connected with a valve operating rod 69 which depends through the opening in the curbing and is connected pivotally with the coupling head 36 of the supply valve 21 and preferably, the said supply valve 21 will be arranged on the side of the chamber 19 opposite from that shown in Figures 1, 3 and 4 in order that the coupling rod 69 may descend directly to the valve and be connected with the head 36.

By this arrangement, we are enabled to dispense with the weighted connecting link with which the other form of the invention is provided, the normal weight of the connecting rod 69 being sufficient to overcome the weight of the pedal lever 65 and maintain the parts in the normal full line position shown, with the pedal lever raised and the supply valve closed.

Such changes from the structure disclosed as are mechanical only and variations in design and structure may obviously be made without departing from the spirit of the invention.

What is claimed is:—

1. In a drinking fountain, and in combination, a base, a pedestal removably mounted on said base, a waste-bowl thereon, a waste-pipe mounted in said base and traversing said pedestal from said waste-bowl to a point below said base, a supply-pipe traversing said waste-pipe and having a drinking head at its upper end, a supply-valve below said base connected with said supply-pipe, valve-operating means extending outside of said pedestal, a sleeve surrounding said pipes removably mounted at one end of said base and coupled at its opposite end to said waste bowl for the purpose specified.

2. In a drinking fountain, and in combination, a base, a pedestal mounted thereon, a waste-pipe traversing said pedestal and secured to said base, a waste-bowl on said pedestal, a coupling between said bowl and waste-pipe, a supply-pipe traversing said waste-pipe and delivering to a drinking head at its upper end, and a dead-air chamber surrounding said waste and supply pipes and having its lower end threaded to said base and its upper end coupled to said bowl.

3. In a drinking fountain, and in combination, a base, a pedestal mounted thereon, a waste-pipe traversing said pedestal and secured to said base, a waste-bowl on said pedestal, a coupling between said bowl and waste-pipe, a supply-pipe traversing said waste-pipe and delivering to a drinking head at its upper end, a dead-air chamber coupled at its lower end to said base and at its upper end to said bowl surrounding said waste and supply pipes, and a connection between said chamber and pedestal to clamp said pedestal to said base.

4. In a drinking fountain and in combination, a base, a pedestal mounted thereon, a waste-pipe traversing said pedestal and secured to said base, a waste-bowl on said pedestal, a coupling between said bowl and waste-pipe, a supply-pipe traversing said waste-pipe and delivering to a drinking head at its upper end, a dead-air chamber coupled at its lower end to said base and at its upper end to said bowl surrounding said waste and supply-pipes, a bearing plate on said chamber, and clamping screws on said plate to engage and clamp said pedestal to said base.

5. In a drinking fountain and in combination, a base, a pedestal mounted thereon, a waste-pipe traversing said pedestal and secured to said base, a waste-bowl on said pedestal, a coupling between said bowl and waste-pipe, a supply-pipe traversing said waste-pipe and delivering to a drinking head at its upper end, a dead-air chamber coupled at its lower end to said base and at

its upper end to said bowl surrounding said waste and supply pipes, a bearing plate removably mounted on said chamber, a clamping plate engaging said pedestal interiorly, and clamping screws carried by said bearing plate to engage said clamping plate and clamp said pedestal to said base.

6. In a drinking fountain and in combination, a pedestal, a waste-bowl thereon having a depending waste-nozzle, a waste-pipe having a packed slip-joint connection with said nozzle, and a sleeve forming a dead-air chamber surrounding said waste-pipe extending throughout the length of the pedestal and having a packed slip-joint connection with said nozzle.

7. In a drinking fountain and in combination a pedestal, a waste-bowl thereon having a shouldered depending waste-nozzle, a waste-pipe having a packed slip-joint connection with said nozzle, and a sleeve forming a dead-air chamber surrounding said waste pipe and coextensive with the pipe in the pedestal, said sleeve having a packed slip-joint connecting with the shoulder of said nozzle.

8. In a drinking fountain, and in combination, a base plate, a waste pipe extending through said base plate, a waste bowl at the upper end of said waste pipe, a supply pipe traversing said waste pipe, an inlet stub entering said waste pipe below said base plate, a normally closed supply valve connected with said inlet stub, a spring closed waste valve on the outlet side of said supply valve, manually operated means to open said supply valve and permit said waste valve to close, and a drain from said waste valve to said waste pipe.

9. In a drinking fountain, and in combination, a curb, a base plate fixed to said curb, a waste pipe extending through said base plate, a waste bowl at the upper end of said waste pipe above said base plate, a supply pipe traversing said waste pipe and having a drinking head at its upper end, a supply valve below said base plate and outside of said pipes communicating with said supply pipe through the wall of said waste pipe, a valve-operated lever pivoted to said base plate, and a manually operable extension from said lever above said curb and base plate.

10. In a drinking fountain, and in combination, a curb, a base plate fixed to said curb, a waste pipe extending through said base plate, a waste bowl at the upper end of said waste pipe, a supply pipe traversing said waste pipe and having a drinking head at its upper end, a supply valve below said base plate communicating with said supply pipe through the wall of said waste pipe, and a lever spanning said waste pipe and pivotally mounted on the underside of said base plate, said lever having a manually operable extension.

11. In an anti-freezing fountain, in combination a pit, a base plate covering said pit, a waste pipe extending above and below said base plate, a supply pipe within said waste pipe and having a drinking head at its upper end, a dead-air chamber having its lower end at said base plate and closed at its upper end, said chamber surrounding the waste and supply pipes, a supply valve in said pit below said base plate, and a connection from said supply valve through said waste pipe to said supply pipe.

12. In a drinking fountain, and in combination, a pit, a base plate covering said pit, a waste pipe extending through said base plate and having a waste bowl at its upper end, a supply pipe within said waste pipe, a dead-air chamber removably secured at its lower end to said base plate and closed at its upper end surrounding said waste and supply pipe, a pedestal seated on said base plate and enclosing said dead-air chamber and its contained pipes, a supply valve in said pit below said base plate, a connection from said supply valve to said supply pipe through the wall of said waste pipe, and manually operable means extending through the wall of said pedestal above said base plate for actuating said valve.

In testimony whereof we have hereunto set our hands.

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ANTON C. SCHUERMANN.