May 27, 1958 H. G. MULLETT 2,836,080

FOOT CONTROL VALVE MECHANISM FOR WASHFOUNTAINS

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Fig. 1

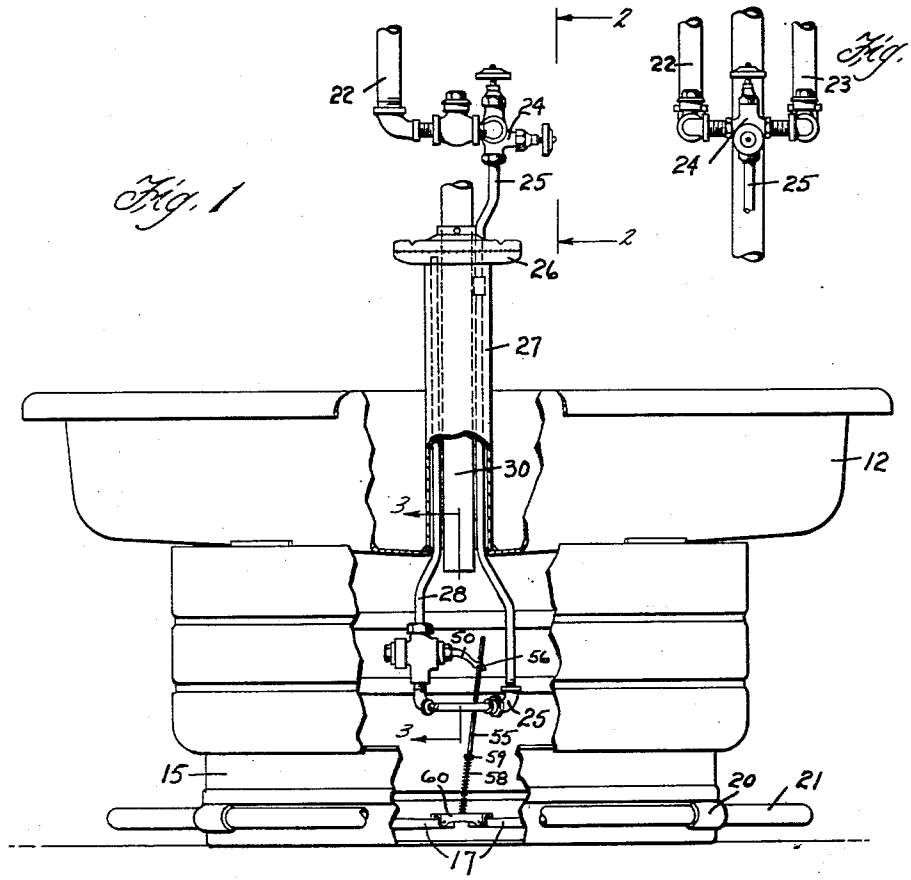


Fig. 2

Fig. 3

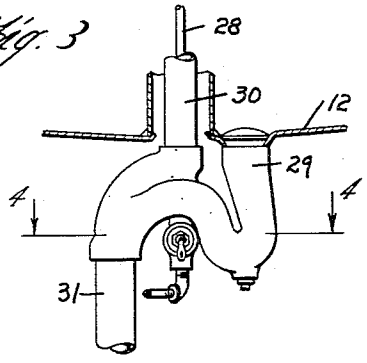
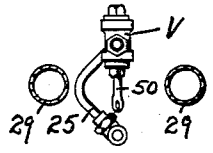


Fig. 4



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Fig. 5

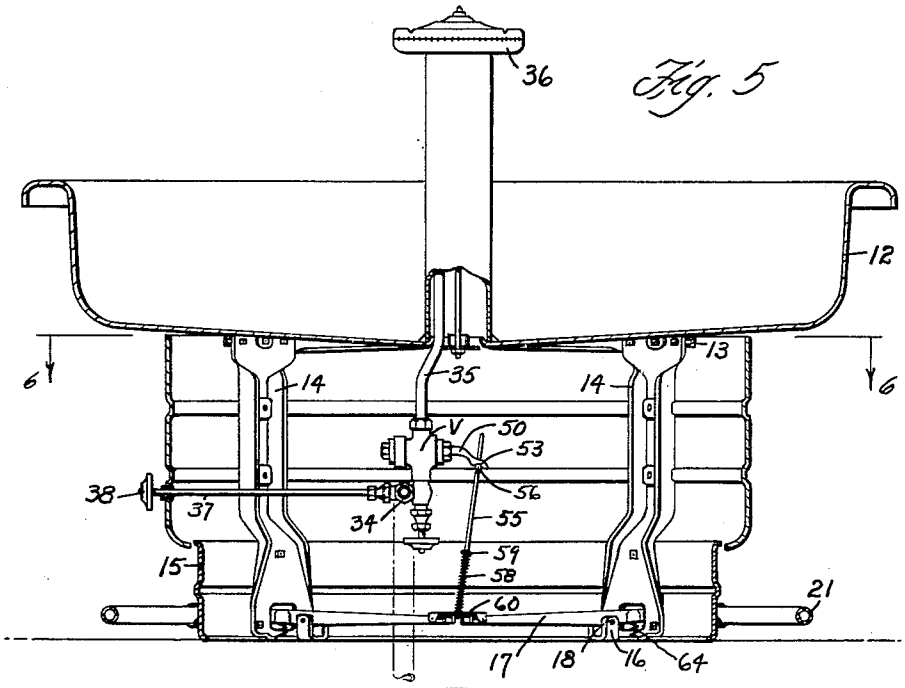
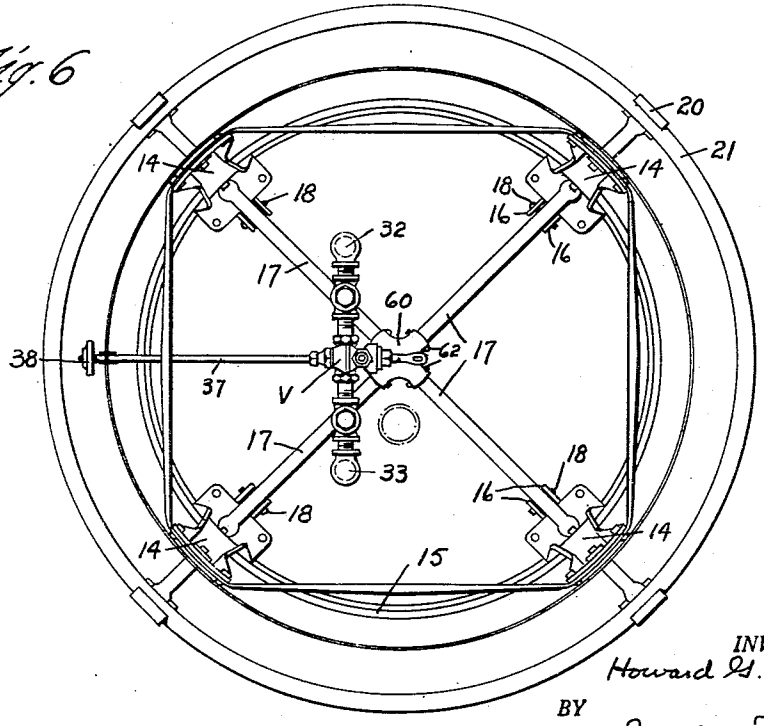


Fig. 6



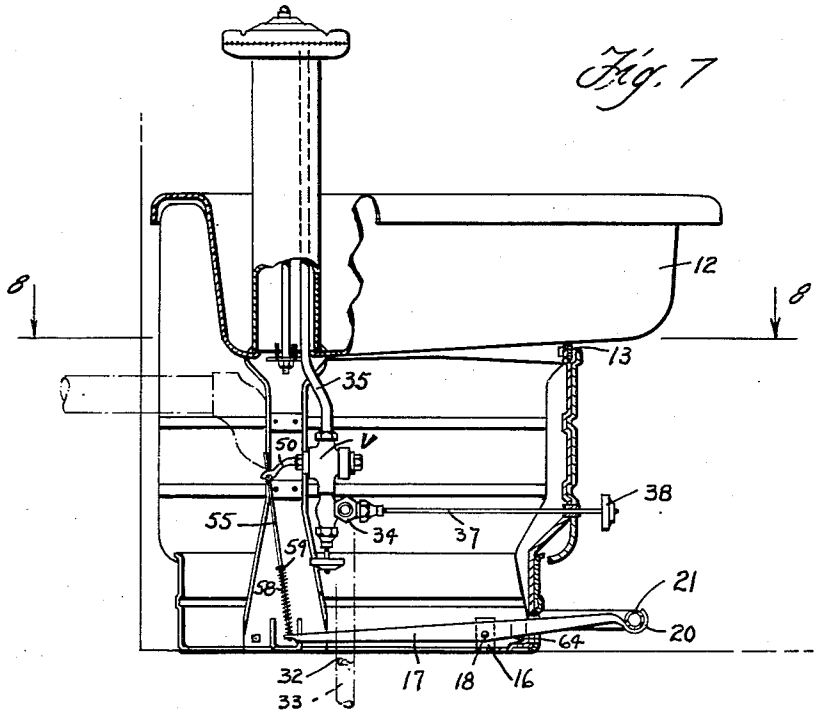
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Fig. 7



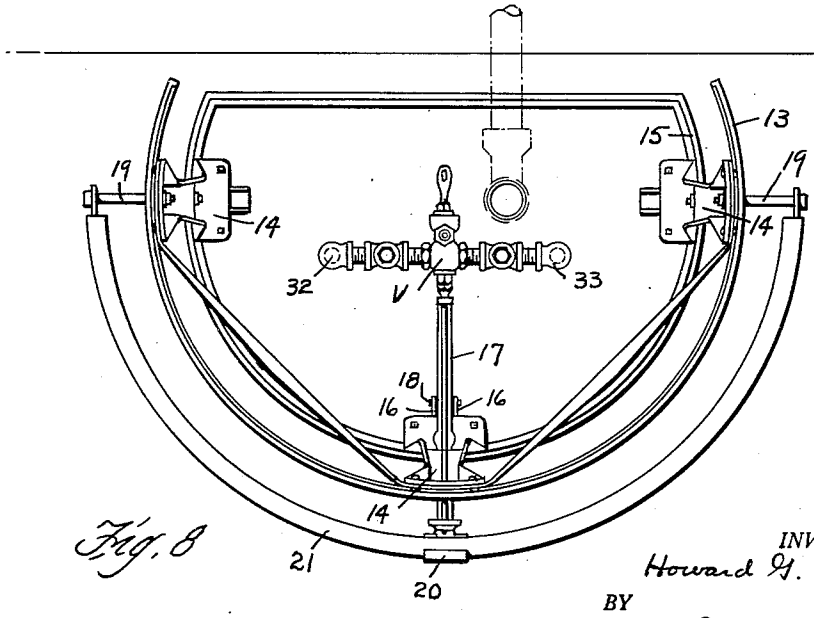


Fig. 8

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Fig. 9

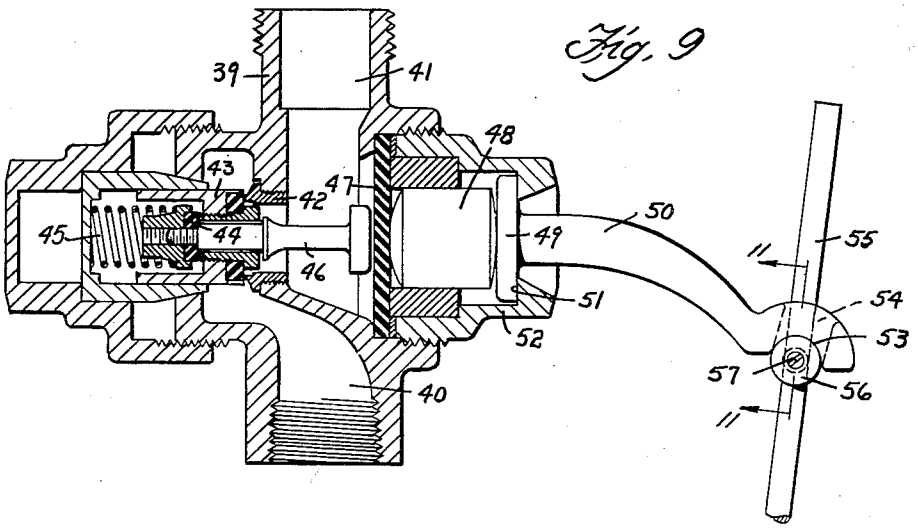


Fig. 10

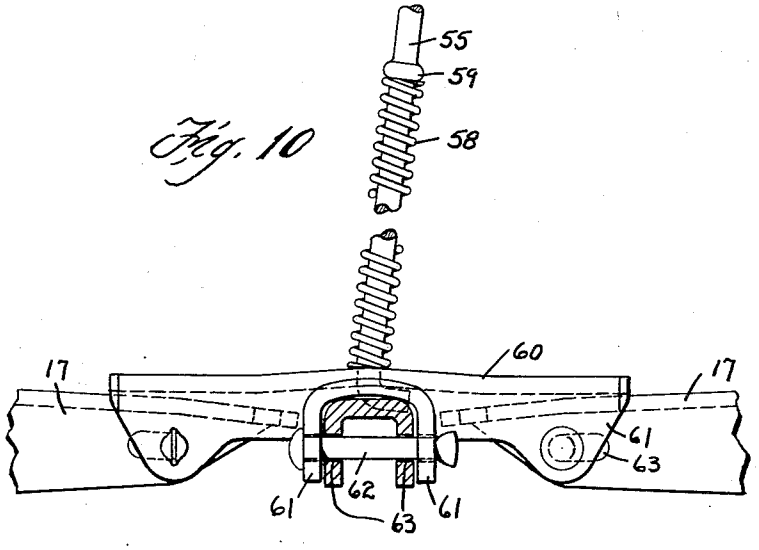
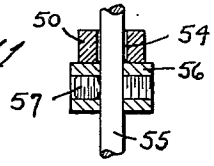


Fig. 11



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FOOT CONTROL VALVE MECHANISM FOR WASHFOUNTAINS

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Application May 12, 1955, Serial No. 507,814

4 Claims. (Cl. 74—512)

The invention relates to washfountains and more particularly to those in which the water to the spray head for the fountain is controlled by a foot-operated valve.

The general object of the invention is to provide a foot controlled valve mechanism of simple construction and one which may be readily used for fountains having the water supply coming in either from below or above the basin and either for full circular or semi-circular type fountains. More particularly, the invention is an improvement over the prior U. S. Patent No. 2,398,149, dated April 9, 1946, to H. G. Mullett and E. D. Wachter, Jr. In the prior patent it was necessary to provide a floor anchorage support for a reciprocatory foot lever operated plate which was connected through a link and a lever to a valve operating link. This floor anchorage was, in many cases because of the type of floor on which the basin was placed, difficult and costly to install. The present invention eliminates the use of a floor anchorage and also the link and lever above referred to and connects the valve operating link either directly to a single lever or to a plate suspended or carried by the inner ends of a series of foot levers, thereby greatly simplifying installation problems and also the mechanism itself.

The invention further consists in the several features hereinafter described and more particularly defined by claims at the conclusion hereof.

In the drawings:

Fig. 1 is a side elevation view of a washfountain having an overhead source of water supply and provided with valve mechanism embodying the invention, parts being broken away and parts being shown in section;

Fig. 2 is a detailed side elevation view looking along the line 2—2 of Fig. 1;

Fig. 3 is a detailed vertical sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 is a detailed horizontal sectional view taken on the line 4—4 of Fig. 3;

Fig. 5 is a vertical sectional view of a washfountain having an underneath source of water supply and provided with valve mechanism embodying the invention;

Fig. 6 is a detailed horizontal sectional view taken on the line 6—6 of Fig. 5;

Fig. 7 is a view similar to Fig. 5 showing the invention applied to a semi-circular washfountain;

Fig. 8 is a detailed horizontal sectional view taken on the line 8—8 of Fig. 7;

Fig. 9 is a vertical sectional view through the control valve;

Fig. 10 is an enlarged view of certain of the valve operating parts;

Fig. 11 is a detailed vertical sectional view taken on the line 11—11 of Fig. 9.

Referring to the drawings, in each instance the numeral 12 indicates a bowl or basin supported above the floor by any suitable pedestal construction. In the present instance I have shown the pedestal construction shown and described in detail in the prior U. S. Patent No. 2,498,699, dated February 28, 1950, and which includes an upper ring 13 secured to the bottom of the bowl and bolted to a plurality of radially spaced legs 14 whose bases are connected to a base ring 15.

The base portion of each leg 14 has upstanding apertured spaced ears or arms 16 formed integral therewith. In the full circular fountain a treadle lever 17 is pivotally mounted on the ears of each leg by a pivot pin 18 while in the semi-circular fountain a single lever 17 is so mounted on the central leg and the other legs carry treadle ring studs 19.

The outer end of each lever 17 has a hook 20 to receive a treadle ring 21 whereby foot pressure exerted at any point on said ring will act to depress the outer ends of the levers 17. In the semi-circular fountain the ring 21 is a half ring whose outer ends are pivotally mounted on the studs 19.

In each instance a treadle operated water supply valve V is adapted to be operated by the connections hereinafter described between the treadle lever or levers and the valve actuator.

In Fig. 1 hot and cold water pipes 22 and 23 connect with a suitable mixing valve 24 whose outlet connects with a pipe 25 that extends downwardly through the spray head 26 and its support 27 and into the pedestal to a connection with the inlet of the valve V whose outlet connects by a pipe 28 with the spray head 26. In this instance, as shown in Fig. 3, the drain fitting 29 for the basin connects with a vent pipe 30 and a drain pipe 31.

Where, as in Figs. 5 to 8, the hot and cold water pipes 32 and 33 come in from below, they connect with a suitable mixing valve 34 whose outlet connects with the inlet of the valve V whose outlet connects by a pipe 35 with the spray head 36. The mixing valve 34 is controlled by a rotary shaft 37 having an exteriorly disposed handwheel 38.

The valve V may be of any suitable construction, the one shown in Fig. 9 being of the flush valve type similar to that shown and described in detail in the prior U. S. Patent No. 2,398,149, dated April 9, 1946, and comprising a housing 39 formed to provide a passage between its inlet 40 and its outlet 41, which passage is provided with a seat member 42. A reciprocatory piston valve member 43 is normally moved into engagement with the seat member by water pressure in accordance with the disclosure of U. S. Patent No. 2,243,957, of June 3, 1941, and is adapted to be opened by a pilot valve 44 slidably mounted in the valve 43 and normally closed by a spring 45. Valve 44 has a stem 46 adapted to engage a flexible rubber diaphragm 47 mounted in the housing. For flexing the diaphragm 47 a thrust member or piston 48 is slidably mounted in the housing and engageable at one end with the central portion of the diaphragm and at its other end with the annular flange head 49 of a tiltable lever or actuator 50. With this construction pushing upwardly on the outer end of the actuator 50 causes its flanged end to fulcrum about a point on the annular surface 51 of the cap 52 and swing about this point to exert an inward thrust on the piston 48 causing it to flex the diaphragm and to open the pilot valve 44 against the action of the spring 45 and thus permit the pressure of the water in the inlet 40 to act on the valve 43 to open the same and allow water to pass to the outlet 41, all as more particularly described in said Patent No. 2,243,957. Any other suitable water control valve that may be opened by a tiltable actuator or its equivalent may be used, if desired.

Referring to Figs. 9 and 11, in the present instance, the outer end of the actuator 50 is canted or curved downwardly and has a curved recess or notch 53 formed therein with a slot 54 extending upwardly through this

notched portion. An actuating link or rod **55** extends loosely through the slot **54** and has an apertured pin member **56** slidably mounted thereon and lengthwise adjustably connected thereto by a set screw **57**. The pin member **56** fits the curved notch **53** so that it can turn relative thereto as the upper end of the rod swings in the slot under the action of thrust forces exerted on the lower end of the link by a spring **58** which engages at its upper end with a shoulder **59** on said rod and at its lower end engages either directly with the outer end of the central treadle lever **17** as shown in Fig. 7 or with a plate **60** carried by the treadle levers **17** as shown in Figs. 1, 5, and 6. The actuator **50** is downwardly canted so that when it is pushed up by the rod **55**, said actuator will have an angle of approximately ninety degrees with the operating rod when the greatest push is required. In Fig. 7 the lower end of the rod or link **55** is free to slide in a suitable opening in the end of the treadle lever while in Figs. 1, 5, and 6 the lower end of said link is free to slide in an opening in the plate **60**. Thus in each instance the rod or link **55** only receives its valve opening thrust movement through the thrust imparted by the treadle lever or levers on the spring **58**. The plate **60** is provided with radially disposed sets of ears **61** carrying pins **62** mounted loosely in slots **63** in the outer ends of the levers though the swinging movement of any one of said levers by depression of the foot or treadle rail will move said plate against the action of the spring **58** to operate the valve.

With the above constructions depression of the treadle ring **21** by the user operates the treadle lever or levers **17** to put an upward pressure on the spring **58** and hence on the link **55**, which acting through the pin member **56** on the outer end of the actuator **50** swings this actuator to cause opening of the valve V.

Each treadle lever **17** and hence the treadle is normally urged to an inoperative position by a spring **64** interposed between the outer end portion of each lever **17** and the base of the leg **14**.

While I have referred to the fountains to which the invention may be applied as circular or semi-circular, it is to be understood that this is to include fountains of a shape approaching a circle or half circle such as octagonal and decagonal or semi-octagonal and semi-decagonal.

It will be noted that there is only a single link connection between the valve actuator and the treadle or treadles and that this link has a floating yielding or lost motion connection with the treadle or treadles through the spring **58** and that the plate **60** forms a suspended connection for all the treadle levers.

I desire it to be understood that this invention is not to be limited to any particular form or arrangement of parts except insofar as such limitations are included in the claims.

What I claim as my invention is:

1. In a washfountain having a water supply valve and a tiltable operating lever therefor, the combination of a foot rail, an intermediately pivoted treadle lever operatively connected at one end with said foot rail, a spring, a link having a direct thrust connection at one end with said tiltable lever and slidably guided at its other end relative to said treadle lever, a thrust transmitting connection between said treadle lever and one end of said spring, and a direct connection between the other end of said spring and said link spaced from the slidably guided end of said link.

2. In a washfountain having a water supply valve and a tiltable lever for operating said valve, the combination of a foot rail, a plurality of treadle levers operatively connected at their outer ends to said foot rail and pivotally supported intermediate their ends, a thrust transmitting means operatively connected to the inner ends of all the treadle levers for transmitting a thrust imposed upon it by any one of said levers, a member having a direct thrust connection with said tiltable lever and a free sliding connection with said thrust transmitting means, and a thrust transmitting spring interposed directly between a part of said member and said thrust transmitting means.

3. The structure as defined in claim 2 wherein the member is a rod having a lengthwise adjustable pivot connection with said tiltable lever.

4. The structure as defined in claim 2 wherein the thrust transmitting means operatively connected to the inner ends of all the treadle levers for transmitting a thrust imposed upon it by any one of said levers is a plate pivotally and slidably connected with the inner ends of said treadle levers.

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