2,892,467
SUMPLESS PUMP PLUMBING SYSTEMS

Sam Weisman and James A. Fine, Detroit, Mich., assigns to Flood Control Valve Company, Detroit, Mich., a corporation of Michigan

Original application September 1, 1955, Serial No. 532,036. Divided and this application October 8, 1956, Serial No. 614,533

3 Claims. (Cl. 137—394)

This application relates to plumbing systems and discloses particularly plumbing systems characterized by the incorporation of sumpless pump arrangements for pumping seepage out of seepage lines. This application is a division of our prior application Serial No. 532,036 of September 1, 1955 now abandoned.

There are presently on the market sump pump arrangements for the same general purpose characterized, among other things, by the provision of a sump or excavation or crock below the basement floor for collecting seepage which may then be pumped from such sump to any desired outletting or disposal line. Without going into detail as to the objections to a sump pump arrangement and particularly to the sump thereof, it will be pointed out that a principal object of the present invention is to eliminate the necessity for a sump. Instead the conventional riser extending from the trap in the seepage line to the basement floor is employed to replace the sump and there is no necessity thus in excavating for or providing a sump.

A better understanding of the invention will be obtained from the appended drawing in which:

The figure shows a sumpless pump installation of simple inexpensive form.

The figure shows a simple inexpensive sumpless pump installation for pumping seepage from seepage line 10 below basement floor 11 through trap 12 and riser 14 to a high level outlet such as a sanitary line or a high level sewer 15 or septic tank 16. A tube 18 is inserted into the riser 14 through its open upper end above floor 11 through a hole 19 in the cleanout opening cap 21 and is connected by line 20 to a pump P whose outlet connects by a line 22 to the high level line 15. A float 24 on tube 18 in riser 14 has an upwardly projecting link 26 passing through a hole of cap 21 whereby it may be connected to and actuates a switch 25 of an electrical circuit for motor M for pump P for automatic pumping of seepage in riser 14. This installation provides an inexpensive sumpless pump.

The operation is as follows. When the seepage in riser 14 reaches a predetermined level, it raises float 24 to actuate switch 25 and start motor M, whereupon pump P will draw the seepage up through inlet tube 18 and line 20 and discharge same to line 15.

We claim:

1. In a sumpless pump system, a basement floor, a seepage line below it and having a riser opening to the basement floor, said riser being of a size and type that is normally closed by a conventional cleanout cap, said riser having at its upper end an annular cap with a central hole, a disposal line considerably above the floor, a pump in the basement on or above the floor, an inlet line for said pump descending into said riser through the central hole of its cap, an outlet for said pump from the pump to the disposal line, and a float control circuit for said pump including a float in said riser responding to a rise in seepage in said riser for actuating said pump to pump out such rise of seepage into said disposal line.

2. A construction according to claim 1 wherein the pump is driven by a motor in the basement on or above the floor having a switch and the float in the riser is connected to said switch by a link in the riser passing upwardly to the switch through said cap.

3. For use with a basement having a floor, a seepage removal system comprising a horizontal pipe under said floor, a vertical pipe whose lower end is connected to said horizontal pipe, and whose upper end opens flush to an opening in said floor, with said floor opening and both of said pipes being approximately of the size of a conventional cleanout cap of approximately four inches in diameter, a cleanout cap closing and sealing said opening, said cap having a central opening, a pump and motor in said basement on or above said floor, said pump having an inlet connected to an inlet tube passing down into said vertical pipe through the cap opening, and thus substantially sealing said opening, a float switch for said motor, a float in said vertical pipe, a float link connecting said float in said vertical pipe with said switch for said motor and passing through said opening in said cap and thus substantially sealing it, said pump having an outlet connected to an outlet pipe, both being in said basement, and a discharge pipe above the level of the floor connected to said outlet pipe.

References Cited in the file of this patent

UNITED STATES PATENTS

757,169 Yeomans Apr. 12, 1914
2,431,640 Gordon Nov. 25, 1947
2,739,662 Sophia Mar. 27, 1956
2,747,678 Howe May 29, 1956

FOREIGN PATENTS

216,553 Germany Nov. 22, 1909