Dec. 16, 1930. J. L. OBERDORFER 1,785,557

SUMP PUMP

Filed April 4, 1928 4 Sheets-Sheet 1

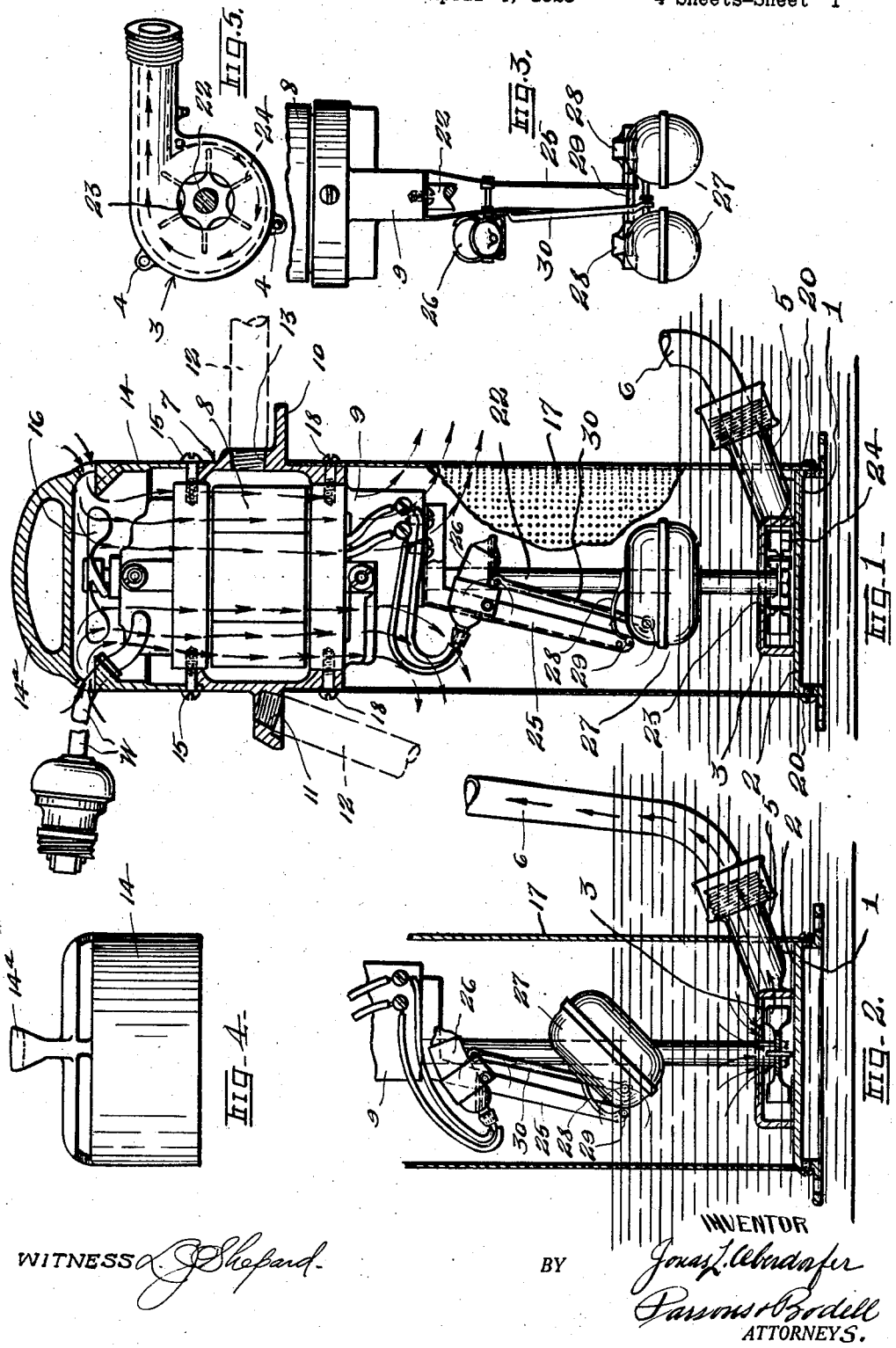


FIG. 5.

FIG. 3.

FIG. 1.

FIG. 2.

FIG. 4.

WITNESS J. J. Shepard.

BY Jonas L. Oberdorfer
Parsons & Bodell
ATTORNEYS.

INVENTOR

Dec. 16, 1930. J. L. OBERDORFER 1,785,557

SUMP PUMP

Filed April 4, 1928 4 Sheets-Sheet 2

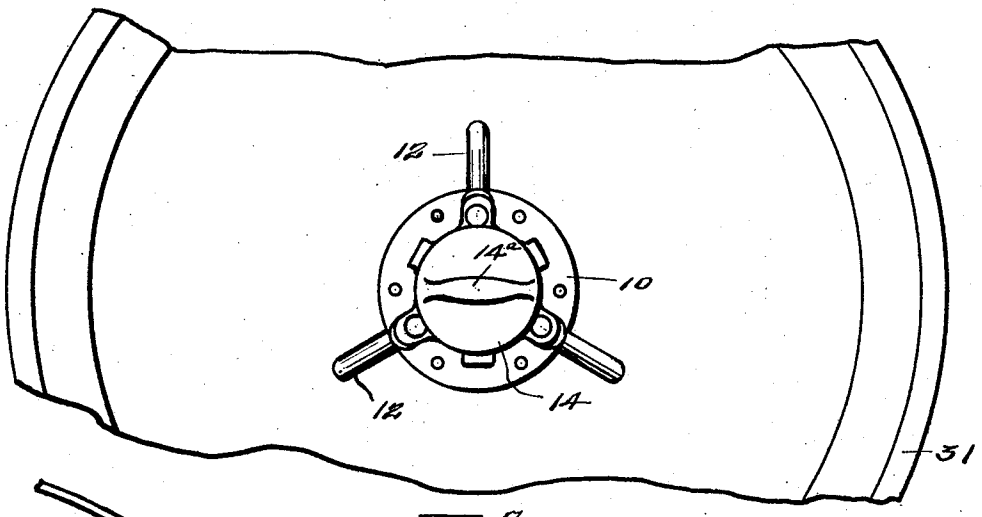


FIG. 7.

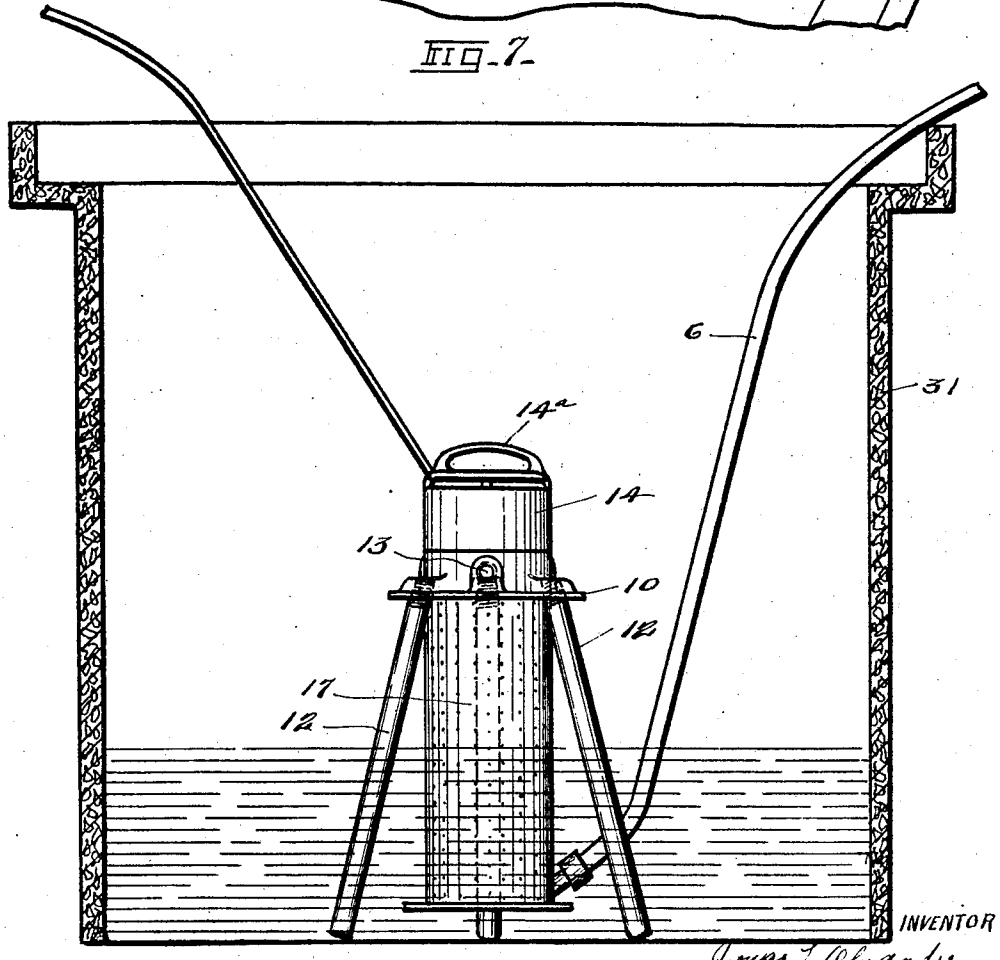


FIG. 6.

INVENTOR
James L. Oberdorfer
By Parmelee Bobbitt
ATTORNEYS.

Dec. 16, 1930. J. L. OBERDORFER 1,785,557

SUMP PUMP

Filed April 4, 1928 4 Sheets-Sheet 3

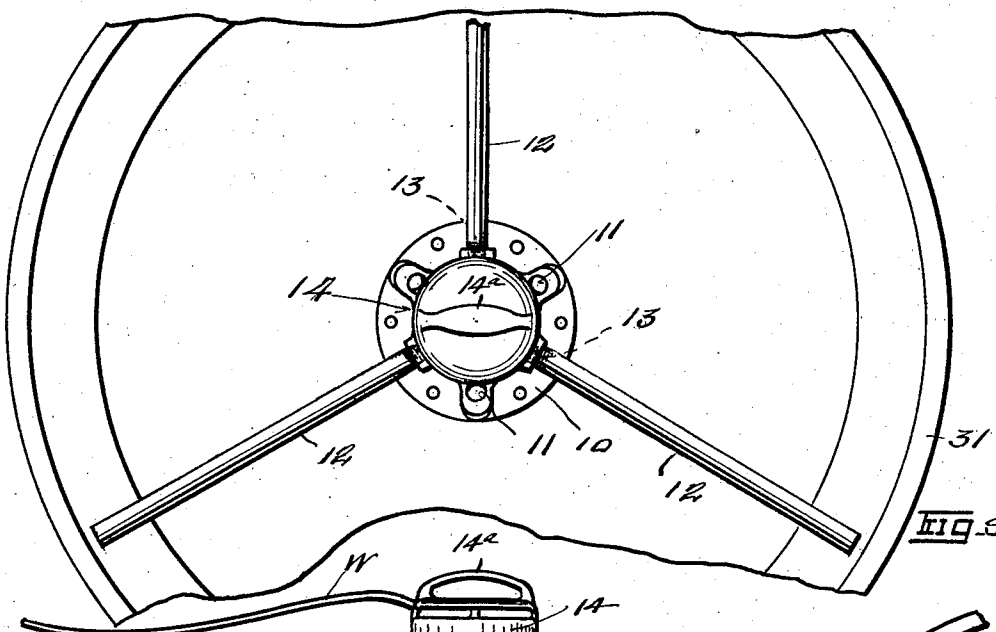


FIG. 9.

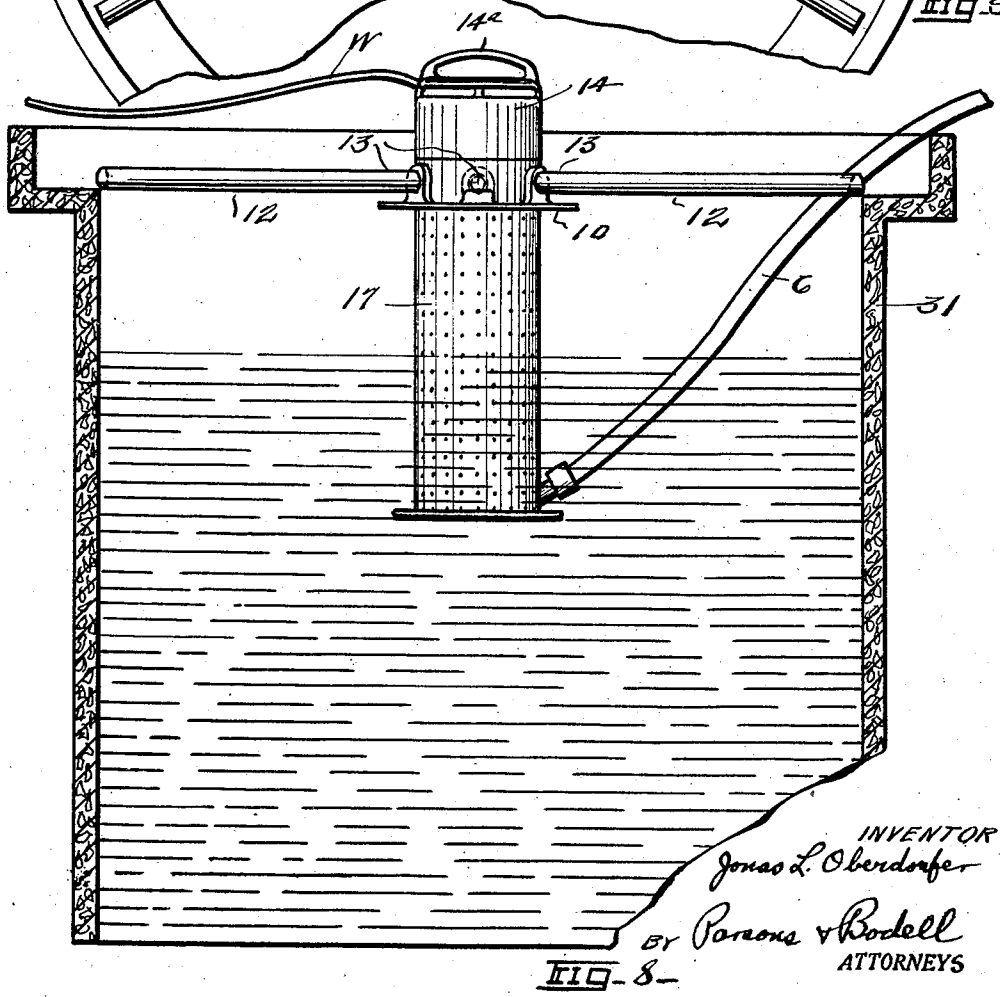


FIG. 8.

INVENTOR
Jonas L. Oberdorfer
BY Parsons & Bodell
ATTORNEYS

Dec. 16, 1930. J. L. OBERDORFER 1,785,557

SUMP PUMP

Filed April 4, 1928 4 Sheets-Sheet 4

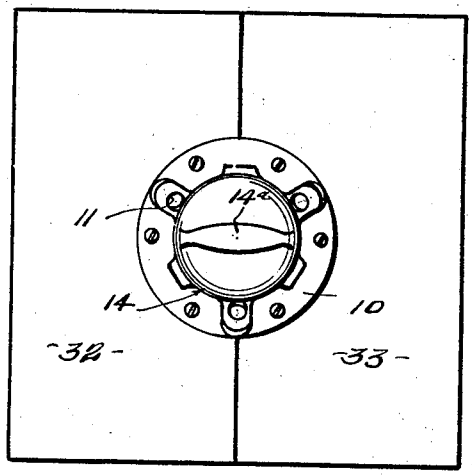


Fig. 11.

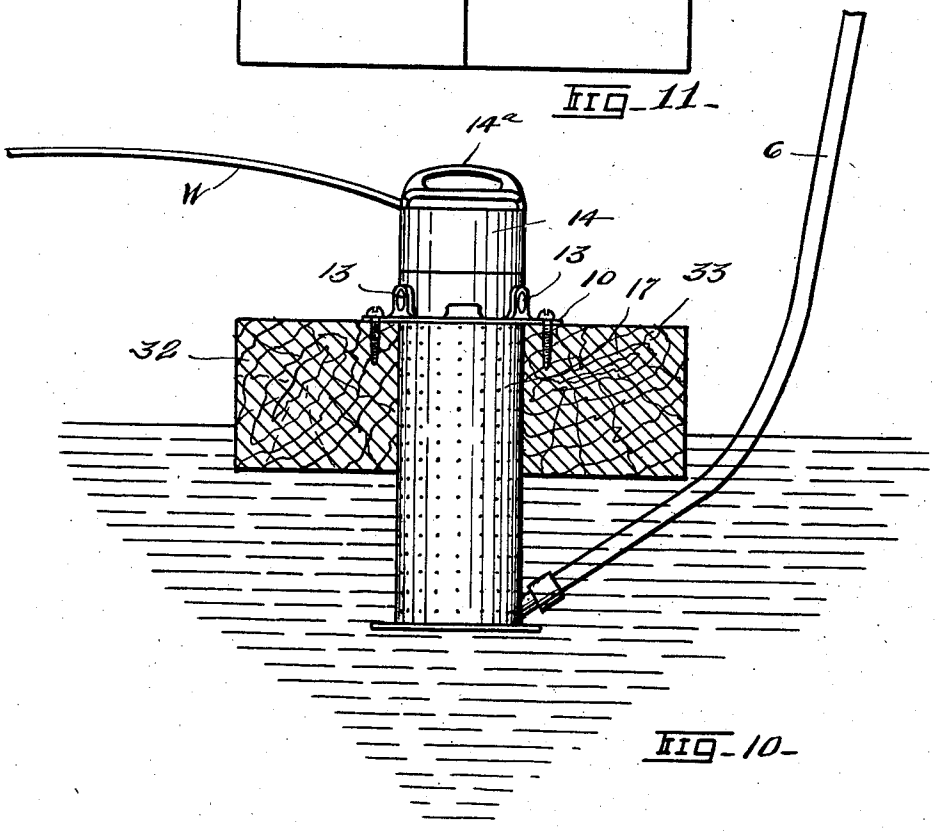


Fig. 10.

WITNESS L. J. Shepard.

INVENTOR.

BY Jonas L. Oberdorfer

Parrish & Bidell

ATTORNEYS

Patented Dec. 16, 1930 1,785,557

UNITED STATES PATENT OFFICE

JONAS L. OBERDORFER, OF SYRACUSE, NEW YORK, ASSIGNOR TO M. L. OBERDORFER BRASS COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK

SUMP PUMP

Application filed April 4, 1928. Serial No. 267,211.

This invention relates to sump and bilge pumps and has for its object, a pump unit which is particularly simple, compact and of light weight in construction and highly efficient and durable in use and has a particularly simple and efficient means for supporting the pump unit in any of the situations in which such pumps are used.

The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

Figure 1 is a vertical sectional view of this bilge pump, two of the positions of the supporting means being shown in dotted lines.

Figure 2 is a fragmentary elevation of the lower part of the pump shown in Figure 1, showing the position of the float and switch operated thereby at the beginning of the pumping operation.

Figure 3 is a detail fragmentary elevation of the float operated switch mechanism looking to the right in Figure 1.

Figure 4 is an elevation of the detached cap of the body.

Figure 5 is a plan view of the pump casing.

Figure 6 is an elevation of the pump showin one of the applications thereof to a sump formed by a tile.

Figure 7 is a fragmentary plan view of parts seen in Figure 6.

Figures 8 and 9 are views similar to Figures 6 and 7 showing the pump as supported in another manner.

Figures 10 and 11 are perspective elevations and plan views of the pump supported on a float, the float being shown in sections in Figure 10.

This pump comprises generally, a base, a pump casing mounted on the base, a body, an electric motor carried in vertical position within the body and having its shaft extending into the pump casing, an impeller mounted on the lower end of the shaft in the casing, a perforated cylindrical wall interposed between the base and the body, float operated switch mechanism depending from the body within the perforated wall, the body having a plurality of means for supporting the pump in different situations.

1 designates the base which may be of any suitable form, size and construction, it being formed with a cylindrical boss or projection 2 having a flat top.

3 is a pump casing mounted on the top of the base and the base closing the lower side of the pump casing.

The pump casing is secured to the base by fastening members extending through lugs 4 on the casing and into the base. The casing has a tangentially extending outlet 5 for connecting to an outlet hose 6.

7 designates the body in which the electric motor is mounted and 8 designates the field coils of the motor. The body is formed with a depending bracket 9 located beneath the field coils. The body is cylindrical in form and has a plurality of sets of means on its outer side for receiving members for supporting it. The body is here shown as formed with an external flange 10 formed with downwardly and outwardly inclined sockets 11 for receiving the upper ends of legs 12 which support, tripod fashion, the body on the bottom of the sump.

The body is also provided with radially extending sockets 13 for supporting the members 12 in horizontal position as shown in Figures 8 and 9. The body is provided with a suitable cap 14 secured thereto as by screws 15, this cap enclosing terminals of the motor to which the wires W are connected and also a suitable ventilating fan 16 mounted on the upper end of the motor shaft. The cover 14 is provided with a handle 14a on the top side thereof.

17 is a cylindrical perforated wall secured at its upper end as by screws 18 to the body 1 beneath the flange 10 and at its lower end to the base as by screws 20.

22 is the shaft of the motor or an extension thereof which extends down through the cylindrical wall 17 and through an opening 23 in the top of the pump housing 3.

24 is an impeller mounted on the lower end of the shaft within the housing.

This shaft 22 has its bearings in the body 1 and none in the pump casing.

25 is an arm depending from the bracket 9 of the body and supporting an oscillating float operated switch 26, the switch being of the mercury type.

27 are a pair of floats extending on opposite sides of the shaft 22 and having arms 28 mounted on a rock shaft 29 pivoted to the lower end of the arm 25, the float being connected by a link 30 to the oscillating mercury switch so that when the float is in its uppermost position shown in Figure 2, the current to the motor is closed through the mercury switch 26 and when the float moves into the position shown in Figure 1, the circuit through the motor is open.

In Figure 6, the arms 12 are shown as arranged in tripod fashion on the bottom of a sump formed by a tile 31.

In Figure 8, the pump is shown as supported in a similar sump by the arms 12 arranged in horizontal position so that their ends rest on the top of the wall of the sump or tile or on the bottom of the bell usually formed at one end of the tile.

In Figures 10 and 11, the body is shown as supported by means of its flange 10 on a float by means of screws extending through the flange into the float, this float being formed in two sections 32 and 33 with a cylindrical hole formed between the sections for receiving the pump body with the flange 10 overlying the upper face of said parts 32, 33.

Owing to the cylindrical construction of the pump unit, it is particularly small and compact and relatively light so that it can be easily carried and also owing to such construction, it can be readily applied to various forms of sumps or other receptacles from which water is to be pumped or to a float for the purpose of supplying water from a stream, large reservoir or other body of water.

What I claim is:

1. A sump pump comprising a base, a pump casing mounted on the base and having an outlet, a body, an electric motor mounted in the body and arranged in vertical position, the motor shaft extending into the pump housing and an impeller mounted on the lower end of the shaft within the pump casing, the casing having an inlet and a perforated wall secured at its upper end to the body and at its lower end to the base, the body having two sets of sockets arranged at different angles for receiving supporting arms, one set being arranged substantially radially whereby the arms extend horizontally and the other set being downwardly facing whereby the arms extend downwardly to serve as standards.

2. A sump pump comprising a base, a pump casing mounted on the base and having an outlet, a body arranged above and spaced apart from the base, an electric motor mounted in the body and arranged in vertical position, the motor shaft extending vertically into the pump casing, an impeller mounted on the lower end of the shaft within the pump casing, the pump casing having an inlet around the shaft, and a perforated enclosing wall between the base and the body and secured at its upper and lower ends respectively to the body and the base, a switch for controlling the actuation of the motor and float means within the cylindrical wall for controlling the operation of the switch.

In testimony whereof, I have hereunto signed my name, at Syracuse, in the county of Onondaga, and State of New York, this 27th day of March, 1928.

JONAS L. OBERDORFER.