

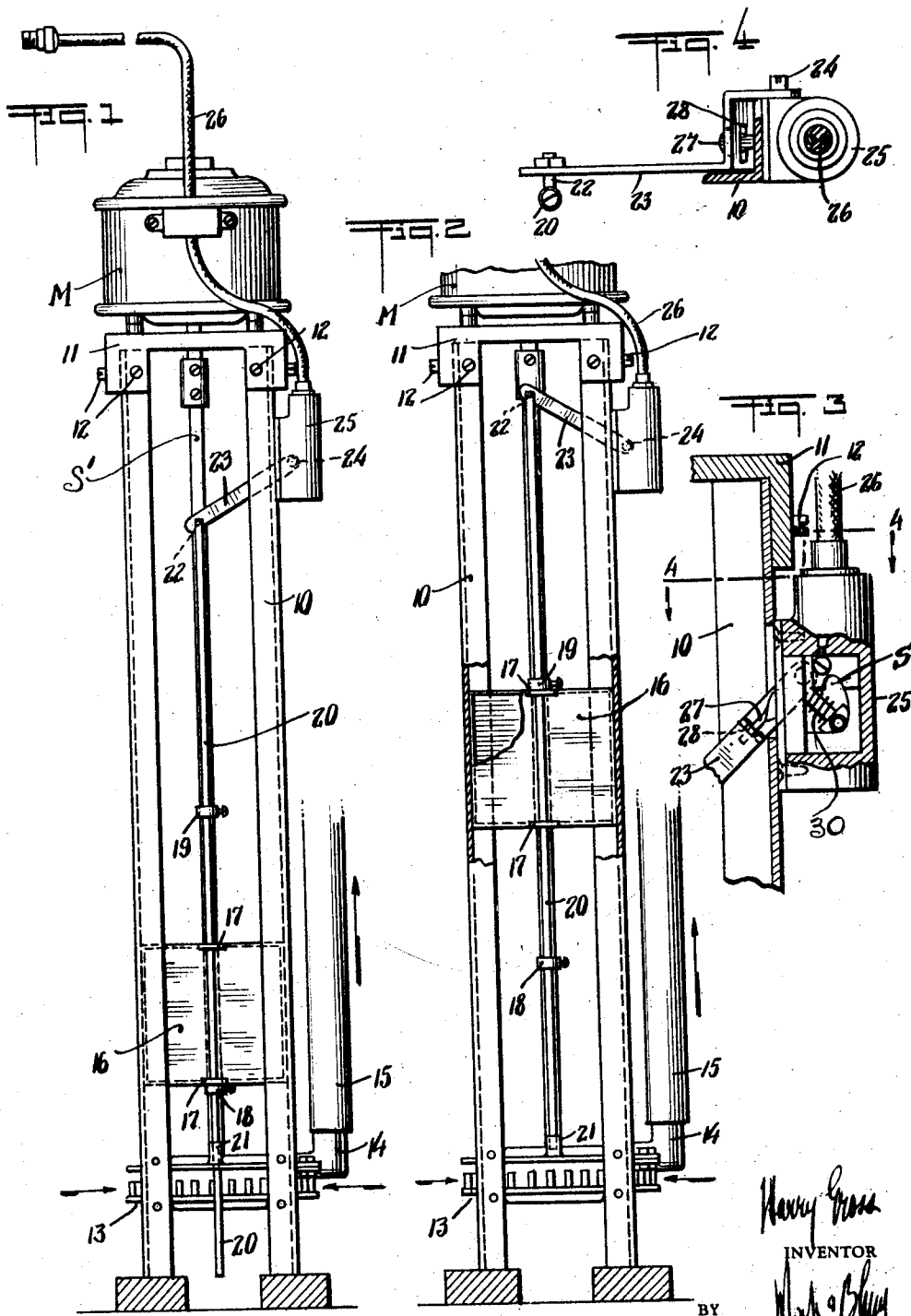
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CELLAR DRAINER

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CELLAR DRAINER.

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My invention relates to a new and improved form of pumping device for automatically pumping water out of cellars or the like when water enters the place which must be kept dry, or when the level of the water in said place exceeds a certain predetermined height.

One of the objects of my invention is to provide a device which shall be simple and automatic in operation.

Another object of my invention is to provide a device which will be of simple, efficient and compact construction.

Other objects of my invention will be set forth in the following description and drawings which illustrate a preferred embodiment thereof, it being understood that the above general statement of the objects of my invention is intended merely to generally explain the same and not to limit it in any manner.

Fig. 1 is a side elevation of the device embodying my invention.

Fig. 2 is a view similar to Fig. 1, certain of the parts being omitted. This figure shows the float in the upper position.

Fig. 3 is a detail view partially in section showing the switch for controlling the electric motor.

Fig. 4 is a sectional view on the line 4-4 of Fig. 3.

The device comprises a frame consisting of four uprights 10 made of angle irons or other suitable material. A centrifugal pump 13 is secured to the four frame members 10 adjacent the bottoms thereof. The four frame members 10 are connected at the tops thereof to a stand 11, by means of rivets or bolts 12. An electric motor M is mounted upon the stand 11 and this is provided with a power cable 26 of the ordinary type which is connected to the switch casing 25.

The vertical shaft S' of the motor M is directly connected to the rotor of the pump 13 which has lateral inlets into which the water flows, as indicated by the arrows at the bottoms of Figs. 1 and 2. The pump 13 is provided with an outlet 14 to which a hose 15 can be suitably connected.

A float 16 is provided with perforated lugs 17 which slidably guide the movements of the said float along a vertical switch rod 20. The float 16 is preferably box-like and it is slidably guided in its movement between the two adjacent angular uprights 10. The switch rod 20 is provided with a lower collar 18 adjustably secured thereto by a clamping screw, and it is also provided with an upper collar 19 also adjustably connected thereto by a clamping screw. The float 16 normally rests in the position shown in Fig. 1. However, the float 16 can be raised by water until its upper lug 17 presses upwardly upon the collar 19 so as to upwardly actuate the switch rod 20. The switch rod 20 is provided with the connecting member 22 by means of which it is pivotally connected to the switch lever 23 which is pivotally connected to the side of the switch casing 25 at 24. As shown more particularly in Figs. 3 and 4, the switch lever 23 has a laterally bent arm provided with a slot 28 into which the head 27 of the switch finger projects. The switch S is of the ordinary snap type. Hence, when the float 16 is moved into its upper position, the motor M is thrown into circuit and when the float 16 moves to its lower position (shown in Fig. 1) the supply of current to the motor M is cut off.

In order to pump out the water from a cellar or the like, it is merely necessary to place the device below the floor level of the said cellar. The water in the cellar moves the float 16 to the upper position shown in Fig. 2. The centrifugal pump is thereby thrown into operation because current is fed to the motor M and the switch of the motor M remains in the operative or circuit-closing position until the float 16 can bear upon the lower collar 18 with sufficient force to overcome the resistance of the spring 30 of the switch and thereby move the rod 20 into its lower position.

When this occurs the level of the water is only slightly above the level of the inlets of the pump 13.

The switch rod 20 passes through a guide 21 connected to the pump casing.

I have shown a preferred embodiment of my invention, but it is clear that numerous changes and omissions could be made without departing from its spirit.

I claim:—

1. A pumping device comprising a pump mounted in a frame, an electric motor connected to the said pump and adapted to operate the same, a snap switch having a spring and adapted to control the said motor, a switch rod connected to the said snap switch and adapted to operate the same, and a vertically movable float slidably with respect to said switch rod and adapted to operate the said switch rod at pre-determined points of the vertical movement of the said float, said

float being located in said frame and slidable therein.

2. A pumping device comprising a frame, a rotor pump connected to the said frame, an electric motor connected to the said frame and having a shaft which is connected to the rotor of the said pump, a switch for the said motor connected to said frame, said switch having a switch rod and a float connected to the said switch and adapted to operate the same, said float being slidable with respect to said switch rod.

3. A pumping device comprising a frame having a plurality of angle irons to which an electric motor is connected, a rotor pump connected to the said frame, the rotor of said pump being connected to said motor, a float located within said frame slidably mounted between said angle irons and guided in its movement by the faces of the said angle irons, a vertically movable switch rod having a pair of collars connected thereto, said collars being located one above the other, the said float having a pair of perforated extensions located intermediate the said collars, the said switch rod passing through the said perforated extensions, and a switch to which the

said switch rod is connected, the said switch being adapted to control the said electric motor.

4. A pumping device comprising a frame having a plurality of angle irons to which an electric motor is connected, a rotor pump connected to the said frame, the rotor of said pump being connected to said motor, a float located within said frame and slidably mounted between said angle irons and guided in its movement by the faces of the said angle irons, a vertically movable switch rod having a pair of collars connected thereto, said collars being located one above the other, the said float having a pair of perforated extensions located intermediate the said collars, the said switch rod passing through the said perforated extensions, and a switch to which the said switch rod is connected, the said switch being adapted to control the said electric motor, the shaft of the motor being substantially parallel to the central axis of the frame and the pump being substantially perpendicular to the said central axis.

In testimony whereof I affix my signature.

HARRY GROSS.