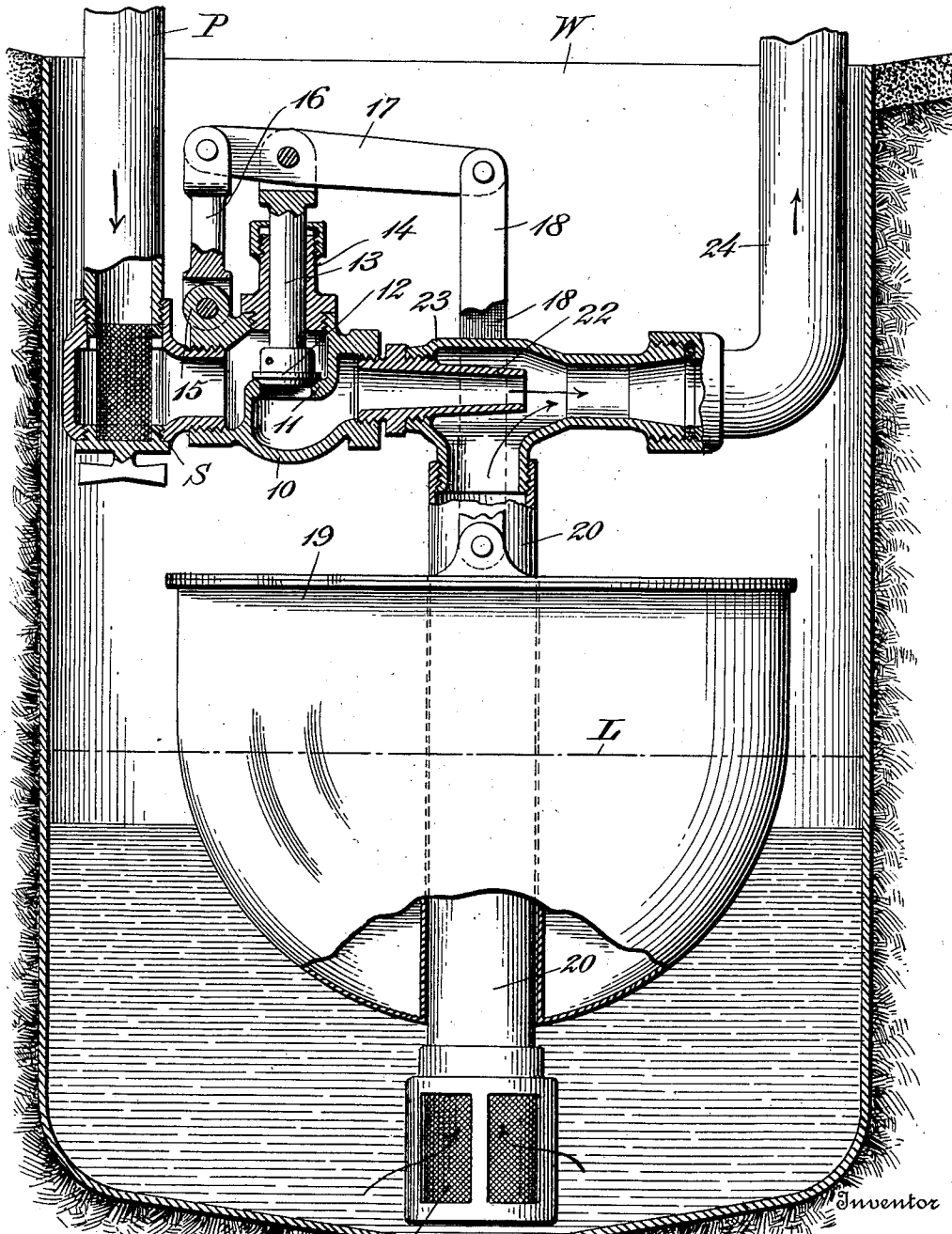


A. R. PRIBIL.
 AUTOMATIC CELLAR DRAINER.
 APPLICATION FILED SEPT. 13, 1911.

1,063,468.

Patented June 3, 1913.



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UNITED STATES PATENT OFFICE.

ALEXIS R. PRIBIL, OF DETROIT, MICHIGAN, ASSIGNOR TO PENBERTHY INJECTOR CO.,
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AUTOMATIC CELLAR-DRAINER.

1,063,468.

Specification of Letters Patent.

Patented June 3, 1913.

Application filed September 13, 1911. Serial No. 649,141.

To all whom it may concern:

Be it known that I, ALEXIS R. PRIBIL, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Automatic Cellar-Drainers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to automatic draining devices, and it has for one of its objects the provision of a float-operated ejector-mechanism which will become operative under a full head of water pressure irrespective of how slow the water level rises in the cellar or in a special well therein.

The invention has, furthermore, for its object the provision of an improved fluid-controlling device which may be varied or changed in accordance with different water-pressures prevailing in different localities and is proof against tampering or accidental disarrangement.

Further objects of the invention will hereinafter appear and be defined in the claims.

The invention has been clearly illustrated in the accompanying drawing which represents in vertical cross-section a cellar-drain-well equipped with my improved device which is primarily intended for discharging the drainage of cellars or sub-basements the floors of which are below the level of the sewers, so that consequently force must be applied to extract the cellar-water, in contradistinction to systems in the water drains gravitatively.

In the drawing the well or basin W is sunk below the floor of the cellar which is to be drained, and a high-pressure water service-pipe P enters the well and has at its lower end a strained-casing S connected with a valve casing 10 provided with a seat 11 the aperture of which is adapted to be opened or closed by a superposed valve-disk 12. The organization of the valve is such that the water pressure tends to close the valve-disk, and the latter has a stem 13 guided in a packed sleeve 14 which is removable from the casing so that a smaller or larger stem may be substituted for the one in use, according to the effective top-pressure which it is desired to obtain against the upper area of the disk 12. An ear 15 on the valve casing pivotally carries one end of a link 16 the upper end of which is articu-

lated to a lever 17 pivoted to the valve stem and having its free end connected (by links 18) with a float 19 which is guided for free vertical movement on a pipe 20. This pipe constitutes a suction pipe which has a strainer 21 at its lower end and through which the well-water may be drawn upward by a stream issuing through an ejector-nozzle 22 when the valve disk 12 is opened.

In the preferred construction shown, the ejector-nozzle is screwed into a casing 23 having its discharge-end connected with a waste pipe 24, which leads to a sewer or other convenient discharge-conduit.

The operation is as follows: As the water rises in the well, it will have a tendency normally to raise the float at the level shown. However, inasmuch as high-pressure water is holding the valve disk closed, the float cannot at first rise with the well water until the latter has attained a level substantially as indicated by dot-and-dash line L, at which time the buoyancy of the float is sufficient to equalize or overbalance to some extent the downward pressure of the service-water on the valve disk. The result will be that the latter will then be raised from its seat, thereby relieving the high pressure above the valve disk and thus removing all obstruction to the float assuming its normal position relatively to the level of the water in the well. This means that the float will jump suddenly upward and therefore quickly throw the valve wide open thereby allowing a full stream of high pressure water to pass through the ejector nozzle and thus begin to draw-up the well water through the suction pipe and discharge the same through the discharge pipe. As the well-water level falls, so will the float descend until the high pressure again becomes effective on the top-surface of the valve disk and quickly close the same.

As will be readily understood, the location of the float 19 on the pipe 20 below the plane of the injector nozzle 22, causes the inlet end of the discharge element (the pipe 20, casing 23, and pipe 24 constituting such element) to act as a guide for the movements of the float to prevent placing any lateral strains on the valve or its stem; furthermore, this particular location of the float enables the device to be installed in a well of comparatively small area in horizontal section, the well being of a size sufficient to

receive the necessary parts in compact form and at the same time permit of the use of a float of considerable size. It should also be noted that substantially all of the operating parts (excepting the float itself) are positioned entirely above the water level so that rusting, etc., of these parts is practically eliminated, since no actual contact of drainage fluid and parts is had.

Any leakage around the valve disk and its seat, as well as at the other connections will gravitate in the well and form a part of the liquid to be automatically ejected therefrom by the operation of the float.

I claim:—

1. In a device of the character described and in combination, a fluid-pressure supply, a waste discharge element having a permanently open inlet, injecting means adapted to be operated by such supply and extending into said discharge element above its inlet end, and means for controlling the passage of the supply to the injecting means, said controlling means including a float carried by and movable longitudinally of said element below the plane of the injecting means, said element acting as a guide for the float.

2. In a device of the character described and in combination, a waste discharge ele-

ment having its inlet end adapted to extend into a collecting basin, said element including a pipe leading upwardly from the inlet end, waste fluid ejecting mechanism, and means for controlling said mechanism, said means including a float movable longitudinally of and guided by said pipe, said mechanism being operative in said element above the float, the movements of the float controlling the operation of the mechanism.

3. In a device of the character described and in combination, a fluid-pressure supply, a waste discharge element, an injector nozzle extending into the discharge element at a point above and removed from its inlet end, a valve between said supply and nozzle, a float movable longitudinally of and guided by said element below the plane of the nozzle, and connections between said float and the valve to cause the upward movement of the float to open the valve when the flotation pressure reaches the pressure of the supply on the valve.

In testimony whereof I affix my signature in presence of two witnesses.

ALEXIS R. PRIBIL.

Witnesses:

F. E. ERNST,

G. E. McGRANN.