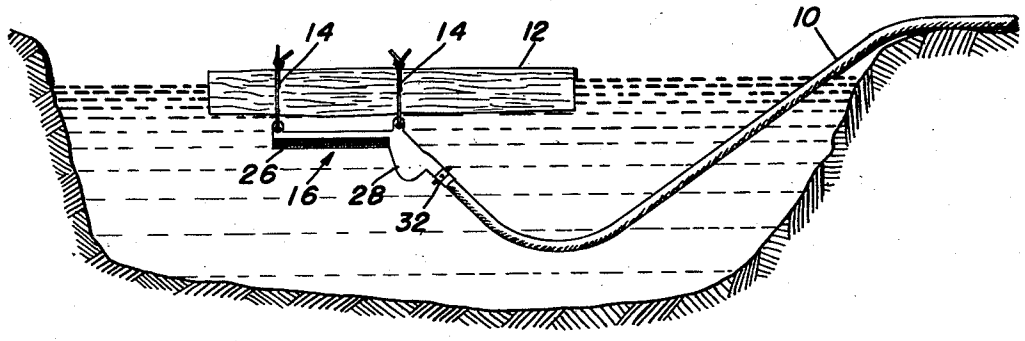
May 20, 1952 L. L. HINK 2,597,728

SUCTION SCREEN AND FOOT VALVE

Filed July 5, 1950

Fig. 1



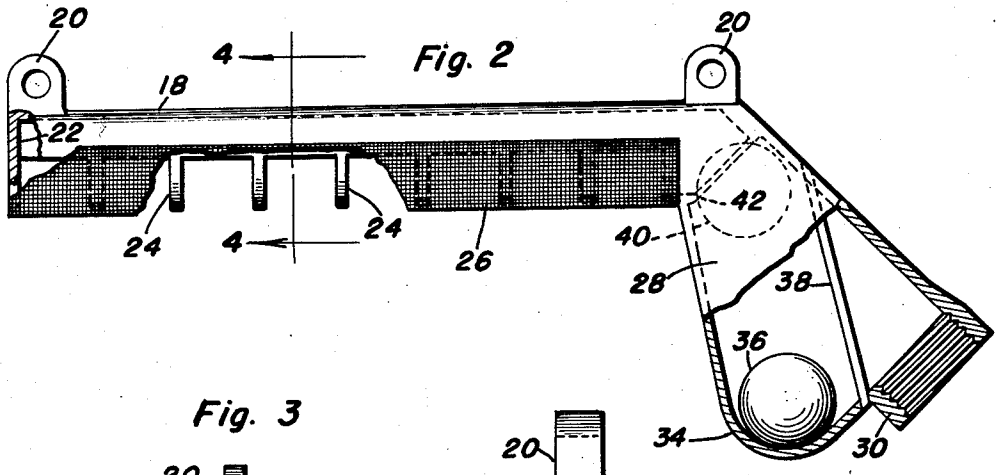
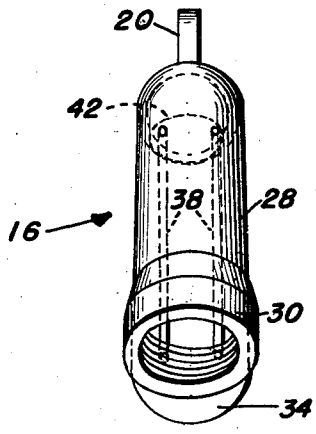


Fig. 2

Fig. 3



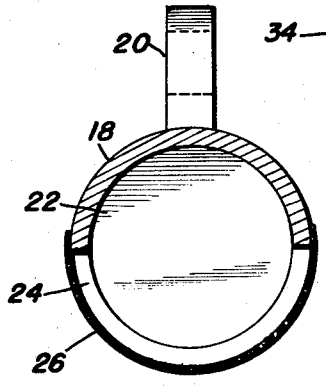


Fig. 4

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SUCTION SCREEN AND FOOT VALVE

Lester L. Hink, Grand Rapids, Minn.

Application July 5, 1950, Serial No. 172,169

1 Claim. (Cl. 210—97)

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This invention relates to a screened and valved inlet for fire hoses and the like, and the primary object of the invention is to provide such an inlet for use with a float, so that power pumps may be used to draw in reasonably clean water from sources of water such as ponds and rivers, when this inlet is secured to one end of the hose and the other end of the hose is connected to the pump.

Another object of this invention is to provide a device of this character which can be used with many different types of floats or even with a log or a piece of timber.

Yet another object of this invention is to provide a device of the character mentioned which can be used with reasonable assurance that the prime of the pumps employed therewith will not be lost during the operation of the device.

Yet another object of this invention is to provide a protected and valved inlet for fire hoses and the like, which is not unduly massive and is reasonably sturdy and completely reliable due to its simplicity.

A last object to be mentioned specifically is to provide a device of the character mentioned above which is relatively inexpensive and practicable to manufacture, which is simple, safe and convenient to use, and which will give generally efficient and durable service.

With these objects definitely in view, this invention resides in certain novel features of construction, combination and arrangement of elements and portions as will be hereinafter described in detail in the specification, particularly pointed out in the appended claims and illustrated in the accompanying drawings which form a material part of this application, and in which:

Figure 1 is a side elevational view of the device, operatively mounted upon a log and connected with a fire hose;

Figure 2 is a longitudinal vertical sectional view of the invention;

Figure 3 is an end elevational view of the invention, as viewed from the right hand end of Figure 2; and

Figure 4 is a vertical transverse sectional view taken substantially upon the line 4—4 in Figure 2.

Similar characters of reference designate similar or identical elements and portions throughout the specification and throughout the different views in the drawing.

Referring now to the drawing in detail, this invention is adapted to be used with an environment including a fire hose 10, or like conduit, a

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float 12 which is represented as a log, and elongated fastening elements such as wire, ropes or chains, indicated at 14, will be used to secure the device upon the underside of the float 12.

The device includes an assembly generally indicated at 16, comprised of a casing 18 which is hollow and elongated and, in the embodiment illustrated, generally semi-cylindrical in shape throughout the main body portion of the casing. A pair of apertured ears 20, ordinarily integral with the casing 18, are disposed one at each end of the casing 18 and on the top thereof, to receive the fastening elements 14. One end of the casing 18 is closed by an end wall 22, and a plurality of longitudinally spaced parallel semi-circular ribs 24 are provided on the underside of the casing, it being understood that the casing is open bottomed, except for these ribs and the screen 26. The ribs support the screen 26 and the longitudinal edges thereof are rigidly secured by welding or otherwise to the side of the casing 18, so that the screened open bottom of the casing comprises an inlet for the device.

A downwardly inclined extension of the casing, comprising an outlet for the casing, is provided at 28, this extension or outlet having an internally threaded port 30 to receive the end 32 of the fire hose 10. This extension or outlet includes a laterally offset pocket 34 which receives a ball valve of a specific gravity less than unity and indicated at 36. The side of the outlet 28 leading toward said pocket 34 and a pair of rods 38 extending parallel to said side and terminally secured to the outlet together comprise a runway for the ball valve 36. The said runway extends at an acute angle to a line drawn from the port 30 to a valve seat 42 at the upper end of the extension or outlet 28. In the preferred form illustrated, the runway defined by the rods 38 and side of the extension or outlet 23 parallel to these rods will be seen to be inclined downwardly from the said line drawn from the port 30 to the valve seat 42. Therefore, when water is drawn through the valve seat 42 into the port 30, the ball valve 36 tends to move from the position thereof indicated in dash lines at 40 to the position of the ball shown in full lines at the bottom of the runway. Since the ball valve 36 is lighter than water, the moment that the water ceases to flow downwardly through the outlet or extension 28, the ball valve 36 will rise into the dash line position thereof at 40 and close the valve seat 42, preventing backflow of water and preventing loss of prime in any pump connected to the hose 10.

The operation of this invention has already

been fully described during the description of the mechanical details of this invention, and the operation will be clearly understood without further particularization. It will be clear that all the objects recited above are amply achieved by this invention. Obviously, considerable variation from the form of this invention illustrated in the drawings and described above may be made, all within the scope of the invention.

Having described the invention, what is claimed as new is:

In a device of the class described, an elongated, substantially semi-cylindrical casing closed at one end, means for suspending the casing horizontally in a body of water, said casing having a plurality of screened inlet openings in its lower portion, an outwardly and downwardly inclined outlet on the other end of the casing for connection to a conduit, a valve seat in the upper portion of the outlet, an integral valve chamber extending laterally and downwardly from the lower side of the outlet and communicating therewith, a buoyant ball valve operable in the chamber and engageable with the seat for preventing back flow of water into the casing, and a plurality of spaced, parallel rods in the outlet for confining the valve to the chamber and for directing said valve toward the seat.

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