

[54] ANTI-SIPHON VALVE FOR SWIMMING
POOL LINT POT

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[51] Int. Cl.² E04H 3/20[58] Field of Search 210/117, 169, 232, 234,
210/235, 240

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[57] ABSTRACT

A lint pot for an above-ground swimming pool has a flap valve on the inlet to the housing, the flap valve being closed by a flow of water from the pool into the lint pot. When the removable top to the lint pot is in place, a portion of the top engages a projecting stop on the flap valve to hold the valve in an open position. When the top is removed, water siphoned out of the pool flowing towards the pot causes the flap valve to close.

4 Claims, 3 Drawing Figures

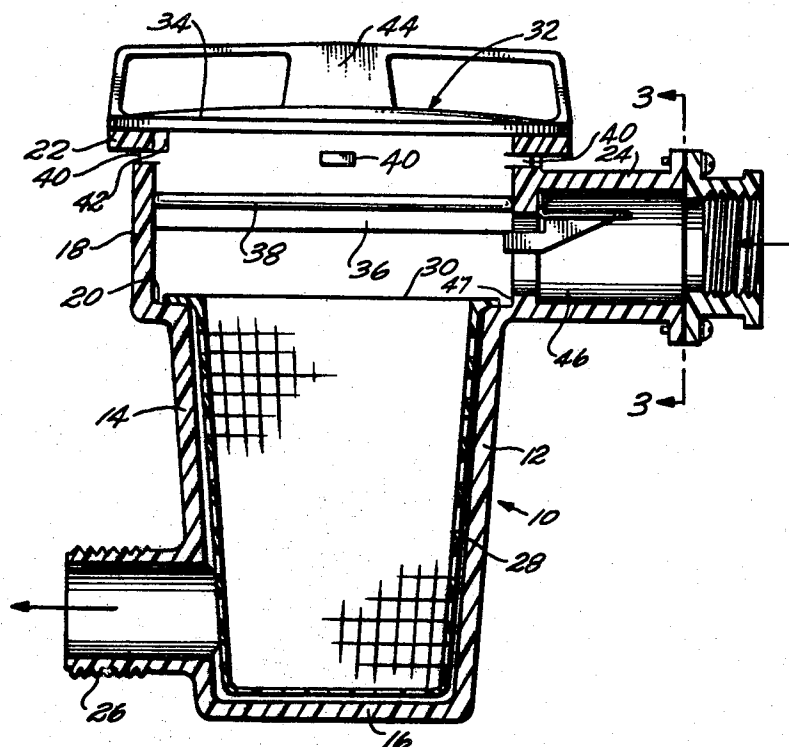


Fig. 1

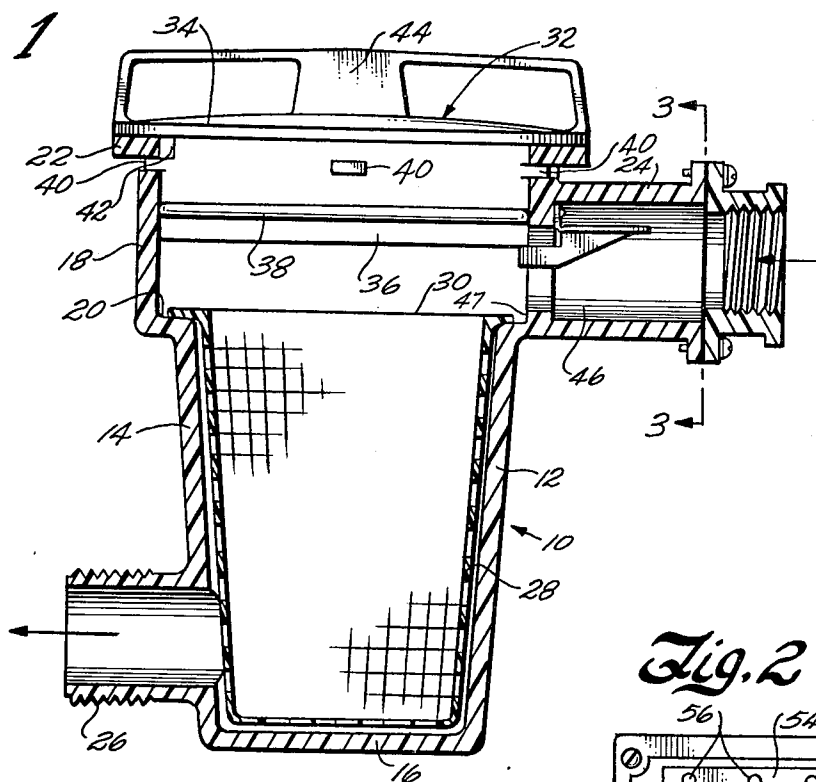


Fig. 2

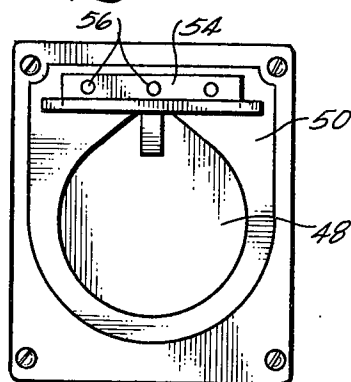
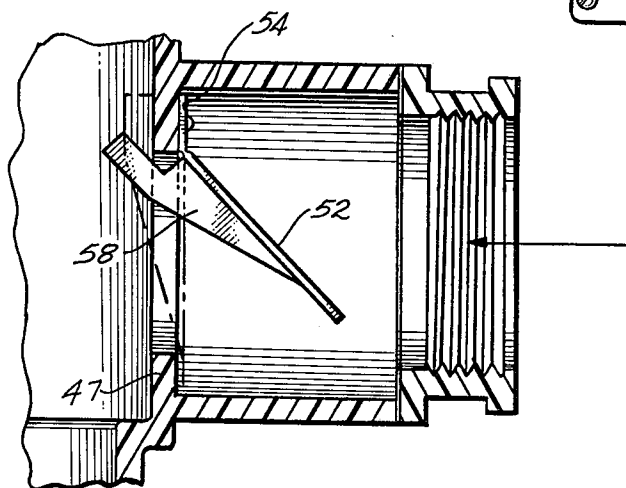


Fig. 3



ANTI-SIPHON VALVE FOR SWIMMING POOL LINT POT

FIELD OF THE INVENTION

This invention relates to swimming pool filtering systems, and more particularly, is concerned with an anti-siphon valve for the lint pot of a filtering system.

BACKGROUND OF THE INVENTION

In conventional pool filtering systems, water is withdrawn through the filtering system by a pump which forces the water through a suitable filter and returns it to the pool, the filter removing solid particles which accumulate in the pool water. Generally a lint and hair pot is connected on the inlet side of the pump, the pot having a removable strainer which catches hair, lint, leaves, and other larger debris which is present in the water from the pool. In many installations, particularly in the case of above-ground swimming pools, the level of water in the swimming pool is higher than the lint pot. However, when the lid of the lint pot is removed to clean the strainer, water flows either directly or by siphoning action from the pool out the open top of the lint pot. In the past, either a shut-off valve has been provided in the line going into the lint pot or the user is instructed to plug the line before opening the lint pot to prevent the water from escaping.

SUMMARY OF THE INVENTION

The present invention is directed to an arrangement in which a flap-type valve is inserted in the inlet to the lint pot. When the top of the lint pot is in place, the flap valve is held in the open position by a stop member attached to the valve which engages the removable top of the lint pot. When the top is removed for cleaning, the flow of water toward the lint pot causes the flap valve to move to a closed position to seal off the flow of water into the lint pot from the pool.

BRIEF DESCRIPTION OF THE DRAWING

For a more complete understanding of the invention, reference should be made to the accompanying drawing, wherein:

FIG. 1 is a cross-sectional view of the lint pot;

FIG. 2 is a fragmentary view of the flap valve with the lint pot top removed; and

FIG. 3 is a sectional view taken on the line 3—3 of FIG. 1.

DETAILED DESCRIPTION

Referring to the drawing in detail, the number 10 indicates generally a lint pot which preferably is molded of a plastic material, but which may be of cast metal construction if desired. The lint pot includes a housing 12 which is circular in cross-section. The housing includes a lower portion 14 which is tapered slightly toward the bottom and terminates in bottom wall 16. The top of the lower portion 14 joins an upper portion 18 of slightly larger diameter to form an internal shoulder 20. The upper end of the upper portion 18 has a circular opening formed by an annular rim 22 for receiving a removable top 32.

Attached to the upper portion 18 on one side is an inlet pipe connection 24. The lower portion 14 of the housing 12 includes an integrally molded outlet pipe connection 26 adjacent the bottom 16. A strainer basket 28 fits inside the lower portion 14 of the housing

12. The strainer basket includes a rim 30 around the top of the basket which engages the shoulder 20. The water entering through the inlet 24 passes downwardly through the strainer to the outlet in conventional manner.

The removable top has a cover portion or lid 34 adapted to rest on top of the rim 22 of the housing 12 when the top is in position. The top 32 has a cylindrical sleeve portion 36 of slightly smaller diameter than the inside of the upper portion 18 of the housing 12. The sleeve portion 36 projects below the lid 34 so that it extends into the housing 12 when the top 32 is in position. The sleeve portion 36 has an annular groove around the outer periphery for receiving an O-ring sealing element 38. The O-ring 38 presses against the inner wall of the housing 12 when the top is in closed position. The top is preferably locked in position by a conventional bayonet lock arrangement. Thus lugs 40, projecting from the sleeve 36 below the cover 34, are inserted through notches 42 and then, with rotation of the top 32 by a handle 44, lock under the rim 22.

According to the present invention, the housing has an inlet chamber 46. The chamber 46 is separated from the interior of the housing 12 by a divider wall 47 through which a pear-shaped opening 48 is formed to connect the inlet chamber 46 with the interior of the upper portion of the housing 12. Within the chamber 46, the divider wall 47 forms a flat surface 50 surrounding the margin of the hole 48. A flap valve member 52 has an integrally molded hinge portion 54 which is secured to the surface 50 immediately above the opening 48. The hinge portion 54 of the flap valve may be secured to the wall 47 by suitable pins 56. The material from which the flap valve is molded is sufficiently resilient in very thin cross-section to permit the flap valve to bend easily about the hinge portion 54.

With the top 32 of the lint pot removed, the flap valve 52 assumes the position shown in FIG. 2. If any water tends to flow into the inlet to the pot from the pool, it presses the flap valve 52 down against the seating surface 50, holding the flap valve shut, indicated by the dotted position in FIG. 2, thus blocking flow of water from the pool into the open lint pot. However, when the top 32 is in the closed position shown in FIG. 1, an integrally molded stop member 58 projecting from the inner face of the flap valve 52 extends through the opening 48 where it comes into engagement with the sleeve 36. This forces the flap 52 to swing to the fully open position and prevents the flap valve 52 from closing as long as the top 32 is closed at the top of the lint pot 10.

From the above description it will be appreciated that a lint pot is provided in which removal of the top of the lint pot to remove and clean the strainer permits the inlet to the lint pot to automatically close, preventing any flow of water into the open lint pot from the pool.

What is claimed is:

1. A lint pot for an above-ground swimming pool or the like, comprising a housing open at the top, a removable lid engaging the top of the housing, a porous strainer basket positioned inside the housing, releasable means for locking the lid to the housing to close and seal the top, the housing having an inlet portion extending from the side of the housing adjacent to the top, the inlet portion having an inlet hole opening into the interior of the housing for admitting water, the

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housing having an outlet portion adjacent the bottom of the basket, water passing from the inlet to the outlet through the strainer basket, a flap valve member positioned on the outside of the opening, means hingedly supporting the flap valve member in position to close said inlet hole, water flowing into the housing urging the hinged flap valve member toward the closed position, and valve opening means connected to the flap valve member and movable therewith, said valve opening means coming into engagement with the lid when the lid is moved to the locked position, said valve opening means holding the flap valve member away from the inlet hole when the lid is in the locked position.

2. Apparatus of claim 1 wherein said last-named

means includes a stop member attached to the flap valve member, the stop member projecting through said hole into the interior of the housing, the lid engaging the stop member and moving the flap valve when the lid is moved to the closed position.

3. Apparatus of claim 2 wherein said lid includes means extending into the housing when the lid is in locked position and engaging the stop member.

4. Apparatus of claim 3 wherein said means extending into the housing includes a sleeve extending around the inside perimeter of the housing and terminating adjacent the upper edge of the inlet hole.

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