Feb. 22, 1966 W. E. BARNES 3,235,885

MEANS FOR SKIMMING DEBRIS FROM THE SURFACE OF SWIMMING POOLS

Filed Sept. 3, 1963 2 Sheets-Sheet 1

Fig. 1

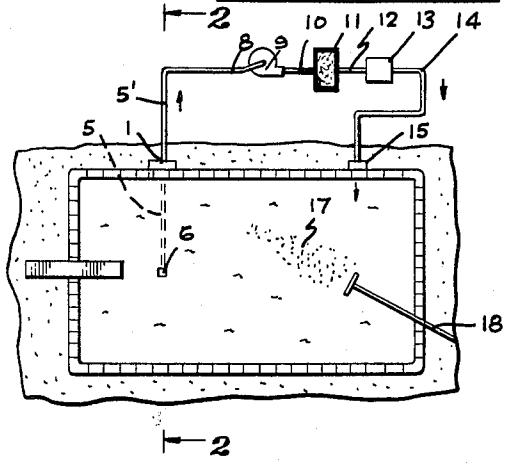


Fig. 2

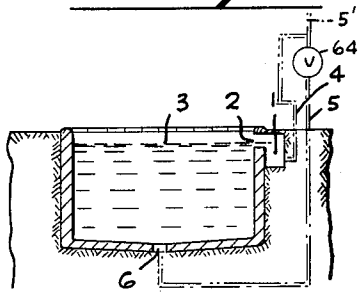


Fig. 3

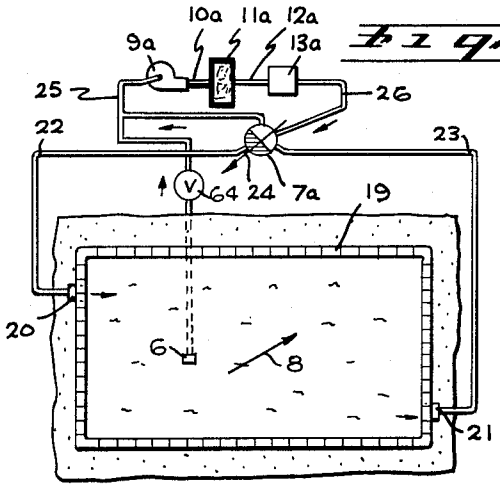


Fig. 4

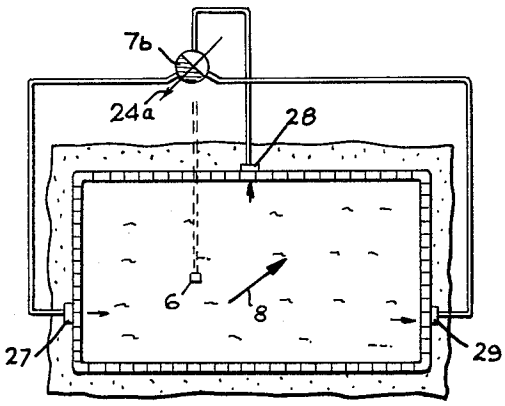


Fig. 5

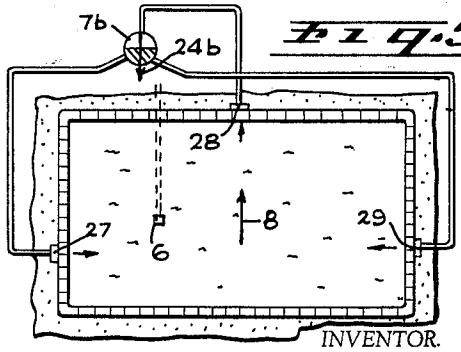
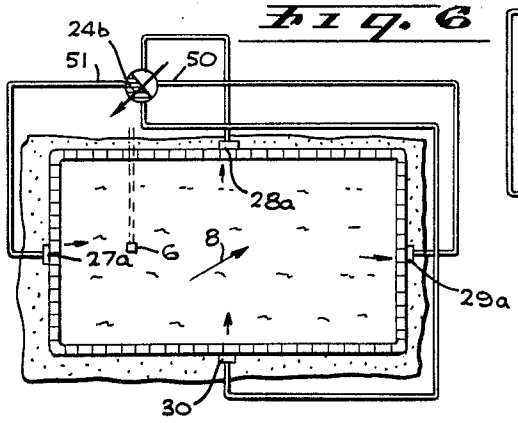


Fig. 6



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MEANS FOR SKIMMING DEBRIS FROM THE SURFACE OF SWIMMING POOLS

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Fig. 1

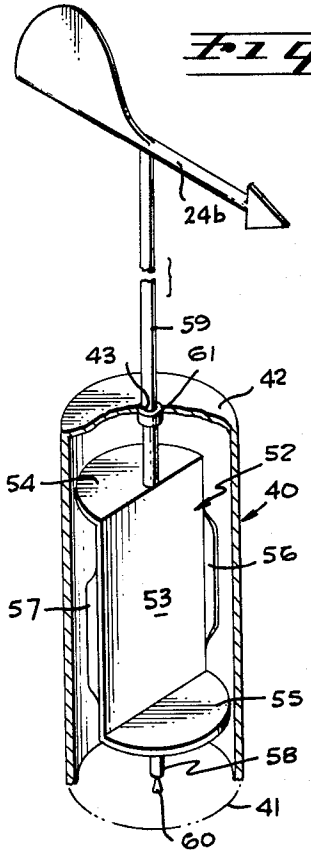


Fig. 8

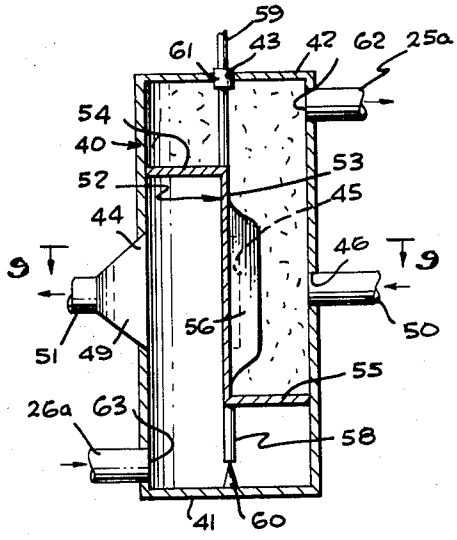


Fig. 9

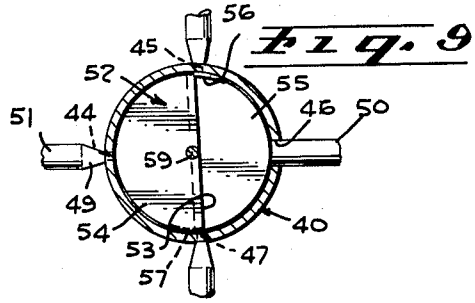


Fig. 11

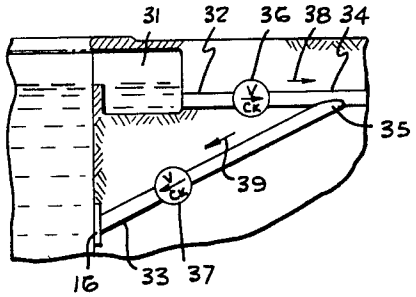
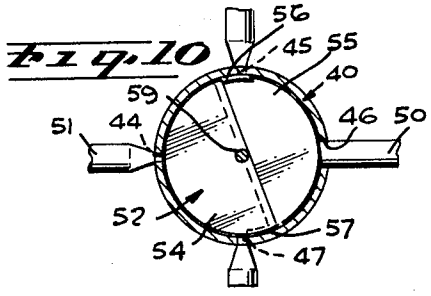


Fig. 10



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3,235,885

MEANS FOR SKIMMING DEBRIS FROM THE SURFACE OF SWIMMING POOLS

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Filed Sept. 3, 1963, Ser. No. 305,962
9 Claims. (Cl. 4—172)

The invention described herein pertains to a system for skimming floating material from the surface of the water in swimming pools and in particular to a system of this type having a plurality of skimmer outlets that are selectively operable in accordance with the direction of the prevailing wind.

Most modern swimming pools are provided with a so-called "skimmer," which is an outlet on the side of the pool extending somewhat above and below the surface of the water so that any leaves, scum, or other debris on the surface of the water adjacent to such outlet may be drawn therein by means of a pump that sucks such surface water to the filter. Such skimmers are very ineffective in and of themselves for the reason that the aforementioned debris always drifts to the lee side of the pool. If the skimmer does not happen to be on the lee side, the debris must be pushed or scraped toward the skimmer in order to be entrained with the outgoing water. This requires the frequent attention of an attendant. If the debris on the surface of the pool is not skimmed shortly after it appears, it tends to collect and to form larger particles that are heavy enough to sink to the bottom of the pool. A large part of the debris and dirt at the bottom of a pool accumulates in this way. If the pool is kept skimmed, it is seldom if ever necessary to clean out the bottom of the pool.

One of the objects of the present invention is to provide automatic means for skimming the pool as fast as the debris appears.

Another object is to provide two or more skimmer outlets spaced around the pool so that at least one such outlet will be near the lee side of the pool where the surface current caused by the prevailing breezes will carry the surface debris.

A further object is the provision of means controlled by the prevailing breezes for making the skimmers selectively operable in accordance with the direction of the prevailing winds.

An additional object is to provide as many as three, four, or more skimmer outlets so that one or more of them will be sufficiently near the leeward portion of the pool to be effective in quickly sucking off the surface debris.

Still another object is to provide a valve having a plurality of ports each individual to one of the aforementioned skimmer outlets and to connect each of these ports by means of a pipe to its associated skimmer at the edge of the pool, and to use these same pipes or conduits for the return of the filtered water, heated or otherwise, to the pool itself.

A further object of the present invention is the provision of water inlets each located below or adjacent to one of the skimmers and so associated therewith that it may return filtered water to the pool through a part of the same piping used to remove skimmed surface water from the pool.

Yet another object is the provision of suitable valves that will prevent the filtered water from returning through the skimmer openings if the pool is equipped with independent inlet ports for the filtered water.

A further object of my invention is to provide a special valve having a plurality of ports therein each individual to one of said skimmer outlets and its associated inlet.

Another object is to provide a valve of the type described that will direct the incoming water to the filter and the water from the filter back through the ports in the valve to the filtered water inlets on the windward side of the pool.

Still another object is to provide a design for a valve of the type described that is inexpensive to build and so easy to operate that it may be controlled and powered by means of a weather or wind vane.

This invention possesses many other advantages and has other objectives which may be made more clearly apparent from a consideration of several embodiments of the invention. For this purpose there is shown a few forms in the drawings accompanying and forming a part of the present specification. These forms or embodiments will now be described in detail, illustrating the general principles of the invention; but it is to be understood that this detailed description is not to be taken in a limiting sense, since the scope of the invention is best defined by the appended claims.

In the drawings:

FIGURE 1 is a combined plan view of a swimming pool and associated apparatus showing debris on the surface of the pool being pushed toward a single skimmer, this figure illustrating the problem that is solved by the present invention;

FIG. 2 is a section on line 2—2 of FIG. 1 intersecting the skimmer outlet and the usual pool drain, showing the connections normally used for drawing water from the pool by one or other of these outlets;

FIG. 3 is a diagram showing one embodiment of my invention utilizing a valve that directs water from whichever skimmer is on or near the lee side of the pool to the pump and filter, simultaneously directing the filtered and heated water to the port on the opposite side of the pool;

FIG. 4 shows another embodiment of my invention in which there are three surface water outlets, this diagram indicating the manner in which water selectively flows through these outlets in accordance with the direction of the wind;

FIG. 5 is another diagram similar to FIG. 4, with the weather vane indicating a different wind direction and showing how the water flows in and out of the pool in accordance with the resulting valve settings;

FIG. 6 is a similar diagram in which four outlets for surface water are provided, this diagram indicating the direction of water flow with respect to these outlets in accordance with the direction of the wind.

FIG. 7 is a broken-away perspective view of a valve suitable for opening and closing ports in accordance with the direction of the wind;

FIG. 8 is a cross-section through a valve having a rotor like that shown in FIG. 7, the FIG. 8 view indicating the direction of water flow through four of the ports and illustrating two differently shaped approaches to the ports, either of which shapes may be used optionally;

FIG. 9 is a section taken substantially on line 9—9 of FIG. 8, this view showing the location of the ports around the valve;

FIG. 10 is a cross-section like that of FIG. 9, but showing the rotor oriented slightly counterclockwise from the position indicated in FIG. 9, a change of angular position that results in the opening of one of the ports that is closed in the FIG. 9 view and the closing of another port that is open in the FIG. 9 view;

FIG. 11 is a vertical section taken through the side of the pool in such a position that it will intersect one of the skimmers or outlet vents as well as one of the return inlets for filtered water.

Swimming pools are conventionally provided with a surface water outlet or skimmer 1, FIGS. 1 and 2, the

mouth 2 of the vent, FIG. 2, being so disposed in the side of the pool that it extends somewhat above as well as somewhat below the surface 3 of the water. As a result, if there is any suction on the pipe 4, indicated in broken lines in FIG. 2, for drawing the water out of the vent or "skimmer," the surface water near the vent will flow into the vent and entrain with it such debris as may be in the vicinity of the vent or skimmer. In order to establish a flow of water from the skimmer 1, the pipe 4 may be connected in any suitable manner to the suction line 5', to which the conduit 5 from the drain 6 may also be connected by opening the valve 64. The pipes 4 and 5 shown in FIG. 2 may communicate with the conduit 5' shown in FIG. 1. In the system usually provided at a swimming pool, the pipe 5' leads to a pump 9 shown symbolically in FIG. 1. This pump is connected by a suitable conduit 10 to the filter 11, which in turn communicates by way of conduit 12 with an optional heater 13 from which the water is returned to the pool through the conduit 14, having been filtered and sometimes heated. The returned water is usually received into the pool through an intake 15, FIG. 1, generally located some distance away from the skimmer 1. The intake 15 is usually at least a short distance below the surface of the water, as shown in FIG. 11 where a return opening 16 is shown in such a position.

Although the suction through the conduit 5' due to the operation of the pump 9 is sometimes sufficient to cause a very slow surface current toward the skimmer 1, the surface currents are usually controlled by the prevailing air currents, with the result that the leaves and other debris 17 falling into the pool tend to drift toward the lee side. They must then be skimmed or pushed toward the skimmer 1 by some kind of a mechanical skimmer or pusher such as the device 18 indicated in FIG. 1. This of course requires the services of an attendant—usually the owner of the pool.

I provide a plurality of surface water skimmers substantially equally spaced around the swimming pool and make them selectively operable in accordance with the direction of the wind.

FIG. 3 shows a swimming pool 19 equipped with two water surface openings 20 and 21 located about 180 degrees apart around the pool. The openings or skimmers 20 and 21 are connected respectively by means of conduits 22 and 23 to a control valve 7*a* through a plurality of peripherally spaced ports, later to be described. The water from the valve 7*a* that enters through said ports passes from the valve through an appropriate outlet into the conduit 25 and thence to the pump 9*a*, which is the counterpart of the pump 9 in FIG. 1. From the pump 9*a* the water passes successively through conduit 10*a*, filter 11*a*, conduit 12*a* and heater 13*a* to a conduit 26 from which the filtered and heated water, instead of returning directly to the pool as in the system shown in FIG. 1, returns instead to the valve 7*a* through a suitable inlet.

Valve 7*a*, hereinafter to be described, is so constructed that water from the pool reaches the valve either through conduit 22 or 23 according to the direction of the wind which, of course, positions the weather vane 24. It should be noted that the arrow of the weather vane is pointed in the direction from which the wind is coming. Arrow 8 points in the direction toward which the wind is blowing —that is *leeward*. If the water enters the valve through conduit 23, it will leave the valve through conduit 22, and vice versa. As diagrammatically shown in FIG. 3, the water is leaving the pool through outlet 21 from which it passes through conduit 23 to the valve 7*a*. After leaving this valve through conduit 25 it passes in turn through the pump, filter and heater to the conduit 26 from which it returns to the valve. It then leaves the valve through conduit 22, returning again to the pool through the opening 20—all as indicated by the various arrows.

In the FIG. 4 diagram, only the conduits between the pool and the valve or water-directing means are shown, other apparatus such as the conduits to and from the pump, filter and heater being omitted for the sake of clarity. Three water surface openings 27, 28 and 29 are shown with associated conduits communicating with the valve 7*b*. A weather or wind vane 24*a* is diagrammatically shown attached to the valve 7*b*, indicating that the wind is blowing in a northeasterly direction if we assume that north is toward the top of the page. However, because of the use of three water surface openings instead of only two, there is a different pattern of water flow in and out of the pool. The control valve that will hereinafter be described, causes the water to be drawn from the surface of the pool through the openings 28 and 29, since the wind is blowing toward the northeast corner of the pool; and the water of course must return through the water surface opening 27. It will be noted that the three water surface openings 27, 28 and 29 have been substantially equally spaced about the pool.

In FIG. 5, the water outlets, as in FIG. 4, are spaced approximately 120 degrees apart around the pool, but the wind is indicated by the vane 24*b* as blowing in a northerly direction. In this case, the various ports in the valve 7*b*, as will later be apparent, will be so oriented that water will flow out of the pool through the skimmer 28 only and will return through both of the openings 27 and 29.

By adding a fourth water surface opening 30 opposite the opening 28*a*, as shown in FIG. 6, and by spacing the openings 27*a* and 29*a* angularly between them at opposite ends of the pool, then, if the wind is blowing in the same direction as that indicated in FIGS. 3 and 4, the water would leave the surface of the pool through the surface skimmers 28*a* and 29*a* and return to the openings 27*a* and 30, as indicated by the arrows.

As hereinbefore mentioned, it is customary when a single skimmer is used to return the water through an intake located some distance away around the pool, but at a lower level as indicated in FIG. 11 where an intake 16 is shown. When a plurality of skimmers are used, as shown in FIGS. 3, 4, 5 and 6, the same openings used for skimming may be used for the return of the water. However, if it is still desired to return the water at a lower level or, at a different location from that at which it leaves the pool, the arrangement illustrated in FIG. 11 may be used. This shows a skimmer 31 located above the intake 16 which is shown at the conventitonal depth. Were it not for the presence of the lower level intake 16, water would enter and leave the pool through the conduit 32, in accordance with the direction of the wind, but when both an outlet and an intake are provided, it is of course advisable that water flow out only through the conduit 32 and return only through the branch conduit 33 which joins the common two-way conduit 34 at point 35. In order to assure that water will flow in one direction only through pipes 32 and 33, I provide a check-valve 36 in the branch 32 and another check valve 37 in the branch 33. Check valve 36 must of course be adjusted so that water will flow only in the direction of arrow 38, and the adjustment of check valve 37 must be such that water will flow through it only in the direction of arrow 39 toward the intake 16.

A satisfactory wind-control valve for the purposes hereinbefore set forth is shown in FIGS. 7, 8 and 9. This valve comprises a shell 40, preferably of cylindrical shape, closed by a disc 41 at the bottom and a centrally apertured disc 42 at the top. A plurality of ports are substantially equaly spaced around the central portion of the periphery of the shell, the number of ports being the same as the number of surface water outlets provided for the pool. For purposes of illustration, a valve having four peripheral ports is shown, this arrangement being satisfactory for the four-skimmer system diagrammatically illustrated in FIG. 6.

In the broken-away perspective view of FIG. 7, none of the ports or other openings (with the exception of the top central shaft aperture 43) is visible. However, the four ports are shown in the cross-sectional view of FIG. 9, and three of them are visible in the longitudinal cross-sectional view of FIG. 8. Three of the ports, 44, 45 and 46, appear in both FIGS. 8 and 9, with the fourth port 47 being visible only in the last-mentioned figure.

For reasons that will hereinafter be apparent, these ports are long and narrow in the presently preferred embodiment. Because of this particular configuration of the ports, the adjoining ends of the conduits are flared out at the top and bottom as shown at 49 in FIG. 8 and narrowed in an opposite direction as shown by the portion 49 of conduit 51 in FIG. 9, and by the ends of the adjacent conduits that communicate with ports 45 and 47, FIG. 9.

Inasmuch as it is not essential that the ports be long and narrow, pipe 50 is indicated in both FIGS. 8 and 9 as being round in order to illustrate this alternative arrangement, although it will be understood that in usual practice they will all be formed one way or the other.

The ports 44, 45, 46 and 47 in the shell 40 are opened and closed by means of an angularly movable structure 52 which rotates on an axis that is coaxial with the shell 40 itself. The rotor 52 comprises a central section 53 to which are attached two semi-circular dics 54 and 55 that are connected to opposite ends of the rectangular central section 53 and so disposed with respect to this central section that they extend in opposite directions therefrom at an angle of substantially 90 degrees. Two ears or lugs 56 and 57, each sufficiently long to cover the length of one of the aforementioned ports, and sufficiently wide to cover a little more than its width, are attached to opposite sides of the center portion 53 of the rotor, their angulation being such that each forms an angle of substantially 90 degrees with respect to the adjoining surface of the rectangular portion 53. As shown in FIGS. 9 and 11, the lugs or ears 56 and 57 are arcuate in formation, their arcs being concentric with the shell so that they may fit as close as possible to the inner walls thereof without danger of binding.

A shaft 58 is connected to the lower part of the aforementioned rotatable or angularly adjustable structure, its point of attachment and inclination being such that its axis lies substantially in a plane passing midway between the two surfaces of the central section 53 of the rotor. The aixs of the shaft 58 should also be equally distant from both of the edges or sides of the central section 53. A second shaft 59 is appropriately secured to the upper end of the flat plate 53 at its juncture with the semicircular disc 54, the shaft 59 being so disposed with respect to the shaft 58 that they are axially aligned.

The shaft 58 is supported on a needle bearing provided by the cone-shaped member 60 appropriately secured to the center of the circular lower end 41 of the shell. The upper shaft 59 extends through an opening or aperture 43 in the center of the cover 42 of the shell. If desired, a bearing 61 may be provided in the aperture 43, and an O-ring or other suitable sealing means may be used at this opening.

The entire rotor 52 with the exception of the two shafts 58 and 59 may be formed from a single elongated sheet of rigid material, such as sheet metal, having parallel sides and two arcuate ends tangent to these sides. The radius of the arcuate ends should of course be slightly less than half the inside diameter of the shell. In forming this sheet, each of the arcuate ends must be turned at a right angle to the adjoining portion of the sheet, but in an opposite direction. The lugs 56 and 57 may then be attached by any appropriate means, or they may be provided on the flat blank itself and then turned substantially at right angles, and in opposite directions. The arcuate curvature of these flanges or ears may be formed either before or after the blank has been bent to the configuration shown in FIG. 7.

The distances that the flanges extend from the plate 53 should be such that they will cover the width of the ports. In FIG. 8, flange 56 is shown extending sufficiently far to span the width of the round port 46. If the ports are narrow like port 45 shown in phantom in FIG. 8, the distance that the flanges or ears project perpendicularly from the plate may of course be appropriately less.

A port 62 must be provided in the shell between the plane of the semicircular disc 54 and the top end 42 of the shell, and there must be a similar port 63 diametrically opposite from the port 62 but between the opposite end 41 of the shell and the semicircular disc 55.

It will be observed that the rotor divides the interior of the shell into two adjoining chambers. One of these chambers includes the space above the semicircular disc 54 and the entire three-dimensional area lying at the right of the central section 53 down to the lower semicircular disc 55. The other chamber comprises the space below these discs and to the left of the central section 53—that is, the special area below the two semicircular discs.

In the orientation of the rotor 52 indicated in FIGS. 8 and 9, the ports 46 and 49 are open. If skimmed water from the pool is flowing into the cylindrical valve through pipe 50 and port 46, the entire area above the discs 54 and 55 will be occupied by the skimmed water. This water is drawn out through the outlet 62 and the suction pipe 25*a*, which is the counterpart of the suction pipe 25 in FIG. 3. Under these conditions, the filtered and heated water returns to the valve through the return pipe 26 of FIG. 3 and 26*a* of FIG. 8 from which it enters the valve through the inlet 63. As a consequence, when the rotor 52 is in the angular position shown in FIG. 8, the entire three-dimensional area below the semicircular discs 54 and 55 will be filled with fresh water. Inasmuch as port 44, FIG. 8, is open, fresh water will flow from the valve through port 44 and conduit 51 to the appropriate openings in the wall of the pool.

It will be clear from an examination of FIGS. 7 and 8, that as the rotor 52 turns about its axis, the two chambers defined by the central section of the rotor 53 and the two discs 54 and 55 will likewise rotate. When utilizing a valve constructed as shown in FIG. 8, two of the ports on the periphery of the shell intermediate the planes of the semicircular discs will always be in communication with the chamber in the shell containing the skimmed water, while the other two ports will be in communication with the area where the fresh filtered water is then located, the identity of the ports being determined, of course, by the particular orientation of the rotor.

If the ports that are opened and closed by the rotor 53 are narrow like port 45, FIG. 8, and ports 44 and 47 of FIG. 9, they will of course completely open and close in response to a smaller angular movement of the rotor than would otherwise be the case, and the occasions when any port is partly open and partly closed will of course be fewer in number and of shorter duration.

In practicing my invention in its entirety as embodied in the system just partially described, it is necessary that the orientation of the rotor 52 be controlled by the direction of the wind. This requires the use of a suitable wind-sensitive device for opening and closing the ports. If a weather or wind vane is used for this purpose, as indicated in the various figures illustrating the presently preferred embodiment of my invention, such vane may be connected directly to the shaft 59 somewhat as indicated in FIG. 7, although a direct connection is by no means necessary, the requirements of the system being met by any suitable positive drive between the wind vane 24*b* and the shaft 59.

In the embodiment of my invention just described, the mechanism for opening and closing the various ports, inlets, outlets and other openings is operated directly by the mechanical force of the moving air surrounding the wind vane or weathervane. It is, of course, possible to control the flow of water in accordance with the direc-

tion of the wind by utilizing any type of wind-sensitive device that will respond differently according to the direction of the wind, and that may actuate suitable equipment for opening and closing the various ports, or for controlling the flow of water and its direction of flow by still other means.

Alternative instrumentalities may also be used in lieu of other structures shown in the drawings and described in the specification, and various elements may be omitted from the combinations set forth in the appended claims and replaced by others performing the same function, or the same function plus an additional function, and various parts may be rearranged, transposed or reversed in position without departing from the broad spirit of my invention.

I claim:

1. In a system for skimming floating material from the surface of the water in swimming pools, a combination including: a plurality of pool-wall openings widely spaced around a swimming pool and so disposed that they will be intercepted by the surface of the water in the pool; a valve having (a) a plurality of ports each individual to one of said openings, (b) an outlet for the water entering through said ports and (c) an inlet for water to be returned to the pool; a plurality of conduits each communicating with one of said openings and its associated port; a weather vane; and rotatable control means for said valve connected to said vane for positive rotation therewith for placing said outlet selectively in communication with the port or ports connected to the opening or openings that are then leeward of the pool and for simultaneously placing said inlet selectively in communication with the port or ports connected to the opening or openings that are then windward of the pool.

2. In a system for skimming floating material from the surface of the water in swimming pools, a combination including: a plurality of pool-wall openings widely spaced around a swimming pool and so disposed that they will be intercepted by the surface of the water in the pool; a valve having (a) a plurality of ports each individual to one of said openings, (b) an outlet for the water entering through said ports and (c) an inlet for water to be returned to the pool; a plurality of conduits each communicating with one of said openings and its associated port; a weather vane; rotatable control means for said valve connected to said vane for positive rotation therewith for placing said outlet selectively in communication with the port or ports connected to the opening or openings that are then leeward of the pool and for simultaneously placing said inlet selectively in communication with the port or ports connected to the opening or openings that are then windward of the pool; a filter; a pump for pumping water from said outlet to said filter; and means communicating with said filter for carrying filtered water therefrom to said inlet.

3. In a system for skimming floating material from the surface of the water in swimming pools, a combination including: a plurality of pool-wall openings widely spaced around a swimming pool and so disposed that they will be intercepted by the surface of the water in the pool; a valve having (a) a plurality of ports each individual to one of said openings, (b) an outlet for the water entering through said ports and (c) an inlet for water to be returned to the pool; a plurality of conduits each communicating with one of said openings and its associated port; a weather vane; rotatable control means for said valve connected to said vane for positive rotation therewith for placing said outlet selectively in communication with the port or ports connected to the opening or openings that are then leeward of the pool and for simultaneously placing said inlet selectively in communication with the port or ports connected to the opening or openings that are then windward of the pool; a filter; a pump for pumping water from said outlet to said filter; a heater for heating water from said filter; and means communicating with said heater for carrying heated filtered water to said inlet.

4. In a system for skimming floating material from the surface of the water in swimming pools, a combination including: a plurality of pool-wall openings widely spaced around a swimming pool and so disposed that they will be intercepted by the surface of the water in the pool; a valve having (a) a plurality of ports each individual to one of said openings, (b) an outlet for the water entering through said ports and (c) an inlet for water to be returned to the pool; a plurality of conduits each communicating with one of said openings and its associated port; a weather vane; and rotatable conrol means for said valve connected to said vane for positive rotation therewith for placing said outlet selectively in communication with the port or ports connected to the opening or openings that are then leeward of the pool and for simultaneously placing said inlet selectively in communication with the port or ports connected to the opening or openings that are then windward of the pool; a plurality of filtered water intakes each individual to, and located below, one of said openings; and a plurality of pipes each individual to one of said intakes and communicating with its associated conduit, each of said pipes having a check valve therein to prevent the flow of water therethrough from the intakes to their respectively associated conduits.

5. In a system for skimming floating material from the surface of the water in swimming pools, a combination including: a plurality of pool-wall openings widely spaced around a swimming pool and so disposed that they will be intercepted by the surface of the water in the pool; a valve having (a) a plurality of ports each individual to one of said openings, (b) an outlet for the water entering through said ports and (c) an inlet for water to be returned to the pool; a plurality of conduits each communicating with one of said openings and its associated port; a weather vane; and rotatable control means for said valve connected to said vane for positive rotation therewith for placing said outlet selectively in communication with the port or ports connected to the opening or openings that are then leeward of the pool and for simultaneously placing said inlet selectively in communication with the port or ports connected to the opening or openings that are then windward of the pool; a plurality of filtered water intakes each individual to, and located below, one of said openings; a plurality of pipes each individual to one of said intakes and communicating with its associated conduit, each of said pipes having a check valve therein to prevent the flow of water therethrough from the intakes to their respectively associated conduits; and a check valve in each of said conduits between its juncture with its associated pipe and the pool-wall opening that is individual to said conduit to prevent the return of water from said conduit to its associated pool-wall opening.

6. In a system for skimming floating material from the surface of the water in swimming pools, a combination including: a plurality of pool-wall openings widely spaced around a swimming pool and so disposed that they will be intercepted by the surface of the water in the pool; a filter for filtering water received from said pool-wall openings; a heater for heating filtered water from said filter; a plurality of conduits each individual to one of said openings; water-directing means for selectively directing water from said conduits to said filter and for directing water from said heater selectively to said conduits; and wind-sensitive apparatus for so controlling said means that it will selectively direct the water to the filter from the conduit or conduits that are individual to the opening or openings then on the lee side of the pool, and so that it will direct the water from said heater selectively to the conduit or conduits associated with the opening or openings then on the windward side of the pool.

7. In a system for skimming floating material from the surface of the water in swimming pools, a combination

including: a plurality of pool-wall openings widely spaced around a swimming pool and so disposed that they will be intercepted by the surface of the water in the pool; a filter for filtering water received from said pool-wall openings; a plurality of conduits each individual to one of said openings; water-directing means for selectively directing water from said conduits to said filter and for directing water from said filter selectively to said conduits; and wind-sensitive apparatus for so controlling said means that it will selectively direct the water to the filter from the conduit or conduits that are individual to the opening or openings then on the lee side of the pool, and so that it will selectively direct water that has been filtered by said filter to the conduit or conduits associated with the opening or openings then on the windward side of the pool.

8. In a system for skimming floating material from the surface of the water in swimming pools, a combination including: a plurality of pool-wall openings widely spaced around a swimming pool and so disposed that they will be intercepted by the surface of the water in the pool; a valve having (a) a plurality of ports each individual to one of said openings, (b) an outlet for the water entering through said ports and (c) an inlet for water to be returned to the pool; a plurality of conduits each communicating with one of said openings and its associated port; a weather vane; and rotatable control means for said valve connected to said vane for positive rotation therewith for placing said outlet selectively in communication with the port or ports connected to the opening or openings that are then leeward of the pool and for simultaneously placing said inlet selectively in communication with the port or ports connected to the opening or openings that are then windward of the pool; a plurality of filtered water intakes each individual to one of said openings; and a plurality of pipes each individual to one of said intakes and communicating with its associated conduit, each of said pipes having a check valve therein to prevent the flow of water therethrough from the intakes to their respectively associated conduits.

9. In a system for skimming floating material from the surface of the water in swimming pools, a combination including: a plurality of pool-wall openings widely spaced around a swimming pool and so disposed that they will be intercepted by the surface of the water in the pool; a valve having (a) a plurality of ports each individual to one of said openings, (b) an outlet for the water entering through said ports and (c) an inlet for water to be returned to the pool; a plurality of conduits each communicating with one of said openings and its associated port; a weather vane; and rotatable control means for said valve connected to said vane for positive rotation therewith for placing said outlet selectively in communication with the port or ports connected to the opening or openings that are then leeward of the pool and for simultaneously placing said inlet selectively in communication with the port or ports connected to the opening or openings that are then windward of the pool; a plurality of filtered water intakes each individual to one of said openings; a plurality of pipes each individual to one of said intakes and communicating with its associated conduit, each of said pipes having a check valve therein to prevent the flow of water therethrough from the intakes to their respectively associated conduits; and a check valve in each of said conduits between its juncture and its associated pipe and the pool-wall opening that is individual to said conduit to prevent the return of water from said conduit to its associated pool-wall opening.

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