July 27, 1937. R. B. EVERSON 2,088,410

INLET FITTING FOR SWIMMING POOLS

Filed Oct. 27, 1936

Fig. 1.

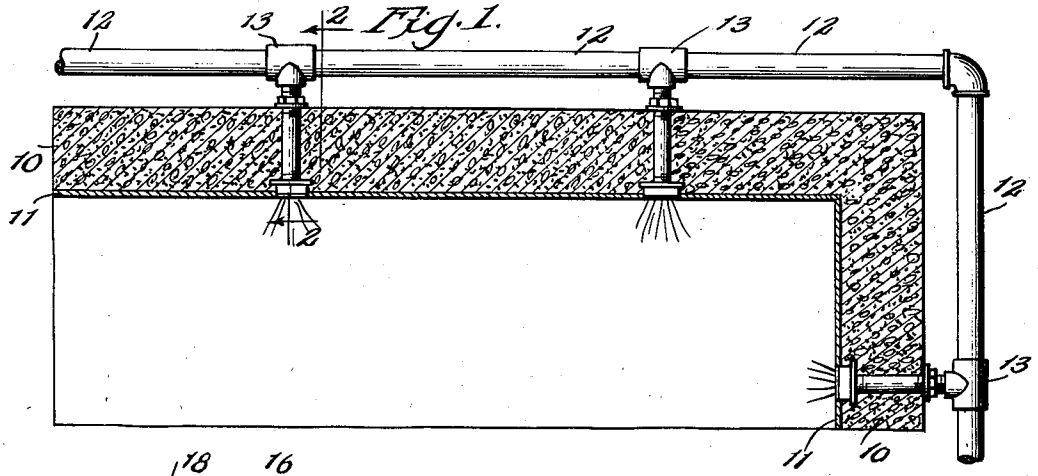


Fig. 2.

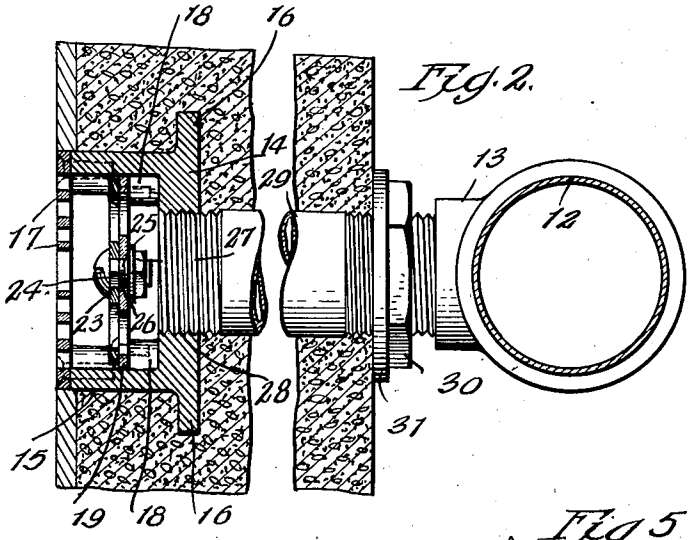


Fig. 3

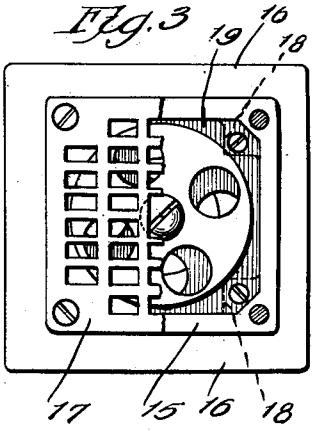


Fig 5

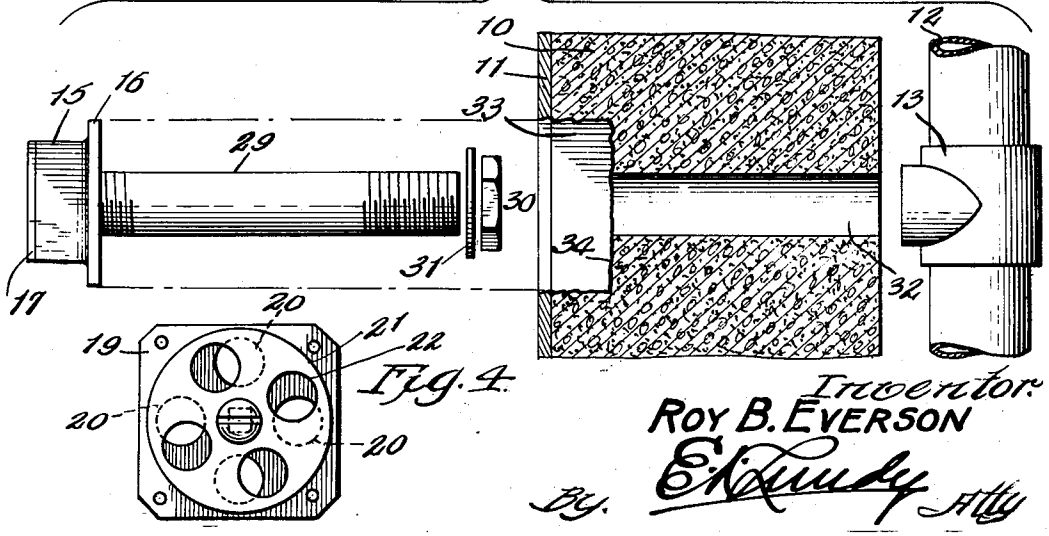


Fig. 4

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INLET FITTING FOR SWIMMING POOLS

Roy B. Everson, Chicago, Ill.

Application October 27, 1936, Serial No. 107,796

15 Claims. (Cl. 137—21)

My invention relates to an inlet fitting through which water is discharged into a swimming pool, and it has relation to a device of this character that is adjustable in order that the flow of water may be readily controlled. The novel and unique construction of the fitting permits it to be easily installed in a swimming pool that has already been erected and is in use without reconstructing or marring the walls of such pool, as well as being installed in a pool in course of construction.

It has become the practice from a sanitary standpoint, (which is compulsory under Health Department regulations in many localities), to chlorinate the water before it is discharged into swimming pools, but when this is done with the usual equipment where the water is supplied at one end of the pool or through only a few inlets the chlorine is soon dissipated in the large volume of the pool and therefore becomes ineffective a short distance from its point of discharge. If, however, the treated water is fed into the pool at a plurality of spaced points along its sides and ends the distribution of the freshly supplied water is in a more even manner and will extend throughout a greater volume of water. With a plurality of inlets, the flow at each inlet may be nicely regulated by means of adjustable control devices embodied in my inlet fitting, and this may be done by unskilled persons without the use of special tools.

The fitting I have invented is novel in construction; it is made of a minimum of simple parts; it is economical to produce; it is easy to install; and it is effective in performing the functions for which it is designed. Numerous other advantages and objects of my invention will be apparent to persons skilled in the art after the construction and operation thereof is understood from the within description taken in connection with the accompanying drawing. It will be understood that the drawing and the within description are illustrative only and are not to be taken as limiting my invention except insofar as it is limited by the claims. The drawing shows a typical or preferred embodiment of my invention.

In the drawing:—

Figure 1 is a horizontal section of side and end portions of a pool showing several of my inlet fittings installed therein.

Figure 2 is a vertical transverse section on line 2—2 of Figure 1 and enlarged.

Figure 3 is a front face view of the fitting with the grille plate partly broken away.

Figure 4 is a front elevation showing details of the control device removed from the fitting.

Figure 5 is a graphic view, partly in section, illustrating the manner of installing a fitting in a pool that is in use.

Referring to the drawing, wherein like reference characters identify like parts in the different views, the pool embodies continuous vertical walls 10 of suitable material such as poured cement that are usually faced upon the inside with tile 11 or the like. Outside these walls I provide a water supply pipe 12 that has T-couplings 13 interposed therein at definitely spaced intervals arranged with their lateral stubs towards the walls 10 to provide a plurality of distributors.

The fitting is of a boxlike formation and is preferably imbedded in the walls as shown during erection of the pool. There is a heavy or thick base member 14 from which continuous rectangular walls 15 project laterally on one face so that a hollow chamber is provided that is open at its front. The base has its edges extended, in the form of a continuous flange 16, beyond the lateral walls 15, which said flange 16 provides a portion of the means for anchoring the fitting in a wall of the swimming pool as will later appear. The front of this boxlike portion of the fitting is covered by a perforated plate 17 that provides a grille or grating across its open front to prevent articles entering the interior of the fitting. The plate 17 is secured to walls 15 by corner screws and the outer face of this grille, when the structure is in position, is flush with the tile face 11 on the inside surface of the pool.

Suitable bosses 18 are provided at the inner corners of chamber formed by the base wall 14 and the lateral walls 15, which bosses provide abutments or shoulders of such dimensions that they will support a control device that is anchored to them so as to be positioned about centrally of the depth of said chamber as seen in Figure 2. This control device may be of a variety of shapes such as cylindrical, conical, flat, and the like. For the purpose of convenience, and as typifying a control device, I have shown herein a structure that is flat and of substantially rectangular outline. The unit consists of a rectangular mounting plate 19 disposed with its corners resting against and removably secured to the bosses 18 by screws, and the central portion of said plate is provided with a plurality of egress or discharge openings 20 that are arranged in concentric order around the center or axis of the plate as more clearly shown in detail in Figure 4.

In lieu of this separate plate, a transverse wall or diaphragm may be provided which is formed with and projects from the lateral side walls of the boxlike structure. This may readily be done since the base 14 and the flange walls 15 are preferably made of a cast-metal and the said wall may be cast integrally therewith. There is a co-acting valve plate 21 rotatably mounted upon a face of plate 19, said rotatable plate being circular in outline and provided with a plurality of egress or discharge openings 22 corresponding in number, and preferably in size, with the openings 20 of the stationary mounting plate and are also arranged in concentric order around the axis of rotation of rotatable plate 21. The plates 19 and 21 are preferably assembled with each other as a unit by providing a central or axial opening 23 of angular shape in plate 21 to receive an angular portion 24 of a headed pivot bolt. The round shank 25 of the bolt is journaled in a circular aperture 26 in the center of mounting plate 19 and the two plates are movably held in face-to-face arrangement by a lock-nut 27 screwed on the protruding threaded portion of the shank of the bolt against a friction lock washer. These plates are maintained in such intimate relation to each other that when they are in a position where the apertures of one plate are positioned opposite imperforate portions of the opposing plate the volume of fluid past the plates is shut off. However, the movable plate 21 may be readily rotated by inserting a screwdriver or similar tool through the central opening in the grille to engage the slotted head of the pivot bolt and then rotating plate 21 until the desired amount of registration is secured between the apertures 20 and 22 of the plates, thus controlling the quantity of fluid flowing through the fitting and into the pool. Thus it will be seen that an effective control device is provided which consists of a stationary member or body and a co-acting member or body that is movable with respect to the first member for the purpose of permitting passage of water through the fitting.

The base 14 of the box-like structure is provided with a relatively large transverse opening 28 that is threaded to receive the adjacent threaded end of the feed pipe 29 that has its other or remote end threaded so as to screw into the lateral stub of the T-coupling 13. The pipe 29 is long enough to extend through the vertical wall of the pool and the threaded portion that screws into coupling 13 is of such extent that a clamp nut 30 and washer 31 may be disposed thereon for engagement with the exterior surface of the pool wall. In constructing a pool the fitting, including the box-like portion and the feed pipe, is imbedded transversely in a wall during erection of the latter. When a pool already erected is to be provided with a plurality of inlet fittings, the workman need only drill a hole 32 transversely through the wall 10 of a diameter slightly greater than the outside diameter of pipe 29 and the inner portion of this hole is then enlarged as shown at 33 in Figure 5. The fitting is inserted into the hole 32 from inside the pool so that flange 16 of the fitting engages the inner transverse portion 34 or shoulder of the enlarged opening, in which position the threaded outer end of the pipe 29 will protrude beyond the outer surface of the pool wall so that the clamp nut and washer (30 and 31) may be inserted on the pipe and turned thereon until the wall is clamped tightly between the abutments formed by flange 16 and the washer 31. If desired a mass of cement or other plastic material may be placed in the enlargement 33 so that when the abutments are drawn together in the manner described a substantial portion of the plastic material will be squeezed or forced into the hole 32 as well as around the sides of the box-like part of the fitting, thus sealing the structure against leakage or seepage.

From the above description, it will be evident that I have provided a very simple and economical inlet fitting, which is equally adapted for installation in swimming pools already erected and in use as well as in a new pool in course of construction. It also will be apparent that the inlet fitting, after installation, is capable of ready adjustment to control the flow of water into the swimming pool, and that it is constructed of simple parts which may be readily assembled at the factory where the device is manufactured.

I claim:

1. An inlet fitting for swimming pools comprising a base plate, walls extending laterally therefrom and providing an open-front chamber, a grille extending across the open front of said chamber, a control unit within said chamber, said unit embodying an apertured mounting plate and an apertured valve plate carried by said mounting plate, means for supporting said control unit within said chamber, and a pipe communicating with said chamber and extending outwardly from said base plate.

2. An inlet fitting adapted for mounting transversely in a wall of a swimming pool, said fitting embodying a plurality of walls forming a chamber that is open on its side next the inner face of the pool wall, a grille extending across the open side of said chamber, a pipe discharging into said chamber and extending beyond the outer face of the pool wall, means within the chamber for controlling the flow of water through the latter, and clamping elements on the extended portion of said pipe for engagement with the pool wall.

3. An inlet fitting for swimming pools comprising a rectangular hollow body one of the walls of which is omitted to provide an egress opening, a grille extending across said opening, said body having an ingress opening, and means within said body for controlling flow of water therethrough, said means embodying an apertured wall disposed across said hollow body back of said grille and an apertured valve plate rotatably mounted upon said apertured wall.

4. An inlet fitting for swimming pools comprising a rectangular hollow body the vertical front of which is open to provide an egress opening, a grille extending across said opening, said body having an ingress opening in the vertical rear wall opposite said grille, and means within said body for controlling flow of water therethrough, said means embodying an apertured wall disposed across said hollow body intermediate the rear wall thereof and said grille and an apertured valve plate rotatably mounted upon said apertured wall.

5. An inlet fitting for swimming pools comprising a hollow body embodying a base wall and a plurality of horizontal and vertical walls projecting laterally from a side of said base wall whereby to provide a chamber that is open on the side opposite said base wall, a grille extending across the open side of said chamber and disposed parallel to said base wall, an apertured wall extending across said chamber intermediate said base wall and said grille, an apertured valve

plate rotatably mounted on said apertured wall, and means for discharging water into said chamber between said base wall and said apertured wall.

6. An inlet fitting for swimming pools comprising a rectangular hollow body one of the walls of which is omitted to provide an egress opening a grille extending across said opening, said body having an ingress opening, means within said body for controlling flow of water therethrough, said means embodying an apertured wall disposed across said hollow body back of said grille and an apertured valve plate rotatably mounted upon said apertured wall, a pipe discharging into said body through said ingress opening and extended outside the pool wall, and clamping elements on the extended portion of said pipe for clamping engagement with the pool wall.

7. An inlet fitting for swimming pools comprising a rectangular hollow body the vertical front of which is open to provide an egress opening, a grille extending across said opening, said body having an ingress opening in the vertical rear wall opposite said grille, means within said body for controlling flow of water therethrough, said means embodying an apertured wall disposed across said hollow body intermediate the rear wall thereof and said grille and an apertured valve plate rotatably mounted upon said apertured wall, a water supply pipe one end of which enters the ingress opening in the rear wall of said body and the other end of which protrudes outside the pool wall, and clamping elements on the protruding portion of said pipe for clamping engagement with the pool wall.

8. An inlet fitting for swimming pools comprising a hollow body embodying a base wall and a plurality of horizontal and vertical walls projecting laterally from a side of said base wall whereby to provide a chamber that is open on the side opposite said base wall, a grille extending across the open side of said chamber and disposed parallel to said base wall, an apertured wall extending across said chamber intermediate said base wall and said grille, an apertured valve plate rotatably mounted on said apertured wall, means for discharging water into said chamber between said base wall and said apertured wall, said means embodying a water pipe imbedded in a wall of the pool and having one end mounted in an ingress opening in said base wall and its other end extended outside the pool wall, and clamping means on the outer portion of said pipe for clamping engagement with the pool wall.

9. An inlet fitting for swimming pools comprising a housing having an open side, a grille extending across said open side, flanges extending from the housing wall opposite said grille and providing an abutment adapted for engagement with a shoulder in the pool wall, a supply pipe secured to the flanged housing wall and communicating with the interior of said housing, means within the housing intermediate the flanged wall and grille for controlling the flow of water through said housing, an abutment member on said pipe adapted for engagement with the outer face of the pool wall, and means on said pipe for urging said abutment member firmly against the pool wall.

10. An inlet fitting for swimming pools comprising a base wall having an inlet opening, a plurality of side walls extending laterally from said base wall, said base and side walls providing a chamber that is open on its side opposite said base wall, a grille extending across the open side of said chamber, means for discharging fluid into said chamber through said inlet opening, and devices within the fitting for controlling discharge of fluid through said grille.

11. An inlet fitting for swimming pools comprising a suitably shaped hollow body the vertical front of which is open to provide an egress opening, a grille extending across said egress opening, said body having an ingress opening in the vertical rear wall opposite said grille, means within said body for controlling flow of water there-through, and means for discharging water into said body through said ingress opening.

12. An inlet fitting for swimming pools comprising a hollow body the vertical front of which is open to provide an egress opening, a grille extending across said egress opening, means within said body for controlling flow of water therethrough, said means embodying a stationary member and a movable member adjustable with respect thereto for permitting passage of water past said control means, and means for discharging water into said body on the side of the control means opposite said grille.

13. An inlet fitting for swimming pools comprising a hollow body the vertical front of which is open to provide an egress opening, a grille extending across said egress opening, annular flanges projecting from said body on the portion opposite said grille and adapted for imbedment in the wall of the pool, means for discharging water into said body opposite said grille, and means controlling flow of water through said body.

14. An inlet fitting for swimming pools comprising a hollow body the vertical front of which is open to provide an egress opening, a grille extending across said egress opening, annular flanges projecting from the portion of said body opposite said grille, and control means within said body consisting of a stationary member and a movable member that is adjustable with respect to said stationary member for permitting passage of water past said control means, and means for discharging water into the portion of said body opposite said grille.

15. An inlet fitting for swimming pools comprising a suitably shaped hollow body the vertical front of which is open to provide an egress opening, a grille extending across said egress opening, said body having an ingress opening, means within said body for controlling flow of water there-through, and means for discharging water into said body through said ingress opening.

ROY B. EVERSON.