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AERATOR FOR MINNOW BUCKETS

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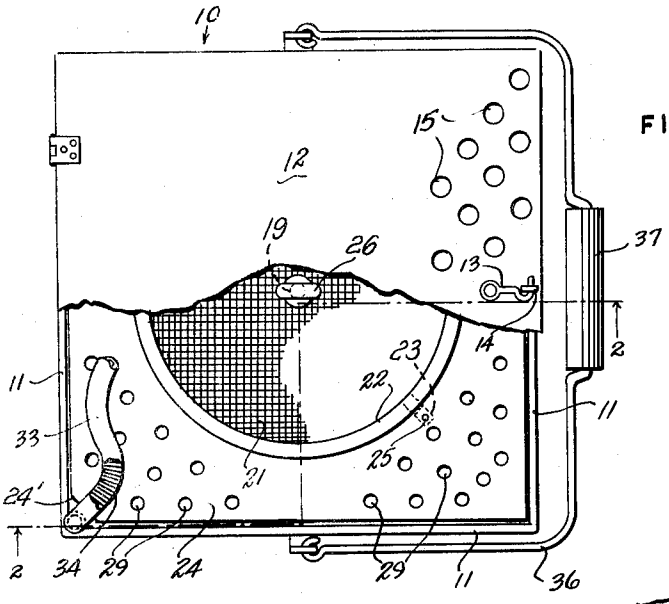


FIG. 1.

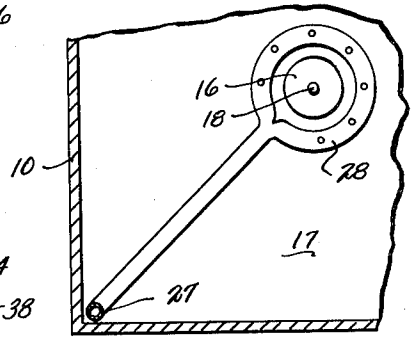


FIG. 3.

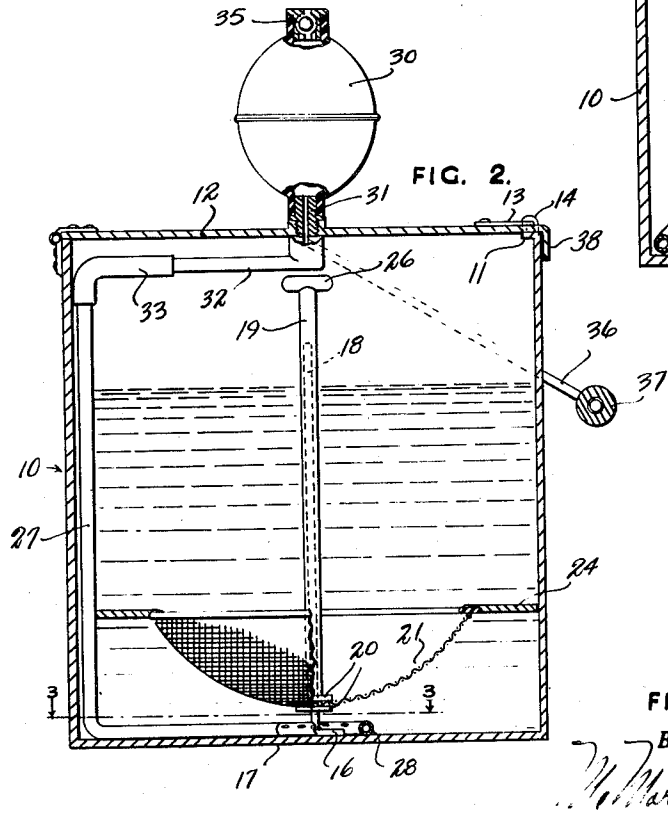


FIG. 2.

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AERATOR FOR MINNOW BUCKETS

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4 Claims. (Cl. 43—57)

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The present invention relates to aerating apparatus for water containers and is more particularly concerned with a device to be attached to minnow buckets.

The primary object of the invention is to provide a device to supply oxygen to a water container without the use of electrical or mechanical pumps.

Another object of the invention is to provide a device of the character referred to which can be readily attached to a container.

A further object of the invention is to provide a device of the character to which can be operated by an ordinary bulbous bellows to oxygenate the water in a minnow bucket.

Still another object of the invention is to provide a simple and inexpensive oxygenating apparatus for attachment to water containers.

With the foregoing and other objects and advantages in view the invention consists of the novel construction, arrangement and combination of parts hereinafter described and claimed.

In the accompanying drawings illustrating the invention,

Figure 1 is a top plan view of a minnow bucket constructed in accordance with the invention, the top being broken away partially to expose interior construction.

Figure 2 is a vertical transverse section thereof on line 2—2 of Figure 1, and

Figure 3 is an enlarged fragmentary horizontal section on line 3—3 of Figure 2.

Like numerals, as used in the description and drawings, designate the same structural parts.

10 is a rectangular, box-like metal water container with an interiorly projecting bead 11 on its rim to serve as a stop for the hereinafter described screen unit, and a hinged lid or cover 12 designed to be fastened down by means of a pivoted latch 13 which engages a keeper 14 projecting from said rim and through the top. In proximity to the said fastener the top is provided with a plurality of round holes 15 to drain off water, as desired, without removing the top.

Mounted perpendicularly on a base plate 16, secured centrally on the bottom 17 of the bucket, is a post consisting of a round rod 18 which extends short of the bucket lid and serves as a guide for a tubular sleeve 19.

Fastened to the bottom of said sleeve by means of upper and lower dics 20, is a concave, wire screen 21, with an annular rim plate 22 fastened to its circular edge. The disks 20 overlie and under lie axial bottom portions of the screen and are secured to sleeve 19 in any suitable manner.

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Thus, the sleeve and screen are connected together for unitary vertical movement.

Projecting diametrically from said rim plate are two angular brackets 23 only one of which is shown. Such brackets 23 are formed with small screw holes in the free ends. The wire screen is of suitable diameter to pass down through a circular opening in an horizontally disposed plate 24, rectangular in form and suitably dimensioned to freely fit the interior of the bucket. The two brackets 23 on the screen rest against plate 24 and are secured thereto by screws 25, to unify the plate and screen. The slidable sleeve 19 is provided on top with a cross bar 26, serving as a handle to lift the unit. As aforesaid, the bead 11 is engageable with the marginal edges of the plate 24 to limit upward movement of the unit. The screen and plate comprise means for elevating the minnows in the bucket to a point adjacent the upper edge thereof whereby a minnow may be selected for the purpose of bait in a well-known manner.

An angular air tube 27, of copper or other suitable non-corrosive material, is provided with an open end on its vertical portion and a communicating tubular ring 28, with perforations, on the extremity of the other portion, which is designed to lie on the bottom of the bucket. The tubular ring is passed over the post 18 and surrounds the base thereof. Plate 24 is provided with a plurality of apertures 29 for the escape of oxygen to the water above.

When the bend in pipe 27 is a sufficient distance from the center of the bucket, the vertical portion of the pipe is located in a corner with the open end in proximity to the top, as illustrated, and is thereby braced. To permit the passage of the pipe 27 therethrough and facilitate the movement of the plate 24 into and out of the container 10, its corner adjacent the pipe 27, is cut away as at 24'. To permit free bending of the hereinafter described hose coupling bead 11 is also cut out at said corner.

A bulbous bellows 30 is attached to the lid of the bucket, centrally, by means of a tubular plug 31 to seal the connection. This plug is exteriorly threaded on the outer end and projects below the under surface of the lid to receive an elbow pipe 32. A short length of hose coupling 33, provided interiorly with an helical spring 34, connects the end of pipe 27 to the end of the said elbow.

The passage-way through said plug provides the air outlet for the bellows and an air intake 35 is provided on the opposite end. A suitable intake valve, such as a ball valve, is provided for

the intake to contain the air which is sucked in when the bellows is inflated in forcing air into pipe 27 and through the air escape holes in ring 28 to oxygenate the water in the bucket. A number of compressions of the bellows, will accomplish this result, and the operation may be repeated when deemed necessary.

The bucket is provided with a suitably shaped bail 36 with a hand grasp 37, and a flange 38 depends from the front of the bucket lid and overlaps the side of the bucket, thus serving to reinforce the closure.

As different embodiments may be made of this inventive concept and modifications may be made in the embodiment hereinbefore shown and described, it will be understood that the matter herein is to be interpreted as illustrative merely, and not in a limiting sense.

What we claim is:

1. Aerator for a bucket having a hinged cover, said aerator comprising a compressible bulb having a valved air intake and a tubular outlet on its lower end, means securing said tubular outlet to project downwardly through said cover, a rigid pipe connected to the said tubular outlet below said cover, said pipe having a portion projecting laterally along the underside of said cover toward a side wall of the bucket, a second rigid pipe having a vertical portion positioned along the bucket side wall and a horizontal portion projecting laterally inwardly along the bottom of the bucket, a perforated spray ring on and communicating with the laterally inward end of said horizontal pipe portion and resting on the bucket bottom, and a flexible L-shaped pipe connected at its opposite ends to the laterally outward end of said first rigid pipe and to the upper end of the vertical portion of the second rigid pipe, said flexible L-shaped pipe serving to permit removal of the bucket cover and tilting thereof to provide free access to the interior of the bucket without rendering the aerator inoperative, said flexible L-shaped pipe having sufficient resilient strength to insure resumption of their positions in the bucket by said first and second pipes upon return of the cover to closed position in the event of any displacement thereof due to opening and tilting of said cover.

2. Aerator for a bucket having a hinged cover, said aerator comprising a compressible bulb having a valved air intake and a tubular outlet on its lower end, means securing said tubular outlet to project downwardly through said cover, a rigid pipe connected to the said tubular outlet below said cover, said pipe having a portion projecting laterally along the underside of said cover toward a side wall of the bucket, a second rigid pipe having a vertical portion positioned along the bucket side wall and a horizontal portion projecting laterally inwardly along the bottom of the bucket, a perforated spray ring on and communicating with the laterally inward end of said horizontal pipe portion and resting on the bucket bottom, and a flexible L-shaped pipe connected at its opposite ends to the laterally outward end of said first rigid pipe and to the upper end of the vertical portion of the second rigid pipe, said flexible L-shaped pipe serving to permit removal of the bucket cover and tilting thereof to provide free access to the interior of the bucket without rendering the aerator inoperative, said flexible L-shaped pipe having sufficient resilient strength to insure resumption of their positions in the bucket by said first and second pipes upon return of the cover to closed position in the event of any displacement thereof due to opening and tilting of said cover, and means tending to retain said rigid pipes in normal position in the bucket comprising a plate shaped to freely conform to the side walls of the bucket, a corner of said plate being formed with a positioning opening passing the vertical portion of said second rigid pipe, said positioning opening defining an edge to engage a side of said vertical pipe portion, and means spacing said plate above the bottom of the bucket whereby said positioning opening edge engages an intermediate portion of said vertical pipe portion above its lower end.

3. Aerator for a bucket having a hinged cover, said aerator comprising a compressible bulb having a valved air intake and a tubular outlet on its lower end, means securing said tubular outlet to project downwardly through said cover, a rigid pipe connected to the said tubular outlet below said cover, said pipe having a portion projecting laterally along the underside of said cover toward a side wall of the bucket, a second rigid pipe having a vertical portion positioned along the bucket side wall and a horizontal portion projecting laterally inwardly along the bottom of the bucket, a perforated spray ring on and communicating with the laterally inward end of said horizontal pipe portion and resting on the bucket bottom, and a flexible L-shaped pipe connected at its opposite ends to the laterally outward end of said first rigid pipe and to the upper end of the vertical portion of the second rigid pipe, said flexible L-shaped pipe serving to permit removal of the bucket cover and tilting thereof to provide free access to the interior of the bucket without rendering the aerator inoperative, said flexible L-shaped pipe having sufficient resilient strength to insure resumption of their positions in the bucket by said first and second pipes upon return of the cover to closed position in the event of any displacement thereof due to opening and tilting of said cover, and means tending to retain said rigid pipes in normal position in the bucket comprising a plate shaped to freely conform to the side walls of the bucket, a corner of said plate being formed with a positioning opening passing the vertical portion of said second rigid pipe, said positioning opening defining an edge to engage a side of said vertical pipe portion, and means spacing said plate above the bottom of the bucket whereby said positioning opening edge engages an intermediate portion of said vertical pipe portion above its lower end, and a vertical handle element rising from a portion on said plate whereby said plate can be elevated and depressed in the bucket while engaged with said vertical pipe portion and with the bucket cover in an open position.

4. Aerator for a bucket having a hinged cover, said aerator comprising a compressible bulb having a valved air intake and a tubular outlet on its lower end, means securing said tubular outlet to project downwardly through said cover, a rigid pipe connected to the said tubular outlet below said cover, said pipe having a portion projecting laterally along the underside of said cover toward a side wall of the bucket, a second rigid pipe having a vertical portion positioned along the bucket side wall and a horizontal portion projecting laterally inwardly along the bottom of the bucket, a perforated spray ring on and communicating with the laterally inward end of said horizontal pipe portion and resting on the bucket bottom, and a flexible L-shaped pipe connected at its opposite ends to the laterally outward end of said first rigid pipe and to the upper end of

the vertical portion of the second rigid pipe, said flexible L-shaped pipe serving to permit removal of the bucket cover and tilting thereof to provide free access to the interior of the bucket without rendering the aerator inoperative, said flexible L-shaped pipe having sufficient resilient strength to insure resumption of their positions in the bucket by said first and second pipes upon return of the cover to closed position in the event of any displacement thereof due to opening and tilting of said cover, and means tending to retain said rigid pipes in normal position in the bucket comprising a plate shaped to freely conform to the side walls of the bucket, a corner of said plate being formed with a positioning opening passing the vertical portion of said second rigid pipe, said positioning opening defining an edge to engage a side of said vertical pipe portion, and means spacing said plate above the bottom of the bucket whereby said positioning opening edge engages an intermediate portion of said vertical pipe portion above its lower end, and a vertical handle element rising from a portion of said plate whereby said plate can be elevated and depressed in the bucket while engaged with said vertical pipe portion and with the bucket cover in an open position, said portion on said plate comprising a recticulated part depressed below the level of said plate to engage the bucket bottom and support said plate above the bucket bottom.

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