Dec. 29, 1959 E. H. BAXTER 2,919,120

AERATING DEVICE

Filed Aug. 25, 1955 2 Sheets-Sheet 1

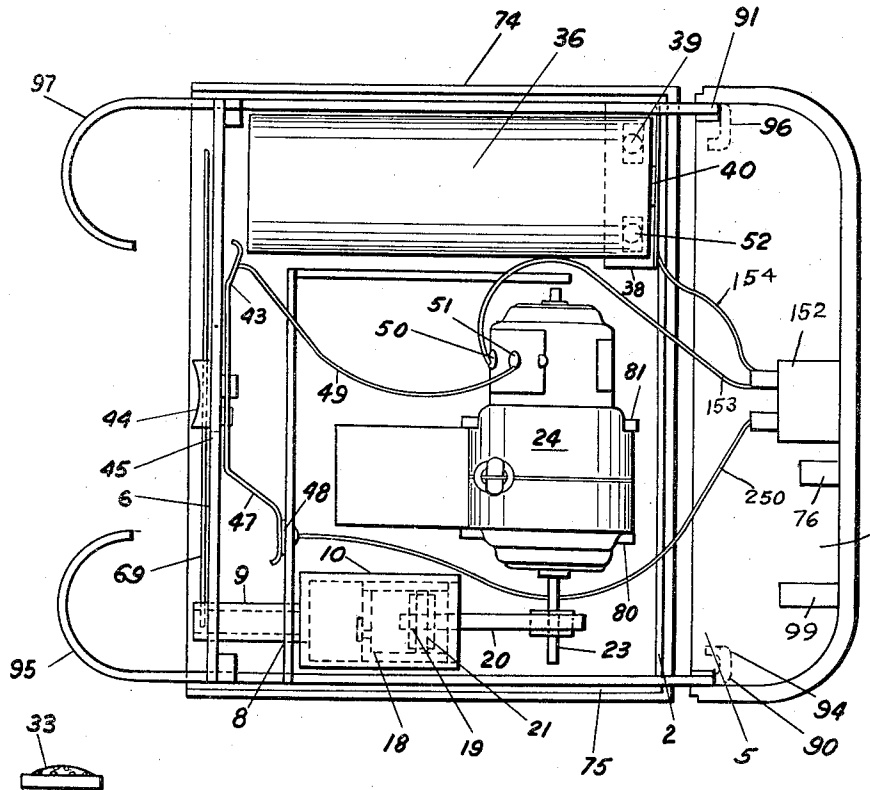


Fig. 1

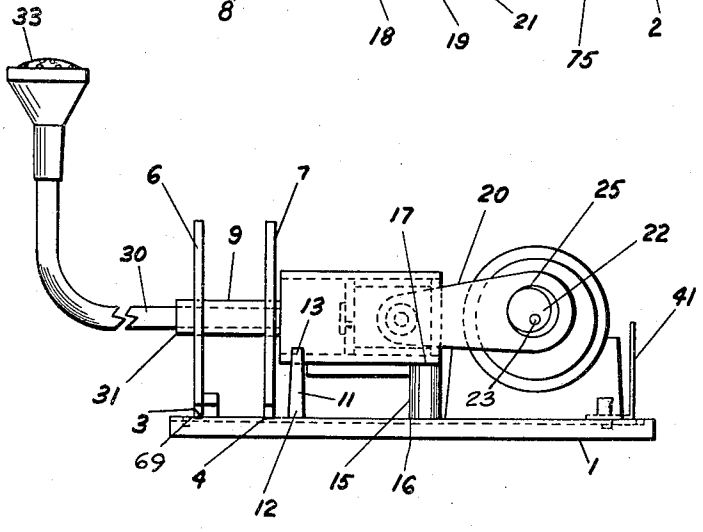


Fig. 2

INVENTOR.
Ellsworth H. Baxter
BY
Charles L. Lovercheck
attorney

Dec. 29, 1959 E. H. BAXTER 2,919,120

AERATING DEVICE

Filed Aug. 25, 1955 2 Sheets-Sheet 2

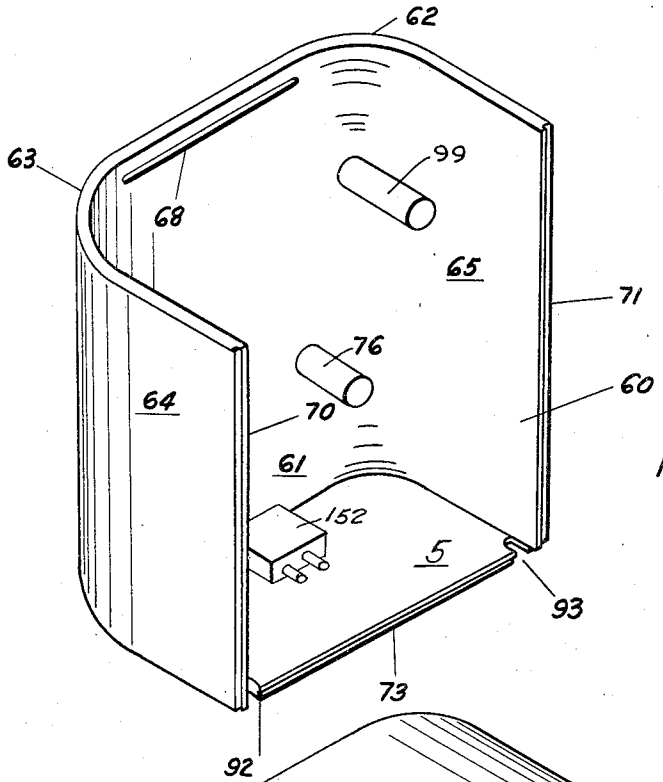


Fig. 3

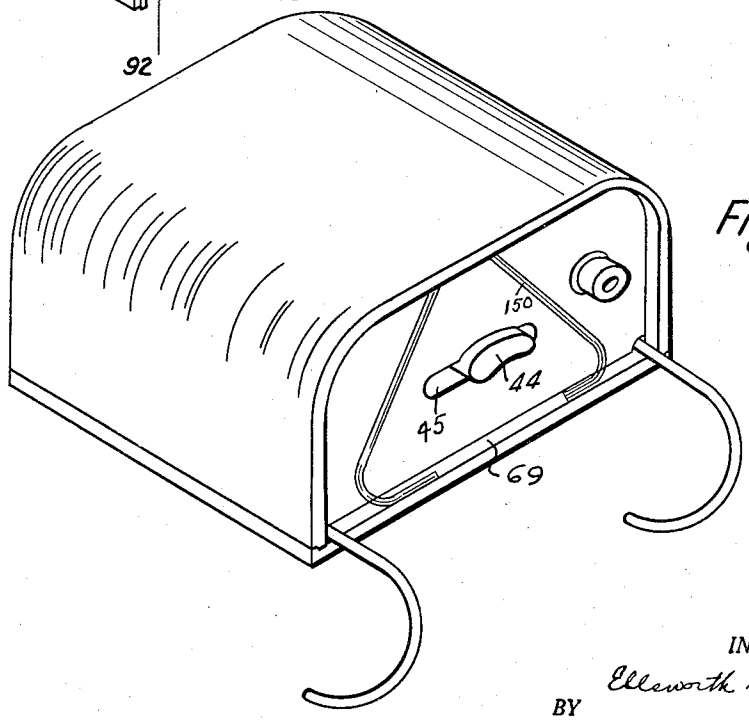


Fig. 4

INVENTOR.
Ellsworth H. Baxter
BY
Charles L. Lovenstedt
attorney

United States Patent Office

2,919,120

Patented Dec. 29, 1959

2,919,120

AERATING DEVICE

Ellsworth H. Baxter, Erie, Pa.

Application August 25, 1955, Serial No. 530,543

3 Claims. (Cl. 261—30)

This invention relates to aerating devices and more particularly to pumps and aerating devices for putting air into water in fish bowls, minnow buckets, bait buckets, and the like.

Aerating devices made according to previous designs were of a complex design which required a separate external source of power to operate the device and they were permanently mounted on a bucket. The present invention discloses a self-contained aerating unit having a power supply and power source therein which can be temporarily attached to the side of a bait bucket or carried on the person of a fisherman. A hose may be extended from the aerating device into the bait bucket to conduit air thereinto.

It is, accordingly, an object of this invention to provide a self-contained aerating device which is simple in construction, economical to manufacture, and simple and efficient to use.

Another object of the invention is to provide an aerating device with attaching means thereon for attaching the device to a bait bucket or to the person of a fisherman.

With the above and other objects in view, the present invention consists of the combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings and more particularly pointed out in the appended claims, it being understod that changes may be made in the form, size, proportions, and minor details of construction without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:

Fig. 1 is a top view of an aerating device having the cover removed and shown resting on its end and overlying the ends of the wire hooks;

Fig. 2 is a side view of the device shown in Fig. 1;

Fig. 3 is an isometric view of the inside of the cover for the aerating device; and

Fig. 4 is an isometric view of the assembled device.

The individual parts of the entire construction with the exception of the electrical components may be molded from plastic or similar material.

Now with more specific reference to the drawings, a base 1 is shown made of a piece of sheet like material having generally parallel grooves 2, 3, and 4 therein. The grooves 2 and 3 receive the lower edges of sheet like end members 5 and 6, respectively, which may be cemented or otherwise attached in the grooves 2 and 3. A pump support sheet 7 is disposed in the groove 4 and has an opening 8 therethrough which receives an output tube 9 from a pump cylinder 10. The pump cylinder 10 is also supported in a cradle 11 which is attached to the base 1 at 12 and has ears 13 which extend upwardly around each side of the pump cylinder 10. A boss 15 is attached to the base 1 at 16 and engages the bottom of the cylinder 10 at 17. A piston 18 is actuated by a crankshaft 20 and it slides in the pump cylinder 10 and has a hollow end which receives the end 19 of the pitman 20. The pitman 20 is attached to the piston 18 by means of a pin 21. A cam 22 is attached to a shaft 23 on a motor 24, the shaft 23 being offset from the center of the cam 22. The cam 22 rotates in a circular hole 25 in the pitman 20. Therefore, when the motor 24 rotates, it will oscillate the piston 18 in and out in the cylinder 10, thereby driving air through the hollow tube 9 and into a tube 30 attached thereto at 31 and then through a diffuser which is in the form of a sprinkler head 33 which may be disposed in the water in a bait bucket.

A dry battery 36 is supported on the base 1 by means of a sheet like member 38 which has ears punched upwardly at 39 to engage either side of the dry battery 36 to hold it in place. A terminal 40 engages an upturned end 41 of the member 38 and contact is made on the other end of the battery by means of a curved spring 43 which has a plastic boss 44 attached thereto. The boss 44 slides in a slot 45 in the end 6. The other end of spring switch 47 will selectively slide to engage a terminal 48 which is attached by support sheet 7 with the spring 43 in closed position. The terminal 48 is connected through a wire 49 and the spring 43 to a terminal 51 on the motor 24. A terminal 50 on the motor 24 is electrically attached through wires 153 and 154 to the metallic member 38 at 52 and to a plug 152 which may be used to attach a separate source of power. Therefore, when the switch member 47 is in the position shown, a circuit will be established from the plug 152, through the wire 250, through the terminal 48, spring switch 47, and wire 49 to the terminal 51 through the motor 24 to terminal 50 and through wire 153 to the other side of the plug 152, thereby allowing the pump to be operated from the external source of power. When it is desired to operate the motor 24 from the dry battery 36, the switch 47 is moved to bring the spring 43 into contact with the dry battery 36. This establishes a contact through wire 49, terminal 51, through the motor 24 to terminal 50 and wires 153 and 154 to the other side of the dry battery 36. If the battery 36 is not in place or is not energized, when the operator puts his thumb against the boss 44 to slide the switch 47 out of engagement with the terminal 48, the circuit through the motor 24 will be interrupted and the motor 24 will stop. However, if no external source of power is connected and a battery is in place as shown, pushing the boss 44 toward the battery will push the spring 43 into engagement with the battery which will complete the electric circuit and will start the motor.

In Fig. 3, a cover 60 has a top 61 which curves at 62 and 63 to merge into sides 64 and 65, respectively, and end 5 is formed integral therewith. The opposite end is open and the top 61 above this end has a slot 68 therein which is adapted to receive a U-shaped wire 150, the bottom of which can extend into a slot 69 in the base 1 so that by removing the wire from between the base 1 and the cover 60 when the cover 60 is in place, the end 6 may be swung off of the end of the tube 9 to allow inspection of the device. Ordinarily, the edges 70 and 71 of the cover 60 will engage slots 74 and 75, respectively, and end 73 will engage the groove 2. By means of cement or otherwise, the cover 60 can be held in place on the base 1. When the cover 60 is in place on the base 1, a boss 76 will hold the top of the motor 24 down into place in its cradles 80 and 81. A boss 99 will engage the top of the pump cylinder 10 and hold it in the cradle 11 and on the boss 15. Both of the bosses 76 and 99 are integrally attached to the cover 60.

The U-shaped spring wire 150 is disposed in the slot 68 in the cover 60 and in the slot 69 in the base 1. The tension on the wire 150 holds it in the slots 68 and 69

and the wire itself forms a stop to hold the end in place.

Wire members **90** and **91** extend through openings **92** and **93** in the end **5** and terminate at either end in hooks **94** and **95** and **96** and **97**, respectively. The wires **90** and **91** are freely rotatable in their slots and can be rotated to swing the hooks **94**, **95**, **96**, and **97** into a common plane with the base **1**. The hooks can also be rotated to bring the hooks **95** and **97** into perpendicular relation with the bottom whereby they can be used to hook over the edge of a bait bucket or the belt of a fisherman to support the carrying device thereon.

The foregoing specification sets forth the invention in its preferred practical forms but the structure shown is capable of modification within a range of equivalents without departing from the invention which is to be understood is broadly novel as is commensurate with the appended claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. An aerating device comprising a base, a cylinder having a piston therein, a discharge means, a plurality of cradles on said base, a motor, a cover, said cylinder being supported in one said cradle, the remaining cradles on said base supporting said motor, said cover disposed on said base over said motor, means on said cover engaging said motor and said cylinder whereby said motor and said cylinder are held in place in said cradles, means operatively connecting said motor to said piston, other means connecting said cylinder to said discharge means,

and a diffuser head on the distal end of said discharge means.

2. The aerating device recited in claim 1 wherein a battery is supported on said base and operatively connected to said motor.

3. An aerating device comprising a base, a cover, cradles, a motor, a pitman rod, a cam, a cylinder with a piston therein, a discharge tube, said cradles being mounted on said base and supporting said motor and said cylinder, said motor having said cam mounted on the shaft thereof, said cam engaging a circular opening in said pitman rod operatively attached to said piston in said cylinder, a cover on said base, said cover having means thereon holding said motor and said cylinder in said cradles, said discharge tube on said cylinder adapted to conduct air from said cylinder to a container of water, a sheet like end member adapted to fit between said base and said cover in engagement therewith, and a U-shaped spring engaging a slot in said cover and its legs engaging a slot in said base whereby said end is held in place, and means for attaching said aerating device to a belt or a bait bucket.

References Cited in the file of this patent

UNITED STATES PATENTS

1,647,818	Semak	Nov. 1, 1927
1,698,419	Wappler	Jan. 8, 1929
2,285,215	Lotz	June 2, 1942
2,601,198	Willson	June 17, 1952
2,639,906	Butler	May 26, 1953
2,808,196	Williams	Oct. 1, 1957