

AQUARIUM TANK

The present invention relates to an aquarium tank for keeping or raising aquarium fish, e.g. freshwater or tropical fish, and particularly to an aquarium tank comprising a tank body and a lid which is attached to the upper portion of the tank body and in which an illuminator is accommodated.

In typical aquarium tanks, a glass lid having an edge opening for supplying food into the tank is attached to the front portion on the upper surface of an upper frame of the tank body. The lid is equipped with fluorescent lamps for illumination. A filter device filled with a filter material is placed on the rear portion of the upper surface of the upper frame.

There have heretofore been proposed various aquarium tanks having an illuminator etc. disposed on the upper portion of a tank body. For example, Japanese Patent Public Disclosure No. 3-195434 discloses an aquarium tank which comprises a tank body having a transparent glass or synthetic resin frame member of a substantially U-shaped sectional profile attached watertightly to a synthetic resin main frame member open at the front, top and part of the opposite sides thereof, and a lid attached to the upper surface of the tank body. The lid is a saucer-shaped synthetic resin frame open at

the bottom and including a lid member provided on the front side so as to be openable and closable for supplying food into the tank body, a housing portion provided on the rear side for accommodating an illuminator therein and a plug socket portion provided on the back side and connected to a power source for a heater etc. The housing is watertightly sealed with a lining member. The lid is pivotally attached to the tank body via a hinge member.

In the prior art aquarium tank, while only the lid member is opened for supplying food into the tank body, the whole lid has to be rotated about the hinge member and opened upright for the purpose of cleaning the interior of the tank body, introducing new fish into the tank body and/or changing the fish. At this time, since the hinge member is positioned outside the tank body, the waterdrops splashing against and the condensed moisture adhering to the lining member flow out of the tank body and wet its surroundings. It is very troublesome to mop up the spilt water.

The present invention has been proposed to eliminate this drawback and aims at providing an aquarium tank capable of preventing such waterdrops from flowing out of the tank body and wetting its surroundings.

This application is related to co-pending United Kingdom Patent Application no. GB 9220889.1. The invention forming the subject matter of that application
5 relates to an aquarium tank comprising a tank body and a lid attached to the upper portion of said tank body and said lid is provided on the side wall thereof with a vent portion to which a cover panel having a plurality of through holes is attached.

10 According to the present invention, there is provided an aquarium tank which comprises a tank body and a lid openably and closably attached to the upper portion of the tank body via a hinge member and having an illuminator accommodated therein and a lining panel
15 attached thereto and which is characterized in that it further includes a drop catcher extending along the edge of the lining panel on the side of the hinge member and opening toward the open end of the lid. The water received in the drop catcher runs into the tank body when
20 the lid is closed.

The present invention will now be described with

reference to the embodiments shown in the accompanying drawings in which:-

Figure 1 is a perspective view of the aquarium tank according to the present invention;

Figure 3 is a side sectional view illustrating the upper portion of the aquarium tank;

Figure 4 is a front sectional view illustrating the upper portion of the aquarium tank;

Figure 5 is a side sectional view illustrating the upper portion of the aquarium tank, with the lid open;

Figure 6 is a front view illustrating the bottom of the open lid;

Figure 7 is a partially cutaway sectional view illustrating a vent portion formed in the side wall of the lid;

Figure 8 is a sectional view taken along line VIII-VIII in Figure 7;

Referring now to Figure 1, there is shown an aquarium tank 1 which comprises a tank body 2 and a lid 3 detachably attached to the tank body 2. The tank body 2 comprises a main frame member 4 of synthetic resin open at the front, top and part of the opposite sides thereof and a transparent frame member 5 of glass or synthetic resin having a substantially U-shaped sectional profile and attached watertightly to the main frame member 4 with adhesive. As shown in Figure 3, the upper end of the transparent frame member 5 is pinched between the upper end 4a of the main frame member 4 and an abutment member 6 fitted on the upper end 4a of the main frame member 4. The abutment member 6 has a stopper piece 6a engageable with the lower edge 3a of the lid 3. The tank body 2 may be formed by attaching a plurality of transparent glass or

synthetic resin panels to one another.

A filter device (not shown) is detachably fitted in the tank body 2 and comprises a functional portion 7 defined by a partition wall 8 positioned on the rear side of the tank body 2 and a filter portion on the bottom of the tank body 2. Pebbles are placed on the filter portion and a heater is provided below the filter portion. A pump and a filter material are accommodated in the functional portion 7.

Part of the water pumped up by the pump is sprinkled onto the surface of the water in the tank body 2 through sprinkling holes 9a of a discharge pipe 9 disposed in a space p between the lower surface of the lid 3 and the surface of the water in the tank body 2 and the remaining pumped-up water is recirculated by being supplied onto the filter material through a branch pipe 10 disposed in the functional portion 7 of the filter device.

The lid 3 attached to the upper surface of the tank body 2 is a saucer-shaped synthetic resin frame open at the bottom and including a lid member 11 provided to be openable and closable at the front for supplying food into the tank body, a housing portion 12 provided on the rear side for accommodating an illuminator therein and a plug socket portion 13 provided on the back side and connected to a power source for a heater etc. The lid 3 is attached openably and closably relative to the tank body 2 via a hinge member 14. Since the hinge member 14 can be disassembled, the lid 3 can be detached from the tank body 2. The housing portion 12 of the lid 3 is for accommodating therein a ballast and fluorescent lamps 15 constituting an illuminator. The housing portion 12 is a space defined by a peripheral wall 17 extending from a head panel 16 and is sealed watertightly by a lining panel 18. Further, as shown in Figure 6, a space 20 formed between the peripheral wall 17 and the side wall 19 of the

lid 3 is divided into first wide space portions 20a disposed laterally of the fluorescent lamps 15 and second narrow space portions 20b disposed laterally of the ballast. Each pair of space portions 20a and 20b communicate with each other. The lining panel 18 is detachably screwed to bosses 21 formed on the lid 3.

In the aquarium tank 1, a drop catcher 22 having a draining piece 22a extends straight along the edge of the lining panel 18 on the side of the hinge member 14 and opens toward the open end of the lid 3. A trough having a substantially U-shaped sectional profile can be used as the drop catcher 22. The drop catcher 22 receives not only the condensed moisture adhering to the lining panel 18 when the lid 3 is rotated about the hinge member 14 to be in a substantially upright position as shown in Figure 5, but also the waterdrops splashed up by the water sprinkling. Therefore, the waterdrops which have reached the hinge member 14 via the lining panel 18 neither flow out of the tank body 2 nor wet its surroundings. The water received in the drop catcher 22 runs into the tank body 2 when the lid 3 is closed.

The aquarium tank 1 of the present invention thus has the lining panel 18 provided with the drop catcher 22 and, therefore, even when the lid is opened for the purpose of cleaning the interior of the tank body 2, introducing new fish or hydrophytes into the tank body 2 and/or changing the fish or hydrophytes, the water received in the drop catcher 22 will not flow out of the tank body 2. Therefore, no particular precaution is required when selecting a location for the aquarium tank 1. It can be placed, for example, even on an electric appliance apt to be easily damaged by moisture. A plurality of such drop catchers 22 may be disposed on the lining panel 18 in parallel with the pivot axis of the hinge member 14. Furthermore, the drop catcher 22 may be

formed to have a substantially V-shaped sectional profile or the draining piece 22a may have an inclination directed downward when the lid 3 is in its closed position, whereby waterdrops can be reliably caught by the drop catcher 22 and the received water can be easily discharged.

In the aquarium tank 1 of the present invention, the lid 3 has a vent portion 23 formed in the side wall 19 thereof. A register 24 is fitted to the vent portion 23 so that it can open and close the vent portion 23. When the vent portion 23 is opened by the register 24, the space p above the surface of the water in the tank body 2 communicates with the outside.

The present invention has been described with reference to the illustrated embodiment. However, it is not limited to the illustrated embodiment, but may be modified within the scope of the appended claims.

As has been described in the foregoing, according to the present invention, since an aquarium tank comprising a tank body and a lid openably and closably attached to the upper portion of the tank body via a hinge member and having an illuminator accommodated therein and a lining panel attached thereto is provided with a drop catcher extending along the edge of the lining panel on the side of the hinge member and opening toward the open end of the lid, when the lid is rotated about the hinge member to be in a substantially upright position for the purpose of cleaning the interior of the tank body, introducing new fish or hydrophytes into the tank body and/or changing the fish or hydrophytes, the drop catcher can receive the waterdrops splashed up by the sprinkling water and the condensed moisture adhering to the lining panel. Therefore, the waterdrops neither flow out of the tank body nor wet its surroundings. For this reason, the aquarium tank can be placed, for example, even on an electric appliance apt to be easily damaged by moisture. Thus, no particular precaution is required when selecting a location for the aquarium tank.



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CLAIMS

1. An aquarium tank comprising a tank body and a lid
5 openably and closably attached to the upper portion of
said tank body via a hinge member and having an
illuminator accommodated therein and a lining panel
attached thereto,

said aquarium tank being characterized in that it
10 further includes a drop catcher extending along the edge
of said lining panel on the side of said hinge member and
opening toward the open end of said lid.

2. An aquarium tank according to claim 1, characterized
15 in that a plurality of drop catchers are provided in
parallel with the axis of said hinge member.

3. An aquarium tank substantially as hereinbefore
described with reference to and as shown in the
20 accompanying Figures 3, 4, 5, 6, 7 and 8.