Jan. 27, 1931. H. C. BETHLEM 1,790,531

METHOD OF MAKING PICTORIAL GLASSES

Filed June 12, 1929

Fig. 1.

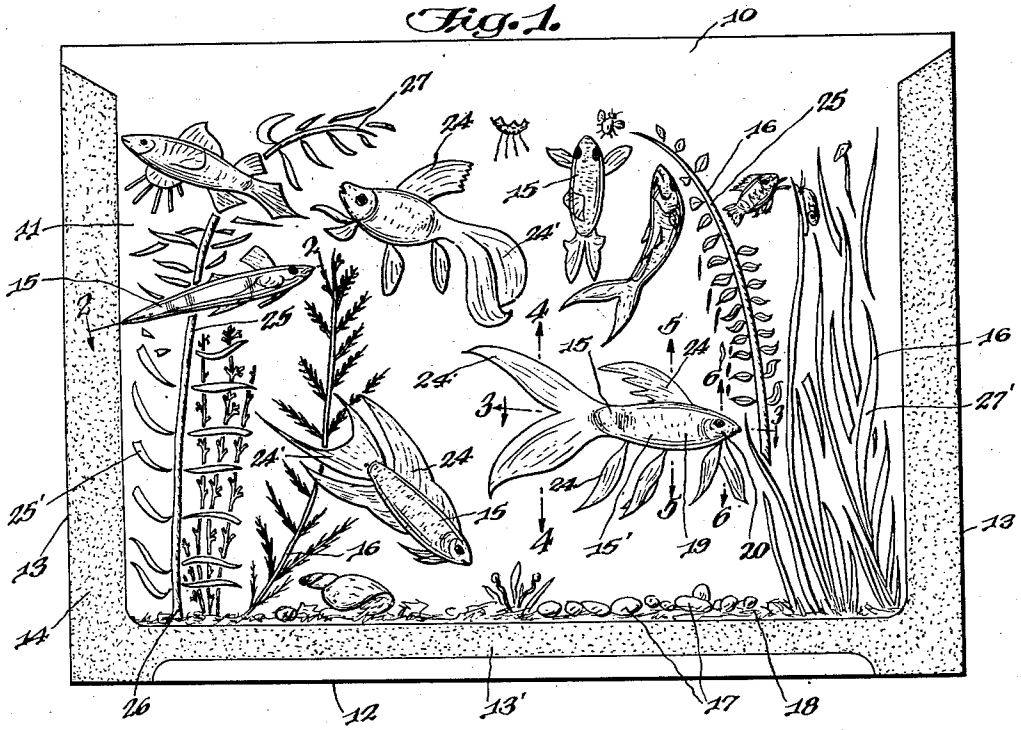


Fig. 2.



Fig. 3.

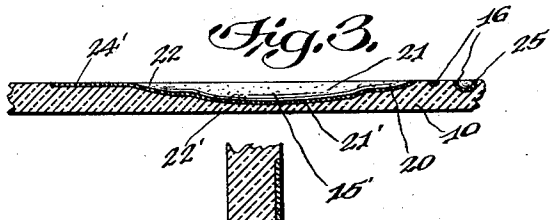


Fig. 4.

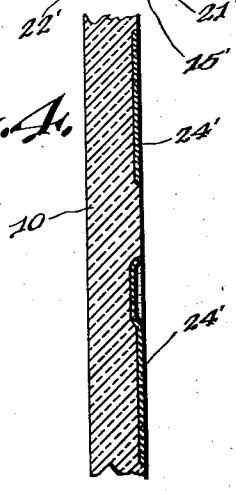


Fig. 5.

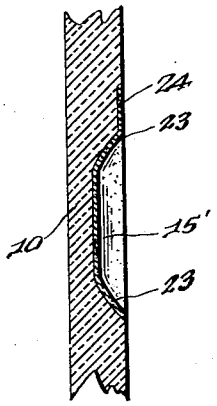
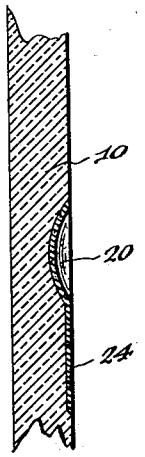


Fig. 6.



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WITNESS:

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UNITED STATES PATENT OFFICE

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METHOD OF MAKING PICTORIAL GLASSES

Application filed June 12, 1929. Serial No. 370,394.

This invention relates to pictorial glasses and the method of forming intaglio characters in the body of the glass of homogeneous structure.

The object of the invention is the production of a pictorial glass of the character hereinafter described wherein certain portions of the bodies of the characters are produced in intaglio in the under surface of the glass and the remaining portions of the bodies are artistically painted so that when the characters are viewed from the face of the glass they will appear in relief, giving a life-like appearance and stand out from the glass.

Before my invention, so far as I am aware, characters have been formed in porcelain, clay, glass and like material, while in a plastic composition, by the use of molds or dies patterned to produce the desired effect. Such methods are objectionable by reason of the cost involved in producing the molds or dies and because of the rough and irregular outline of the characters produced by contraction during cooling and hardening of the material.

It is therefore an object of the invention to produce a pictorial glass representing an aquarium or the like wherein the characters are formed by grinding depressions in the body of the glass and painting the surface of the depressed portions to contrast with other portions of the characters painted directly upon shallow depressed surfaces of the body of the glass sheet and wherein these depressed portions vary in depth, giving to the design, as seen from the face of the glass sheet, a handsome shaded appearance which makes the characters stand out in relief and in life-like appearance.

The invention will be more fully understood by reference to the accompanying drawings, showing the preferred form of construction and in which:

Fig. 1 is a face elevational view of the finished article embodying the invention;

Fig. 2 is a fragmentary sectional view taken substantially on line 2—2 of Fig. 1;

Fig. 3 is a fragmentary sectional view taken substantially on line 3—3 of Fig. 1;

Fig. 4 is a fragmentary sectional view taken substantially on line 4—4 of Fig. 1;

Fig. 5 is a fragmentary sectional view taken substantially on line 5—5 of Fig. 1; and

Fig. 6 is a fragmentary sectional view taken substantially on line 6—6 of Fig. 1.

To accomplish the various objects of the invention I preferably use a sheet of glass 10 of homogeneous structure having smooth surfaces free from streaks or the like such as would depreciate the æsthetic effect of the article when completed.

The article shown in the drawing is illustrated to represent an aquarium wherein the body 11 of the glass sheet serves to appear as water with certain portions thereof adjacent its lower and side edges 12 and 13 stippled or rough ground as at 14 to produce a white clouded appearance representing the sides and bottom frame members of the body of an aquarium. Within the confines of these edge portions are artistically arranged characters 15 representing sea animals such for example as fish, tadpoles, and the like. In addition to these characters there is also artistically arranged sea plants 16 such for example as sea grass, moss, and the like.

Contiguous of the stippled portion 13′ adjacent the bottom edge 12 of the body there are arranged pebbles 17 or the like resting upon and partially embedded in sand 18.

These characters and other representations such as the sea plants and sea bottom are preferably formed in the back surface of the glass body in the following manner.

Referring to one of the characters 15, as at 15′, I preferably form the main body portion 19, including the head portion 20 by grinding out the body of the glass sheet to a desired depth and area producing an indentation or hollowed out portion 21. This indentation made in the glass body has a flat bottom surface with its surface lines 21′ varying in depth from a slight indentation, as at 22, to a deep indentation as at 22′ and with its longitudinal edges terminating into upwardly and outwardly gradually sloping side walls as at 23 to leave the body of the glass between the indentation and the outer surface or face thereof of varying thickness whereby the body

of this character will appear, when viewed from the face of the glass, in perspective.

It is important to note that the deeper the indentation is made the nearer the character will appear toward the face of the glass and the shallower the indentation is made the further away the character will appear, thus adding to the realistic appearance of the character.

The fins 24 and tail 24′ of this character are also formed by grinding indentations in the sheet of glass in a manner similar to that in which the body is formed. It is intended that the indentations forming the fins and tail each be formed of a slight depth providing a shallow depression to receive the coloring to prevent the coloring from spreading over the undisturbed surfaces of the glass and to facilitate applying the coloring.

These indentations after being properly formed are painted in various blending colors to further bring out the illustration of a fish, the head portion 20 thereof which is of slight depth being painted or otherwise colored to provide a mouth and an eye.

In viewing this character as well as other like characters it will be observed that certain of the fins 24 and certain portions of the tail 24′ appear near the front surface of the glass body while the remaining portions and other portions of the tail, which are of very shallow indentation, appear further away from the front surface thereof. This arrangement, together with the gradually sloping side walls serves to bring out the character in relief aiding to present the character in perspective form when viewed from the face of the glass. The other sea animals, as well as the pebbles, are formed in the same manner, there being certain portions formed by grinding shallow indentations and other portions formed by grinding deep indentations of varying depths and gradually sloping surfaces preferably from end to end and side to side producing when viewed from the back of the glass elongated or oblong bowl or dish shaped indentations.

The sand or sea bottom is provided by painting the back lower surfaces of the glass body of a color contrasting with the color of natural sand.

In connection with the sea plants I preferably form each of the stems or trunks 25 thereof by grinding out the body portion of the glass to provide elongated depressions varying in depth and width in a direction from the bottom 26 to the top 27 thereof.

The leaves 25′ and grass blades 27′ are likewise formed by grinding indentations in the body of the glass in a manner similar to that in which the fins 24 and tail 24′ are formed, it being intended that the indentations forming these leaves and grass blades be formed of slight depth providing shallow indentations for the purpose herein mentioned. These indentations or depressions are painted in blending colors to produce the natural appearance of sea grass and plants.

It is important to mention at this time that in forming the various indentations the surfaces of these indentations are rough ground providing surfaces which are readily adapted for receiving the paint or other coloring materials preventing such paint or other materials from spreading over the undisturbed surfaces of the sheet of glass.

It is important to note that by reason of the variations in the depths of the depressions of the stems and the indentations of certain of the leaves and grass blades that these characters stand out from the back surface of the glass body in perspective form adding to the æsthetic appearance of the pictorial glass, when completed.

It is apparent from the foregoing description, taken in connection with the illustrations in the accompanying drawing that when the glass sheet is viewed from the face thereof the stippled edge portions will appear as the sides and bottom of an aquarium body; that the clear or uncolored body portion of the glass body will appear as water within which the artistically colored sea plants and animals appear in perspective, and in life-like appearance. While I have illustrated in the drawings a sheet of glass from which the article is made it is apparent that the body of the article can be cylindrical in form to present the appearance of a fish bowl. Further in this connection it is pointed out that the article when completed can be either hung on a wall forwardly of a suitable background or be placed upon a table or desk to protect the finished surfaces of the table top or desk thereunder from damage.

It is intended that the colors be brilliant and blended together to produce the best effect.

While I have shown and described the preferred form of construction, it is apparent that various changes and alterations may be resorted to during manufacture without departing from the spirit of the invention or the scope of the appended claims.

Having thus described my invention what I claim as new and desire to protect by Letters Patent is:

1. The method of making an artificial aquarium from a glass body consisting in rough grinding the edge portions of the body to cause said edge portions to present the appearance of a frame around the aquarium and applying colored characters in the portion thereof surrounded by said rough ground edge portion.

2. The method of making an artificial aquarium from a glass body consisting in rough grinding the edge portions of the body to cause said edge portions to present the ap-

pearance of a frame around the aquarium, grinding deep indentations forming certain portions of the colored characters, grinding shallow indentations forming other portions of the characters, and coloring the surfaces of the indentations completing the characters.

3. The method of making a pictorial glass consisting in having portions of characters in intaglio, coloring the intaglio portions, and applying other portions of the characters outlined upon the surfaces of the glass contiguous of the intaglio portions so as to appear in the background of the intaglio portions.

4. The method of making a pictorial glass consisting in having portions of characters in intaglio, coloring the intaglio portions having other portions of the characters outlined upon the surfaces of the glass contiguous to the intaglio portions so as to appear in the background of the intaglio portions, and stippling the edge portions of the glass to produce frosted portions of the glass.

5. The method of making a pictorial glass consisting in grinding deep flat depressions of varying depths in the glass each having rough ground bottom surfaces gradually sloping inwardly from end to end and side to side, to form certain portions of the bodies of characters, coloring the surfaces of the depressions, and grinding shallow flat bottomed depressions contiguous of the deep depressions completing the characters.

6. The method of making a pictorial glass consisting in grinding deep flat depressions of varying depths in the glass each having rough ground bottom surfaces gradually sloping inwardly from end to end and side to side, to form certain portions of the bodies of characters, coloring the surfaces of the depressions, and grinding shallow flat bottomed depressions contiguous of the deep depressions completing the characters, and coloring the surfaces of the depressions.

7. The method of making an artificial aquarium from a glass body consisting in grinding deep and slight depressions contiguous of each other with flat bottom surfaces of varying depths and gradually rounded side walls forming a character, and coloring the surfaces of the depressions so as to make the character appear to stand out from the back surfaces of the glass body.

8. The method of making an artificial aquarium from a glass body consisting in grinding deep and slight depressions contiguous of each other with flat bottomed surfaces of varying depths and gradually rounded side walls forming a character, coloring the surfaces of the depressions so as to make the character appear to stand out from the back surfaces of the glass body, and rough grinding the edge portions of the glass body to form a clouded border.

9. The method of making an artificial aquarium from a glass body consisting in grinding deep and slight depressions contiguous to each other with flat bottom rough ground surfaces of varying depths and gradually rounded side walls forming a character, and coloring the surfaces of the depressions as to make the character appear to stand out from the back surfaces of the glass body.

In testimony whereof I affix my signature.

HENRY C. BETHLEM.