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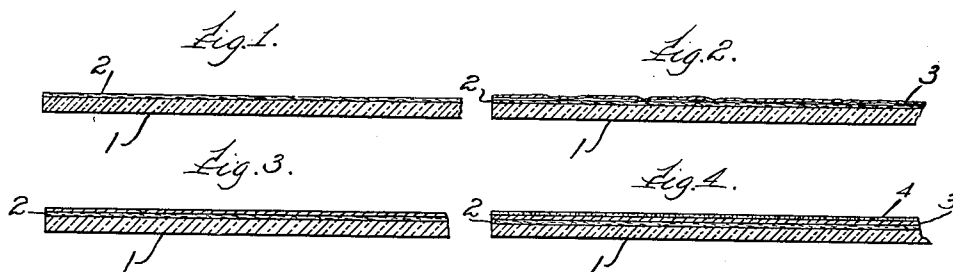
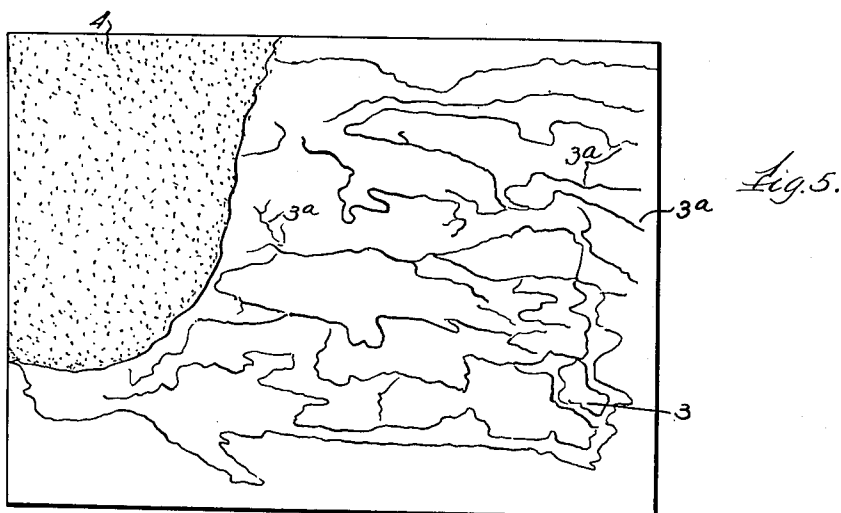
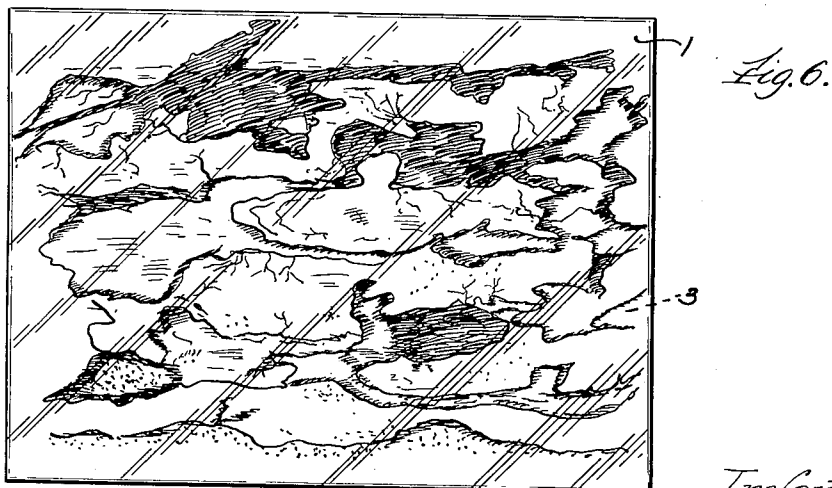
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2,586,394

PROCESS FOR ORNAMENTING GLASS

Filed June 17, 1949

2 SHEETS—SHEET 1



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2 SHEETS—SHEET 2

Fig 7.



2a

Fig 8



2a

Fig 9

3a 1a



1a

2a

Fig 10

3c

1a



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UNITED STATES PATENT OFFICE

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PROCESS FOR ORNAMENTING GLASS

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1 Claim. (Cl. 41-18)

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This invention relates to processes for ornamenting transparent objects such as table tops of glass, jewelry boxes and the like. The process may be employed to provide a fissure effect, a crackle finish, a marble effect, etc. Objects that may be ornamented by the instant process are endless in variety, each object being given an individuality that provides strong appeal particularly to persons desirous of furnishing their homes, offices, shops and the like in a manner denoting originality.

The instant process is capable of providing a decorative effect having practically any degree of transparency or opaqueness and one wherein designs are readily applied to the surface in a manner to provide a high degree of contrast or the object may be so treated as to harmonize or "fit in" with its immediate surroundings and most any overall effect attained.

Having in view the foregoing and other objects which will be pointed out in the following description, reference is now made to the drawings, wherein

Figs. 1, 2, 3 and 4 are vertical sectional views through a transparent plate illustrating successive steps employed in carrying out the process.

Fig. 5 is a back view of the plate showing metal leaf applied thereto and a lacquer in the process of application.

Fig. 6 is a face view of the plate showing the original effect produced by the process.

Fig. 7 is a face view of a glass plate showing a crackle finish or effect.

Fig. 8 is a longitudinal sectional view through a glass plate with glue sizing.

Fig. 9 is a view similar to Fig. 8 but with metal leaf applied, and,

Fig. 10 is a longitudinal sectional view through Fig. 7 on the line 10-10.

The instant process contemplates the application to the glass plate 1 of a thin coat of gelatine glue size 2 which has been dissolved in water, application being made preferable with a paint brush. The most satisfactory material I have found to be the colloids used ordinarily in painting that possess jelly-like characteristics, that are smooth or slippery to the touch and that adhere to the objects with which they make contact that are not materially altered in this respect by substantial dilution.

To the sized surface I now apply the metal such as gold leaf, aluminum leaf, copper leaf and for the finer grade of work gold leaf 3 only is applied somewhat unevenly and preferably by tip of the finger. By spreading the fingers and then touch-

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ing the leaf to be applied the same may be satisfactorily laid by closing and opening the fingers so that an application is made that will form flat spots with folds between them. When this configuration has formed the metal is gently pressed against the surface with cheese cloth or cotton waste and allowed to dry. Cotton waste is then used to firmly rub or massage this surface to remove all excess metal leaf that has accumulated due to the folds.

A portion of the moisture is also removed in this manner and the amount of moisture remaining will determine to an appreciable extent the final shapes attained by the material and by regulating the quantity of moisture left at this stage a definite effect may be built up that will influence or tend to mold the final result so that the worker by this step may to a considerable degree forecast the ultimate configuration. It will now be found that fine spider-web like veins 3a appear upon the surface where the folds or creases have met. Any air which has been trapped in the folds or creases is in this manner evacuated.

A lacquer 4, an enamel or flat paint is now sprayed upon the back of the transparent or glass sheet. A good flat enamel is very satisfactory, or a lacquer which is used to completely cover the cracks so that they will be clearly seen from the reverse side. With practice it will be found that a crackle finish may be provided that in certain details such as color contrasts or color blends may be supplied each of which will have many points of originality to distinguish them from any other surface. Such overall surface finishes make the object so treated very individual as it will be found impossible to duplicate them in detail although points of similarity such as certain outlines or general configuration may be repeated or copied.

Referring now to Figs. 7 through 10: To the transparent surface 1a a thin layer of gelatin glue-size 2a dissolved in water is applied. The metal leaf 3c is then applied, in this case as smoothly as possible. This leaf is pressed out with a roller to squeeze out the excess gelatin from beneath the leaf and also to cause a slight irregularity of the folds in the metal. The application is now permitted to dry upon the surface. This should ordinarily require about twenty minutes.

A piece of newsprint or material having a similar porosity and which will buckle, shrivel and shrink is then laid flat upon the glass. A piece of light cotton cloth or the like which has a fairly

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good capacity for liquid absorption is then saturated with ammonia, aqua ammoniae. This cloth, so saturated, is laid evenly upon the newsprint. The chemical reaction of the ammonia upon metal is allowed to continue until the cloth is quite dry or the ammonia completely evacuated. During this time the paper permits the ammonia to react on the metal only as long as it lays perfectly flat. As soon as the newsprint begins to buckle it draws away from the metal in the high spots while in the low spots it permits the action of the ammonia to continue until completely evacuated.

In this manner an ever changing pattern is formed. This step may be repeated as many times as necessary to achieve a desired effect, usually three repetitions will provide an interesting design. Now after fissures, veins and the like 3b have been formed a locking agent is used to assist the gelatin remaining to hold the metal to the glass. Clear shellac has been used for this purpose with complete satisfaction. The surface may be sprayed or coated with paint or an ordinary enamel 4a to cover same completely.

What is claimed is:

The process of ornamenting glass which comprises the steps of evenly applying over one surface of the glass a size coat of highly diluted gelatin glue, applying a metal leaf to the exposed

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surface of said size coat under varying pressures at different localized points and gathering the metal leaf until flat spots of varying sizes interspersed with folds forming configurations of diverse contours are produced, firmly massaging said metal leaf with absorbent material until the portions of material of the metal leaf that have accumulated due to the interspersed folds are removed thus forming a substantially smooth surface on said metal leaf having fine irregular lines conforming to the places where the metal was massaged away and then applying a thin enamel coat to the massaged surface of said metal leaf thus enhancing the designs produced by the configurations of the produced fine lines.

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