July 20, 1943. C. W. GUSTKEY 2,324,694

METHODS OF ETCHING INSIGNIA UPON ARTICLES OF GLASSWARE

Filed Dec. 11, 1942

Fig. 1

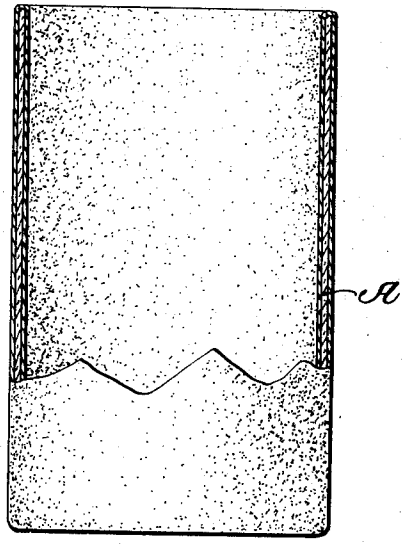


Fig. 2

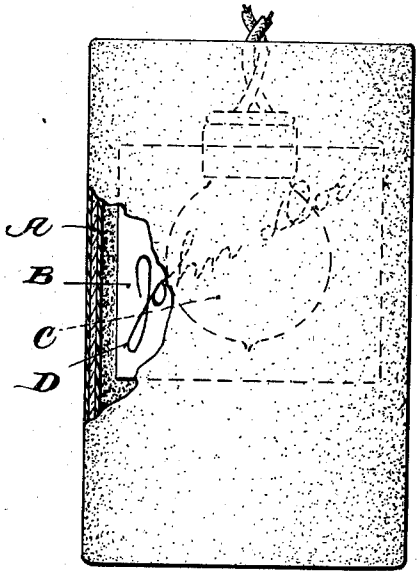


Fig. 3

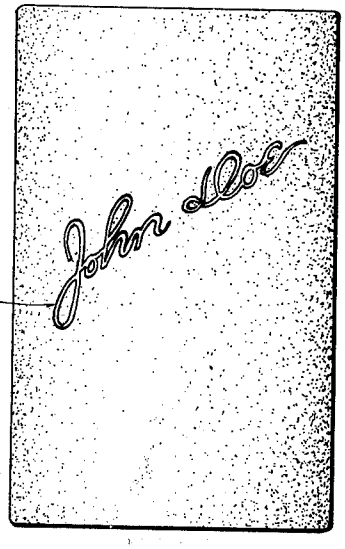
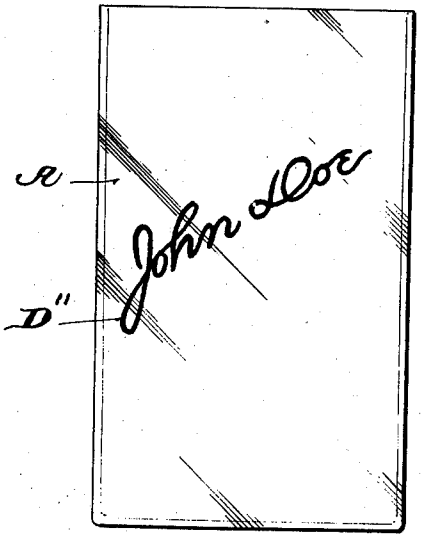


Fig. 4



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METHOD OF ETCHING INSIGNIA UPON ARTICLES OF GLASSWARE

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4 Claims. (Cl. 41—43)

This invention relates to glassware etching and more particularly to a method of etching insignia on articles of glassware, such as tumblers, ash trays, and other articles upon which it is desired to etch a signature, picture, initials or other insignia, or configuration.

The primary object of the present invention is to provide a method of etching glassware which is simple in its practice, involves a minimum of steps and effort and which is effective in its attainments.

The invention in its scope, comprehends inter alia many variations, including that of the transfer of pictures, outlines of photographs and various other transfers too numerous to mention to various articles of glassware, however, all comprehended by the broad subject of glassware in general.

The invention has still further and other objects, which will be later set forth and of themselves manifested in the course of the following description.

In the drawing:

Figure 1 is a side elevation of a tumbler to which the invention is susceptible of use, partly broken away and in section,

Figure 2 is a similar view showing the second stage of the invention,

Figure 3 is a side elevation showing the third step of the method, and

Figure 4 is a similar view of the ultimate product.

In proceeding in accordance with the present invention, a tumbler A, merely by way of example, is depicted and coated with an acid resisting material or substance, both interially and exteriorly thereof, which material is of a translucent type or character.

The insignia D is inscribed or imprinted, or otherwise placed upon a section of paper or cardboard indicated at B, and is inserted or placed in the tumbler into close or intimate contact with the internal surface of the tumbler.

A light source, such as an electric light bulb is next inserted interiorly in the tumbler in a position rearwardly of the insignia bearing paper or cardboard B, and by means of which light source the insignia is rendered clearly visible from the outer surface of the tumbler.

The image of the insignia is then traced through the acid resisting coating or material thereon from the exterior of the tumbler, by use of a stylus, or any similar tool, so as to remove the acid resisting material at points coinciding with the insignia, thus exposing the surface of the glass as indicated at D' in Figure 3.

The next step resides in the use of hydrofluoric acid to etch the insignia at the points where the acid resistant material has been removed, thus to permanently affix the insignia onto the surface of the glass. After this etching step, the hydrofluoric acid or any composition of acids which may have been employed, are removed by a washing process, thus leaving the original glass surface with the insignia indicated at D'' in Figure 4 permanently inscribed upon the exterior of the tumbler. Obviously, also, the grooves resultant from the etching may be filled with gold, or any other desired coloring, in order to enhance the appearance of the article. The drawings illustrate a signature diagonally disposed on a tumbler which is preferred, but obviously various dispositions thereby can be resorted to. From the foregoing it will be obvious that the invention is very simple and provides expeditious and simple etching in a minimum of steps.

The foregoing is illustrative of one method or form by means of which the invention can be practiced, and it is to be understood that such changes and alterations may be resorted to as fall within the scope of the invention, and its spirit announced by the following claims.

What is claimed is:

1. The herein described method of etching insignia upon articles of glassware, which resides in coating opposed faces of the article with acid resistant material, then placing an insignia bearing media against one face of the coated article, subjecting the media to a source of light, removing the acid resistant material from the opposite face of the article at points coinciding with the insignia, etching the glass surface at the points of removal of the material, and finally removing the acid resistant material.

2. The herein described method of etching insignia upon articles of glassware which resides in coating opposed faces of the article with acid resistant material, then placing an insignia bearing media against one face of the coated article, subjecting the media to a source of light which is impinged against the rear face of the media, removing the acid resistant material from the opposite face of the article at points coinciding with the insignia, etching the glass surface at the points of removal of the material, and finally removing the acid resistant material by washing.

3. The herein described method of etching in-

signia upon hollow articles of glassware, which resides in coating the interior and exterior of the article with acid resistant material, then placing an insignia bearing media within the article and against the inner surface thereof, then inserting an electric light bulb within the article so as to cause the article to be subjected to the rays from the bulb, then in removing the acid resistant material from the outer surface of the article at points coinciding with the insignia, etching the glass surface at the points of removal of the material, and finally removing the material.

4. The herein described method of etching insignia upon hollow articles of glassware, which resides in coating the interior and exterior of the article with acid resistant material, then placing an insignia bearing media within the article and against the inner surface thereof, then inserting an electric light bulb within the article so as to cause the article to be subjected to the rays from the bulb, then in removing the acid resistant material from the outer surface of the article at points coinciding with the insignia, etching the glass surface at the points of removal of the material, and finally removing the material by washing.

CARL W. GUSTKEY.