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## METHOD OF MANUFACTURING ETCHED METALLIC CHARM

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3 Claims

### ABSTRACT OF THE DISCLOSURE

A method of making a charm from a photograph by making a screened negative from the photograph, making a screened positive from the negative, exposing the positive on a photo-sensitized metallic plate to produce a negative image, etching the negative image on the printed plate, electroplating the etched plate, and darkening the etched portion of the plate.

### BACKGROUND OF THE INVENTION

This invention relates to a method of manufacturing etched metallic articles, and more particularly to the manufacture of metallic charms from photographic images.

Miniature charm designs have always been a popular item of jewelry for personal wear. Such charms may be formed as three-dimensional replicas of animals, musical instruments and other articles of interest, or they may be in the form of flat discs having appropriate inscriptions or figures in relief thereon. The method of the present invention is directed to the manufacture of this latter class of charms.

The charms manufactured in accordance with the principles of the present invention differ from charms conventionally available in that a photographic image is reproduced with life-like clarity on a selected background design. It has been known in the past to utilize line negatives to reproduce images on charms and medallions, but this method does not allow for any gradation in intensity among the tones reproduced. The present invention permits a complete range in gradation of tones to be reproduced on the metallic backing selected and thereby brings out in the charm all of the subtleties of shading present in the original photographic image.

### SUMMARY

A screened, or halftone, positive is utilized in the steps of manufacturing an etched metallic charm from a photographic image to produce a surface image on the metallic base having tones from the very lightest to solid black. In this manner a charm can be made with a faithful reproduction of any desired photographic image.

### DESCRIPTION OF THE PREFERRED EMBODIMENT

The charms of the present invention constitute substantially flat, disc-like structures similar to conventional charms presently used on bracelets and necklaces. The charms comprise a metal base having an etched border design with a central image transferred to the metal base in accordance with the novel principles of the invention.

A pen and ink drawing is utilized to make a line negative, and the desired photographic image is used to make a screened, or halftone, negative. These two negatives

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would be the normal negatives used by a photoengraver for making a commercial engraving or printing plate. In accordance with the present invention, however, these two negatives are combined and a screened, or halftone, positive is made.

A copper plate is selected for the metallic base member, and this plate is chemically scrubbed to clean all impurities. After cleaning, the plate is coated with a light-sensitive solution such as a conventional photoengraver's enamel and then dried. The positive is placed upon the sensitized metallic base and exposed on the base with a high-powered light. The resulting negative image on the metallic base is developed, and the print is burned in from the bottom of the plate to harden it on the metal.

The metallic base with the printed negative image thereupon is placed in a copper-etching machine where an iron chloride solution etches or eats away the unwanted metal to produce a roughened surface corresponding to the desired image. The etched metallic base, which contains a plurality of charms is then removed from the solution and each charm is cut-out. After all burrs and imperfections are removed by filing and polishing, the charms are then cleaned thoroughly and placed in a gold electroplating solution. A layer of gold is deposited over the copper base, and the charms are taken from the electroplating solution and after rinsing, they are polished and buffed until the degree of smoothness and brightness desired on the finished product has been attained. The etched-out portions are darkened by means of a black coloring, and after the coloring has dried, the charm is complete.

In the particular process described the metallic base was copper and the electroplated coating was gold. Other metals may be employed equally as well for both the base and coating; e.g., brass or silver may be utilized as the base and silver may be utilized in the plating process.

While the invention has been shown and described with particular reference to a preferred embodiment, it will be understood by those skilled in the art that various changes in form and details may be made without departing from the spirit and scope of the invention.

What is claimed is:

1. A method of manufacturing an etched metallic charm from a photographic image comprising the steps of:

- (a) developing a screened negative from said photographic image,
- (b) developing a screened positive from said screened negative,
- (c) coating a metallic plate with a light sensitive solution,
- (d) exposing said positive on said coated metallic plate,
- (e) developing the exposed negative image on said metallic plate,
- (f) etching the negative image on said metallic plate,
- (g) electroplating said metallic plate with a desired metallic coating, and
- (h) treating the etched portions of said metallic plate to produce a contrasting appearance.

2. The combination according to claim 1 including the additional steps of:

- (a) developing a line negative from a desired background pattern, and
- (b) combining said line negative with said screened negative prior to developing said screened positive, whereby said screened positive is a composite of said line negative and said screened negative.

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3. The combination according to claim 2 wherein a plurality of charms are produced in the same series of steps including the additional step of cutting out each individual charm after etching and prior to electroplating.

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