

(No Model.)

T. BENFIELD.

THE METHOD OF ORNAMENTING WATCH CASES AND OTHER ARTICLES
OF JEWELRY.

No. 275,569.

Patented Apr. 10, 1883.

Fig. 1.

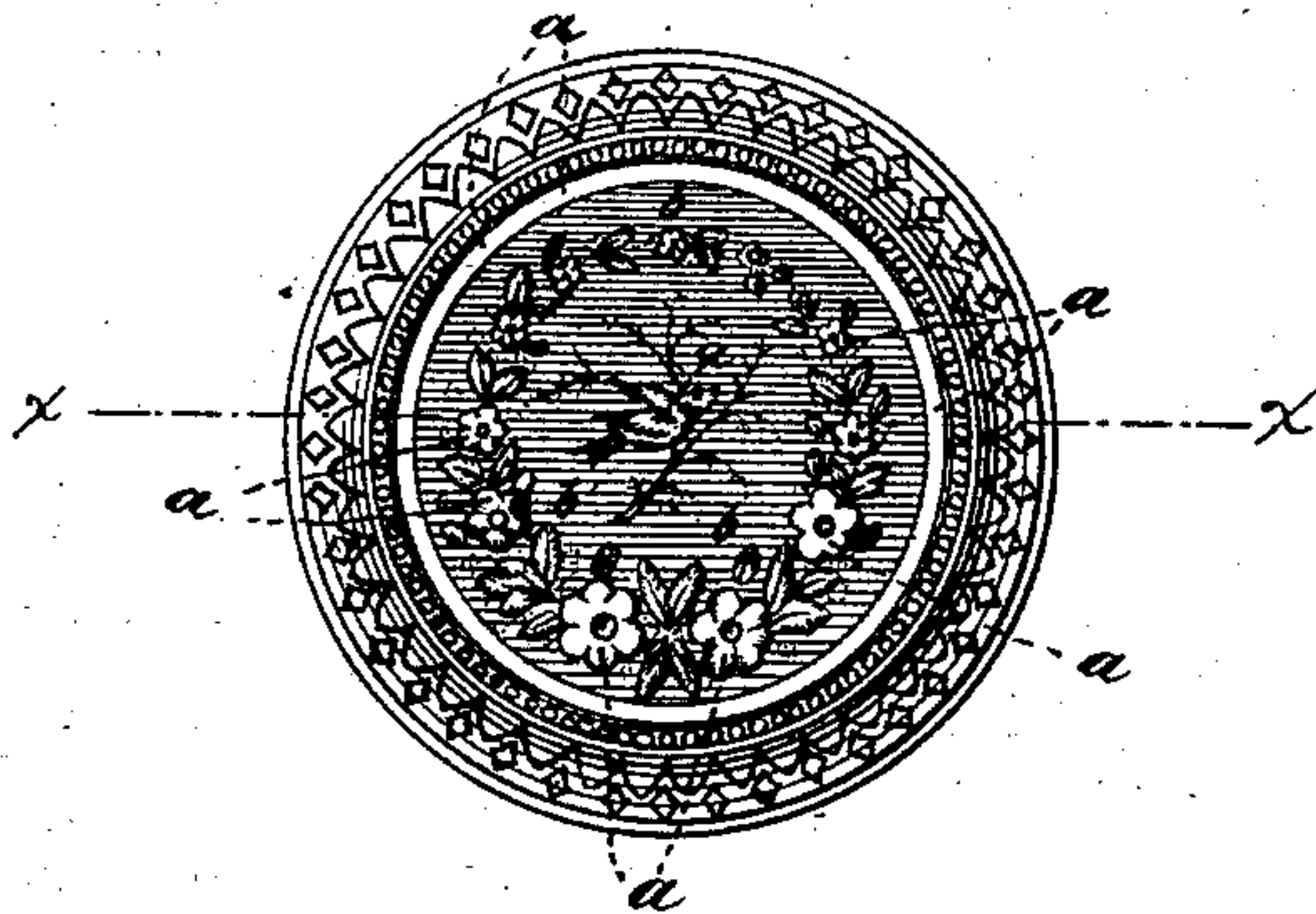


Fig. 2.



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METHOD OF ORNAMENTING WATCH-CASES AND OTHER ARTICLES OF JEWELRY.

SPECIFICATION forming part of Letters Patent No. 275,569, dated April 10, 1883.

Application filed January 29, 1883. (No model.)

To all whom it may concern :

Be it known that I, THOMAS BENFIELD, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Watch-Cases and other Articles of Jewelry, of which the following is a specification.

The present invention relates to ornamenting watch-cases and other articles of jewelry with raised metallic figures or designs enameled in colors; and it consists, first, in the method by which such ornamentation is effected, and, second, in a watch-case or other article of jewelry provided with such ornamentation.

In my Patent No. 237,085 of February 1, 1881, is described a watch-case, in which the raised ornamentation is entirely covered with a coating of colorless or transparent enamel, whereby the appearance of the raised metallic figures and designs is not affected, but remained the same as if no enamel had been applied. The object of that invention was to protect the raised figures from wear and abrasion and from dust and oxidation.

The object of the present invention is to produce artistic and beautiful ornamentation upon articles of jewelry by covering the raised figures, or some parts thereof, with colored enamels, whereby flowers, leaves, birds, and other representations raised above and secured to the surface of the article can be colored, tinted, and shaded to closely resemble the objects which they represent.

My invention is illustrated in the accompanying drawings, which represent a watch-case, and in which Figure 1 is a plan view of the watch-case, and Fig. 2 is a cross-section along the line *x x* of Fig. 1.

In the drawings the raised figures or designs covered with colored or tinted enamels are designated by *a*, and the surface of the watch-case to which such figures are secured is designated by *b*.

The central ornamentation shown in the above drawings, to which my invention relates, is produced as follows: The figures or designs are cut or struck up from metal of the desired quality, and preferably in separate pieces, so that by partially superimposing such pieces upon each other natural and life-like effects can be produced. The parts or pieces which

are to constitute the designs are arranged in position upon the surface of the article which may be finished up with engine-turned straight lines, or in any other way, or it may be left plain. The proper quantity of hard solder is disposed upon and in proximity to the ornaments or figures, so that when melted it will firmly braze the several pieces to each other and to the surface of the article. When this is done powdered enamel, preferably in the condition of paste, and having the desired colors and tints, is applied with delicate tools to the parts to be enameled, the colors and tints being chosen and applied by the artist to produce the desired effects. For instance, leaves may be covered with shades of green, scarlet, crimson, or brown, or other colors.

In order to facilitate the work and produce more natural effects, parts of the design, as flowers, birds, &c., may in the first instance be covered with white enamel or enamel of neutral shades. After the enamel has been laid in place heat is applied sufficient to fuse the enamel, and when cool the unfinished parts—as the white or neutral shades—may be tinted and shaded as desired by the use of the fusible paints employed for decorating china or glass. Such painted parts should afterward be coated with a thin layer of transparent enamel fused in place to protect their painted surfaces.

Extremely beautiful and natural effects are produced by the application of colored but partially-transparent enamels directly to bright metal surfaces. For instance, the centers of various flowers, the plumage of tropical birds, &c., may be successfully imitated by fusing the transparent colored enamels directly upon the bright surface of gold or silver, in which case the luster of the metal imparts a beautiful gem-like brilliancy to the enamel.

Instead of placing the raised ornaments upon the bare surface of the article, soldering them thereto, and then enameling them as above set forth, it is preferred, for the purpose of protecting the surface from oxidation, to cover it with a protective coating before the ornaments are laid upon it. A composition of ocher and borax—well known to jewelers—when spread over the surface in the condition of powder or paste and fused, will form a good protective coating. The ornaments, with the solder prop-

erly disposed, are arranged upon such coating and the surface heated directly beneath the ornaments, when the ornaments, with the melted solder, will fall down through the melted coating and be secured to the metallic surface of the article. The ornaments can then be enameled, as above set forth, the coating removed, and the surface cleaned by treating with acid, in the usual manner. By these means the surface is fully protected during the soldering and enameling operations. When the enameling is completed, the unenameled parts may be further finished up by additional engraving or chasing, it being found that the effects of delicate lines and shading can be more artistically produced when the ornaments are secured in their final position.

If desired, the surface of the article, as well as the raised ornaments themselves, may be covered with a coating of transparent enamel. This, however, would not be generally practicable unless the metal surface was sufficiently pure as not to tarnish or become discolored under the fusing heat of the enamel; but in such case the appearance of the colored enameled ornaments would remain substantially the same, and the ornaments and the surface would be fully protected; also, the parts of the surface contiguous to the raised ornaments may be coated with a dark enamel, contrasting in color with the colored enameled ornaments, and the whole coated and protected with transparent enamel, substantially as set forth in my said Patent No. 237,085.

I am informed that ornaments have been enameled, and afterward been riveted or screwed in place upon articles of jewelry; but such ar-

ticles, in addition to their expense, must be objectionable from the circumstance that the edges and angles of the ornaments are not closely fastened upon the surface of the articles, and consequently are very liable to catch in the clothing and become bent or torn away.

In order to produce fine work, the raised metallic figures must be secured in place by hard solder or brazing, and, as it is very difficult, if not entirely impracticable, to so secure such ornaments to the surface of the article after they have been enameled, as the enamel fuses at a lower temperature than the solder, it follows that the ornaments should first be soldered in place and then enameled, as above set forth.

What is claimed as new is—

1. The herein-described method of ornamenting watch-cases or other articles of jewelry with raised metallic figures or designs, which consists in covering the surface to be ornamented with a protective coating, upon which the figures or designs are placed, melting the protective coating, and securing the figures or designs directly to the surface of the article by means of solder or by brazing, and then applying colored enamels to the figures or designs and fusing them in place.

2. A watch-case or other article of jewelry having raised metallic figures or designs composed of several separate pieces enameled in colors, and secured directly to the surface of the article by soldering or brazing, substantially as and for the purpose described.

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Witnesses:

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