No. 665,166.

Patented Jan. 1, 1901.

A. BIPPART.

RECESSED ENAMEL WORK.

(Application filed July 28, 1900.)

(No Model.)

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

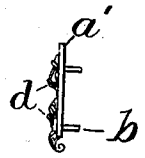
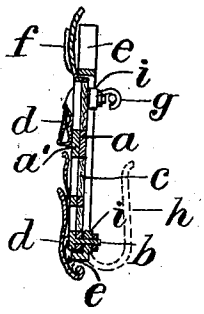


Fig. 5.

Fig. 6.



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UNITED STATES PATENT OFFICE.

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RECESSED ENAMEL-WORK.

SPECIFICATION forming part of Letters Patent No. 665,166, dated January 1, 1901.

Application filed July 28, 1900. Serial No. 25,206. (No model.)

To all whom it may concern:

Be it known that I, ACHILL BIPPART, a citizen of the United States, residing at No. 915 South Sixteenth street, in the city of Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Recessed Enamel-Work, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of the present invention is to facilitate the manufacture of jewelry and other artwork in which panels are employed with their rear portions enameled, so that the surface of the enamel lies below the edges of the bars which separate the panels.

The invention is especially applicable to that class of articles in which perforated or open-paneled frames are employed, so that the enamel appears translucent between the bars of the frame and forms a very unique and ornamental background for the details of ornamentation applied to the front of the frame. Heretofore such open-paneled frames have been made in a single piece by casting or carving, and the enamel could only be fired by subjecting the entire article to the heat, and where a translucent enamel was required in the panels it has been produced by firing the entire article a considerable number of times to build up the enamel to a sufficient thickness between the frame-bars.

In the present invention I make the recessed piece which is to be enameled separate from the other parts of the article and fill its panels or openings with enamel by firing successive charges of the enamel within the panels until a layer of sufficient thickness is obtained, and then attach the enameled frame to a similarly-perforated frame, through the openings of which the enamel is visible. The perforated frames may be made identical by punching them from a sheet of metal in the same die, and the frame-bars and openings thus correspond accurately or register with one another when the frames are superimposed and produce the effect of a single deeply-recessed frame with enamel in the rear portion. The frames are preferably made with means to engage one another, so as to hold the openings in perfect coincidence, and the front or open-work frame may be ornamented by attaching jewels or other ornaments by means which could not be employed if such frame were to be heated, as in firing the enamel. A border may be provided, separate from the two frames, and used to hold the same together and to sustain other ornaments which can be attached to such border more readily than to the open-work frame. The border may be provided with seats inside its margin to support the two frames and studs be formed upon the front frame to pass through perforations in the seats and the rear frame.

As the effect of the enameled frame depends largely upon its having delicate outlines and the front or open frame corresponds necessarily therewith, it is a material advantage to employ the auxiliary border, as it gives strength to the entire article and serves as a foundation to attach the pin required for a brooch and the hook required for a chatelaine. The border is not, however, essential to the invention, as the front frame may have the same openings as the enameled frame but a broader margin, if required, to make the necessary attachments.

The invention will be understood by reference to the annexed drawings, in which—

Figure 1 is a front view, and Fig 2 an edge view, of the enameled panel-frame. Fig. 3 is a front view of the two frames with the ornaments attached to the front frame, and Fig. 4 is an edge view of the front open-work frame with the ornaments attached. Fig. 5 is a front view of the border, and Fig. 6 is a vertical section of the entire article in which the border and the two frames are combined and drawn larger than the other figures.

The perforated frames are designated a and a' and the openings c. The ornaments attached to the frame a' are designated d, the border is designated e, the ornaments attached to it f, the pin-fixtures for holding the brooch upon the dress are marked g, and a hook for hanging other articles upon the brooch is marked h.

The seats i to sustain the frames in the border are formed with holes j, and similar holes are provided in the frame a, and the front frame a' is provided with studs b, adapted to pass through said holes to engage the frames together and to the border. The studs are

shown secured by nuts upon their rear ends, but they may be secured in the holes by solder or riveting. Fig. 6 shows all the parts thus united, with the pin *g* in full lines and the hook *h* in dotted lines, as in Fig. 5.

From the above description it will be seen that the construction affords the means for greatly varying the ornamentation in this class of articles without increasing the cost, which is not the case when the article is made in a single piece like a casting. Where such articles are made by casting, each variation in the design requires a different pattern, which is often more costly than the resulting casting. By attaching ornaments to the open-work frame *a'* or to the border *e* widely different designs may be produced without any variation in or addition to the cost, and the connection of the ornaments with a piece which is not enameled enables the parts to be operated upon by a different class of workmen and to be produced much more rapidly than where the article is all in one piece and only one operator can handle it at once. It is obvious that if the front or open-work frame be made with a heavier border than the rear or enameled frame the openings would still be identical in both and could be cheaply produced by punching such openings with the same punch.

The cost is greatly reduced by making the frames *a a'* of sheet metal and punching the duplicate openings therein and then baking the enamel in the rear frame separate from the other parts, as all such work can be done by cheap labor at a much lower cost than the artistic work involved in ornamenting the article.

The articles produced by this method are in no way inferior to those made by other means, as is often the case when the method cheapens the product; but they are more elegant and light in appearance than when made by casting and equally durable.

Although I have shown the rear frame *a* with openings cut entirely through the thickness of the frame, it is obvious that the invention can be practiced with all the advantages mentioned by forming the rear frame with mere depressions to receive the enamel and making the front frame, as already stated, with openings corresponding to such depressions. The enamel would not be translucent in such case, but the convenience and economy of manufacture would be precisely the same. I do not therefore limit myself in this respect to the precise construction shown in the drawings. It is also obvious that the perforated frames may be engaged with one another and with the border (if one be used) by other means than is shown herein without departing from the spirit of the invention.

Having thus set forth the invention, what is claimed herein is—

1. In recessed enamel-work, the combination of two frames having identical openings arranged to register with one another, one of said frames having the openings filled with enamel, substantially as herein set forth.

2. In recessed enamel-work, the combination, with two correspondingly-perforated frames, one having the openings filled with enamel, of means for engaging the frames with one another with the openings coincident.

3. In recessed enamel-work, the combination, with two similarly-perforated frames with openings arranged to register with one another and one of such frames having the openings filled with enamel, of a border with means for securing the frames one over the other upon such border.

4. In recessed enamel-work, the combination, with a perforated frame having the openings filled with enamel, of a similarly-perforated frame having ornaments attached thereto, and such ornamented frame having its openings arranged to register with the openings of the enameled frame, and the ornamented frame being secured to the enameled frame, substantially as herein set forth.

5. In recessed enamel-work, the combination, with a border having brooch-fastenings, and seats within the border, of two correspondingly-perforated frames having their openings arranged to register with one another, and the frames being secured upon the said seats, and the rear frame having its openings filled with enamel, substantially as herein set forth.

6. In recessed enamel-work, the combination, with a border having perforated seats within its margin, of a perforated frame having holes corresponding with those in the seats and having the openings filled with enamel, and a similarly-perforated frame having studs to engage the holes of such seats and frame, substantially as herein set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ACHILL BIPPART.

Witnesses:
THOMAS S. CRANE,
WM. H. ROBERTS.