

(No Model.)

J. ESSER.
PROCESS OF PRODUCING REFLECTING PROPERTIES IN JEWELRY AND
SMALL WARE.

No. 513,312.

Patented Jan. 23, 1894.

Fig 1.

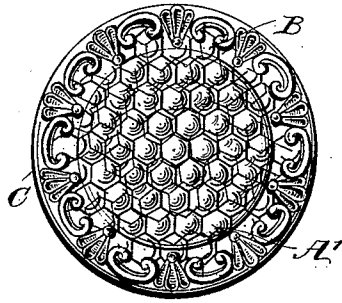


Fig 2.

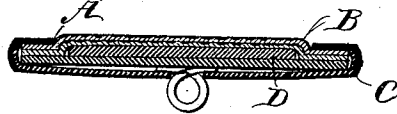


Fig 3.

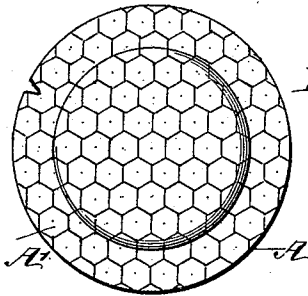


Fig 4.

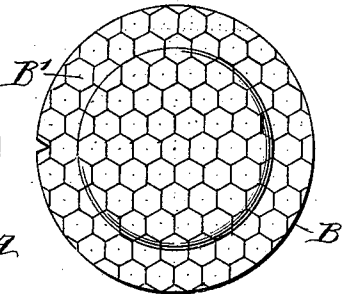


Fig 5.

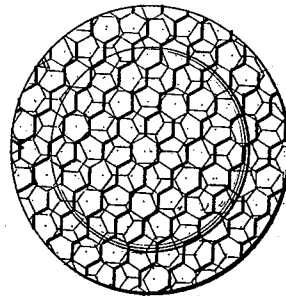
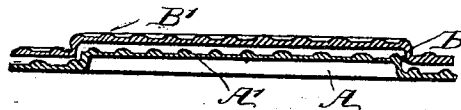


Fig 6.



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JOSEPH ESSER, OF BARMEN, GERMANY.

PROCESS OF PRODUCING REFLECTING PROPERTIES IN JEWELRY AND SMALL WARE.

SPECIFICATION forming part of Letters Patent No. 513,312, dated January 23, 1894.

Application filed December 22, 1892. Serial No. 456,064. (No specimens.)

To all whom it may concern:

Be it known that I, JOSEPH ESSER, of Barmen, in the Kingdom of Prussia and German Empire, have invented a new and useful Process of Producing Reflecting Properties in Jewelry, Small Ware, and Similar Articles, of which the following is a specification.

The present invention has for its object the production of buttons and articles of bijoutry of all kinds, consisting of round plates of polished metal upon which white or colored transparent plates are laid, by which arrangement brilliant effects of light are obtained. The basis plates are made of aluminium, silver or any suitable material, having geometrical figures on their surface, so engraved that the surface appears to stand out in relief. Over these foundation plates are laid transparent plates of a suitable material consisting either of celluloid, horn, tortoise shell, amber or tracing cloth, and these transparent plates also have geometrical figures engraved upon them. When these two plates are laid one upon the other the lines of the figures cover each other or cross themselves, and in this way a variety of figures are produced. Rays from the sun, from electric light or any other source and falling on the button are refracted by the upper plate. The metal plate underneath reflects the rays of light, which are again refracted by the upper plate and turn another way. By this means, beautiful and brilliant effects of light are produced. By choosing a suitable color for the patterns, the effect is still more enhanced, while the upper plate may be provided with any transparent color to increase the splendid effect of the buttons. Different effects and patterns can be produced according to the relative positions of the plates even when only one material and one design are used. In producing articles of bijoutry in general superimposed plates are employed to get the desired effects, but here the basis plate has to take the form of the object to be produced.

In the accompanying drawings, which form a part of this specification, I have represented a button embodying my invention.

Figure 1 shows the finished article; Fig. 2 a cross section of the same. Figs. 3 and 4 are separate plan views of the foundation plate and the cover plate respectively. Fig. 5 shows the two plates placed one upon the other; and Fig. 6 is a cross section of the plates in the same position as in Fig. 5.

Like letters refer to like parts throughout the several views.

A is the reflecting foundation plate having embossed hexagons A' produced thereon, the surface of the hexagons being rounded, as will be seen in Figs. 1 and 6. The transparent cover plate B is likewise provided with a pattern composed of regularly aligned hexagons B', and the plates are adapted to be placed one upon the other as shown in Figs. 1, 2, 5 and 6, it being understood that the effect will depend on the relative position of the patterns. C is a case in which the several parts are inclosed, and D are filling pieces to hold the plates A and B in contact with one another.

I do not restrict myself to the particular form of construction shown in the drawings, as the pattern of either the cover plate or the foundation plate, or of both, may be changed without departing from the nature of my invention.

The objects for which my invention are applicable are buttons, articles of bijoutry, ornamental plates for inlaid work boxes, handles of bells, holders for portières and articles for the toilet of all descriptions.

Having thus described my invention, what I claim is—

1. The process of producing effects of light on reflecting surfaces of buttons and other articles, which consists in placing transparent plates provided with patterns, on the reflecting surface of a foundation plate which is likewise provided with patterns, whereby the effects of light and color are caused to

change according to angle of incidence of the light and according to the relative positions of the patterns, substantially as described.

2. In a button or other article, the combination, with a reflecting foundation plate having a pattern produced thereon so as to cause different parts of the plate to differently reflect the light, of a transparent cover plate likewise provided with a pattern and placed

on the reflecting surface of the reflecting plate, substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

JOSEPH ESSER.

Witnesses:

RUDOLPH FRICKE,
WM. ESSENWEIN.