Jan. 10, 1939. H. I. NIRENSTEIN 2,143,084

IMITATION STONE

Filed March 15, 1937

Fig. 1.

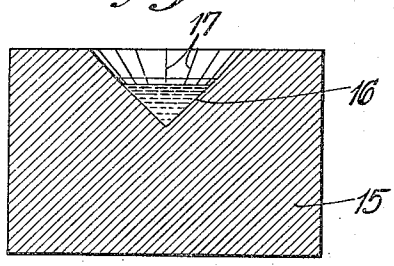


Fig. 4.

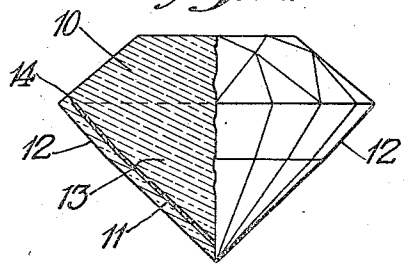


Fig. 2.

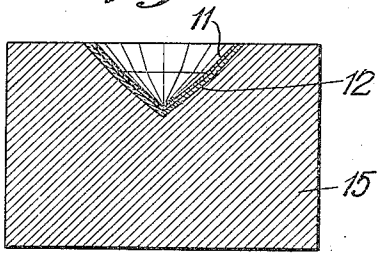


Fig. 5.

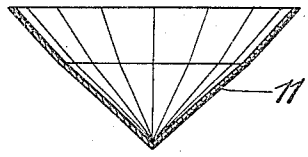


Fig. 6.

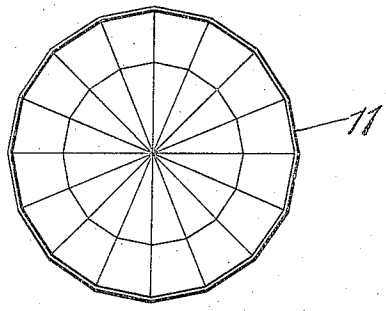


Fig. 3.

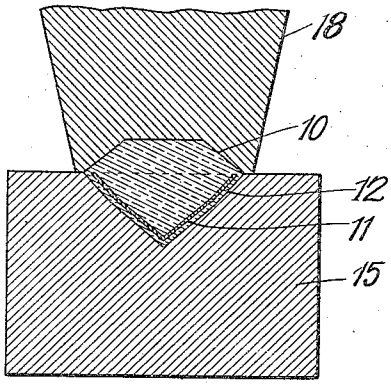
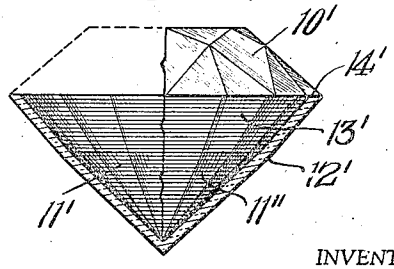


Fig. 7.



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IMITATION STONE

Harris I. Nirenstein, New York, N. Y.

Application March 15, 1937, Serial No. 131,005

1 Claim. (Cl. 63—32)

This invention relates to improvements in imitation gems and/or precious stones.

Objects

Among the principal objects which the present invention has in view are:—to be enabled to manufacture imitation gems to closely simulate the genuine article; to be enabled to manufacture imitation gems cheaply; to utilize a simplified method in the manufacture and assembly of parts; to provide means for aiding in giving brilliance to the finished gem; to utilize means for assembling the composite parts and applying heat thereto whereby the parts will be formed into a one-piece construction; to secure simplicity of construction and operation in the manufacture and method of making the gems; and to obtain other advantages and results as may be brought out in the following description.

Drawing

Figure 1 is a sectional view of a mold having a die for shaping a composite part and consisting of the first step in carrying out the method;

Figure 2 is a similar view and showing the second step of the method;

Figure 3 is a similar view and showing the final step of the method and the composite parts completely assembled;

Figure 4 is a view of the finished gem showing one-half thereof in elevation and the other half in section;

Figure 5 is a sectional view of one of the parts completely shaped;

Figure 6 is a top plan view of the same; and

Figure 7 is a modified construction of the gem showing the same partly broken away.

Description

As will be seen in the drawing, the invention is particularly directed to the manufacture of imitation gems, such as diamonds and/or other precious and semi-precious stones. In the method of making the gems it will be noted that the shapes may be of various styles and cuts to simulate square cuts, emeralds, pear shape, marquisite, baguette and round. However, for purposes of description the illustration as shown is for round cut gems.

Referring now to Figures 4 to 6 inclusive the gem consists of a plurality of parts united together. In the specific embodiment shown in the drawing the gem preferably is made of three parts, each part having suitable facets formed thereon, as is usual in cut gems, with each of said parts interfitted to form the completed article. One of said three parts, as the mid-body portion, is indicated by the reference numeral 10, the second part, as the reflector portion, by the numeral 11 and the third part, as the stem shell, by the numeral 12. The body portion 10 preferably provides the face or exposed portion of the gem and the usual stem portion 13 extending downwardly from the top thereof. Said stem portion at the upper widest part thereof next the top or face of the gem preferably is of less diameter than the face, as at 14, to accommodate the thickness of the reflector portion 11 and stem shell 12 to enable the diameters of the face and stem shell to be the same where those parts meet.

In carrying out the invention the face or top portion 10 with the setting or stem portion 13 and the set-in portion 14 preferably may be suitably formed with the usual facets, as by die cutting, and then made fast with respect to the reflector member 11 and stem shell 12 by any suitable method. One such method is shown in Figures 1 to 3 inclusive, in which I have shown a mold 15 having a conically shaped depression 16 in the top thereof. Said depression 16 is provided with internal facets 17 and is adapted to receive molten glass therein, whereby when heat is applied to the mold at a proper temperature the glass on its exterior surface will be suitably shaped and faceted. The initial step of the method may thus be referred to as the introduction of or production of molten glass in the mold.

The reflector member 11 before being applied to the hot molten glass is first preshaped and preferably to correspond to the shape of the faceted mold depression and can be positioned within the depression in spaced relationship to the wall thereof. In this connection, the reflector member 11 preferably is hollow and of metal, and constructed of a heat resistance material, such as copper rodium plated and finished with a brilliance which will present the sparkle to the completed gem. It likewise is to be understood that the said metal reflector member 11 may be provided with interior and exterior facets, and may then be inserted in the depression 16 and centered therein with its facets in substantial registration with but spaced from the facets of the depression, forcing the molten glass to fill the space outside the reflector member and thus form the stem shell 12 as shown in Figure 2.

Simultaneously with inserting the reflector member 11 to the interior of the stem shell 12, is the introduction of the body material, unification thereof with the stem shell, and shaping of

the exposed face with facets. An exemplification of this is indicated in Figure 3 wherein the glass or other material to form the gem body 10 is introduced in such plastic or semi-molten state as to build up above the level of the die 15 having depression 16. The material is thus built up over the top edge of the reflector member 11 and unifies with the material, still plastic, forming stem shell 12. This unification is completed by pressure from an upper die which also acts to shape the face and form the upper facets.

The gem resulting from the method outlined is accordingly and preferably a unified body and stem shell containing a reflector member in close contact on the one side with the stem portion and on the other side with the stem shell. The gem is provided with a faceted stem, the reflector member is within the stem and is likewise faceted, preferably having its facets corresponding to the exterior facets of the stem portion. The fact that the reflector member is thus not only embedded within the gem in close surface contact with the material forming the body of the gem and forming the shell, renders the presence of the reflector as such inconspicuous, but on the other hand obtains a brilliancy of the gem both from the upper face and when observing the stem, which closely simulates a genuine gem.

There are other detail steps in the method and other detail differences in the ultimate construction which will be deemed within the scope of the present invention, and as one such, attention is called to Figure 7. According to the showing of Figure 7 I provide a preformed stem shell 12', which, as in the herebefore described construction, may be of glass or other suitable material. This shell having substantial and uniform thickness and faceted inside and out. A gem body is provided having an exposed faceted portion 10' and a stem portion 13' the size, shape and facet of the stem portion 13' is such that it will substantially fit against the inside surface of the stem shell in intimate contact therewith throughout. In order to accommodate the thickness of the stem shell, the stem portion is made of less diameter at its end next the face portion 10' so that the facet portion will overlie the upper edge of the stem shell as at 14'. The inside surface of the stem shell is preferably coated as at 11' with a suitable reflecting or shiny material, for instance mercury and the outside surface of the stem portion 13' is similarly coated with a reflecting or shiny material 11'', which also may be mercury or other suitable material of which silver chronimum and the like are examples. The stem portion 13' is assembled within the stem shell 12' and the reflecting materials or coating 11' and 11'' are then juxtaposed against each other. The thickness of these coatings is substantially nothing more than a film and with the one coating supplementing the other, there will be increased reflection and light to produce brilliancy in the gem whether observed from the top or from the stem. The film-like thickness of the reflecting material thus makes it proper to state that the stem shell and stem portion of the body portion are in intimate association in the assembled gem. The parts are held together by appropriate adhesive, and the gem will appear as being an integral gem closely simulating a genuine gem.

I claim:

An artificial gem comprising a stem portion, and a face portion, a stem shell shaped to surround the stem portion, said stem portion being of less diameter than the face portion where joined, a reflector juxtaposed to the stem portion the diameter of its wider part being less than the face portion and stem shell and entirely surrounded by the said stem shell thereby presenting a reflecting surface to both the face portion and stem shell.

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