May 15, 1934. J. GAUTIERI 1,958,946

MULTIPLE STONE JEWELRY UNIT

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Fig. 1.

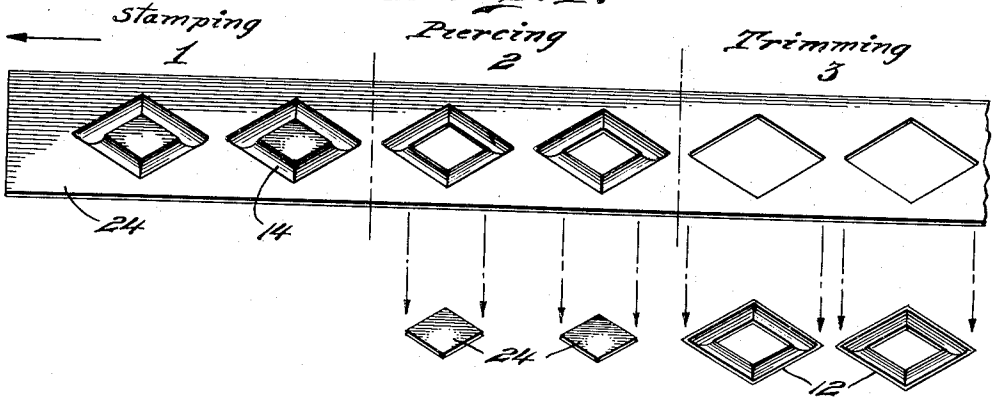


Fig. 2.

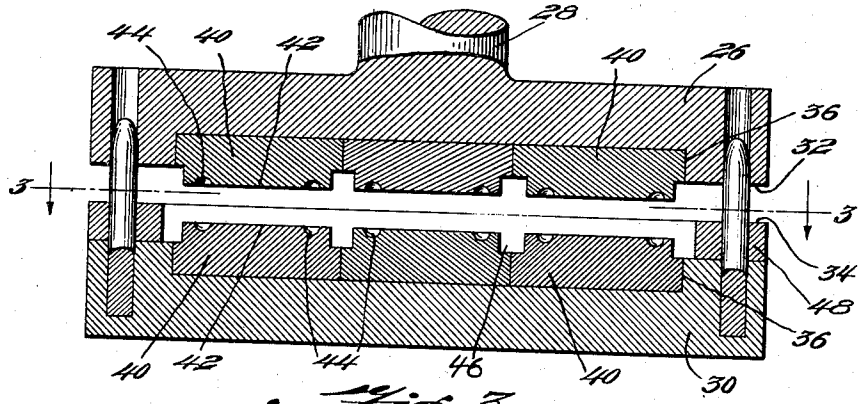
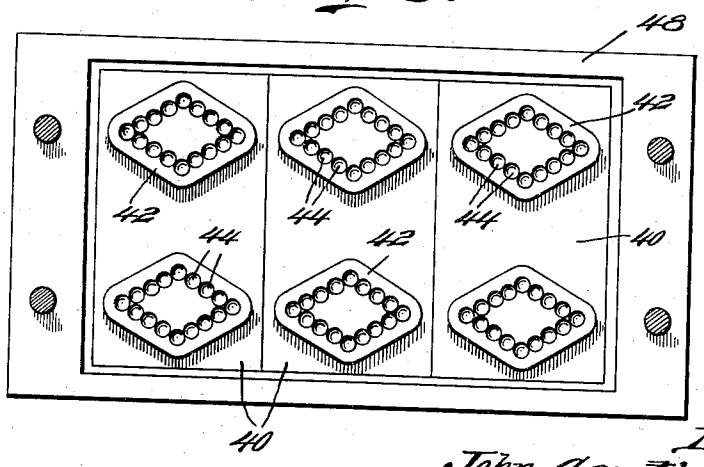


Fig. 3.



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Fig. 4.

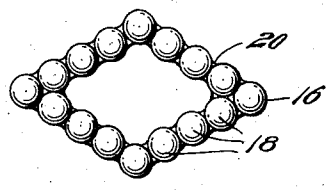


Fig. 5.

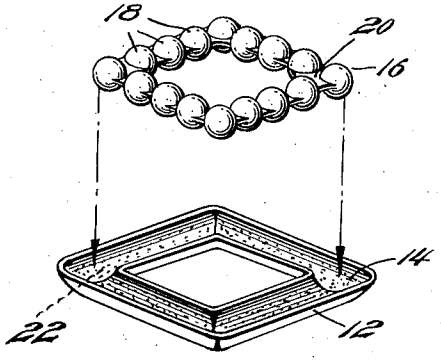


Fig. 6.

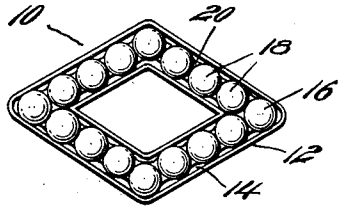


Fig. 8.

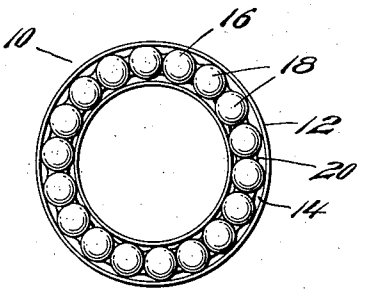


Fig. 7.

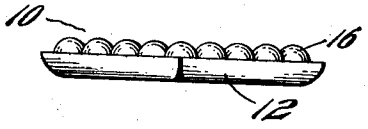
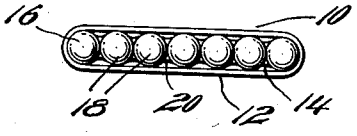


Fig. 9.



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UNITED STATES PATENT OFFICE

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MULTIPLE STONE JEWELRY UNIT

John Gautieri, Providence, R. I.

Application January 18, 1934, Serial No. 707,127

9 Claims. (Cl. 63—28)

My invention relates to multiple stone jewelry settings, multiple stone units for use therein and their method of manufacture.

Hitherto in the manufacture of multiple stone jewelry settings, a suitable finding has been made provided with a suitable individual stone receiving groove therein and individual stones have been inserted within said groove, which has been usually shaped in the desired design configuration, such as an oval, circle, square, diamond, etc. It has required a great deal of labor to insert the individual stones within this groove and due to the fact that the individual stones have not been of a uniform size, they have not tended to fit compactly within said groove. This has been particularly true in employing bead or imitation pearls, which are usually imported and in certain instances made by heating glass on a wire and vibrating it in the air, which tends to form seed pearls or imitation pearls of non-uniform diameters. While the grooves in the findings have been uniform throughout their respective lengths as the pearls of different diameters are laid in these grooves some have to be discarded as being too large and others are so small that they will not compactly fit within the groove. Thus as the stones have not been of such a uniform size as to compactly fit within the grooves, they have not been firmly secured therein and have tended on rough handling to individually drop out. While my invention is primarily adapted for use with imitation seed pearls, it is obvious, however, that it may be employed in the manufacture of other precious or semi-precious gem simulating stones.

To these ends I preferably shape plastic material into a multiple stone unit consisting of spaced gem simulating members arranged in the form of said design suitably connected together preferably by integral preferably web-like connections, so as to form a single multiple unit of a cooperating design and cooperating dimensions of the pre-formed groove in the finding.

It is thus apparent that with this construction I can form the finding groove of the desired design configuration and of the predetermined dimensions and I can shape the plastic material into a multiple stone unit consisting of spaced connected gem simulating member arranged in the form of said design of the desired cooperating dimensions for a portion thereof to substantially fit within said groove. It is thus obvious that in order to set my improved multiple stone unit within the finding groove, that it is merely necessary to lay it in and thus; objects of my invention are to save time in the manufacture of multiple stone settings of this description, to save a large amount of labor, to save the expense of imported materials by providing a much cheaper method of their manufacture, to provide a multiple stone unit which will maintain its rigidity in use and which will be compactly retained within the finding grove as long as some portion thereof is firmly cemented or otherwise secured therein and thus prevent the individual dropping out of the stones, a great objection in former multiple stone jewelry settings of this description.

A further feature of my invention is that due to the method I preferably employ, designs of any desired configuration may be provided, made up of continuous single design units, or a multiplicity of the same joined together in any desired configuration or design.

These and such other objects of my invention as may hereinafter appear will be best understood from a description of embodiments thereof such as are shown in the accompanying drawings.

In the drawings, Fig. 1 is a diagrammatic view illustrating successive steps in the method of forming the improved findings I preferably employ from a continuous sheet of strip material.

Fig. 2 is a central vertical sectional view of the press I preferably employ for pressing my multiple stone units from plastic material.

Fig. 3 is a plan view of the lower portion of the press taken along the line 3—3 of Fig. 2.

Fig. 4 is a plan view of the complete multiple stone unit after it has been withdrawn from the press.

Fig. 5 is a disassembled perspective view of the multiple stone unit about to be inserted within the cooperatingly shaped groove of its respective finding.

Fig. 6 is a plan view of a complete multiple stone jewelry setting constructed in accordance with my invention.

Fig. 7 is a side elevation of the embodiment of my invention shown in Fig. 6.

Figs. 8 and 9 illustrate plan view of alternative forms of my invention, Fig. 8 showing a circular setting and Fig. 9 showing a design consisting of a single line.

In the drawings, wherein like characters of reference indicate like parts throughout, as shown in Figs. 6—9, 10 generally indicates a multiple stone jewelry setting constructed in accordance with my invention. Said setting 10 comprises a finding 12 having a multiple stone unit receiving groove 14 therein of the desired design configu-

ration and of predetermined dimensions and the multiple stone unit 16 consisting of spaced formed stones 18 integrally connected together, such as by the web 20 shown, in the form of said design and of predetermined dimensions to substantially compactly fit within said cooperating groove 14 suitably secured as by the cement 22 within said groove 14. As stated hitherto, my improved setting may be of any desired design, such as the diamond shown in Figs. 6 and 7, the circle shown in Fig. 8, or the line shown in Fig. 9, or may be oval, square or in fact of any well known geometric or design form and if desired my improved settings may be made in the form of the individual units shown suitably joined or connected together in any desired fashion to form any desired complex design. Thus if five of the settings shown in Fig. 6 were laid side by side a star-shaped formation will be provided made up of a plurality of five of these settings.

The improved finding I preferably employ consists of the finding 12 formed with the groove 14 of the desired design configuration and preferably of exact predetermined dimensions.

While the finding 12 may be formed in any suitable manner, I have diagrammatically illustrated in Fig. 1 how such a finding may be made from sheet material. In operation (1) stamping as referred to therein, the groove 14 is suitably stamped therein in any suitable type of press, drop, or in any other desired manner. As shown in group (2) pressing the center 24 may then be readily pierced therefrom internally of said groove and as shown in Fig. 1 at 3 trimming, the entire finding 12 may be pierced or trimmed in any suitable fashion from the sheet of stock by cutting it exterior of said groove 14 to form the finding 12 shown dropping from the continuous sheet 24 at 3 of Fig. 1. Forming findings, however, of any desired configuration is well known in the art and by itself forms no part of my invention. It, however, forms a well defined step in the method of making my improved setting as by the method just described I am enabled to provide a finding with a gem receiving groove of known predetermined shaped dimensions which is inherently desirable in the manufacture of my improved multiple stone setting. While I have diagrammatically illustrated a stamping piercing and trimming operation which may be done in any well known manner on many types of well known machines, it is obvious that insofar as my invention is concerned that a finding be provided and provided with a groove of the desired configuration and of predetermined dimensions, no matter how this be formed. I then shape and preferably press as shown in Fig. 2 from suitable plastic material under suitable conditions of heat and pressure a multiple stone unit 16 as shown in Figs. 4 and 5 consisting of separated gem simulating members 18 joined together in suitable fashion in the embodiment shown by the integral web 20 in the form of the design of said groove 14 and of the desired dimensions for a portion, preferably the lower portion thereof to substantially compactly fit within said groove and preferably with the lower portion thereof of such a width or depth as to fit within said groove and conceal the web or other integral connecting portions thereof.

I have shown in Fig. 2 a suitable press for forming my improved multiple stone units, which may consist of the press member 26 suitably actuated by the press rod 28 functioning against the lower stationary die member 30. The contacting surfaces 32 and 34 of said punch and die members 26 and 30 are preferably provided with cooperating pressing surfaces shaped in the desired configuration to form the complete jewelry unit 16. In the embodiment shown the cooperating surfaces 32 and 34 are preferably recessed as at 36 to receive the individual detachable moulding dies 40 provided with outwardly projecting portions 42 individually provided with the suitable holes 44 semi-circular as shown arranged in the configuration of the design for shaping the individually spaced gem members 18. Inasmuch as the individual die blocks 40 are removable it is obvious that they may be readily removed and rearranged or replaced by larger or smaller blocks having designs of different configurations so as to form multiple pattern units or any desired design in a single pressing operation. The plastic material receiving holes 44 are thus arranged in the moulding die blocks 40 in the form of the design of the finding groove 14.

Any suitable type of a plasticizable material may be used, preferably in the form of a powder. A suitable material may be made out of casein and filler, Bakelite powder, or as examples, any of the materials sold under the following trade names may be employed: Beetle, Plaskon, Catalin, Casein, Lumaritts, Bakelite, Kerolitt, Marbalite, Dures, or in fact any suitable gem simulating plasticizable material may be employed, phenol condensation products, organic casein-like or otherwise preferably provided with the suitable coloring matter to permit it when plasticized to simulate a gem of any desired color. I thus where powder is employed provide the lower portions 46 exterior of and in between the individual outwardly projecting portions 42 to receive the excess powder and I may, if desired, as shown, cover the entire die 30 with a powder holding ring 48 exterior of the block members 40. It is obvious, however, that if desired the cooperating surfaces 32 and 34 of the punch 26 and the die 30 may have the desired design integrally formed thereon. If desired, however, the powder may be suitably formed into individual pellets which may be individually placed in the desired holes 44 prior to pressing.

The punch member 26 is then lowered over the powder or pellet in the design forming holes 44 and compressed under a steam pressure of between 500 to 2000 lbs. and held for a suitable period of time preferably about ten minutes. In the press I preferably employ, a temperature of 180° F. is transmitted to the pressed plasticized material. The press may be retained in this manner for approximately ten minutes, when it may be withdrawn and the multiple stone units shown in Figs. 4 and 5 consisting of separated gem simulating members 18 joined together by the integral web 20 formed by the powder in between the holes 44 in the form of said design and of the desired predetermined width and depth to compactly fit in the groove 14 may be withdrawn from the press. It is apparent therefore that by cooperatingly regulating the size of the holes 44 and the configuration of the design in the raised press portions 42 that multiple stone jewelry units may be provided of the exact design and size to compactly fit within the groove 14, it being obvious that the size of the tools formed in shaping the finding groove 14 and those formed in making the unit 16 may be accurately measured to cause the cooperating parts of the groove and setting to substantially compactly fit. The upper surface of the groove 14 is then covered

with any suitable type of cement or glue 22, such as sold under the trade under the name of "Pearl" or "Stone" cement and the multiple setting unit is then laid within the groove 14 and compactly secured therein by the dried cement.

It is apparent therefore that by my invention I am enabled to provide a multiple stone unit of the exact design configuration and exact dimensions so as to correspond with the design and dimensions of the groove 14 so that the cooperating portions of said unit and groove may substantially exactly fit. It is apparent also that very little hand labor is required to insert the single multiple stone unit 16 shown in Fig. 4 within the groove 14 as shown in Fig. 5, thereby dispensing with a large amount of hand labor hitherto required to set the individual seed pearls or other gems in side by side spaced relationship within said groove. It is also apparent that each individual stone 18 of the unit will be substantially of uniform size, thus simulating the rather rare natural occurrence of matched pearls, or other gems and being of the same size and integrally joined together, they will uniformly fit and be positively retained in said groove.

It is understood that my invention is not limited to the specific embodiments shown or methods described and that various deviations may be made therefrom without departing from the spirit and scope of the appended claims.

What I claim is:

1. The method of making a multiple stone jewelry setting which comprises forming a finding with a groove of the desired design configuration and of predetermined dimensions, shaping from plastic material a multiple stone unit consisting of spaced integrally connected gem simulating members arranged in the form of said design and of the desired cooperating dimensions for a portion thereof to substantially compactly fit within said groove and securing said stone unit within said groove.

2. The method of forming a multiple stone jewelry setting which comprises, forming a finding from sheet stock and shaping it with a groove of the desired design configuration and of predetermined width and depth, pressing from plastic material under suitable conditions of heat and pressure, a multiple stone unit consisting of separated gem simulating members integrally joined together by integral web in the form of said design and of the desired predetermined width and depth for the lower portion thereof to substantially compactly fit within said groove and conceal the web connecting portions thereof and securing said unit firmly within said groove.

3. The method of forming a multiple stone jewelry setting which comprises forming a finding from sheet stock and shaping it with a groove of the desired design configuration and of predetermined width and depth, pressing from plastic material under suitable conditions of heat and pressure a multiple stone unit consisting of separated gem simulating members joined together in the form of said design and of the desired predetermined width and depth for the lower portion thereof to substantially compactly fit within said groove and securing said unit firmly within said groove.

4. A multiple stone jewelry setting comprising, a finding having a multiple stone unit receiving groove therein of the desired design configuration and of predetermined dimensions and a multiple stone unit consisting of formed stones integrally connected together in the form of said design and of predetermined dimensions to substantially compactly fit within said groove, secured within said groove.

5. A multiple stone jewelry setting comprising a finding having a multiple stone unit receiving groove pressed therein of the desired design configuration and of predetermined width and depth and a multiple stone unit of plasticized material pressed into spaced gem simulating members joined together by an integral web and shaped in the form of said design and of a cooperating predetermined width and depth in the lower portion thereof compactly fitting and secured within said groove to conceal the web connecting portion thereof.

6. A multiple stone jewelry setting comprising, a finding having a multiple stone unit receiving groove pressed therein of the desired design configuration and of predetermined width and depth and a multiple stone unit of plasticized material pressed into spaced gem simulating members integrally joined together and shaped in the form of said design and of a cooperating predetermined width and depth in the lower portion thereof compactly fitting and secured within said groove.

7. A multiple stone jewelry unit consisting of spaced formed stones integrally connected together in the form of a design and of predetermined dimensions to substantially compactly fit within a finding groove of cooperating dimensions.

8. A multiple stone jewelry unit of plasticized material pressed into spaced gem simulating members joined together by an integral web and shaped in the form of a design and of a predetermined width and depth in the lower portion thereof to campactly fit within a setting groove of cooperating dimensions.

9. A multiple stone unit of plasticized material pressed into spaced gem simulating members integrally joined together and shaped in the form of a design and of a predetermined width and depth in the lower portion thereof to compactly fit within a setting groove of cooperating dimensions.

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