July 31, 1956 C. R. YEAGER ET AL 2,756,572

GEM SETTING WITH FILLING MEANS BETWEEN THE GEM AND THE SEAT THEREFOR

Filed Sept. 8, 1954

Fig. 1.

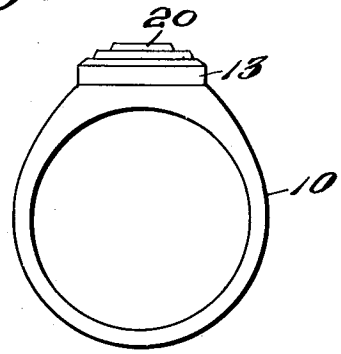


Fig. 2.

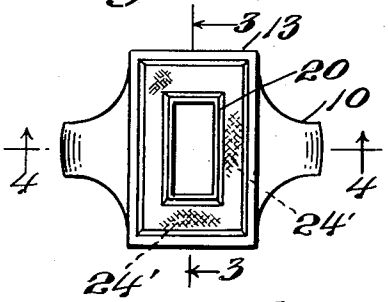


Fig. 3.

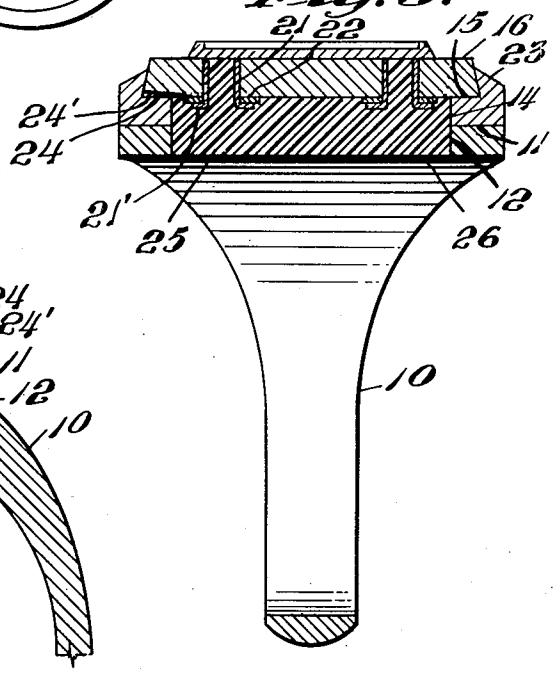


Fig. 4.

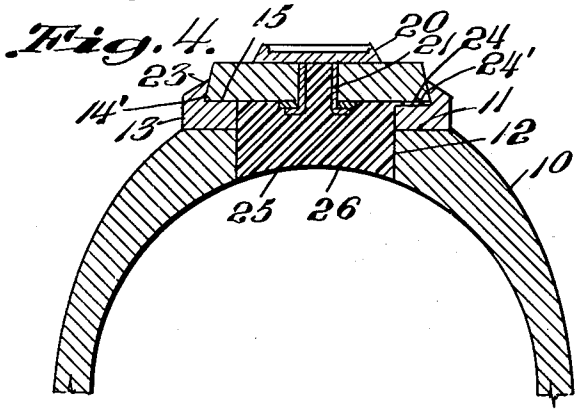


Fig. 5.

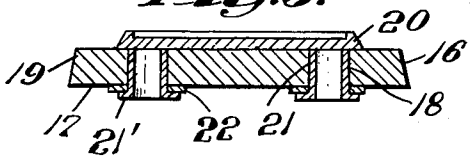


Fig. 7.

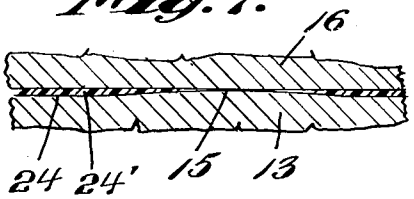
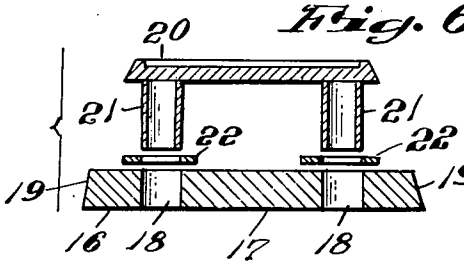


Fig. 6.



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GEM SETTING WITH FILLING MEANS BETWEEN THE GEM AND THE SEAT THEREFOR

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Application September 8, 1954, Serial No. 454,762

2 Claims. (Cl. 63—26)

This invention is a continuation in part of our co-pending application Serial No. 342,042, filed March 13, 1953, now abandoned, and relates to the mounting of a metallic ornament on a gem and the mounting of the gem in an article of jewelry, more particularly a finger ring.

Gems such as stones and the like are frequently used as an ornamental top of a finger ring. In some cases an opening extends completely through the article and the gem is mounted in this opening, leaving its back open or exposed. In some cases a member such as a metallic crest or the like is mounted on the top of the gem by means of soldering tubular pegs on the back of the member, which pegs pass through the gem with their ends spread over washers on the back of the gem. This fastening is also exposed in the open back type of gem mounting. Dirt or dust accumulates in the recess in back of the gem and is difficult to remove by reason of the recessed back making it difficult to get at. In some cases a metal back closes the back of the gem mounting and tends to prevent dirt or dust from accumulating over the back of the gem. In most cases the open back gem mounting is desirable, as it permits light to pass through the gem, which is usually a stone and transparent or translucent, and thus enhances the appearance of the gem.

One of the objects of this invention is to provide a gem mounting of the open back type which will permit light to pass through the gem and at the same time provide a seal against dirt or accumulation of foreign matter on the back surface of the gem or in and about any fastening which may be there located for the securing of an ornamental member, such as a crest, in position on the outer surface of the gem.

Another object of the invention is to provide a more secure fastening of the member on the gem by blocking releasing movement of portions of the pegs which hold the member on the gem.

Another object of this invention is to make this filling material transparent or translucent so that light may pass through the gem as well as provide a seal for the gem.

Another object of this invention is to provide a translucent or transparent filling material which will be of substantially the same color as the gem which is used so as to in a large measure hide any fastening means and to at the same time enhance the color appearance of the gem by reason of backing the same up with substantially the same color as the natural color of the gem.

Another object of the invention is to provide a smoother surface for the back of the jewelry article, which is particularly desirable in a finger ring where the back is in intimate contact with the finger.

Another object of the invention is to provide a better supported gem or stone.

Another object of the invention is to provide a cushion support for the gem or stone that there may be some resilience to absorb shock.

With these and other objects in view, the invention consists of certain novel features of construction as will

be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings:

Figure 1 is a side elevational view of a finger ring embodying my invention;

Figure 2 is a top plan view of the ring shown in Figure 1;

Figure 3 is a sectional view on a much larger scale taken substantially along line 3—3 of Figure 2;

Figure 4 is a sectional view taken substantially along line 4—4 of Figure 2 and drawn to the same scale as that of Figure 3;

Figure 5 is a longitudinal central sectional view of the gem with the ornament attached thereto;

Figure 6 is an exploded view of the gem and ornament of Figure 5; and

Figure 7 is a fragmentary sectional view on a greatly enlarged scale showing the plastic entering a void between the stone and the shoulder of the bezel.

In proceeding with this invention, a crest, initial, or other member is mounted on the gem by means of pegs soldered to the member passing through the gem where they are backed up with a washer and the pegs being headed over the washer to secure the member in place. We then set the gem in the finger ring or other article of jewelry in the usual manner, the setting for the stone being provided by a hole through the top of the ring or other ornamental article of jewelry. We complete this setting by flowing into the tubular pegs and the recess in the back of the gem which is not completely filled by the gem a plastic material such for instance as methyl methacrylate or any other resin which may be softened and caused to fill a void and will thereafter harden upon cooling or evaporation of the solvent which may be used for plasticizing the same. This resin by filling their riveted ends prevents collapse of the pegs for their release and the resin also supports the gem throughout its extent.

The invention is shown embodied in an article of jewelry in the form of a finger ring which is illustrated more or less conventionally. The ring comprises the usual body or shank portion **10** having a flat surface **11** in which there is provided an opening **12** therethrough. A base or bezel **13** is secured to the surface **11** in a known manner and has an opening **14** therethrough, the walls of which extend in continuation with the walls of opening **12**. The upper part of opening **14** is recessed or enlarged as at **14'** and provides a ledge or shoulder **15** about the opening **14**. Thus, there is formed an open setting in which a gem **16** or the like may be inserted to rest upon the shoulder **15**.

The gem **16** in the present instance has a generally flat bottom side **17** (Fig. 6) and is provided with spaced openings **18** therethrough. Preferably the edges of the gem are beveled as at **19**. The metal ornament **20** (see Figure 6) which may have any desired configuration is shown as being rectangular and is provided with hollow or tubular pegs **21** depending from the bottom side thereof. These pegs are of a size and spaced to correspond to the size and spacing of openings **18**. The gem **16** and ornament **20** in accordance with the invention are assembled together (see Figure 5) by positioning the ornament **20** on the face of the gem **16** with the pegs **21** projecting through openings **18**. The pegs extend a substantial distance beyond the gem. Washers **22** are placed over the pegs and the projecting end portions are headed over the washers **23** by spreading as at **21'** to rivet the metallic member or ornament **20** in position on the gem. The gem **16** is usually inserted in the base or bezel **13** to rest the bottom side **17** of the gem upon the shoulder **15** prior to assembly of the ornament thereon but the ornament may be assembled after setting if desired. The upper marginal edges **23** of the bezel **13** are turned inwardly

to engage the bevel edges 19 of the gem to secure the gem between the said shoulder 15 and the turned edges 23. Frequently, because of irregularities, some void exists between the stone and the shoulder as at 24 (see Figure 7).

The void or opening at the rear of the gem is filled with a resin material 25, such for instance as methyl methacrylate or other suitable resin which may pass light. This resin is softened to such an extent that it may be flowed into the said opening to fill the hollow tubular pegs 21 and embed the heads 21' of the pegs 21 and also fill the void 24 as at 24' (Figure 7). The resin fill is shaped along its exposed surface as at 26 so as to extend in continuation with the adjacent surface portions of the shank 10 and provide a generally flush continuous surface for engagement with the finger for comfort in wearing the ring. The hollow pegs 21 being filled are well supported and their heads 21' are thus embedded in and also supported by the resin which cooperates with the pegs to prevent their coming loose. The gem is also better supported throughout its entire surface and the fill at 24' provides a cushion support for the stone.

The plastic material 25 which is used may be of a color so as to correspond to the color of the gem 16. Thus, this transparent or translucent plastic material by reason of its color sets off and enhances the stone or gem which is used and greatly increases the brilliance thereof. Likewise by filling of the opening at the back of the gem and providing a smooth surface, dirt or foreign matter which usually collects in this opening or void is prevented from doing so, making it unnecessary to attempt to clean the ring and also providing a much cleaner ring, thus tending to prevent irritation of the skin, maintaining its greater brilliance without cleaning effort and yet retaining all of the advantages of the open back gem setting as well as the advantages of the closed back setting. As the plastic material fills all of the crevices and voids, even the irregularities between the stone and the shoulder on which it seats, dirt is kept out and a better support for the stone results.

By the term "gem" used in the specification we include any natural stone or artificial stone or any insert member which may be set into an open setting in a jewelry article.

We claim:

1. An article of jewelry comprising a body having a stone receiving recess in one surface thereof provided with a bottom wall and a hole of a lesser area than the bottom wall extending from the bottom wall through the body and leaving said bottom wall as a shoulder on which a stone may rest, a stone engaging said bottom wall at spaced points due to an uneven surface on the stone leaving non-contacting portions between the stone and bottom wall at other locations, portions of the edge of said recess extending over the stone to hold it on said bottom wall, and a solid non-metallic material of such a character as to have been flowable filling substantially the hole and the non-contacting locations between the stone and bottom wall to thereby support the stone against cracking by a blow or pressure from the outer side of the stone toward the bottom wall.

2. An article as in claim 1 wherein the non-metallic material is of substantially the same color as the stone.

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