Feb. 2, 1937. S. (DIT CHARLES) ARPELS 2,069,598

SETTING DEVICE FOR A PRECIOUS STONE OR THE LIKE

Filed March 12, 1936

Fig. 1

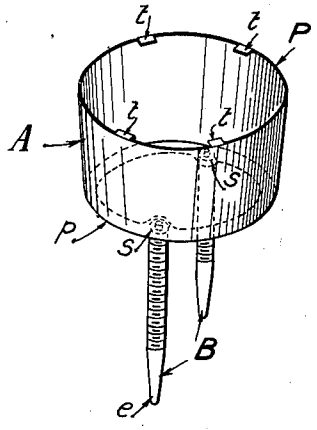


Fig. 2

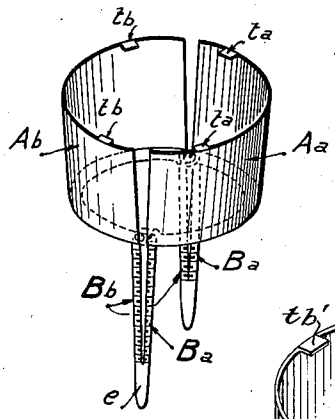


Fig. 6.

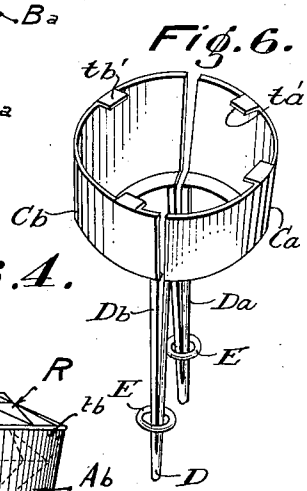


Fig. 3

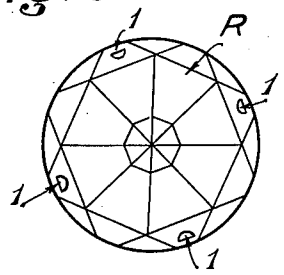
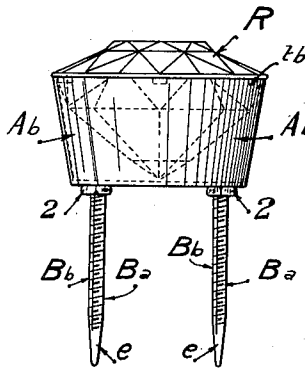


Fig. 4.



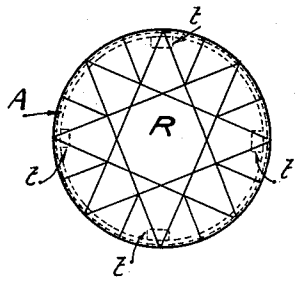


Fig. 5

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SETTING DEVICE FOR A PRECIOUS STONE OR THE LIKE

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12 Claims. (Cl. 63—29)

There are manufactured, at the present time, jewels provided with pavements having surfaces obtained by means of stones set one adjacent to the other, but these stones are maintained by means of metallic parts which are visible when the stones are seen straight from the front, and these visible metallic parts are detrimental of the good appearance of the jewels because they destroy the homogeneity of the surfaces. It is therefore endeavoured to hide as much as possible these metallic parts when the jewel is seen directly from the front.

Furthermore, the arrangement must be such that the stones can easily be set in their support without impairing the safety of their fixation, in order to facilitate the work of the lapidary. This is especially important in the case of jewels to be sent into countries where there are few skilled lapidaries, because it is absolutely necessary in this case to simplify as much as possible the work of taking to pieces and reassembling the jewels, when said jewels are to be repaired, for instance.

The primary object of the present invention is to provide a novel and improved method of mounting a precious stone into a setting, whereby the setting will remain entirely concealed by the stone when the stone is seen from the front thereof.

Another object is to provide a setting device on which each separate stone can be fixed, without any trace of said setting being visible when the stone is seen from the front, whatever be the size or the shape of the stone to be set.

According to the essential feature of the present invention, the setting device includes at least two metallic parts, arranged at a certain distance from each other, and which can be moved toward each other and fixed to each other, after having placed between them the stone to be set, in order to secure the latter in position, said stone being provided with notches for its fixation.

These settings may be utilized either individually or in combination, according to the pattern to be formed.

Other features of the present invention will result from the following detailed description of a specific embodiment thereof.

A preferred embodiment of the present invention will be hereinafter described, with reference to the accompanying drawing, given merely by way of example, and in which:

Fig. 1 is a perspective view of the metallic part from which the setting is manufactured according to the present invention;

Fig. 2 is a perspective view of the setting ready for use;

Fig. 3 shows a bottom view of a stone prepared for use with the setting according to the present invention;

Fig. 4 is an elevational view of the stone mounted in its setting;

Fig. 5 is a plan view of the stone mounted in its setting; and

Fig. 6 is a view similar to that of Fig. 1, illustrating an alternative embodiment of the invention.

In Fig. 1, I have shown the metallic piece which serves to make the mounting or setting device according to the invention. This metallic piece consists of a frusto-conical annular element A and two threaded stems or rods B, soldered to the smaller base *p* of the frusto-conical annular element A in two respective points located on a diameter of said base.

Near the larger base P of the frusto-conical annular element A, and on the inner face of said annular element, there are provided several (for instance four) lugs *t*.

In order to make the setting according to the invention, this metallic piece is sawn into two equal parts along a plane passing through the axes of rods or stems B, in such manner as to leave these stems undivided over a certain length close to their respective ends *e*.

The setting device is then of the form shown in Fig. 2. This setting device includes two equal parts A*a* and A*b* respectively, each provided, at its upper end, with two lugs *ta*, *ta*, and *tb*, *tb*, these two parts being connected together, on either side by the stems B*a*—B*b*, having a common part *e*. The setting device is so dimensioned as to extend to a suitable distance below the girdle of the stone to be set, and it is made in accordance with the shape of the stone that is to be set.

In Fig. 3, I have shown, in bottom view, the stone R, which is provided with notches *l* intended to cooperate with the lugs *ta*, *tb* of the body A of the setting device.

In order to mount the stone in the setting device, it suffices to introduce it into the frusto-conical body A, in such manner that lugs *ta* and *tb* are engaged into the notches *l* of the stone, and then to screw nuts 2 (see Fig. 4) on stems B. The two parts B*a* and B*b* of each stem B are thus forced toward each other, also forcing toward each other the parts A*a* and A*b* of the body A of the setting device. Stone R is thus fixed in the setting device in a very satisfactory manner.

The whole of the stone and of the setting device thereof has the appearance shown in side view in Fig. 4 and in front view in Fig. 5.

The body portion A of the setting device is not necessarily given the shape of a circular truncated cone, as shown in the drawing, but it may be given any suitable shape corresponding to the shape of the stone which it is to maintain. For instance said body may be given the shape

of a truncated pyramid, of a frustum of a cone having an oval base, etc.

Once the mounting has been completed and the nuts are in position, the threaded stems are cut right under the nuts.

If desired, the ends of the stems may also be crushed, or a small mass of solder is provided on said stems, or, in a general way, any means are provided for preventing the nuts from unscrewing.

It results clearly from the preceding description that when several stones are mounted in adjoining relation to one another, only the stones and not the setting parts are visible when looked at directly from the front.

Of course, the details of the specific embodiment above described might be modified without departing from the principle of the present invention.

For instance, the frusto-conical body A, instead of being made of a solid material, might be provided with apertures. On the other hand, the manner of assembling the two portions of the frusto-conical body might be different. For instance, instead of a nut screwed on stem B*a*, B*b*, there might be provided a ring sliding along the stem until it comes into contact with part A. Such an arrangement is shown in Fig. 6, where C*a*, C*b* are the two halves of the split frusto-conical body of the device, having their upper edge provided with inwardly directed lugs *ta'*, *tb'*, and D represent the two smooth stems split into parts D*a*—D*b*, and provided with rings E adapted to be moved against the lower surface of parts C*a*—C*b*, so as to force parts D*a*—D*b* of each stem against each other, together with parts C*a*, C*b*. Instead of two stems B and two notches disposed along the axes of the stems, I might provide a greater number of stems, for instance three or four, with a corresponding number of notches. With this arrangement, the setting device would include more than two parts.

In a general way, while I have, in the above description, disclosed what I deem to be a practical and efficient embodiment of the present invention, it should be well understood that I do not wish to be limited thereto as there might be changes made in the arrangement, disposition, and form of the parts without departing from the principle of the present invention as comprehended within the scope of the appended claims.

What I claim is:

1. A setting device for a precious stone or the like which comprises, in combination, a ring-shaped body of suitable shape corresponding to the shape of the stone, lugs carried by the upper edge of said body, stems carried by the lower edge of said body, the whole of the body and the stems being divided into respective portions by slits passing through the axes of said stems respectively, and means for bringing the two parts of each stem toward each other, whereby the respective portions of the body are brought toward one another.

2. A setting device for a precious stone or the like which comprises, in combination, an annular body of a shape corresponding to that of the stone to be set, lugs at the upper edge of said body, stems at the lower edge of said body, the whole of the body and the stems being divided into respective portions by slits passing through the axes of said stems respectively, said slits extending to a short distance from the end of each stem, and tightening means for bringing the two parts of each stem toward each other, said means being movable along said stems from said ends of said stems toward said body.

3. A setting device according to claim 2 in which said stems are screw threaded, and said means consist of nuts screwing on said stems.

4. A setting device according to claim 2 in which said means consist of rings slidable along said stems, further including means for preventing said rings from moving back toward said ends of said stems.

5. A setting device for a precious stone having, below the girdle thereof, at least two notches, which comprises, in combination, at least two parts provided at one end with lugs capable of engaging said notches, stems carried by said parts, at the other end thereof, said stems being provided with slits extending along the respective axes thereof, the two portions of each stem being carried by or secured to the adjacent edges of different parts, and means for forcing the two portions of each stem toward each other, whereby said lugs are engaged into said notches.

6. A setting device for a precious stone or the like which comprises at least two pieces adapted to receive the stone between them, below the girdle of the stone, means on said pieces adapted for gripping said stone below its girdle and means for forcing said pieces toward each other.

7. The method of mounting a precious stone in a setting which consists in forming notches in the surface of the stone below the girdle thereof, and securing the stone in the setting by causing said setting to engage and grip said notches.

8. In combination, a precious stone having peripheral notches below the girdle thereof, and a setting having means firmly engaging said notches, thereby securing said stone into said setting.

9. In combination, a previous stone having peripheral notches below the girdle thereof, and a setting having means firmly engaging said notches, thereby securing said stone into said setting, said setting remaining entirely concealed by said stone when the stone is seen from the front thereof.

10. In combination, a precious stone having peripheral notches below the girdle thereof, and a setting having inwardly directed lugs firmly engaging said notches, thereby securing said stone into said setting.

11. In combination, a precious stone having peripheral notches below the girdle thereof, and a setting having inwardly directed lugs firmly engaging said notches, thereby securing said stone into said setting, said setting remaining entirely concealed by said stone when the stone is seen from the front thereof.

12. In combination, a precious stone and a setting thereof having means engaging said stone below the girdle thereof, said setting remaining entirely concealed by said stone when the stone is seen from the front thereof.

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