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STONE**(71) Applicant: **Arnaud Greulich**, Strasbourg (FR)(72) Inventor: **Arnaud Greulich**, Strasbourg (FR)(21) Appl. No.: **14/374,899**(22) PCT Filed: **Feb. 5, 2013**(86) PCT No.: **PCT/IB2013/050963**

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(2013.01); **A44C 17/00** (2013.01)USPC **63/32**; 29/896.41(57) **ABSTRACT**

The invention relates to an ornamental device (1) comprising at least one cut or polished stone (2) with at least one rear portion (23).

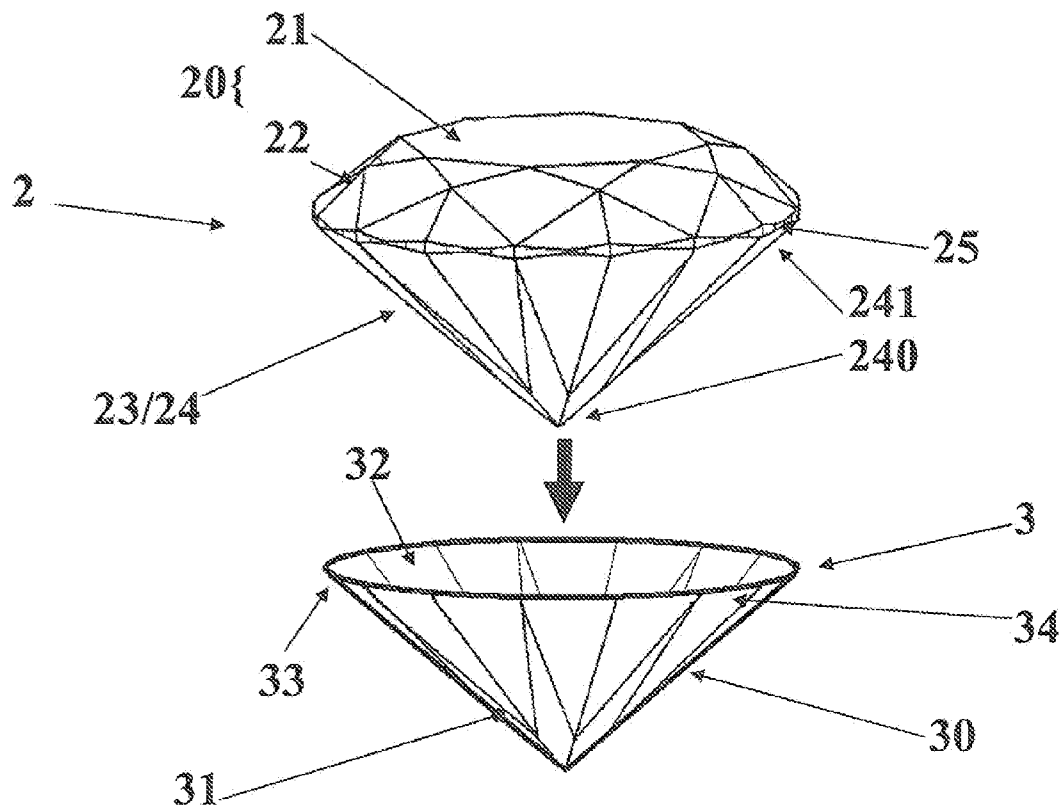
This ornamental device (1) is characterised by 5 the fact that it also has:

means (3) to at least partially protect the rear portion (23) of the stone (2) from becoming soiled. This means of protection (3) takes on the shape of this rear portion (23) of the stone (2) and equips this rear portion (23) of the stone (2) without adhering to it;

means (5) to prevent the ingress of a body from between the rear portion (23) of the stone (2) and the means (3) for protecting this rear portion (23) of the stone (2) and/or to prevent the egress of such a body from a defined internal volume (4) between the rear portion (23) of the stone (2) and the means (3) for protecting this rear portion (23) of the stone (2);

Means for securing, on the stone (2), means (3) for protecting the rear portion (23) of this stone (2).

The invention also concerns a manufacturing process of such an ornamental device (1).



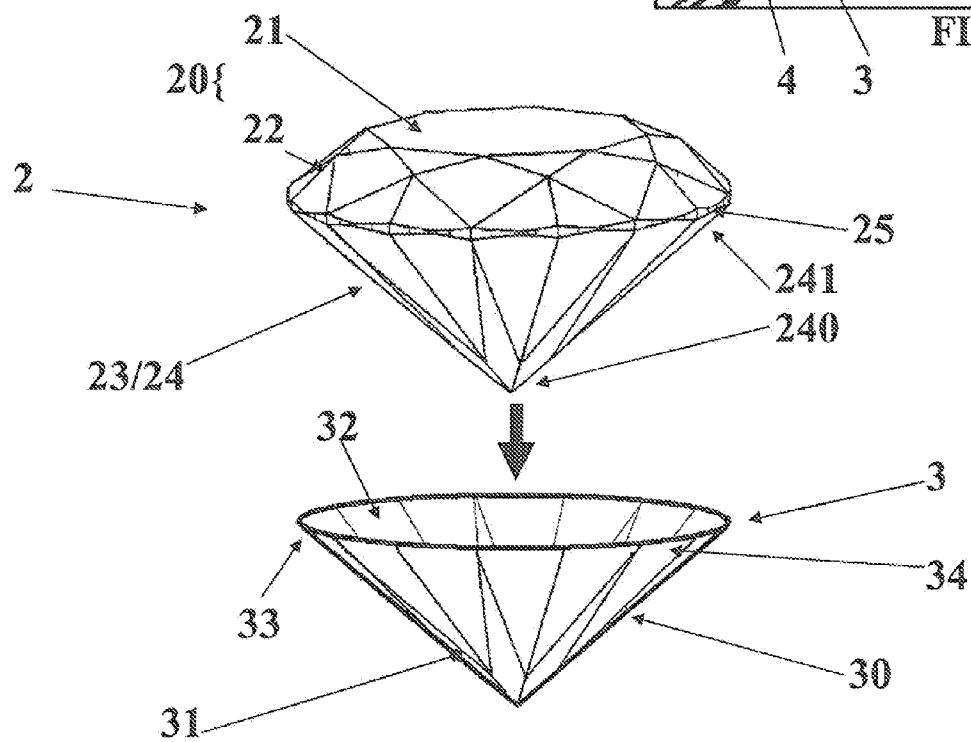
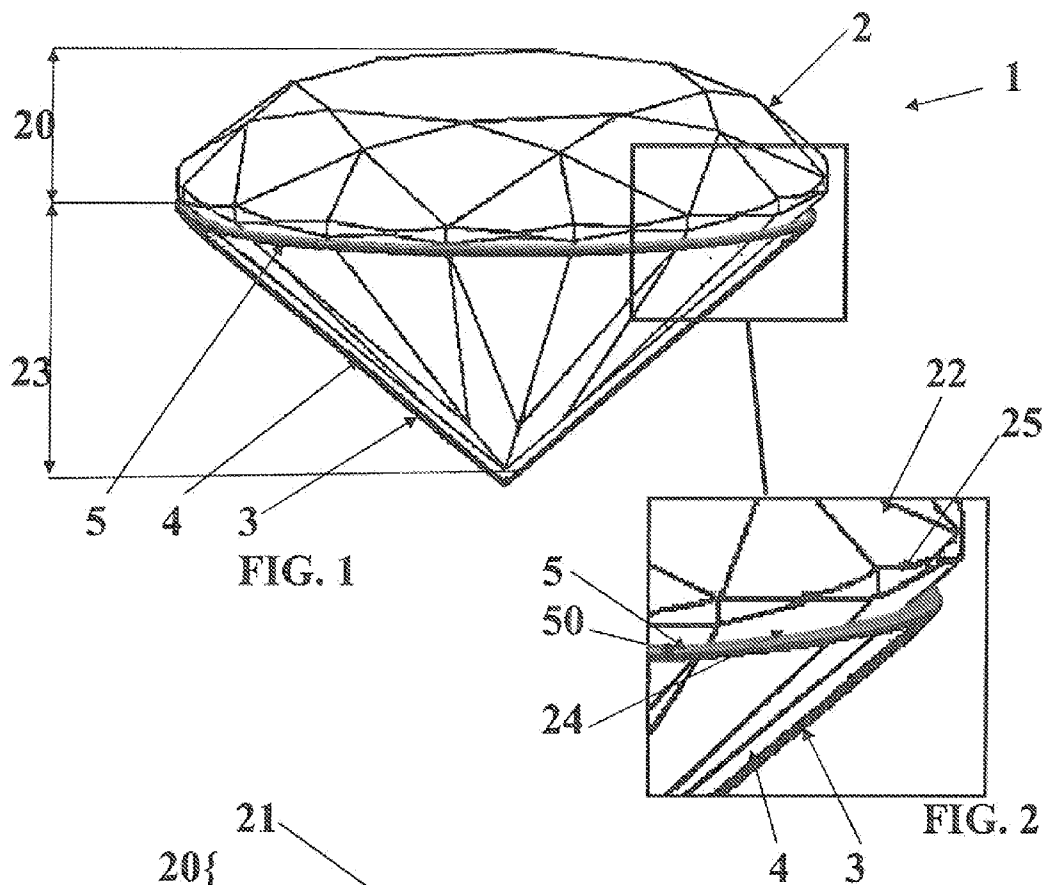


FIG. 3

ORNAMENTAL DEVICE COMPRISING A STONE

[0001] This invention concerns an ornamental device comprising at least one cut or polished stone as well as a manufacturing process for such an ornamental device.

[0002] This invention relates to the field of ornamentation and, more specifically, that of the manufacture of ornamental devices incorporating at least one fine, semi-precious or precious stone, such a stone that can be cut and/or polished. In fact, this invention will be particularly well suited for applications in the fields of jewellery or even watchmaking. It should be noted that this invention is also of particular interest (but not limited) to the case of ornamental devices incorporating at least stone that has a low refractive index.

[0003] There are already ornamental devices that incorporate at least one stone whose brightness results from the reflection of light inside the stone. Such brightness can be significantly amplified by cutting such a stone appropriately.

[0004] However, with time and/or depending on the environment of this stone, the stone becomes dirty resulting in a change in its refractive index in relation to its environment. This change causes a deviation of the rays of light reflected inside the stone from their original direction, which has the effect of dulling the stone's brilliance.

[0005] It should be noted that such a stone has, on the one hand, a front portion usually incorporating a table and a crown and, on the other hand, a rear portion, constituted, in particular, by a flat face or a pavilion. Also, even though it is possible to clean the front of such a stone with relative ease, dirt deposited on the rear portion of this stone is particularly difficult to clean, especially since it is difficult to access such a rear portion that is usually inserted inside a setting. This leads, irreparably, to the stone's brightness being dulled. This invention aims to overcome the disadvantages of state-of-the-art ornamental devices.

In particular, this invention is intended to overcome the problem of dirt being deposited on such an ornamental device's stone, which dulls the stone's brightness.

[0006] Also, according to an inventive approach that led to this invention, a solution was sought to prevent dirt from being deposited on a stone with such an ornamental device, particularly on the rear portion of such a stone, in order to preserve the original brightness of such a stone.

[0007] To this end, the invention relates to an ornamental device comprising at least one cut or polished stone with at least one rear portion. This ornamental device is characterised by the fact that it also has:

[0008] means to at least partially protect the rear portion of the stone from becoming soiled. This means of protection takes on the shape of this rear portion of the stone and equips this rear portion of the stone without adhering to it;

[0009] means for preventing the ingress of a body between the rear portion of the stone and means for protecting this rear portion of the stone and/or to prevent the egress of such a body from a defined inner volume between the rear portion of the stone and the means to protect this rear portion of the stone;

[0010] means for securing, on the stone, means for protecting the rear portion of this stone.

[0011] The invention also concerns a manufacturing process for an ornamental device comprising at least one polished or cut stone with at least one rear portion. This process is characterised by the fact that:

[0012] the rear portion of the stone is equipped with means to at least partially protect this rear portion of the stone from becoming soiled. This means takes on the shape of this rear portion of the stone and equips this rear portion of the stone without adhering to it;

[0013] the stone and/or the means for protecting the rear portion of the stone are equipped with means preventing the ingress of a body between the rear portion of the stone and means for protecting this rear portion of the stone and/or to prevent the egress of such a body from a defined inner volume between the rear portion of the stone and the means to protect this rear portion of the stone;

[0014] Means for protecting the rear portion of this stone is secured on the stone.

[0015] Finally, the invention concerns an ornamental device obtained by the implementation of this manufacturing process.

[0016] Thus, the ornamental device, according to the invention, comprises a stone as well as means for protecting the rear portion of this stone from becoming soiled. The presence of this means of protection ensures that dirt will settle on this means of protection and, advantageously, keep the dirt from being deposited on the back of the stone.

[0017] Moreover, this ornamental device comprises means to prevent the ingress of a body (solid, liquid or gas) between the rear portion of the stone and means to protect this rear portion of the stone. These means, advantageously, keep dirt from penetrating and soiling the rear portion of the stone and thus make it possible to preserve the stone's original brightness. These means also keep air from entering and, as appropriate, avoid breaking the vacuum or modifying the composition of the gas mixture between the rear portion of the stone and the means for protecting this rear portion of the stone, particularly in the defined inner volume between the rear portion of the stone and this means for protecting this rear portion of the stone.

[0018] Moreover, this ornamental device comprises means to prevent the egress of a body (in particular, gas) from a defined inner volume between the rear portion of the stone and means for protecting this rear portion of the stone. This, advantageously, makes it possible to maintain such a body (in particular, a gas or gas mixture, especially air) inside this inner volume. As a result, the rear portion of the stone is always in contact with a layer of this body, which, advantageously, makes it possible to maintain the initial direction of the light reflected inside the stone and to thereby retain the stone's initial brightness.

[0019] Other goals and advantages of this invention will become apparent in the following description relating to the forms of embodiment that are only given as non-exhaustive examples.

[0020] It will be easier to understand this description by referring to the drawings attached as appendices in which:

[0021] FIG. 1 is a schematic, perspective view of an ornamental device consistent with the invention and comprising a stone as well as means for protecting the rear portion of this stone;

[0022] FIG. 2 is a schematic view corresponding to a detail drawing of the ornamental device shown in FIG. 1 at the level of the means for preventing the ingress or egress of a body;

[0023] FIG. 3 is an exploded view schematic drawing of the ornamental device illustrated in FIG. 1.

[0024] This invention relates to the field of ornamentation and, more specifically, to that of the manufacture of ornamental devices incorporating at least one gem, one fine, semi-precious or precious stone. Such a stone can then be polished (for example, only polished as for a cabochon) and/or cut.

[0025] In fact, this invention will be particularly well suited for applications in the fields of jewellery or even watchmaking and is of particular interest (but not limited to) the case of ornamental devices incorporating at least one stone with a low refractive index (such as quartz).

[0026] This invention, therefore, concerns an ornamental device 1 with at least one stone 2.

[0027] In fact, such a stone 2 usually has a front portion 20 comprising a table 21 as well as a crown 22 extending below, from and around this table 21. Such a stone 2 also has a rear portion 23, as appropriate, in the shape of a pavilion 24 (shown in the appended figures) or a flat surface, for example for a stone composed of a cabochon or otherwise (form of embodiment not shown).

[0028] Finally, such a stone 2 has a girdle 25 interposed between the front portion 20 and rear portion 23 of this stone 2.

[0029] According to the invention, the ornamental device 1 also has means 3 to at least partially protect the rear portion 23 of the stone 2 from dirt settling on this rear portion 23 of the stone 2.

[0030] In this regard, it should be noted that this means 3 to at least partially protect the rear portion 23 of the stone 2 is comprised of means for dressing and/or to covering, at least partially, this rear portion 23 of the stone 2.

[0031] In fact, this means 3 of protection for the rear portion 23 of the stone 2 takes on the shape of this rear portion 23 of the stone 2.

[0032] In this regard, it should be noted that, when the stone 2 has a rear portion 23 in the shape of a flat face, the means 3 for protecting the rear portion 23 of such a stone 2 is comprised of a flat plate fitted to this flat face.

[0033] In such a case, the flat face of the stone 2 and the flat plate of the means of protection 3 have facing surfaces, which are flat and parallel.

[0034] However, where the stone 2 has a rear portion 23 that takes on the shape of a pavilion 24, the means 3 for protecting the rear portion 23 of such a stone 2 consists of a cap 30, fitted to this pavilion 24, and inside of which 30 this pavilion 24 is positioned.

[0035] In this regard, it should be noted that the cap 30 then takes on the shape of the part of the pavilion 24 extending between a distal end 240 of this pavilion 24 and an edge 241 of this pavilion 24 (or even the rim of this pavilion 24) adjacent to the girdle 25. According to a preferred form of embodiment of the invention illustrated in the figures in the appendices, this cap 30 takes on the entire shape of this pavilion 24.

[0036] In addition, the pavilion 24 of such a stone 2 and the cap 30 of the protective means 3 of such a pavilion 24 have facets. The cap's 30 facets thus correspond to the pavilion's 24 facets. Furthermore, the corresponding facets have facing surfaces that are flat and parallel.

[0037] As mentioned above, the means 3 of protection for the rear portion 23 of the stone 2 takes on the shape of this rear portion 23 of the stone 2. Also, according to a preferred form of embodiment of the invention, the means 3 for protecting

the rear portion 23 of the stone 2 has a shape adjusted (preferably perfectly adjusted) to that of the rear portion 23 of the stone 2.

[0038] According to another feature, the means 3 for protecting the rear portion 23 of the stone 2 has a wall 31 with a thickness of between 0.001 mm (1 micron) and 1 mm (1000 microns), preferably between 0.005 and 0.1 mm (5 to 100 microns), specifically, around 0.01 mm (10 microns).

[0039] It should be noted that this means 3 for protecting the rear portion 23 of the stone 2 is made from, at least in part, a synthetic, natural and/or polymer material. A preferred form of embodiment consists of this means 3 being made of a synthetic polymer, in particular, polyester, polycarbonate, PVC, PET or other.

[0040] According to another feature, this means 3 for protecting the rear portion 23 of the stone 2 can be transparent (preferred form of embodiment), translucent, reflective, opaque and/or coloured (including black).

[0041] According to another feature of the invention, the means 3 for protecting the rear portion 23 of the stone 2 equips this rear portion 23 of the stone 2 without this means of protection 3 being adhered to this rear portion 23 of the stone 2.

[0042] In fact, and according to a first form of embodiment, the means 3 for protecting the rear portion 23 of the stone 2 may be in contact with (more specifically, its surface may be mounted against) this rear portion 23 of the stone 2.

[0043] However, according to another form of embodiment, this means 3 for protecting the rear portion 23 of the stone 2 may be positioned some distance from the rear portion 23 of the stone 2. In such a case, the ornamental device 1 has a defined inner volume 4 between the rear portion 23 of the stone 2 and the means 3 for protecting this rear portion 23 of the stone 2.

[0044] More specifically, this inner volume 4 is defined between the facing surfaces, on the one hand, the rear portion 23 of the stone 2 and, on the other hand, the means 3 for protecting this rear portion 23 of the stone 2.

[0045] In fact, the presence of this inner volume 4 is a result, at least in part, of the fact that the means 3 for protecting the rear portion 23 of the stone 2 fits to this rear portion 23 of the stone 2 without adhering to it.

[0046] It should be noted that the inner volume 4 has a shallow depth (corresponding to the distance between the rear portion 23 of the stone 2 and the means 3 for protecting this rear portion 23 of the stone 2) which may be between 0.001 mm (1 micron) and 1 mm (1000 microns), preferably between 0.005 and 0.05 mm (5 to 50 microns), specifically, approximately 0.01 mm (10 microns).

[0047] As mentioned above, the means 3 of protection for the rear portion 23 of the stone 2 takes on the shape of this rear portion 23 of the stone 2.

[0048] As a result, the inner volume 4 is in the shape of a blade extending either between the flat face (constituting the rear portion 23 of the stone 2) and the flat plate (constituting the means 3 for protecting the rear portion 23 of the stone 2) or between the pavilion facets 24 (constituting the rear portion 23 of the stone 2) and those of the cap 30 (constituting the means 3 for protecting the rear portion 23 of the stone 2).

[0049] According to another feature, in this inner volume 4, either there is a vacuum or it contains a gas or gas mixture especially chosen to provide good reflection of the light inside of the stone 2, this at the interface between the pavilion 24 and the inner volume 4. According to a preferred form of embodi-

ment of the invention, this inner volume contains a gas mixture consisting of air that can provide the best reflection possible.

[0050] An additional feature is that the ornamental device 1 comprises means 5 for preventing the ingress of a body (solid, liquid or gas) between the rear portion 23 of the stone 2 and the means 3 for protecting this rear portion 23 of the stone 2 (more specifically, within the inner volume 4) and/or to prevent the egress of such a body (especially gas or, more specifically, the gas mixture mentioned above) from the defined inner volume 4 between the rear portion 23 of the stone 2 and the means 3 for protecting this rear portion 23 of the stone 2.

[0051] These means 5 for preventing the ingress and/or egress of a body consist of at least one sealing gasket 50 extending along the entire perimeter of the means 3 for protecting the rear portion 23 of the stone 2. This sealing gasket 50 also extends, as appropriate, along the entire meter of the girdle 25, along the entire perimeter of the rear portion 23 (more specifically of the pavilion 24) of the stone 2 or even along the entire rim that includes this rear portion 23 (more specifically, the flat face) of the stone 2.

[0052] In fact, such a sealing gasket 50 may be interposed between the means 3 for protecting the rear portion 23 of this stone 2 and the stone 2, more specifically, the girdle 25 or (and preferably) the rear portion 23 (specifically the flat surface or the pavilion 24) of this stone 2.

[0053] According to a preferred form of embodiment of the invention, this sealing gasket 50 is placed between, on the one hand, an inner edge 32 that includes the means 3 for protecting the rear portion 23 of the stone 2, this near its free end 33, and, on the other hand and, as appropriate, the girdle 25 or (and preferably) the rear portion 23 of the stone 2, in particular, the flat face or the pavilion 24 (FIG. 3).

[0054] In an additional or alternative manner, this sealing gasket 50 may be positioned straddling the means 3 for protecting the rear portion 23 of the stone 2 (more specifically, over the free end 33 and/or an outer rim 34 that includes this means of protection 3 near its free end 33) and the stone 2, as appropriate, the girdle 25 and the rear portion 23 of the stone 2.

[0055] It should be noted that such a sealing gasket 50 is solid and is selected so as not to alter and/or flow between the stone 2 and 3 means for protecting the rear portion 23 of the stone 2 (more specifically, within the internal volume 4) during implementation and/or as a result of aging or temperature.

[0056] Such a seal 50 is also deformable to closely fit the contours of the means 3 for protecting the rear portion 23 of the stone 2 and the stone 2, more specifically, the contours of the pavilion 24 or the girdle 25.

[0057] A preferred form of embodiment consists of a sealing gasket 50 formed by an adhesive and/or sealant, in particular, silicone.

[0058] Another feature of the invention is that the ornamental device 1 has means for securing, on the stone 2, the means 3 for protecting the rear portion 23 of this stone 2.

[0059] According to a first form of embodiment, such means for securing, on the stone 2, the means 3 for protecting the rear portion 23 of this stone 2 consists of the means 5 to prevent the ingress and/or egress of a body, more specifically by a sealing gasket 50 as described above.

[0060] Alternatively or additionally, such means for securing, on the stone 2, the means 3 of protection may comprise at least one spot of adhesive (preferably a stripe of adhesive) placed between the means of protection 3 (more specifically,

between the inner edge 32 and/or the edging of the free end 33 of this means 3) and 2 stone (in particular, the flat face, the pavilion 24 or the girdle 23 of this stone 2). Such an adhesive may be formed by a polymerisable and/or cross-linkable chemical compound, in particular, under the effect of radiation (laser, UV or other), and which, by polymerisation and/or cross-linking, will ensure the bonding of the means 3 for protecting the stone 2.

[0061] Finally, the means for securing the means 3 for protecting the rear portion 23 of this stone 2 can consist of a portion of the wall 31 of this means of protection 3 (more specifically, a portion of the edge of the free end 33 of the wall 31 of this means 3) that, as a result of cutting this means of protection 3, will melt and adhere to the stone 2. In this way, this securing means consists of a melted portion of the wall 31 of this means 3 for protecting the rear portion 23 of the stone 2.

[0062] In this regard, it should be noted that the stripe of adhesive and/or melted portion of the wall 31 of the means of protection 3 mentioned above may then also constitute means 5 to prevent ingress and/or egress of a body.

[0063] The invention also concerns means 3 for protecting the rear portion 23 of a stone 2. This means 3 of protection is intended to be part of the composition of an ornamental device 1 described above. Such a means of protection 3 has the features described above and may take on the shape of a flat plate or a cap 30.

[0064] This invention also concerns a manufacturing process for an ornamental device 1 with at least one polished or cut stone 2 that has at least one rear portion 23 such as described above (flat face or pavilion 24).

[0065] In particular, this invention relates to a manufacturing process for an ornamental device 1 with the features described above.

[0066] This manufacturing process consists of:

[0067] fitting the rear portion 23 of the stone 2 with means 3 for at least partially protecting this rear portion 23 of the stone from becoming soiled. This protection means 3 takes on the shape of this rear portion 23 of the stone and equips this rear portion 23 of the stone without adhering to it;

[0068] fitting the stone 2 and/or the means 3 for protecting the rear portion 23 of the stone 2, with this means 5 for preventing the ingress of a body (solid, liquid or gas) between the rear portion 23 of the stone 2 and the means 3 for protecting this rear portion 23 of the stone 2 and/or to prevent the egress of such a body (including gaseous) from a defined inner volume 4 between the rear portion 23 of the stone 2 and the means 3 for protecting this rear portion 23 of the stone 2;

[0069] securing, on the stone 2, means 3 for protecting the rear portion 23 of this stone 2.

[0070] Thus, this process consists of fitting the rear portion 23 of the stone 2 with means 3 for at least partially protecting this rear portion 23 of the stone 2.

[0071] In this regard, it should be noted that when the rear portion 23 of a stone 2 is fitted with means 3 for at least partially protecting this rear portion 23 of the stone 2, the rear portion 23 of the stone 2 is at least partially dressed and/or covered with this means for dressing and/or covering, at least partially, this rear portion 23 of the stone 2.

[0072] As mentioned above, this means 3 for protecting this rear portion 23 of stone 2 takes on the shape of the rear portion 23 of this stone 2 (as appropriate, the shape or the flat face of

the faceted pavilion 24 making up this rear portion 23 of the stone 2) and is preferably adjusted (specifically, perfectly adjusted) to this rear portion 23 stone 2.

[0073] To do this, when the rear portion 23 of the stone 2 is fitted with means 3 for protecting this rear portion 23, we shape, directly on the stone 2 (at least on the rear portion 23 of the stone 2), a plate or a film formed at least in part, by a material used in the composition of this means 3 for protecting the rear portion 23 of the stone 2.

[0074] It should be noted that the shaping of this plate or film is performed by creating a vacuum and/or thermoforming.

[0075] According to another form of embodiment, when the rear portion 23 of the stone 2 is fitted with means 3 for protecting this rear portion 23, a material used in the composition of this means 3 for protecting this rear portion 23 of the stone 2 is sprayed directly onto the stone 2 (at least on this rear portion 23 of this stone 2).

[0076] Another form of embodiment consists of, when the rear portion 23 of the stone 2 is fitted with means 3 for protecting this rear portion 23, the stone 2 being dipped (at least on the rear portion 23 of this stone 2) in a bath formed at least in part by a material used in the composition of this means 3 for protecting this rear portion 23 of the stone 2.

[0077] In fact, through spraying or dipping, a layer of a material used in the composition of the means 3 for protecting this rear portion 23 of the stone 2 and intended to form a flat plate or a cap 30 (as described above) is deposited on the 5 stone 2, for example after drying and/or curing.

[0078] In this regard, it should be noted that the layer and/or the plate (to be shaped) and/or the film (to be shaped) mentioned above have a thickness corresponding to the thickness (mentioned above) of the wall 31 of the means of protection 3, namely, a thickness of between 0.001 mm (1 micron) and 1 mm (1000 microns).

[0079] Furthermore, this layer and/or plate and/or film are formed, at least in part, by a natural, synthetic, and/or polymer material, as described above.

[0080] According to an additional feature of the invention, before making (by shaping, spraying, or dipping) means 3 to protect the rear portion 23 of the stone 2, the surface of the stone 2 (at least the rear portion 23 of this stone 2) can be equipped with a layer of a material preventing adhesion on the stone 2, as appropriate, of the plate, film or material (sprayed onto the stone 2 or in which the stone 2 is dipped) used in the composition of this means of protection 3. Such a form of embodiment advantageously makes it possible to avoid adhesion on stone 2, of the means 3 for protecting the rear portion 23 of a stone 2 and, thus, to define the inner volume 4 as mentioned above.

[0081] Another feature is that when the stone 2 is equipped with means 3 for protecting the rear portion 23 of this stone 2, the operation is completed by adjusting the dimensions of this means of protection 3 to the dimensions of the rear portion 23 (flat face or pavilion 24) of the stone 2 by cutting the layer (sprayed or deposited by dipping), film (shaped) or plate (shaped) equipping the stone 2.

[0082] In this regards, it should be noted that such cutting could be carried out mechanically (e.g. using a blade), or thermally (in particular, by laser).

[0083] As mentioned above, the manufacturing process consists of equipping the device 1 with means 5 to prevent the ingress and/or egress of a body.

[0084] For this reason, either a sealing gasket 50 is interposed between the stone 2 and the means 3 for protecting the rear portion of the stone 2, or such a sealing gasket 50 is placed straddling the stone 2 and the means 3 for protecting the rear portion 23 of the stone 2, as described above.

[0085] As mentioned above, the process also consists of securing, on the stone 2, the means 3 for protecting the rear portion 23 of the stone 2.

[0086] According to a first form of embodiment, such attachment is ensured, either by interposing a sealing gasket 50 (as described above) between the stone 2 and the means 3 for protecting the rear portion 23 of the stone 2, or placing such a sealing gasket 50 straddling the stone 2 and the means 3 for protecting the rear portion 23 of the stone 2.

[0087] Another form of embodiment consists of securing it using at least one dot of adhesive (or even a line of adhesive) and interposing at least one such dot of adhesive (or even a line of adhesive) between the stone 2 and the means 3 for protecting the rear portion 23 of the stone 2, as mentioned above.

[0088] In this regard, it should be noted that this process can, in particular, consist of interposing an adhesive made of a polymerisable and/or cross-linkable chemical compound, in particular, under the effect of radiation (laser, UV or other), and then by polymerization and/or cross-linking of this chemical compound under the effect of such radiation, to ensure adhesion of the means of protection 3 to the stone 2.

[0089] Such attachment can, again, be achieved by melting a part of the means 3 for protecting the rear portion 23 of the stone 2, which will adhere to the stone 2, as described above.

[0090] Therefore, this invention also concerns an ornamental device 1 obtained by implementing the manufacturing process described above.

1. Ornamental device comprising a cut or polished stone with a rear portion and characterised by the fact that it further comprises:

Means to partially protect the rear portion of the stone from becoming soiled. This means of protection takes on the shape of this rear portion of the stone and equips this rear portion of the stone without adhering to it;

Means for preventing the ingress of a body between the rear portion of the stone and the means for protecting this rear portion of the stone or to prevent the egress of such a body from the defined internal volume between the rear portion of the stone and the means for protecting the rear portion of the stone;

Means for securing, on the stone, the means for protecting the rear portion of this stone.

2. Ornamental device according to claim 1, characterised by the fact that the means for protecting the rear portion of the stone has a wall whose thickness is between 0.001 mm and 1 mm, preferably between 0.005 and 0.1 mm, specifically, approximately 0.01 mm.

3. Ornamental device according to claim 1 characterised by the fact that the means for protecting the rear portion of the stone includes a natural, synthetic or polymer, specifically a synthetic polymer, material.

4. Ornamental device according to claim 1, characterised by the fact that the stone has a rear portion that takes on the shape of a flat face and that the means for protecting this rear portion of this stone comprises a flat plate fitted to this flat face.

5. Ornamental device according to claim 1, characterised by the fact that the stone has a rear portion that takes on the

shape of a pavilion and that the means for protecting this rear portion of this stone comprises a cap fitted to this pavilion, and inside of which this pavilion is positioned.

6. Ornamental device according to claim 1, characterised by the fact that, in the inner volume, either there is a vacuum or it contains a gas or gas mixture, in particular, composed of air.

7. Ornamental device according to claim 1, characterised by the fact that the means to prevent the ingress or egress of a body has a sealing gasket extending along the entire perimeter of the means for protecting the rear portion of this stone, and, as appropriate, interposed between the stone and the means for protecting the rear portion of the stone or positioned straddling the stone and the means for protecting the rear portion of the stone.

8. Ornamental device according to claim 1, characterised by the fact that the means for securing, on the stone, the means for protecting the rear portion of the stone is comprised of means to prevent the ingress or egress of a body, using a dot of glue, or a melted portion of the wall of the means for protecting the rear portion of this stone.

9. Manufacturing process for an ornamental device with a polished or cut stone that has a rear portion, characterised by the fact that:

The rear portion of the stone is equipped with means to partially protect this rear portion of the stone from becoming soiled. This means takes on the shape of this rear portion of the stone and equips this rear portion of the stone without adhering to it;

The stone or the means for protecting the rear portion of the stone are equipped with means preventing the ingress of a body between the rear portion of the stone and the

means for protecting this rear portion of the stone or preventing the egress of such a body from a defined inner volume between the rear portion of the stone and the means for protecting this rear portion of the stone;

Means for protecting the rear portion of this stone is secured on this stone.

10. Manufacturing process for an ornamental device according to claim 9, characterised by the fact that, when the rear portion of the stone is equipped with means for protecting this rear portion, a plate or a film comprising a material used in the composition of this means for protecting the rear portion of the stone is formed directly on the stone by creating a vacuum or thermoforming.

11. Manufacturing process for an ornamental device according to claim 9, characterised by the fact that, when the rear portion of the stone is equipped with means for protecting this rear portion, a material used in the composition of these means for protecting this rear portion of the stone is either sprayed directly onto the stone, or this stone is dipped in a bath comprising such a material.

12. Manufacturing process for an ornamental device according to claim 9, characterised by the fact that means for protecting the rear portion of this stone is secured on the stone, or the stone or the means for protecting the rear portion of the stone is equipped with means to prevent the ingress or egress of a body, either by interposing a sealing gasket between the stone and the means for protecting the rear portion of the stone, or by placing such a sealing gasket straddling the stone and the means for protecting the rear portion of the stone.

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