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(54) **Hinge**

(57) Element (10a, 10b, 10c) for a hinge (11) comprising at least a body (13) and an attachment shank (14). Each element (10a, 10b, 10c) also comprises at

least an annular element (23) able to be disposed to cover an uncovered segment (14a) of the attachment shank (14) next to the body (13).

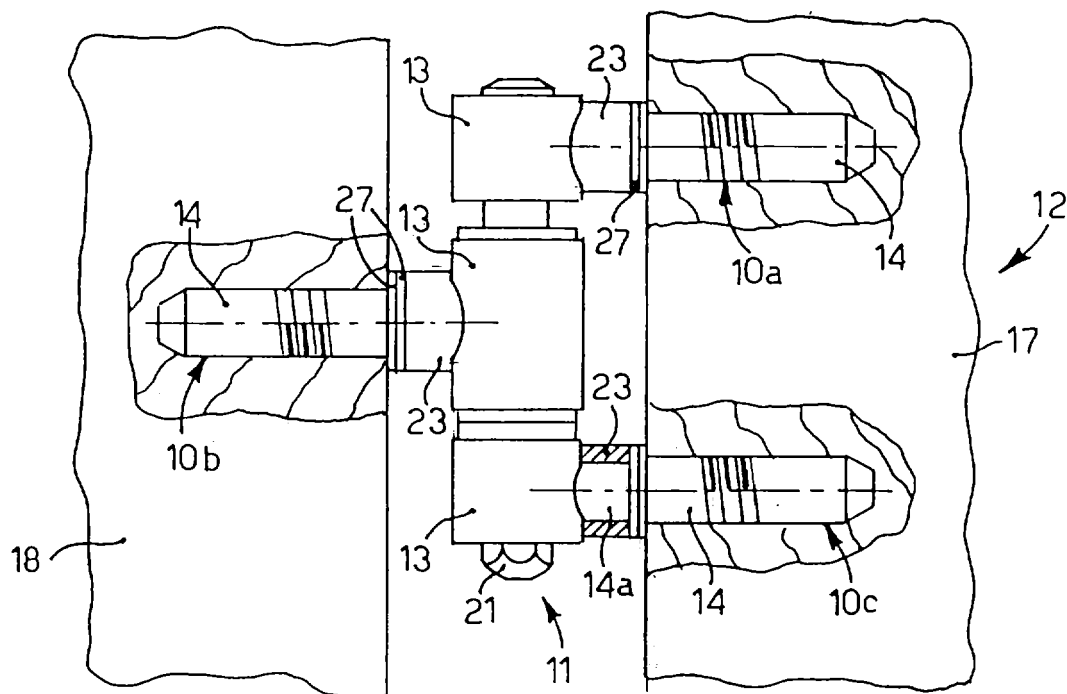


fig.1

Description

FIELD OF THE INVENTION

[0001] The present invention concerns an element for a hinge for fittings such as doors, main doors, windows, furniture panels, furnishing elements in general or other.

[0002] To be more exact, the element for a hinge according to the present invention comprises at least a body and an attachment shank able to attach the body to a fixed part, for example a frame, or to a movable part, such as the panel of a door/window.

BACKGROUND OF THE INVENTION

[0003] It is known in the field of doors and windows and of furnishings to use hinges, comprising for example two, three or more elements, each consisting of a body and of one or more attachment shanks, threaded or not and able to attach the body to the fixed part or the movable part of the door/window.

[0004] The elements of the hinge are pivoted each other so as to allow the panel to rotate around an axis normally vertical with respect to the frame.

[0005] The hinges are normally positioned outside and visible with respect to the door/window, since the axis of rotation must be such as to allow the panel to exit from the frame and at the same time allow a desired angle of rotation which must be at least equal to 90°.

[0006] Normally, the attachment shanks are not completely inserted in the frame, or into the panel of the door/window, but a segment thereof, comprised between the body and the relative wall of the element of the door/window, is uncovered and exposed. This entails the risk that this uncovered part of the shank may be cut or sawn in the event of an attempted break-in.

[0007] For this reason, known hinges are vulnerable and can therefore be forced, allowing the panel to be detached from the frame and consequent access inside a building or piece of furniture which the door/window is intended to protect.

[0008] Moreover, the presence of the exposed segment entails a deterioration in the overall aesthetics of the hinge.

[0009] One purpose of the present invention is to achieve an element for a hinge which guarantees greater security and reliability of use, and is more effective against break-ins compared with known elements.

[0010] Another purpose of the present invention is to achieve an element for a hinge which offers protection against the infiltration of dust and other dirt between the threads of the attachment shank, and which also determines an improvement in the aesthetics of the hinge.

[0011] The Applicant has devised, tested and embodied the present invention to overcome the shortcomings of the state of the art and to obtain these and other purposes and advantages.

SUMMARY OF THE INVENTION

[0012] The present invention is set forth and characterized in the main claim, while the dependent claims describe other characteristics of the invention or variants to the main inventive idea.

[0013] In accordance with the above purposes, an element for a hinge according to the present invention can be used to allow the rotation of a movable element, for example the panel of a door/window, with respect to a fixed element, for example a frame.

[0014] The element for a hinge according to the present invention comprises at least a body and an attachment shank which is attached to the movable element, or to the fixed one, of the door/window.

[0015] According to a characteristic of the present invention, the element for a hinge also comprises at least an annular element able to be disposed to cover an exposed segment of the attachment shank next to the body.

[0016] To be more exact, in the preferential embodiment, the annular element is disposed in the free space resulting, when the hinge is mounted, between the body and the door/window element to which the shank is attached, and consequently the element for a hinge.

[0017] The annular element according to the invention therefore achieves a cover for said segment which would normally be uncovered, exposed and extremely vulnerable, both to attempted break-ins and also to the infiltration of dirt, such as dust and other.

[0018] The element according to the invention therefore guarantees to the hinge great security and high resistance in the event of a break-in. Moreover, the invention allows to improve the overall aesthetics of the hinge.

[0019] In a preferential embodiment, the annular element is shaped, at least on a side, to confer a continuity of line between the body of the hinge and the wall of the door/window element to which the shank is attached.

[0020] According to an advantageous embodiment, the annular element is made of hard and mechanically resistant material, for example metal, in particular hardened steel or other.

[0021] According to a variant, auxiliary annular elements are provided, such as washers or disks, of little thickness, to fill in any possible space between the annular element and the door/window element, so as to be able to use the same annular element for different distances between the body of the hinge and the door/window element.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022] These and other characteristics of the present invention will become apparent from the following description of a preferential form of embodiment, given as a non-restrictive example with reference to the attached drawings wherein:

- fig. 1 is a lateral view, partly in section, of a detail of

a door/window in which three elements for a hinge according to the present invention are mounted;

- fig. 2 is a plane view, partly in section, of the door/window in fig. 1, in a closed position;
- fig. 3 is a longitudinal section of an annular element of the element in fig. 1;
- fig. 4 is a plane view of the annular element in fig. 3.

DETAILED DESCRIPTION OF A PREFERENTIAL FORM OF EMBODIMENT

[0023] With reference to fig. 1, a hinge 11 is shown for a door/window 12 consisting of three elements, respectively first 10a, second 10b and third 10c.

[0024] It is clear that the present invention can also be applied to hinges 11 consisting of two elements, male and female, and in any other type of similar or comparable hinge 11.

[0025] The elements 10a, 10b, 10c (figs. 1 and 2) each comprise a body 13 and a threaded shank 14 protruding from the body 13 and able to be attached by screwing to a panel 17 or a frame 18 of the door/window 12.

[0026] To be more exact, the shank 14 of the first and the third element 10a, 10c are attached to the panel 17 of the door/window 12, while the shank 14 of the second element 10b, disposed between the first and the second element 10a, 10b is attached to the frame 18.

[0027] The elements 10a, 10b, 10c are also longitudinally provided with a respective through hole, not shown, and are coupled to each other so that the three through holes are aligned with each other.

[0028] Into the three through holes thus aligned a pin 21 is inserted, able to allow the three elements 10a, 10b, 10c to be hinged; the pin 21 is clamped in a known manner, for example to the first element 10a with a grub screw.

[0029] Each element 10a, 10b, 10c also comprises a respective annular element 23, able to be inserted into a respective shank 14 so as to cover an uncovered segment 14a of the shank 14 comprised between the body 13 and the respective wall of the panel 17, or of the frame 18.

[0030] The annular element 23 (figs. 3 and 4) has a first face 25, able to be coupled with said wall of the door/window element 17, 18 and having a substantially plane shape, and a second face 26, opposite the first 25, having a concave shape and mating with the substantially cylindrical outer surface of the body 13.

[0031] The annular element 23 is made of hard and mechanically resistant material, advantageously of metal, for example hardened steel.

[0032] To adjust the distance between the body 13 (figs. 1 and 2) and said wall of the door/window element 17, 18 and to make the annular element 23 usable to cover different distances, it is provided to insert between the latter and the first face 25 of the annular element 23 one or more washers 27.

[0033] The washers 27 allow to protect and cover com-

pletely said uncovered segment 14a of the shank 14, in a substantially independent manner from the assembly requirements of the element 10a, 10b, 10c.

[0034] The annular element 23 as described above, apart from performing a primary anti-break-in function, preventing access to the uncovered threaded part of the shank 14, also protects the threads of the shank 14 from infiltrations of dust or other dirt, which over time can render the disassembly and/or adjustment operations difficult and demanding.

[0035] Moreover, the annular element 23 applied to the element 10a, 10b, 10c according to the invention allows to improve the overall aesthetics of the hinge 11, giving it greater continuity of line with respect to known solutions.

[0036] It is clear that modifications and/or additions of parts may be made to the element 10a, 10b, 10c as described heretofore, without departing from the field and scope of the present invention.

[0037] It is also clear that, although the present invention has been described with reference to some specific examples, a person of skill in the art shall certainly be able to achieve many other equivalent forms of element for a hinge, having the characteristics as set forth in the claims and hence all coming within the field of protection defined thereby.

Claims

1. Element for a hinge (11) comprising at least a body (13) and an attachment shank (14), **characterized in that** it also comprises at least an annular element (23) able to be disposed to cover an uncovered segment (14a) of said attachment shank (14) next to said body (13).
2. Element as in claim 1, used to pivot to each other a fixed element (18) and a movable element (17) of a door/window (12), **characterized in that** said annular element (23) is able to be disposed to cover the uncovered segment (14a) between said body (13) and the wall of the relative element (17, 18) of the door/window (12) to which the element (10) for a hinge is attached.
3. Element as in claim 2, **characterized in that** said annular element (23) comprises a substantially plane first face (25), able to be put in cooperation with a wall of said element (17, 18) of the door/window (12), and a second face (26), opposite said first face (25), configured with a shape mating to the lateral surface of said body (13).
4. Element as in claim 1, 2 or 3, **characterized in that** said annular element (23) is made of a relatively hard and mechanically resistant material.

5. Element as in any claim hereinbefore, **characterized in that** said annular element (23) is made of metal.
6. Element as in any claim from 2 to 5, **characterized in that** between said first face (25) and said wall at least an auxiliary annular element (27) is able to be disposed, able to cover, in cooperation with said annular element (23), said uncovered segment (14a) of said attachment shank (14).

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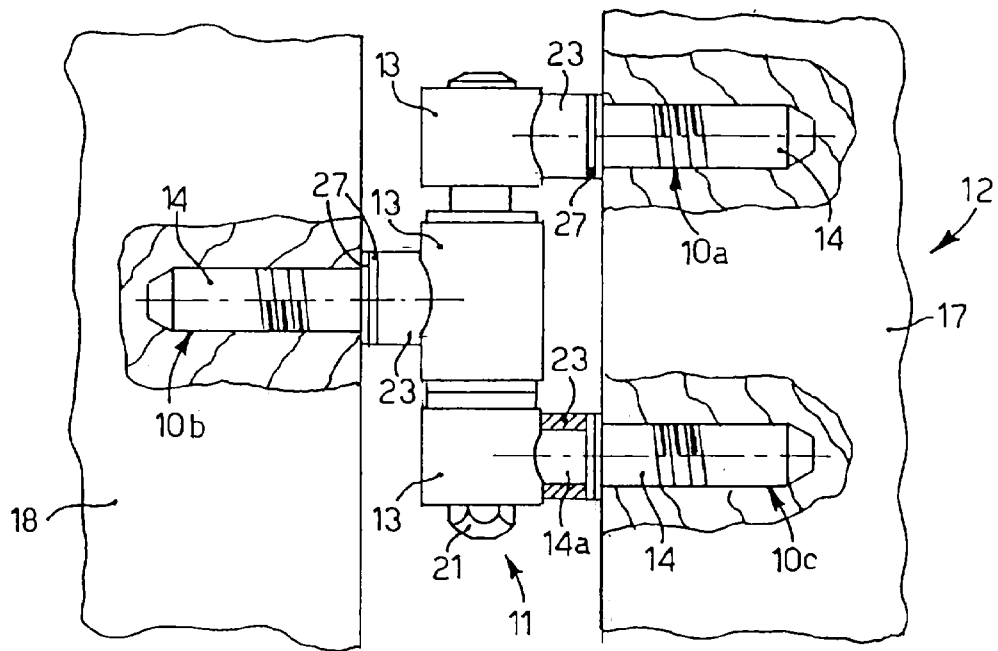


fig.1

