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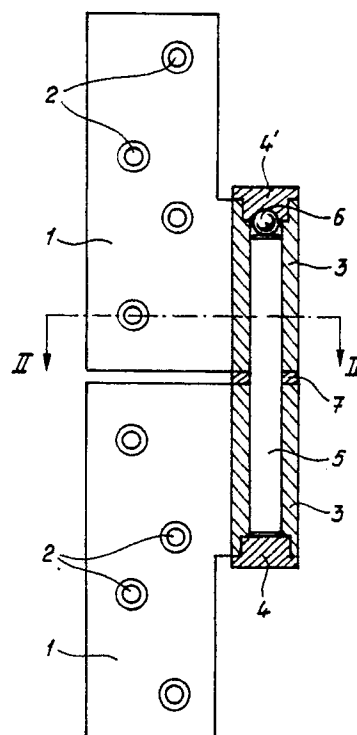
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54 Split hinge.

57 Split hinge, in particular ball split hinge, comprising two leaves (1) provided with fixing openings (2) and two sleeve-type parts (3) (known as knuckless) which are joined to the leaves (1) and which are each closed at one end (4, 4') and jointly accommodate a hardened steel hinge pin (5), which is fixedly connected with one sleeve-type part (3), whereby the centres of the two leaves (1) lie in a flat plane which runs through the centre line of the two sleeve-type parts (3) and the two leaves (1) are staggered with respect to each other in all positions.

fig - 1



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SPLIT HINGE

The invention relates to a split hinge, in particular to a ball split hinge, comprising two leaves provided with fixing openings and two sleeve-type parts (known as knuckles) which are joined to the leaves and which are each closed at one end and jointly accommodate a hardened steel hinge pin. which is fixedly connected to one sleeve-type part.

Such a split hinge, as is a ball split hinge, is described in the earlier Dutch Patent Application 8900785 of the Applicants.

At use of this split-hinge the sleeve-type part with the hinge pin fixedly connected therewith is arranged below the other sleeve-type part on the hinge pin, which other sleeve-type part is also closed at the upper side.

In said older split hinge, both leaves extend over the total height of the two sleeve-type parts.

Each leaf is permanently joined to a sleeve-type part and extends in the direction of the other sleeve-type part.

In the closed position of a panel, such as a door hung with split hinges, the two leaves therefore lie against each other and this means that the leaves have to be let into the casing and into the panel because the hanging gap otherwise becomes too large.

Since the two leaves lie against each other in the closed position, the centre line of the two sleeve-like parts has to lie inbetween the two leaves. This means that the known split hinge is only suitable for panels which rotate to the right or to the left. During building, two types of split hinges have therefore to be kept in stock and used. This is troublesome and expensive.

The object of the invention is to provide a split hinge which can be used both for the left and for the right and in which the leaves do not have to be let into the casing and panel.

According to the invention this is achieved in that the centres of both leaves lie in a flat plane which runs through the centre line of the two sleeve-type parts and in that the two leaves are staggered with respect to each other in all positions.

The possibility of left-handed or right-handed use is a consequence of the fact that each leaf is joined to the sleeve-type part precisely in the centre.

In the closed position of the panel, the two leaves lie in one plane in line with each other. To achieve the required hanging gap, the leaves do not then have to be let in.

Preferably each leaf extends besides and beyond the sleeve-type part joined to it in the direction away from the other sleeve-type part.

In this way, at least some of the fixing openings are situated above and below the sleeve-type parts. The weight of the panel therefore hangs, as it were, above the centre of the split hinge.

In order not to have any trouble from the heads of the fixing screws, the fixing openings are preferably countersunk at both sides in each leaf so that each leaf can be fixed from both sides.

It is pointed out that split hinges which can be used for left and right are known, see US-A-4,424,607. In this hinge a hinge pin with a fixed collar in the middle is used. This hinge pin is not fixedly connected with one of the sleeve-type parts, which, moreover, is not closed at one end.

In this way it is possible to turn the split-hinge, so that rotation to the right and to the left is possible. This in contradiction to the split hinge according to the split hinge according to the invention, whereby the sleeve-type part with the fixed hinge pin must be arranged always at the lower side and cannot be removed. Together with the closed sleeve-type parts a burglar proof split hinge is obtained.

The invention will be illustrated in greater detail with reference to the drawing, in which:

Figure 1 is an elevation of the split hinge according to the invention with the two leaves in line with each other; and

Figure 2 is a section along the line II-II of Figure 1.

Each half of the split hinge comprises a rectangular leaf 1 provided with a number of openings 2 intended for cold fixing the leaf 1 with screws, which are not shown, to a side edge of a panel or to the casing (both not shown).

The openings 2 are countersunk at both ends, as shown in Figure 2.

The leaf 1 is permanently joined to a sleeve-type part 3 which is closed at one end by an end cap 4.

A hinge pin 5 which, in a design as a ball split hinge, rests via a ball 6 against a cap 4, is fitted in the two sleeve-type parts 3. In a design without a ball, the latter is missing and the pin 5 extends up to the cap 4, which is then identical to the cap 4. The hinge pin 5 consists of hardened steel and is fixedly connected to the lowest sleeve type part 5.

Situated between the two sleeve-type parts 3 and around the pin 5 is a known spacing ring 7.

In the position drawn in Figure 1, the two leaves are situated in line with each other and lie in the same plane.

The centre of each sheet 1 lies in a plane which passes through the centre line of the pin 5 (see Figure 2).

In the closed position of the panel, the leaves 1 lie in line with each other, that is to say not on top of each other as in standard split hinges.

Since the leaf thickness is generally 3 mm, a hanging gap of 3 mm is obtained without letting
5 into the panel and casing, and this is acceptable.

The split hinges according to the invention can be used either for left-rotating or for right-rotating doors because the centre line of the sleeve-type parts lies precisely in the centre of the leaves and
10 the leaves are staggered with respect to each other.

Claims

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1. Split hinge, in particular ball split hinge, comprising two leaves provided with fixing openings and two sleeve-type parts (known as knuckles) which are joined to the leaves and which are each closed
20 at one end and jointly accommodate a hardened steel hinge pin, which is fixedly connected with one sleeve-type part, **characterized** in that the centres of the two leaves lie in a flat plane which runs through the centre line of the two sleeve-type parts
25 and in that the two leaves are staggered with respect to each other in all positions.

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2. Split hinge according to Claim 1, **characterized** in that each leaf extends besides and beyond the sleeve-type part joined to it in the direction away
30 from the other sleeve-type part.

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3. Split hinge according to Claim 1 or 2, **characterized** in that the fixing openings in each leaf are countersunk at both sides.

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fig - 1

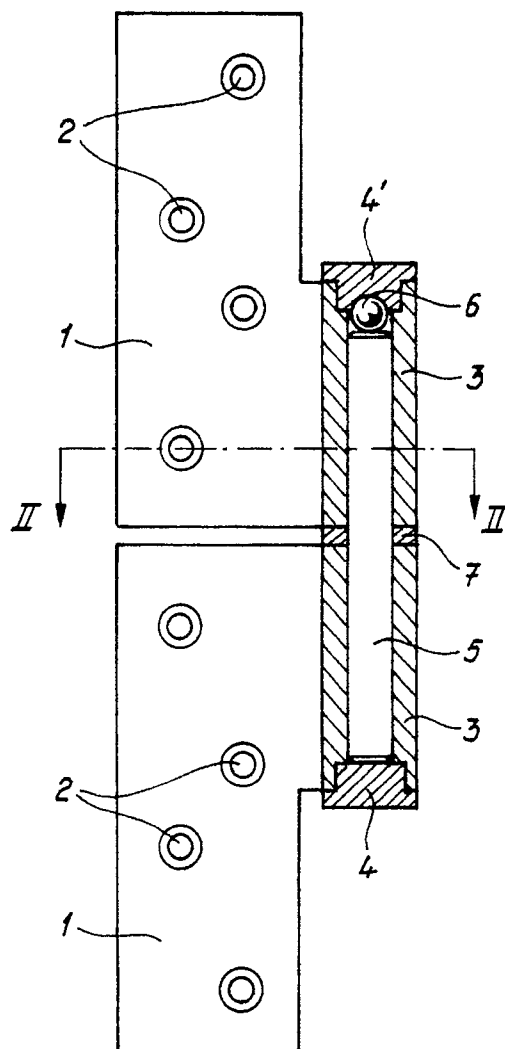
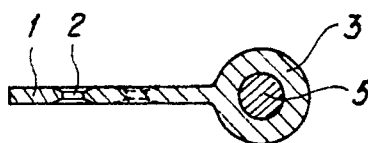


fig - 2





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EUROPEAN SEARCH REPORT

Application Number

EP 90 20 2623

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
Y	CH-A-6 491 23 (P. BEER) * page 3, column 1, lines 52 - 64; figure 4 * - - -	1	E 05 D 7/02
D,Y,A	US-A-4 424 607 (LANGENHORST) * abstract ** column 2, lines 14 - 37 @ column 3, lines 44 - 46 @ column 4, lines 17 - 19; claim 1; figure 4 * - - -	1,3	
A	US-A-3 006 039 (BRYDOLF) * column 3, lines 3 - 5; figures 3, 4 * - - -	2	
A	BE-A-4 854 69 (WERKHUIZEN VARICO) * page 3, lines 14 - 23; claim 2; figures 1, 6, 8 * - - - - -	1,2,3	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			E 05 D
The present search report has been drawn up for all claims			
Place of search		Date of completion of search	Examiner
The Hague		03 January 91	GUILLAUME G.E.P.
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons ----- &: member of the same patent family, corresponding document			