

Title: Fitting for an all-glass door**Description**

The invention relates to a fitting, particularly for all-glass doors, which presents an upper fitting having a fitting body
5 with a clamping device for the glass leaf, and which is equipped with a bearing journal for the engagement in a counter-bearing at the overpanel.

This species of fittings are well known; however, in general, the fittings of the upper counter-bearing, which is supported
10 at an overpanel above the glass leaf of the glass door, are disposed transversally in relation to the vertical axis of the glass door. Such fitting for a rotatable support of a door leaf at a frame construction is disclosed in DE 299 24 319 U1. In this case, one fitting each is disposed at the top and on
15 the bottom of the door leaf, which fitting cooperates with a complementary counter-fitting at a frame construction. The fitting is characterized in that a bearing axis extends in the plane of the door leaf and in that the fitting is fastened in a complementary recess of the door leaf. Simultaneously, in
20 its longitudinal direction, the fitting, through an interspace forming opposite locating surfaces, is divided into fitting members, which are at least partially spaced apart. The glass pane is fastened by means of screw elements, which

engage into the fitting from one side. The upper bearing presents a non-adjustable bearing journal.

An upper bearing component, which presents a bearing journal being displaceable in the longitudinal direction of the door (vertical axis), is disclosed in DE 89 105 69.9 U1. This bearing journal is retained by means of a screw, which is disposed orthogonally with regard to the bearing journal, and can be adjusted in height by loosening this bearing screw. For this purpose, the fitting member is equipped with an oblong hole. In this case, the bearing journal plunges into a pocket boring such that, when installing the door, the bearing journal disappears within the pocket boring, and after having the door installed, the bearing journal, on account of the orthogonally disposed screw, is pushed out of the bearing and will penetrate into the counter-bearing provided at the overpanel. Such construction allows for an easier installation of the glass door.

A fitting for an all-glass door leaf, which fitting members are crowned by means of corresponding caps, is known from DE 298 13 219 U1.

It is an object of the present invention to provide a fitting which is burglar proof, once the glass door is installed.

This problem is solved with the characteristics set forth in patent claim 1. Advantageous embodiments of the subject matter of patent claim 1 result from the dependent claims.

5 The fitting assembly, indicated in claim 1, achieves that the upper fitting is provided with an anti-lift device. To the outside, the anti-lift device is inconspicuous, because it is disposed underneath the fitting bodies, being crowned by cover caps, respectively underneath a clamping device.

10 According to an advantageous further development, the bearing journal is attached by at least one holding screw at the fitting body and/or at the clamping device for the all-glass leaf. In this case, the holding screw penetrates into the bearing journal, orthogonally in relation to the central axis of the bearing journal, respectively passes through the
15 latter. Moreover, the holding screw is inserted into an oblong hole within the fitting body and/or the clamping device in order to configure the bearing journal as being displaceable in the direction of the vertical axis. Moreover, the thread of the holding screw penetrates into a threaded
20 borehole within the bearing journal. By tightening the holding screw, with the bearing journal being protracted, the latter is positively and non-positively connected to the fitting body and/or to the clamping device.

- As the bearing journal is situated within a pocket borehole, it is possible to introduce another screw element, below the protracted bearing journal, which element likewise passes through the fitting body and/or the clamping device, orthogonally in relation to the central axis of the bearing journal. Through the disposition of the locking screw, namely offset by 180° in relation to the holding screw, it is impossible to uninstall the installed all-glass leaf, if the door is closed. This is only possible, if on one side of the all-glass door the locking screw, on the one hand, and the holding screw on the opposite side would be unscrewed, respectively loosened. This means, however, that the fitting and/or the clamping device must be accessible from both sides of the door leaf.
- If, after removing the cover on one side of the all-glass door, only the locking screw would be removed, on account of the design, the bearing journal cannot be lowered, because the holding screw maintains the bearing journal in its position, even if the locking screw has been removed. This results from the fact that the holding screw, being offset by 180° in relation to the locking screw, is accessible in this case inside the room. It is only after having opened the all-glass door that the holding screw can likewise be loosened, and thus the bearing journal can plunge into the fitting body and/or the clamping device. However, this is

only possible if the locking screw has been completely removed. When removing the locking screw, the lower portion of the pocket boring, into which the bearing journal plunges, is exposed.

- 5 If, in another case, someone would only loosen the holding screw, the bearing bolt cannot plunge downwards into the pocket boring, because, on the opposite side, the locking screw is screwed in.

10 It is obvious that through such disposition of the locking screw and of the holding screw of the bearing journal a simple but effective securing of the bearing journal is achieved. The adjustability, when installing the glass door, is not influenced by the locking screw. Moreover the structural execution of the fitting it is irrelevant.

- 15 Further details, characteristics and advantages of the invention will become apparent from the following description of one preferred embodiment example, reference being made to the figures, in which

20 Figure 1: shows an upper fitting including an embodied anti-lift device.

Figure 2: show a condition of an upper fitting according to Figure 1, the bearing journal being retracted.

Figure 3: shows an upper fitting according to Figure 1, the holding screw being removed.

Figure 1 illustrates an upper fitting, which is used for all-glass doors having a glass leaf. As the invention relates
5 only to the upper portion of a fitting having a different execution, and as reference is made here to the anti-lift device exclusively, all the other parts, being not relevant for the invention, have been omitted.

Essentially, the upper fitting 3 consists of a fitting body 4,
10 presenting a glass reception 21 for the glass leaf of the all-glass door. In the upper region of the fitting body 4, a pocket boring 53 is situated, into which plunges a displaceably formed bearing journal 7 of an upper bearing in an overpanel or the like. The fitting body 4 is laterally
15 delimited by clamping inserts 25 (clamping plates). The clamping inserts 25 in turn are covered by cover plates 26. If the cover plates 26 are removed, as depicted in Figure 2 and 3, two screw elements, namely one holding screw 50 and one locking screw 48 are thus accessible within the
20 upper fitting 3. The holding screw 50, with the head thereof, is embedded within an oblong hole extending in axial direction and penetrates with the thread thereof into a female thread 51, situated in the bearing journal 7. When
25 protracting the bearing journal 7 (see Figure 1), the holding screw 50 is tightened such that a positive and non-positive

connection is established between the bearing journal 7 and the upper fitting 3.

The locking screw 48 is situated orthogonally in relation to the longitudinal axis of the fitting, directly below the end of the bearing journal 7 plunging into the pocket boring 53. In this case, the locking screw 48 passes through the pocket boring 53. The length of the locking screw 48 is suitable to the thickness of the fitting body, respectively the clamping inserts. However, the locking screw 48 is disposed offset by 180° in relation to the holding screw 50. This means that, with a closed door leaf, the locking screw 48 is situated outside the room and the holding screw 50 is situated inside the room. Thus, with the door being closed, nobody can simultaneously loosen both screws, namely the locking screw 48 and the holding screw 50, with the intention to lower the bearing journal 7 into the pocket boring 53, and to subsequently remove the door leaf from its position of operation.

In Figure 2, the locking screw 48, which was screwed into a female thread 55 of the clamping insert 25, has been removed. It will be obvious that only with prior removal of the locking screw 48 an unscrewing of the holding screw 50 would result in a lowering of the bearing journal 7. This situation becomes apparent from Figure 2.

The situation, namely removal of the holding screw 50 from the bearing journal 7 with the inserted locking screw 48 being simultaneously present in the thread 55, is illustrated in Figure 3.

- 5 As it becomes obvious from the embodiment of Figures 1 to 3, compared to the discussed state-of-the-art of DE 89 105 69.9 U1, an operational door is still given even if the holding screw 50 is removed, because, due to the locking screw 48, the bearing journal 7 cannot be pushed out of
- 10 the upper bearing. The locking screw 48 being disposed offset by 180° in relation to the holding screw 50, if looking at the upper fitting 3 from the top, simultaneously an anti-lift device for the entire all-glass door is likewise provided.

References

	3	upper fitting
	4	fitting body
	7	bearing journal
5	21	glass reception
	25	clamping insert (clamping plate)
	26	cover plate
	47	oblong hole
	48	locking screw
10	50	holding screw
	51	female thread
	53	pocket borehole
	55	thread

Claims

1. A fitting for an all-glass door (2) including an upper fitting (3), which essentially presents a fitting body (4) with a glass reception (21) and/or a clamping device for a glass leaf, and as well being equipped with a bearing journal (7), displaceable within a pocket boring (53), for the engagement with a counter-bearing at an overpanel or in a door frame, characterized in that the bearing journal (7) of the fitting (3) is secured such that the glass leaf presents an anti-lift device, if the all-glass door is in the closed position.
2. A fitting according to claim 1, characterized in that the bearing journal (7) is fixed by at least one holding screw (50) in or at the fitting body (4) and/or at the clamping device.
3. A fitting according to any of the preceding claims, characterized in that the holding screw (50) penetrates into the bearing journal (7) orthogonally in relation to the central axis of the bearing journal (7).
4. A fitting according to any of the preceding claims, characterized in that the holding screw (50) plunges through an oblong hole (47) within the

fitting body (4) and/or the clamping device into a threaded borehole (51), which is situated within the bearing journal (7), and positively and non-positively connects the bearing journal (7) to the fitting body (4) and/or to the clamping device.

5. A fitting according to claim 4, characterized in that the threaded borehole (51) is a pocket borehole.
6. A fitting according to claim 4, characterized in that the threaded borehole (51) passes through the bearing journal (7).
7. A fitting according to any of the preceding claims, characterized in that a locking screw (48) is situated below the bearing journal (7), which screw extends orthogonally in relation to the bearing journal (7) and at least plunges into the pocket borehole (53), respectively passes through the latter.
8. A fitting according to any of the preceding claims, characterized in that the head of the locking screw (48) is disposed on the side of the fitting body (4) and/or of the clamping device opposite to the holding screw (50).

9. A fitting according to any of the preceding claims, characterized in that the fitting body with the anti-lift device is completely crowned by one or several cover plates (26).