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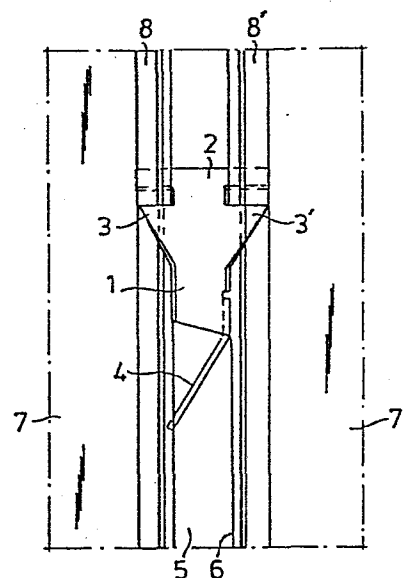
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(54) Attachment member.

(57) The invention relates to an attachment member for attachment of two elements (7, 7') in an each other adjacently located position against a supporting section (5) having a groove (6), defined by two towards each other directed parts, the elements (7, 7') intended to be attached being arranged with towards each other directed flange-shaped parts (8, 8'). The attachment member includes a central portion (1), adjacent to a first end portion being joined to an end part (2), extending in a plane separated from the direction of extension for the central portion (1) and having a width exceeding the width of the groove (6), the part adjacent to the central portion (1) being arranged having a width not exceeding said width of the groove. The central portion (1) is arranged with from each other directed engagement members (3, 3') in a region adjacent to the point of transformation into the end part (2), and an abutment member (4) extends from a second end portion of the central portion (1). The end part (2) is arranged, after insertion into the groove (6), to facilitate establishment of a contact position against the inside surfaces of the parts defining the groove (6), and by force applied against the abutment member (4) in direction towards the groove (6), same is arranged to be inserted into a contact position against an inside surface of the parts defining the groove (6), whereby the engagement members (3, 3') in this established position are arranged to apply a force and to hold the flange-shaped

parts (8, 8') of the elements (7, 7') against the outside planes of the parts defining the groove (6).

Fig. 7



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ATTACHMENT MEMBER

The present invention relates to an attachment member, intended to facilitate attachment of preferably panelshaped elements against
5 supporting sections, which sections at the plane of attachment include two towards each other directed parts, the free edge portions of which restrict a groove intermediately located between the parts.

Attachment against this type of supporting sections has previously
10 usually been accomplished by bolt/nut combinations, and as an example of such prior art, reference is made to the attachment means disclosed in GB, A, 399 581. However, a major disadvantage with previously known types of attachment means is the fact that same can run freely in the existing groove of the supporting section, until the screw/nut
15 combination has been tightened, and this disadvantage is particularly obvious for vertically extending sections. A further disadvantage is, that previously known attachment means have a relatively large extension in direction from the attachment plane of the supporting section, and with regard to partition wall constructions for example, it is difficult
20 to attach a covering flexible strip in the joint between two wall elements. Mounting and dismounting are also timeconsuming tasks, and require access to tools adapted for the bolt or nut used, and previously known types are also expensive to manufacture, since the joint includes a screw thread. Furthermore, it is also an obvious disadvantage that
25 previously known types of attachment members include at least two detachably joined parts, which in use can disengage from each other and thus become lost.

The object of the present invention is to disclose an attachment member,
30 which completely removes the disadvantages related to previously used types, and which facilitates extremely rapid attachment of, for example, partition wall elements against supporting and vertically extending sections. A specific advantage of the attachment member according to the present invention is, that it comprises of one single member, and that
35 same can be massproduced by use of a press tool, and that no screw thread is required. Mounting and dismounting can be performed without use of special purpose tools, and the attachment properties for the established joint are also extremely favourable. Necessary time for

mounting, or dismounting of the attachment member, can also be reduced to a minimum. Furthermore, it is extremely easy to attach a protective covering strip, since the attachment member only to a minimum by space requirements prevents such an operation.

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The attachment member according to the present invention is intended to facilitate attachment of two elements in an adjacent position to each other against a supporting section having a groove, defined by two towards each other directed parts, said elements including towards each other directed flange-shaped parts, and is mainly characterised in that
10 the attachment member includes a central portion, adjacent to a first end portion being joined to an end part, extending in a plane separated from the plane in which the central portion is arranged extending and having a width exceeding the width of the groove, the portion located
15 adjacent to the central portion being arranged with a width not exceeding said width of the groove, and the central portion in an area adjacent to the transformation point into the end part being arranged with from each other directed engagement members, and with an abutment member extending from a second end portion, said end part after
20 insertion into the groove being arranged to take up contact against the inside surfaces of the parts defining the groove, and the abutment member, when moved towards the groove by means of force application, being arranged to facilitate insertion into a contact position against an inner surface of said parts defining the groove, whereby the
25 engagement members in this position taken up being arranged to apply a force against and to hold the flange-shaped parts of the elements against the outer plane of the parts which define the width of the groove.

30 As further features characteristic of the attachment member according to the present invention can be mentioned that the abutment member is arranged extending in an inclined direction in relation to the direction of extension for the central portion, having a in direction from the central portion located part arranged separated from a center axis
35 extending through the central portion with a distance that is not smaller than half the width of the groove, at least one portion of said part being arranged to serve as contact portion after insertion into the groove, and that the portion of the abutment member intended to take

up contact with the internal surface of one of the parts defining the groove, is arranged pointed. Furthermore the abutment member is preferably arranged extending in an inclined, or substantially perpendicular plane, in relation to the plane of extension for the
5 central portion.

An example of an embodiment of an attachment member according to the present invention is more fully described below with reference to the accompanying drawings, in which:-

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Fig. 1 shows a side elevation of an attachment member according to the present invention.

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Fig. 2 shows a plan elevation of the attachment member, viewed as indicated by II - II in Fig. 1.

Fig. 3 shows an end view of the attachment member shown in Fig. 1.

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Fig. 4 shows an end view of the attachment member shown in Fig. 1, viewed from an opposed direction in relation to Fig. 3.

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Fig. 5 shows the attachment member shown in Figs. 1 - 4 in the shape of a plane blank, as punched out during a preliminary stage of the manufacture of same.

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Fig. 6 shows a perspective view of a part of a supporting section, and with an attachment member according to the present invention arranged to hold two panelshaped elements.

Fig. 7 shows a plan elevation corresponding to Fig. 6.

Fig. 8 shows a longitudinal section, centrally located, of the supporting section as shown in Fig. 7.

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With reference to the embodiment of an attachment member according to the present invention as shown more in detail in Figs. 1 - 5, same is arranged as an integrated member, preferably manufactured from a metallic strip material by means of a punching and shaping tool. Said

attachment member includes a central portion 1, adjacent to a first end portion being transformed into a preferably plane end part 2, extending in a plane separated from the central portion 1, and having a width exceeding the width of the central portion 1. At a smaller distance from the point of transformation between the central portion 1 and the end part 2, there are two engagement members 3, 3' arranged extending from the central portion 1, having a substantially triangular configuration, whereby said engagement members 3, 3' are terminated with pointed outer portions. In direction from the second end portion of the central portion 1 extends an abutment member 4, extending in a plane preferably substantially perpendicular to the plane of the central portion 1. The abutment member 4 is joined to the central portion 1 by means of a folded outside edge portion, and the abutment member 4 is further arranged having an inclined direction of extension in relation to the direction of extension for the central portion 1. As shown in Figs. 3 and 4, the central portion 1 is arranged having a curved cross-sectional configuration, the outer edge portions being located at a larger distance from the end part 2 than the part located between the edge portions. It is further shown that the two engagement members 3, 3' are also arranged shaped curved, and with the outer pointed portions thus being directed towards a plane located below.

The attachment member according to the present invention is intended to facilitate attachment against a supporting section, including a groove defined by two parts directed towards each other. As an example of such attachment, a supporting section 5 is shown in Figs. 6 - 8, having a plane of attachment including a centrally located groove 6 between two towards each other directed parts. In contact with this supporting section 5, two panelshaped elements 7, 7' are shown, attached by means of the previously described attachment member. The panelshaped elements 7, 7' are arranged with a longitudinally extending mounting flange 8, 8' at the adjacently located edge portions, said mounting flanges 8, 8' being located adjacent to the planes of the panelshaped members 7, 7' which act as contact planes against the supporting section 5.

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When attaching the panelshaped members 7, 7', same are as a first step located in contact with the supporting section 5, and with the adjacent side parts separated from each other at a distance substantially

corresponding to the width of the groove 6. During this first step, a special purpose mounting tool is advantageously used, which facilitates temporary attachment of the panelshaped elements 7, 7' in intended position. Said tool includes preferably a distance setting means, causing correct positioning and internal distance between the panelshaped elements 7, 7' in relation to the groove 6, but also means which can engage with the supporting section 5 and hold the panelshaped elements 7, 7' pressed against same. A suitable number of attachment members are thereafter applied at spaced locations along the supporting section 5, each attachment member being inserted into the groove 6 with the end part 2 extending in substantially the same direction as the direction of extension for the groove 6. The abutment member 4 serves as an extremely suitable part to be held by the fitter during the attachment operation. When the end part 2 has been inserted into the groove 6, the attachment member is turned, until the central portion 1 extends in a direction substantially corresponding to the groove 6. Hereby becomes the restricting parts for the groove 6 in the supporting section located in a position intermediately located between the end part 2 and the edge portions of the engagement members 3, 3' adjacent to the end part 2, but with the engagement members 3, 3' arranged with the outer and pointed portions in contact with the mounting flanges 8, 8'. Thereafter is the outer and free end portion of the abutment member 4 pressed down in direction towards the supporting section 5 to a position in which same is located below the parts defining the groove 6 in the section 5, where said outer end portion is swung down under one of said parts. Since the outer end portion of the abutment member 4 is arranged pointed, extremely good contact is established against the lower surface of the part which restricts the groove 6. When desired number of attachment members have been attached as described above, the mounting tool, if used, can be removed.

In order to accomplish intended attachment, it is obviously necessary to arrange previously described parts of the attachment member related to each other in a certain way. Accordingly, the distance from the edge portion of the end part 2 to the pointed free end portions of the engagement members 3, 3' must be arranged preferably slightly less than the total wall thickness of the supporting section 5 and the mounting flange 8, 8', and the outer end portion of the abutment member 4 should

preferably be located above the plane in which the aforementioned edge portion of the end part 2 is located. This will result in a possibility to accomplish resilient attachment of the attachment member, which thus can be compared to a double-acting lever, having the outer end portions
5 of the engagement members 3, 3' utilized as the point where force transformation occurs. Since the distance from this point to the end part 2 is several times smaller than the distance to the outer end portion of the abutment member 4, force transmission becomes extremely favourable, i.e. a relatively low force applied against the abutment
10 member 4 results in a relatively large force applied at the engagement members 3, 3'.

The central portion 1 is preferably arranged having a width corresponding to, or slightly less than, the width of the groove 6, and
15 due to the cross-sectional configuration of the central portion 1, same will be substantially completely located in a plane below the contact plane of the supporting section 5. The abutment member 4 may further advantageously be arranged extending in a plane inclined in relation to the plane of the central portion 1, whereby the upper point of the outer
20 portion of the abutment member 4, intended to take up contact with the section 5, becomes located at a larger distance from the center of the central portion 1 in relation to a lower point at the outer portion. As a result of this feature, the final part of the attachment operation for the attachment member is simplified, since the abutment member 4 does
25 not require to be subjected to a transversely directed force when inserted into the groove 6, but it will "search" itself into the groove 6 when a force directed towards same is applied.

By arranging the central portion 1 having the previously discussed
30 cross-sectional configuration, the attachment member will substantially completely be located in plane coinciding with, or below, the attachment plane of the supporting section 5. As a result, a protective covering strip can easily be attached in the gap between the panelshaped members 7, 7'.

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The embodiment of an attachment member described, and which is shown in the accompanying drawings, is only intended to serve as an example of an embodiment according to the invention, since obviously several

modifications of design character can be performed, while maintaining the important and characteric features of the inventive thought. As such modifications, reference in particular is made to modifications relating to the shape of included parts, as well as the fact that the attachment
5 member not necessarily must be arranged with included parts integrated into one single unit, since the attachment member obviously also can include a number of individual parts, joined together.

Claims:

1. Attachment member, intended to facilitate attachment of two elements (7, 7') in an adjacent position to each other against a supporting section (5) having a groove (6), defined by two towards each other directed parts, said elements (7, 7') including towards each other directed flange-shaped parts (8, 8'), characterised in that the attachment member includes a central portion (1), adjacent to a first end portion being joined to an end part (2), extending in a plane separated from the plane in which the central portion (1) is arranged extending and having a width exceeding the width of the groove (6), the portion located adjacent to the central portion (1) being arranged with a width not exceeding said width of the groove, and the central portion (1) in a region adjacent to the transformation point into the end part (2) being arranged with from each other directed engagement members (3, 3'), and with an abutment member (4) extending from a second end portion, said end part (2), after insertion into the groove (6), being arranged to take up contact against the inside surfaces of the parts defining the groove (6), and the abutment member (4), when moved towards the groove (6) by means of force application, being arranged to facilitate insertion into a contact position against an inside surface of said parts defining the groove (6), whereby the engagement members (3, 3') in this established position are arranged to apply a force and to hold the flange-shaped parts (8, 8') of the elements (7, 7') against the outer plane of the parts which define the width of the groove (6).

2. Attachment member according to claim 1, characterised in that the abutment member (4) is arranged extending in an inclined direction in relation to the direction of extension for the central portion (1), having a part directed away from the central portion (1) arranged separated from a center axis extending through the central portion (1) with a distance that is not less than half the width of the groove (6), at least one portion of said part being arranged to serve as contact portion after insertion into the groove (6).

3. Attachment member according to any of claims 1 - 2, characterised in that the portion of the abutment member (4) intended to take up contact with the internal surface of one of the parts defining the

groove (6), is arranged pointed.

4. Attachment member according to any of claims 1 - 3, characterised in that the abutment member (4) is arranged extending in an inclined, or
5 substantially perpendicular plane, in relation to the plane of extension for the central portion (1).

5. Attachment member according to any of claims 1 - 4, characterised in that the central portion (1) is arranged having such a cross-
10 sectional configuration, that the outer edge portions are arranged at a larger distance from the end part (2) than the intermediately located portion.

6. Attachment member according to any of claims 1 - 5, characterised
15 in that the engagement members (3, 3') are arranged having the free end portions directed towards a plane located below the central portion (1), said free end portions preferably being arranged pointed.

7. Attachment member according to any of claims 1 - 6, characterised
20 in that the distance between a plane defined by the contact points for the end part (2) and the abutment member (4), and a parallel plane extending at adjacent portions of the engagement members (3, 3'), is arranged not exceeding the total thickness of the towards each other directed and the groove (6) defining parts, and of the flanges shaped parts
25 (8, 8'), which extend from the elements (7, 7').

8. Attachment member according to any of claims 1 - 7, characterised in that the abutment member (4) is arranged extending as a part folded over from an edge portion adjacent to the second end portion of the
30 central portion (1).

9. Attachment member according to any of claims 1 - 8, characterised in that the central portion (1) is arranged having a width not exceeding the width of the groove (6).
35

10. Attachment member according to any of claims 1 - 9, characterised in that the attachment member is arranged as a single member with all parts (1, 2, 3, 3', 4) included as integrated parts thereof.

Fig. 1

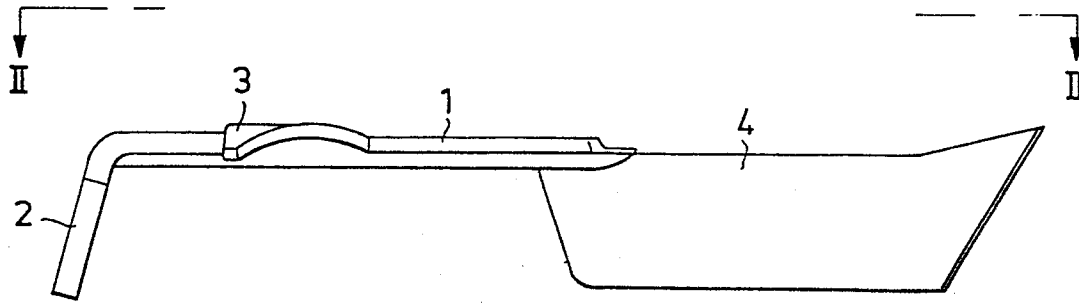


Fig. 2

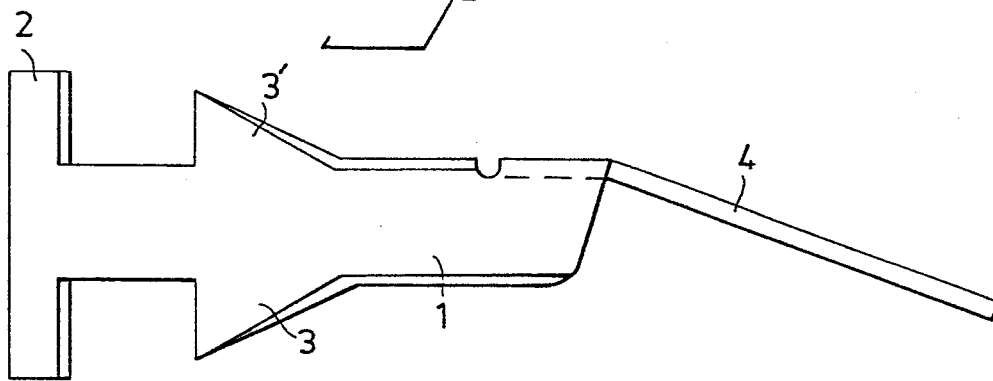


Fig. 3

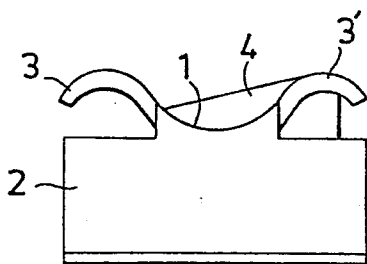


Fig. 4

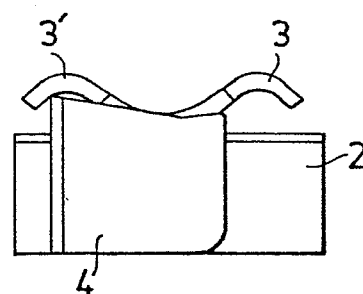


Fig. 5

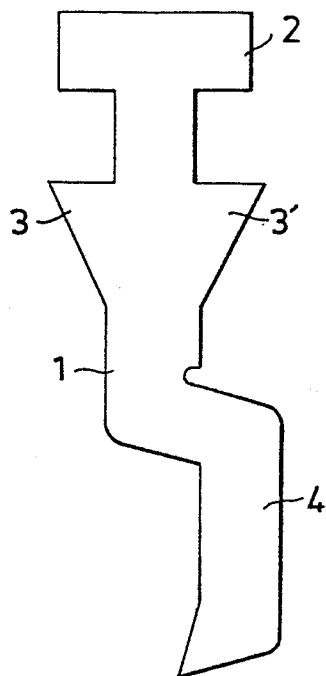


Fig. 6

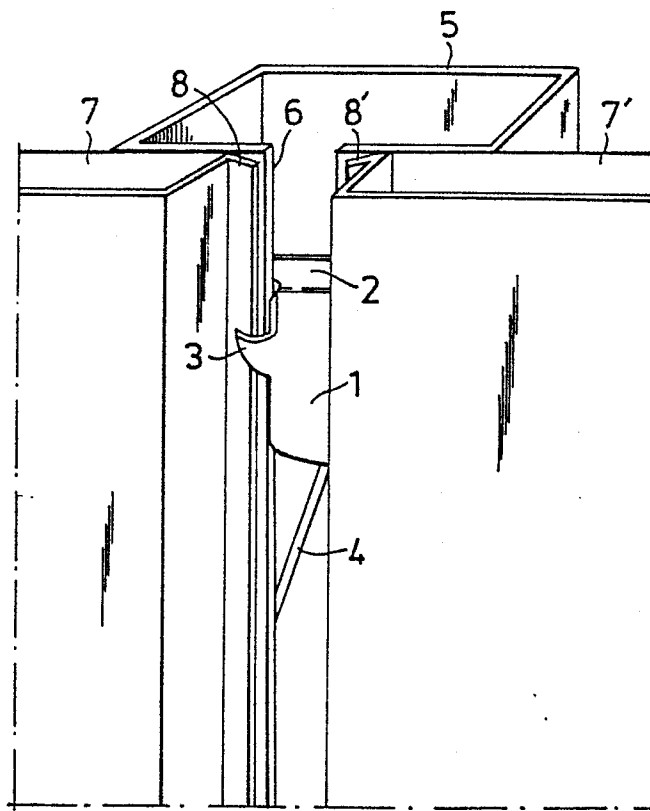


Fig. 7

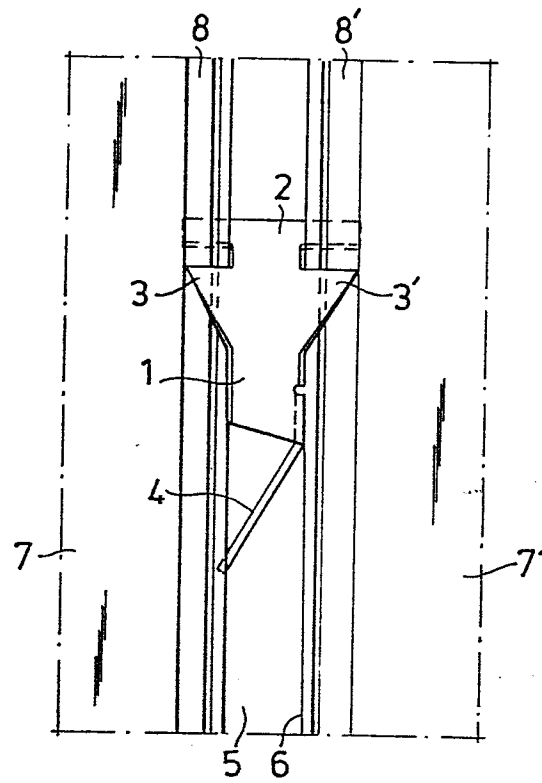


Fig. 8

