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(73) Patenthaver: **HALFEN GmbH, Liebigstrasse 14, 40764 Langenfeld, Tyskland**

(72) Opfinder: **Kasprzak, Jaroslaw, Wiejska 20, 63-400 Ostrow Wlkp, Polen**
Pilch, Marcin, Hanki Sawickiej 49/46, 62-800 Kalisz, Polen
Staskiewicz, Jerzy, Radlowska 19, 63-400 Ostrow Wlkp, Polen
Albartus, Dirk, Erlenstr. 16, 44795 Bochum, Tyskland
Erzengin, Ertugrul, Schülgenstr. 24, 41541 Dormagen, Tyskland
Piesker, Caroline, Balken 16, 42799 Leichlingen, Tyskland
Roik, Matthias, Marienburger Str. 2, 58455 Witten, Tyskland
Stegemann, Michael, Tannenweg 8g, 40764 Langenfeld, Tyskland

(74) Fuldmægtig i Danmark: **Budde Schou A/S, Hausergade 3, 1128 København K, Danmark**

(54) Benævnelse: **Bærebeslag til fastgørelse af en beklædning på en bærende væg**

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[0001] The invention relates to a support bracket of the type specified in the preamble of claim 1 for securing cladding on a load-bearing wall.

[0002] From DE 10 2010 051 557 A1, a support bracket with a sheet metal web is known, which sheet metal web joins a bracket head, a support element and a pressure element to one another. The sheet metal web is substantially triangular and has a circular opening for reducing thermal bridge losses.

[0003] DE 10 2010 051 626 A1 discloses a support bracket to the sheet metal of which a threaded sleeve is welded, into which threaded sleeve an adjusting screw it tightened, by way of which the support bracket is supported on the load-bearing wall. This results in a comparably complex structure of the support bracket. The compressive forces are absorbed via the adjusting screw.

[0004] From DE 10 2004 001 209 A1, a support bracket with support arms is known which are joined to a wall support by means of fasteners.

[0005] DE 85 24 910 U1 discloses a support bracket with a sheet metal web.

[0006] The invention is based on the problem of creating a support bracket of the generic type which is easy to produce and provides low heat transfer between the load-bearing wall and the facing.

[0007] Regarding the support bracket, this problem is solved by a support bracket with the features of claim 1.

[0008] For the support bracket, it is provided that the sheet metal web comprises a diagonal tie and a strut which are connected to each other only at the ends facing the support element. The connecting region joining the diagonal tie and the strut at the ends facing the support element extends along no more than half of the cantilever length of the support bracket. As a result, the sheet metal web is an angle open towards the load-bearing wall. Since the diagonal tie and the strut are connected to each other only at the ends facing the support element, waste can be minimised when producing the sheet metal web from sheet metal by suitably arranging several sheet metal webs on a sheet metal to be cut. At the same time, heat transfer is reduced. In addition, there is advantageously no need for additional thermal insulation elements between the support bracket and the load-bearing wall. It has been shown that the vertical connection between the bracket head and the pressure element as provided in prior art contributes little if anything at all to the absorption of the load. The load is predominantly absorbed by the strut. Since the strut and the diagonal tie are separate from each other in the region of the load-bearing wall, the cross-sections of the diagonal tie and the strut can be adapted very well to the prevailing loads, so that only very little material is required for the strut and the diagonal tie. This minimises the heat transfer between the load-bearing wall and the facing. The connecting region of the diagonal tie and the strut is located in that half of the support bracket which is remote from the load-bearing wall. As a result, the connecting region of the diagonal tie and the strut is partially and in particular completely located outside an insulation between the load-bearing wall and the facing and does not contribute to the heat transfer between the load-bearing wall and the facing.

[0009] The connecting region advantageously extends along no more than a third of the cantilever length of the support bracket. The connecting region is preferably located substantially in the region of the support element only, i.e. above and below the region of the support element. The connecting region extends between the extension of the diagonal tie and the support element. The connecting region is advantageously designed as a solid cross-section without any recesses or cut-outs. This stabilises the sheet metal web in the region remote from the load-bearing wall. At the same time, the free length of the strut, which is relevant to its buckling behaviour, is reduced. Support elements of different shapes can be secured to the connecting region, so that a sheet metal web with connecting region is suitable for various designs of support brackets. In order to obtain a good fixing of a support element, in particular a support angle, it can be advantageous that the connecting region has a recess or a slot for the accommodation of the support element.

[0010] The wall thickness of the sheet metal web is advantageously less than 10 mm. The wall thickness of the sheet metal web is preferably less than 8 mm. By using a comparably thin sheet metal, heat transfer between the load-bearing wall and the facing is minimised. The comparably low wall thickness of the sheet metal web makes for a reduced stability than thicker sheet metal webs. This reduced stability can be compensated for by suitable shaping of the sheet metal web. At the same time, material consumption can be reduced in the region of welds, in particular in the region of the bracket head connection, because of the reduced minimum length of the welds.

[0011] The diagonal tie has an outer edge remote from the strut, and the strut has an outer edge remote from the diagonal tie. The outer edges of the diagonal tie and the strut advantageously enclose in a side view on the sheet metal web an angle of less than 60°. The angle between the outer edges of the diagonal tie and the strut is preferably 30° to 60°.

[0012] The diagonal tie has an outer edge remote from the strut and an inner edge facing the strut. The outer edge and the inner edge of the diagonal tie enclose in a side view on the sheet metal web an angle of less than 20°. It may be provided that the outer edge and the inner edge of the diagonal tie extend parallel to each other. The width of the diagonal tie, however, is preferably matched to the forces and loads prevailing in operation and changes between the bracket head and the connecting region. It is particularly preferred if the angle opens up towards the bracket head. From the bracket head to the connecting region, the diagonal tie becomes narrower. It may, however, also be provided that the diagonal tie becomes wider from the bracket head to the connecting region. The angle between the outer edge and the inner edge of the diagonal tie is preferably less than 10°. A particularly preferred configuration is obtained if the angle is 1° to 5° and opens up towards the bracket head.

[0013] In order to provide the strut with sufficient compressive rigidity irrespective of the lower thickness for the sheet metal web, it is advantageously provided that the strut has an angled section. On this, the angling of the angled section is provided in a cross-section transverse to the longitudinal direction of the strut, in particular perpendicular to the longitudinal direction of the strut. In a cross-section perpendicular to the longitudinal direction of the strut, the strut advantageously extends in an L-shape. However, another cross-sectional form increasing the moment of inertia, such as a C- or S-shaped cross-section, can be advantageous as well. By angling, the moment of inertia of the strut can be increased in a simple way. As a result, there is no need for a solid compression member such as a threaded rod or the like. Compared to a solid threaded rod, a thin angled piece of sheet metal having the same moment of inertia has a reduced weight. At the same time, no additional component is required. By a suitable choice of the width of the angled section, the system can be adapted to the loads to be absorbed. Owing to the angling, a pressure plate can easily be fixed to the strut as well.

[0014] The angled section advantageously extends at least on that end face of the strut which is remote from the support element. The strut is joined to the pressure element at the end face. The pressure element is preferably fixed, in particular welded, to the strut directly at the end face. The pressure element advantageously is a pressure plate. The support element advantageously is a support plate or a support angle. It may, however, also be provided that the support element is an element suspended from the support bracket. Such a suspended support element can for example be joined to the sheet metal web via sheet metal strips or the like.

[0015] The bracket head advantageously encompasses the sheet metal web. This makes it easy to fix the bracket head to the sheet metal web, for example by welding. It may, however, also be advantageous for the bracket head to have a closed underside which is fixed flush to the sheet metal web, for example by welding. The sheet metal web advantageously consists of stainless steel. Compared to construction steel or aluminium, stainless steel has a lower thermal conductivity. By forming the sheet metal web from stainless steel, the thermal bridges of the sheet metal web can be reduced sufficiently without the interposition of further separating layers.

[0016] A sheet metal web for a support bracket is advantageously shaped from a single piece of sheet metal and comprises a diagonal tie and a strut, which are joined to each other only at the end provided for connection to a support element of the support bracket, wherein the connecting region of the diagonal tie and the strut extends along no more than half of the cantilever length of the support bracket.

[0017] Embodiments of the invention are explained below with reference to the drawing, of which:

Fig. 1 is a perspective representation of a first embodiment of a support bracket,
Fig. 2 is a side view of the support bracket from Fig. 1 with a diagrammatic representation of the load-bearing wall and the cladding,
Fig. 3 is a section along line III-III in Fig. 2,
Fig. 4 is a section of a side view of the region of the bracket head of the support bracket from Figs. 1 and 2,
Fig. 5 is a side view in the direction of arrow V in Fig. 4,
Fig. 6 is a section of a side view of an embodiment of the region of the bracket head of a support bracket,

Fig. 7 is a side view in the direction of arrow VII in Fig. 6,

Fig. 8 is a perspective diagrammatic representation of an embodiment of a support bracket,

Fig. 9 is a diagrammatic side view of the support bracket from Fig. 8,

Fig. 10 is a perspective representation of a further embodiment of a support bracket,

Fig. 11 is a side view of the support bracket from Fig. 10,

Fig. 12 is a section of a side view of the region of the bracket head of the support bracket from Figs. 10 and 11,

Fig. 13 is a side view in the direction of arrow XIII in Fig. 12,

Fig. 14 is a section of a side view of the region of the bracket head of an embodiment of a support bracket,

Fig. 15 is a side view in the direction of arrow XV in Fig. 14,

Fig. 16 is a section of a side view of the region of the bracket head of a further embodiment of a support bracket,

Fig. 17 is a side view in the direction of arrow XVII in Fig. 18,

Fig. 18 is a diagrammatic perspective representation of the region of the bracket head of a further embodiment of a support bracket,

Fig. 19 is a side view of the support bracket from Fig. 18, and

Fig. 20 is a diagrammatic representation of the arrangement of a plurality of sheet metal webs on a piece of sheet metal.

[0018] Fig. 1 shows a support bracket 1 in diagrammatic representation. The support bracket 1 is provided to support cladding on a load-bearing wall. Between the load-bearing wall and the cladding, insulating material is usually inserted in order to minimise heat transfer from the cladding to the load-bearing wall. The support bracket 1 has a bracket head 4 provided for fixing to a load-bearing wall. The bracket head 4 is secured to a sheet metal web 5. The sheet metal web 5 comprises a diagonal tie 8 extending downwards at an angle from the bracket head 4 relative to a load-bearing wall and a strut 9, which is usually oriented approximately horizontally after mounting on a load-bearing wall. The diagonal tie 8 and the strut 9 are joined to each other in a connecting region 46. In the illustrated embodiment, the connecting region 46 has an approximately triangular shape. A support element 6 - in the illustrated embodiment a flat support plate - is located in the connecting region 46. The support element 6 is oriented horizontally and secured, in particular by welding, to the underside of the connecting region 46 with the side which is on top in the assembled state. The diagonal tie 8 has a first end 42 located in the connecting region 46 and a second end 43 secured to the bracket head 4. In the illustrated embodiment, the bracket head has two sections 17 and 18 located on opposite sides of the second end 43 of the diagonal tie 8. The bracket head 4 encompasses the sheet metal web 5 therewith in this region. At the sections 17 and 18, the bracket head 4 is secured to the sheet metal web 5, for example by welding. This will be described in greater detail below. The strut 9 has a first end 44, which in the illustrated embodiment is arranged approximately perpendicular below the first end 42 of the diagonal tie 8. The strut 9 has a second end 45 located in the region of a load-bearing wall. A pressure element 7 used for support on the load-bearing wall 3 is provided at the second end 45. In the illustrated embodiment, the pressure element 7 is designed as a flat plate and rests directly against the load-bearing wall.

[0019] The sheet metal web 5 is produced from a single piece of sheet metal with a constant wall thickness d. The sheet metal web 5 can for example be produced by laser cutting from sheet metal. The wall thickness d of the sheet metal web 5 is advantageously less than 10 mm, in particular less than 8 mm. A wall thickness d of less than 5 mm is deemed to be particularly advantageous.

[0020] In order to obtain an adequate stability of the strut 9 in particular irrespective of the low wall thickness of the sheet metal web 5 and to prevent a buckling of the strut 9 under load, it is provided that the strut 9 has an angled section 15. In the angled section 15, the strut 9 is bent out of the plane of the diagonal tie 8. In the illustrated embodiment, the angled section 15 is located on that side of the strut 9 which is remote from the diagonal tie 8 and extends along the entire length of the strut 9 from the connecting region 46 to the pressure element 7.

[0021] As Fig. 1 also shows, the diagonal tie 8 has two outer edges12, which are remote from the strut 9, and two inner edges 14, of which only one can be seen in Fig. 10 because of the perspective representation. The outer edges 12 run parallel to each other. The inner edges 14 run parallel to each other as well. The strut 9 has two inner edges 11, which run parallel to each other and represent the edges of the strut 9 which face the diagonal tie 8. On the angled section 15, the strut 9 further has an outer edge 13, which is the edge remote from the diagonal tie 8. The edge which runs parallel to the outer edge 13 is closer to the diagonal tie 8. As Fig. 1 shows, the inner edges 11 of the strut 9 run parallel to the outer edge 13.

[0022] As Fig. 1 also shows, the support element 6 has a length e measured in the horizontal direction which is significantly greater than the wall thickness d of the sheet metal web 5. The length e can advantageously be several centimetres. A length e of approximately 2 cm to 10 cm is deemed to be advantageous. The length e is measured in the horizontal direction along the load-bearing wall or the cladding and perpendicular to the plane of the sheet metal of the connecting region 46.

[0023] Fig. 2 shows the arrangement of the support bracket 1 on a load-bearing wall 3. A cladding 2 is shown as well. The cladding 2 and the load-bearing wall 3 are only shown diagrammatically. The bracket head 4 has a support section 29 supported on the load-bearing wall 3. The support section 29 advantageously lies directly against the load-bearing wall 3. A mounting bolt 20 is provided for securing the bracket head 4 to the load-bearing wall 3. The mounting bolt 20 advantageously is an anchor head bolt projecting into an anchor rail in the load-bearing wall 3. This is fixed by a fastening nut 21 pressing against a U-plate 22 provided at the bracket head 4. For vertical adjustment, the bracket head 4 has recesses 23 on the side facing the load-bearing wall 3. In the illustrated embodiment, three recesses 23 are provided. An oblique-hole plate 19 to be described in greater detail below is located between the bracket head 4 and the load-bearing wall 3 in the region of the mounting bolt 20. The oblique-hole plate 19 has an edge 24, which projects from the load-bearing wall 3 and extends into one of the recesses 23.

[0024] At its second end 45, the strut 9 has an end face 16, where the pressure element 7 is fixed. Owing to the angled section 15 (Fig. 1), the strut 9 has an L-shaped cross-section at the end face 16. As a result, the support bracket 1 is supported on the support section 29 by way of the oblique-hole plate 19 and on the pressure element 7 on the load-bearing wall 3. The sheet metal web 5 has the shape of an angle open towards the load-bearing wall 3. The free space created between the diagonal tie 8 and the strut 9 is open towards the load-bearing wall 3. The pressure element 7 is likewise directly supported on the load-bearing wall 3. There is advantageously no provision for the interposition of further layers for thermal isolation.

[0025] As Fig. 2 shows, the diagonal tie 8 has a length L_1 measured form its first end 42 to its second end 43. The strut 9 has a length L_2 measured form its first end 44 to its second end 45, which is less than the length L_1. The outer edge 12 of the strut 9 encloses an angle β with the inner edge 14 of the diagonal tie 8. The angle β is advantageously less than 20°, in particular less than 10°. An angle β of 1° to 5° has been found to be particularly advantageous. It may, however. also be provided that the angle β is 0° and the outer edge 12 and the inner edge 14 are parallel to each other. In the illustrated embodiment, the angle β opens towards the bracket head 4. It may, however, also be provided that the angle β opens towards the connecting region 46. Owing to the angle β, the width of the diagonal tie 8 is reduced. At its first end 42, the diagonal tie 8 has a width i which is considerably less than a maximum width k in the region of the second end 43. The width k is measured adjacent to the second end 43 in the region where the diagonal tie 8 has its maximum width. The width k can advantageously be 1.5 to 3 times the width i.

[0026] The outer edge 12 of the diagonal tie 8 encloses with the outer edge 13 of the strut 9 an angle α, which is advantageously less than 60°. The angle α is in particular 30° to 40°, particularly advantageously 40° to 50°. The support bracket 1 has a cantilever length L. The cantilever length L denotes the overall length of the support bracket 1, i.e. the maximum dimension as measured perpendicularly to the load-bearing wall 3. In the illustrated embodiment, the cantilever length L is measured to that side of the support element 6 which is remote from the load-bearing wall 3. Measured perpendicularly to the load-bearing wall 3, the support element 6 has a width f, which is less than half, in particular less than a third, of the cantilever length L. In the illustrated embodiment, the width f is approximately 20% to 30% of the cantilever length L. Between the support element 6 and the strut 9, there is a small distance in the illustrated embodiment. The connecting region 46 has a length b as measured in the plane of the sheet metal web 5 and horizontally. The length b is therefore measured perpendicularly to the load-bearing wall 3. The length b is no more than half the cantilever length L. Advantageously, the length b is no more than a third of the cantilever length L. In the illustrated embodiment, the length b is 20% to 30% of the cantilever length L. In the illustrated embodiment, the connecting region 46 has an inner edge 10, which is vertical. An inclined or curved shape of the inner edge 10 may be advantageous as well, however. The inner edge 10 bounds the free space enclosed between the strut 9 and the diagonal tie 8.

[0027] As Fig. 2 also shows, the strut 9 has a height m, which is more than the minimum width i of the diagonal tie 8. In the illustrated embodiment, the height m approximately corresponds to the maximum width k of the diagonal tie 8. The height m of the strut 9 is measured in the vertical direction in the installed state.

[0028] As Fig. 2 shows, the cladding 2, which may consist of bricks, for example, lies on the support element 6. In the illustrated embodiment, the cladding 2 extends in the connecting region 46 only. It may, however, also be provided that the cladding 2 extends into the region of the diagonal tie 8 and the strut 9.

[0029] As Fig. 3 shows, the strut 9 has a width c which approximately corresponds to the height m in the angled section 15. The width c can be selected to match the magnitude of the load to be absorbed via the strut 9. The width c advantageously is 1.5 to 3 times the height m. The strut 9 has a constant height m and a constant width c along its entire length L_2. As Fig. 3 also shows, the support element 6 of the illustrated embodiment has a thickness a which advantageously corresponds to the wall thickness d of the sheet metal web 5.

[0030] Figs. 4 to 7 show different designs of the bracket head 4. In Figs. 4 and 5, the design of the bracket head 4 shown in Figs. 1 and 2 is illustrated in detail.

[0031] The U-plate 22 shown in Fig. 4 encompasses the bracket head 4 and forms a contact surface for a washer 28 interposed between the U-plate 22 and the fastening nut 21. The fastening nut 21 may alternatively lie directly on the U-plate 22.

[0032] Fig. 4 also shows the inclination of the strut 9 relative to a horizontal 30. The horizontal 30 advantageously extends parallel to the strut 9 (Fig. 2). The outer edge 12 encloses the angle α with the horizontal 30. In the embodiment according to Fig. 4, the angle α is smaller than in the embodiment according to Figs 1 to 3 and is less than 45°, in particular 30° to 45°. The angle α is advantageously 30° to 60°. With the horizontal 30, the inner edge 40 encloses an angle δ, which is advantageously 20° to 55°. The diagonal tie 8 has a central longitudinal axis 31, which is the angle bisector between the outer edge 12 and the inner edge 14. The central longitudinal axis 31 extends relative to the horizontal 30 at an angle γ, which can advantageously be 25° to 55°.

[0033] As Fig. 5 shows, the bracket head 4 is formed from a U-shaped piece of sheet metal. The legs of the U extend downwards, while the closed section which joins the legs extends upwards. The end regions of the legs of the U form sections 17 and 18 on both sides of the sheet metal web 5. The sections 17 and 18 overlap the sheet metal web 5 in an overlap region 33. In the embodiment according to Figs. 4 and 5, the overlap region 33 is comparably large and has a height g measured in the vertical direction which is advantageously at least 1 cm. As a result, the bracket head 4 can be fixed to the sheet metal web 5 by resistance projection welding. Another fixing arrangement can be advantageous as well.

[0034] Fig. 5 also shows the design of the oblique-hole plate 19. The oblique-hole plate 19 has a slot 27 extending at an angle to the edge 23. By laterally moving the oblique-hole plate 19, the distance between the edge 24 and that region of the slot 27 though which the screw 20 (Fig. 2) extends can be varied. This facilitates a fine adjustment of the mounting height of the bracket head 4.

[0035] Figs. 6 and 7 show a further embodiment for securing the bracket head 4 to the sheet metal web 5. In the embodiment according to Figs. 6 and 7, the bracket head 4 is joined to the sheet metal web 5 via sections 17 and 18, which are considerably shorter than in the embodiment shown in Figs. 4 and 5. The overlap region 33 has a height g', which is comparably small and can be about 3 mm to 10 mm. The height g' can be in the range of the wall thickness d (Fig. 1) of the sheet metal web 5. On each of the sections 17 and 18, a weld 32 configured as a fillet weld is provided. The further design of the bracket head 4 and the sheet metal web 5 corresponds to that of the previously described embodiment. Identical reference numbers denote in all of the embodiments elements which correspond to one another.

[0036] Figs. 8 and 9 show an embodiment of a support bracket 1 with a support element 36 instead of the support element 6. The support element 36 is designed as a support angle and has a support section 37 and a contact section 38 extending at an angle to the former. In the illustrated embodiment, the support section 37 and the contact section 38 enclose an angle of 90°, the contact section 38 being vertical and the support section 37 being horizontal. The connecting section 46 has a slot 39, through which contact section 38 projects. Alternatively, it can be provided that the connecting section 46 has a cut-out 40 indicated by broken lines in Figs. 8 and 9. The cut-out 40 can advantageously have an approximately triangular shape. Measured parallel to the load-bearing wall 3 and in the horizontal direction, the support element 36 has a length h, which can be considerably greater than the length e of the support element 6. The length h is advantageously approximately 10 cm to 30 cm. It may also be provided that several sheet metal webs 5 with bracket heads 4 and pressure elements 7 are arranged on a contact element 36. In this case, the length h of the contact element 36 can be significantly greater.

[0037] In the embodiment according to Figs. 8 and 9, the connecting region 46 is likewise provided to join the diagonal tie 8 and the strut 9 at their ends 42 and 43. Owing to the cut-out 40 or the slot 39, the length b_1 of the connecting region 46 is very small at its narrowest point, being only a fraction of the cantilever length L. In the illustrated embodiment, the minimum length b_1 of the connecting region 46 is less than a tenth of the cantilever length L. The overall length of the connecting region 46, i.e. the region where the diagonal tie 8 and the strut 9 are joined to each other, is considerably greater, being about 20% to 30% of the cantilever length L. The length b is less than half the cantilever length L of the support bracket 1.

[0038] Figs. 10 and 11 show an embodiment of a support bracket 1, the structure of which substantially corresponds to that of the support bracket 1 shown in Figs. 1 and 2. The support bracket 1 shown in Figs. 10 and 11 differs from the support bracket 1 according to Figs. 1 and 2 by its bracket head 54. The bracket head 54 is U-shaped and has two legs 56 extending upwards. In the region facing the sheet metal web 5, the legs 56 are joined to each other. As Figs. 10 and 11 show, the bracket head 54 has a total of 5 cut-outs 23. This facilitates a vertical adjustment along a greater range. Another number of cut-outs 23 may be advantageous for a bracket head 54 as well.

[0039] Figs. 12 and 13 show the design of the bracket head 54 in detail. The fixing of the bracket head 54 by way of the oblique-hole plate 19 and the mounting bolt 20 corresponds to the design in the embodiment according to Figs. 4 and 5. The design of the diagonal tie 8 of the sheet metal web 5 likewise corresponds to the design from Figs. 4 and 5. As Figs. 12 and 13 show, the bracket head 54 does not have an overlap region with the sheet metal web 5. The sheet metal web 5 abuts the bracket head 54 with its end face and is welded to the sheet metal web 5 by two welds 55 designed as fillet welds.

[0040] In the embodiment of the bracket head 54 shown in Figs. 14 and 15, the bracket head 54 is built up from two side walls 57. One of the two side walls 57 forms the section 17, while the other of the two side walls 57 forms the section 18 on the opposite side of the sheet metal web 5. The sections 17 and 18 overlap the sheet metal web 5 in an overlap region 33 of a comparably great height g. In the overlap region 33, the side walls 57 are joined to the sheet metal web 5 by a weld, advantageously by resistance projection welding.

[0041] In the embodiment of the bracket head 54 shown in Figs. 16 and 17, two side walls 57 bearing against the sheet metal web 5 on opposite sides of the sheet metal web 5 are likewise provided. The side walls 57 overlap the sheet metal web 5 in an overlap region 33 with a very small height g'. Welds 58 designed as fillet welds are provided to join the side walls 57 to the sheet metal web 5.

[0042] In the illustrated embodiment, the bracket heads 54 shown in Figs. 14 to 17 only have three recesses 23. The number of recesses 23 can, however, be selected to match the desired maximum possible level adjustment of the position of the support bracket 1 of a load-bearing wall 3.

[0043] Figs. 18 and 19 show an embodiment of a support bracket 1, which has a bracket head 54 and a contact element 36. The contact element 36 is located in a slot 39 or a cut-out 40 of the connecting region 46. The further configuration of the support bracket 1 shown in Figs. 18 and 19 corresponds to that of the embodiments described above.

[0044] Fig. 20 diagrammatically represents the arrangement of the contours of several sheet metal webs 5 on a piece of sheet metal from which the sheet metal webs 5 are to be cut out. As Fig. 20 shows, the struts 9 are in each case adjacent to one another, while the diagonal ties 8 project outwards alternately. The sheet metal webs 5 of struts 9 lying adjacent to one another are turned by 180° relative to one another. The second end 45 of each strut 9 extends to the connecting region 46 of an adjacent sheet metal web 5. This results in a space-saving arrangement and thus in very low material consumption. The sheet metal webs are advantageously cut from the sheet metal by laser cutting. The angled section 15 can then be angled from the blank of the strut 9, and the bracket head 4, 54, the support element 6, 36 and the pressure plate 7 can be fixed to the sheet metal web 5, in particular by welding. This facilitates a very simple production with few production steps. The sheet metal web 5 advantageously consists of stainless steel. However, another arrangement of the contours of the sheet metal webs 5 on a piece of sheet metal from which the sheet metal webs 5 are to be cut out can be advantageous as well.

PATENTKRAV

1. Bærebeslag til fastgørelse af en beklædning (2) på en bærende væg (3), hvor bærebeslaget (1) omfatter et beslagshoved (4, 54) til fastgørelse af bærebeslagaet (1) på den bærende væg (3), en kropplade (5), et bæreelement (6, 36) til at understøtte beklædningen (2) og et trykelement (7) til trykoverføring fra bærebeslaget (1) til den bærende væg (3), idet bæreelementet (6, 36) og trykelementet (7) er anbragt på kroppladen (5),
kendetegnet ved, at hele kroppladen (5) er dannet af en enkelt plade med konstant vægtykkelse (d), **at** kroppladen (5) omfatter en trækstræber (8) og en trykstræber (9), og **at** trækstræberen (8) og trykstræberen (9) blot ved deres mod bæreelementet (6, 36) vendende ender (42, 44) er indbyrdes forbundet ved et forbindelsesområde (46), idet forbindelsesområdet (46) højst strækker sig over halvdelen af udkragningslængden (L) for bærebeslaget (1).

2. Bærebeslag ifølge krav 1, **kendetegnet ved, at** forbindelsesområdet (46) højst strækker sig over en tredjedel af udkragningslængden (L) for bærebeslaget (1).

3. Bærebeslag ifølge krav 1 eller 2, **kendetegnet ved, at** forbindelsesområdet (46) strækker sig imellem forlængelsen af trækstræberen (8) og bæreelementet (6).

4. Bærebeslag ifølge ethvert af kravene 1-3, **kendetegnet ved, at** vægtykkelsen (d) på kroppladen (5) er mindre end 10 mm.

5. Bærebeslag ifølge ethvert af kravene 1-4, **kendetegnet ved, at** trækstræberen (8) har en fra trykstræberen (9) bortvendende yderkant (12), at trykstræberen (9) har en fra trækstræberen (8) bortvendende yderkant (13), **og at** yderkanterne (12, 13), set fra siden mod kroppladen (5), omslutter en vinkel (α) på mindre end 60°.

6. Bærebeslag ifølge ethvert af kravene 1-5, **kendetegnet ved, at** trækstræberen (8) har en bort fra trykstræberen (9) vendende yderkant (12) og en mod trykstræberen (9) vendende indvendig kant (14), **at** yderkanten (12) og inderkanten (14) på trækstræberen (8), set fra siden imod kroppladen (5), omslutter en vinkel (β) på mindre end 20°, især på mindre end 10°, **og at** vinklen (β) især åbner sig i retning mod beslagshovedet (4, 54).

7. Bærebeslag ifølge ethvert af kravene 1-6, **kendetegnet ved, at** trykstræberen (9) har et ombukket afsnit (15), idet det ombukkede afsnit (15) har sin ombukning i et tværsnit på tværs af længderetningen for trykstræberen (9).

8. Bærebeslag ifølge krav 7, **kendetegnet ved, at** det ombukkede afsnit (15) i det mindste strækker sig til det bort fra bæreelementet (6) vendende endeside (16) af trykstræberen (9), **og at** trykstræberen (9) ved endesiden (16) er forbundet med trykelementet (7).

9. Bærebeslag ifølge ethvert af kravene 1-8, **kendetegnet ved, at** trykelementet (7) er en trykplade.

10. Bærebeslag ifølge ethvert af kravene 1-9, **kendetegnet ved, at** bæreelementet (6, 36) er en støtteplade eller en støttevinkel.

11. Bærebeslag ifølge ethvert af kravene 1-10, **kendetegnet ved, at** beslagshovedet (4) omslutter kroppladen (5).

12. Bærebeslag ifølge ethvert af kravene 1-11, **kendetegnet ved, at** kroppladen (5) er af rustfrit stål.

Fig. 1

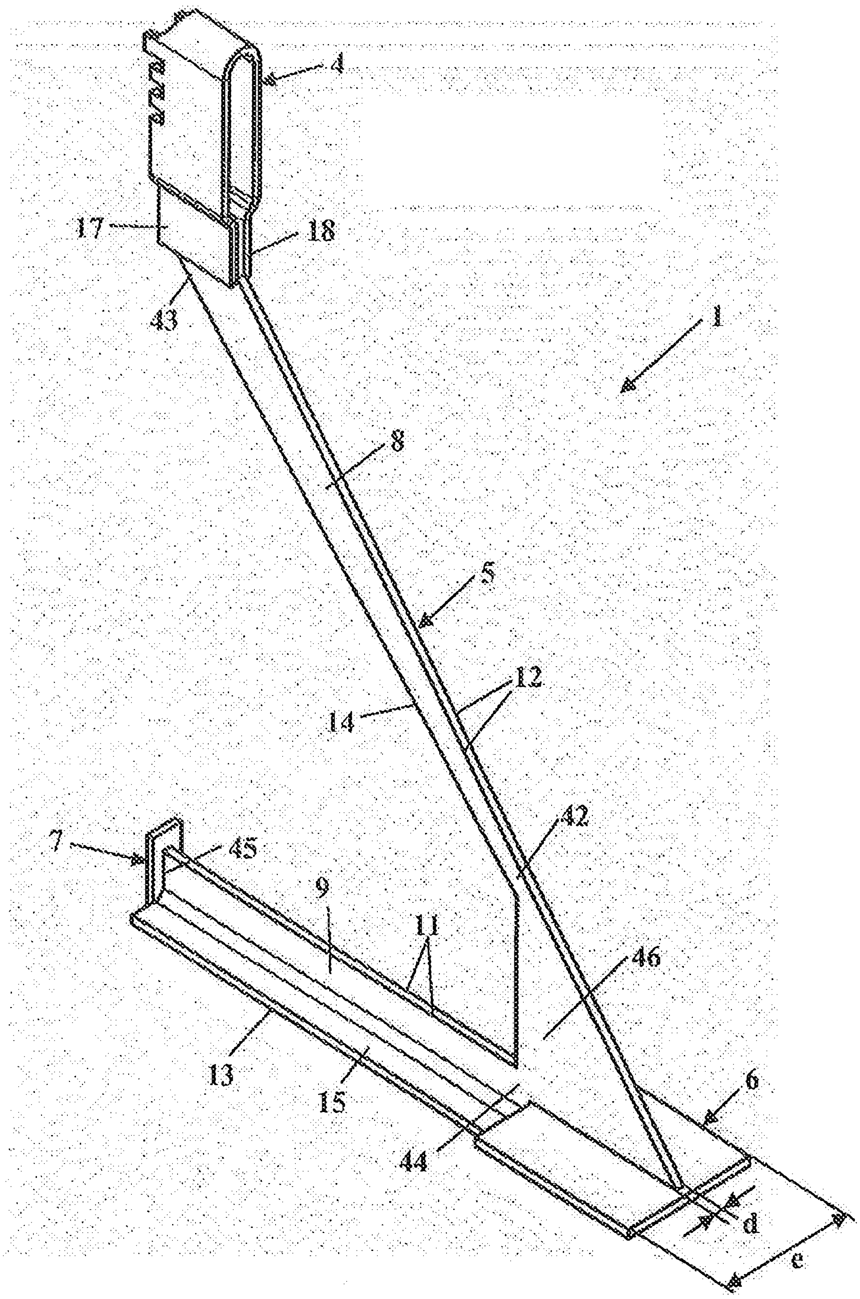
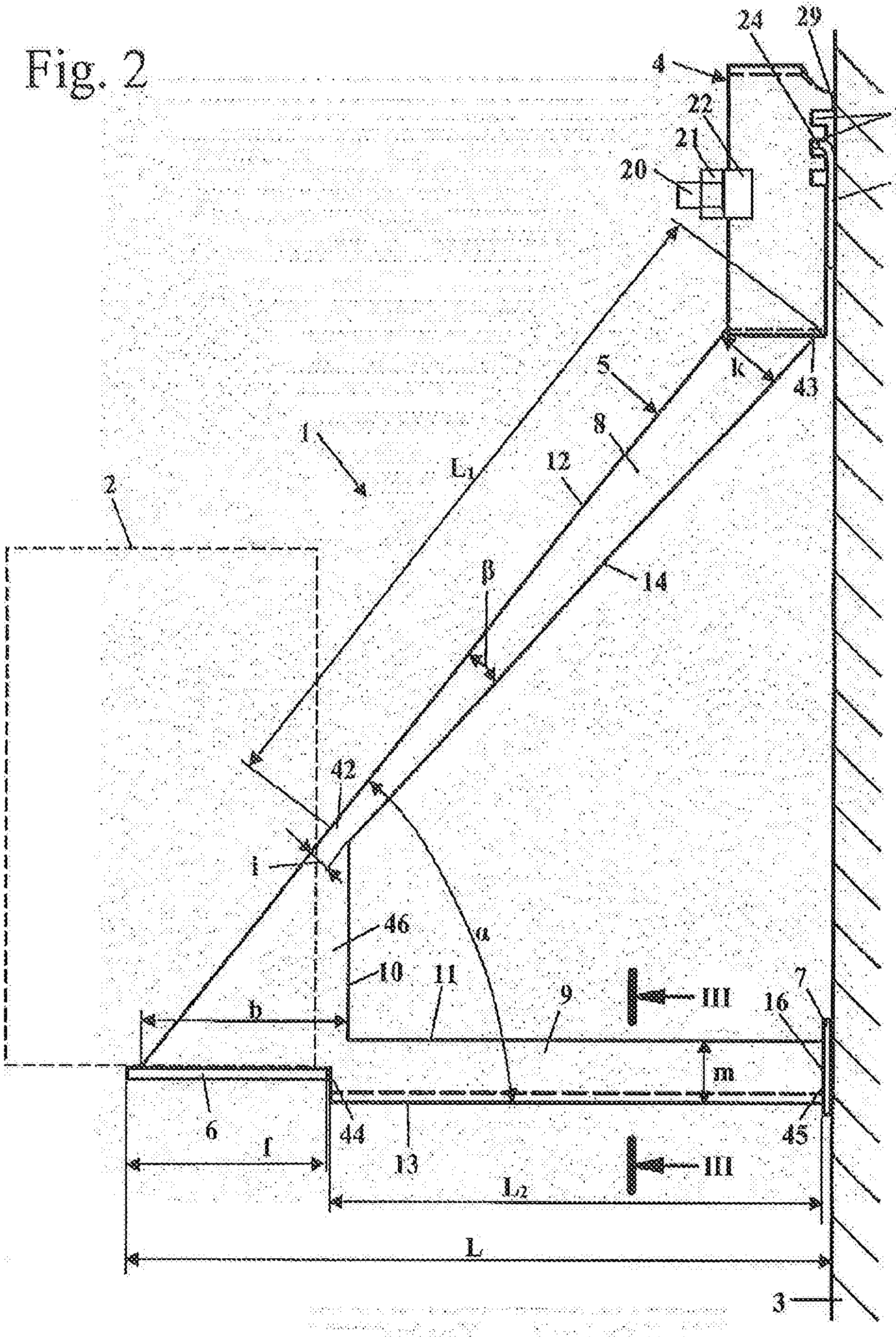


Fig. 2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III
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α
β

Fig. 3

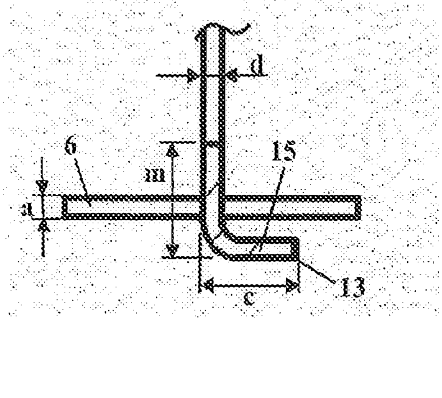
d
6
15
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Fig. 4

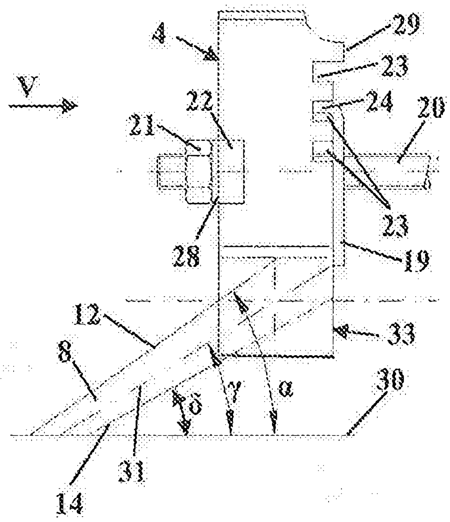


Fig. 5

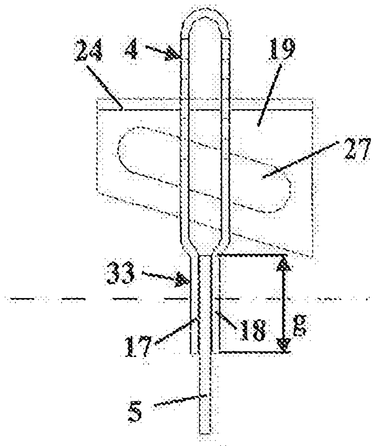


Fig. 6

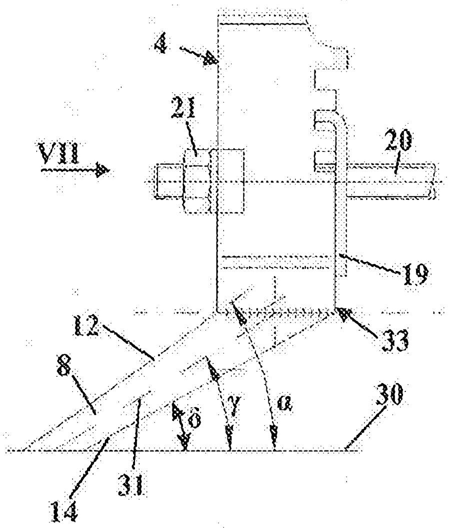


Fig. 7

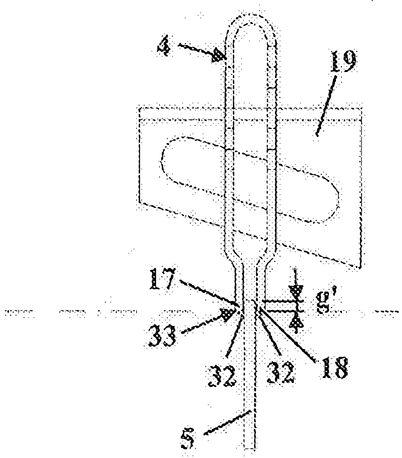


Fig. 8

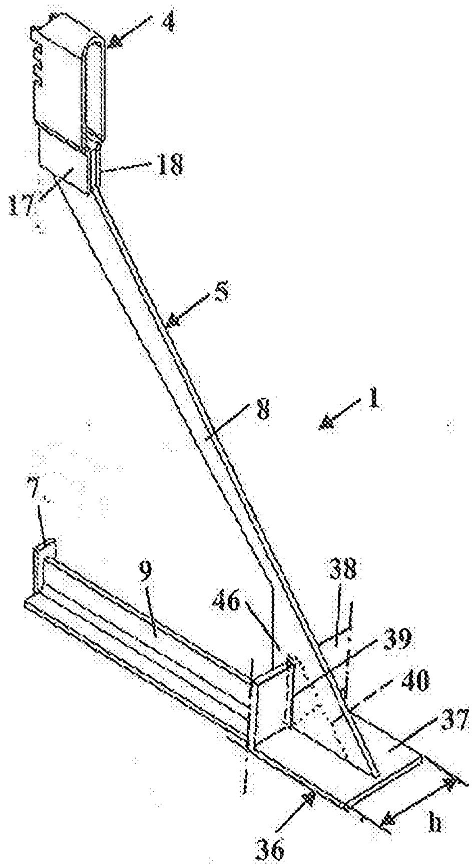


Fig. 9

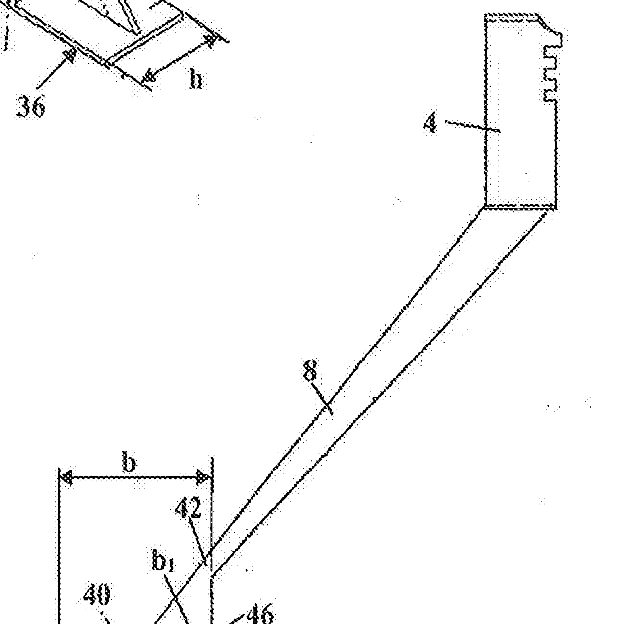


Fig. 10

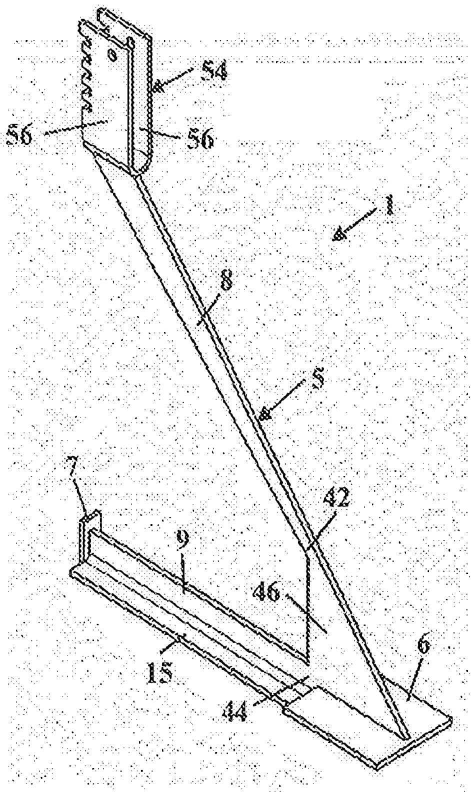


Fig. 11

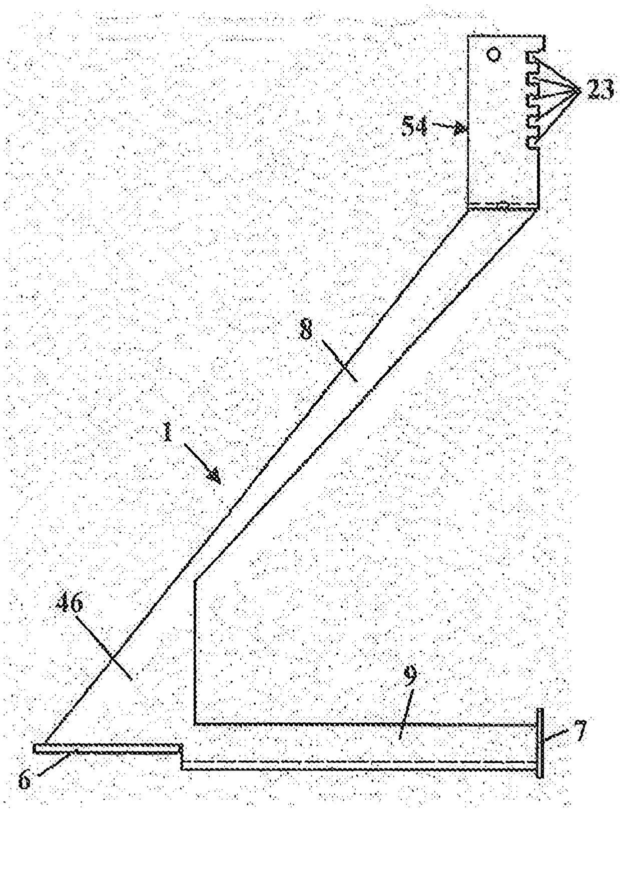


Fig. 12

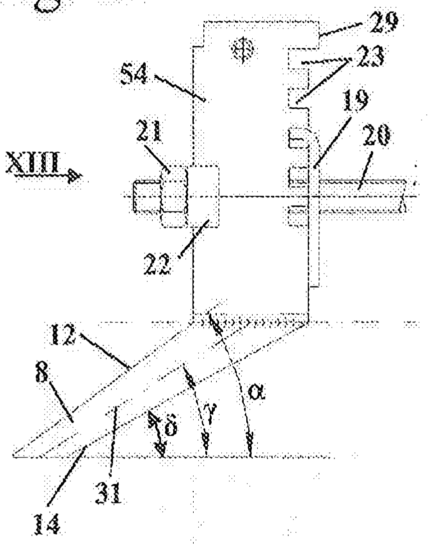


Fig. 13

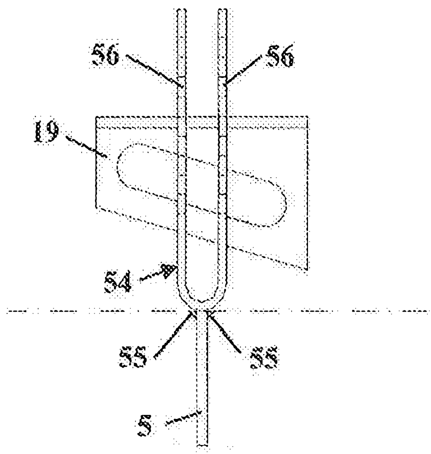


Fig. 14

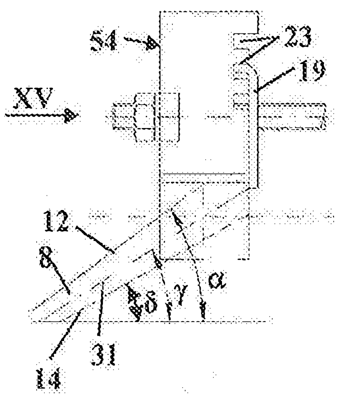


Fig. 16

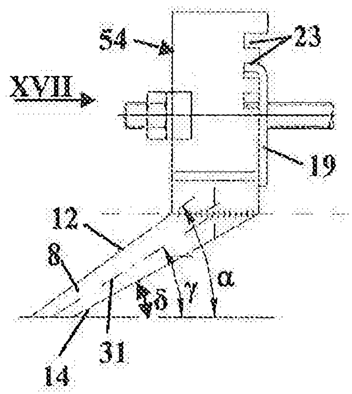


Fig. 15

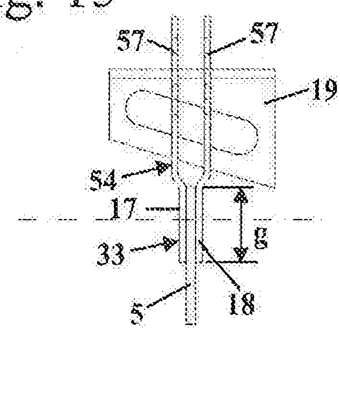
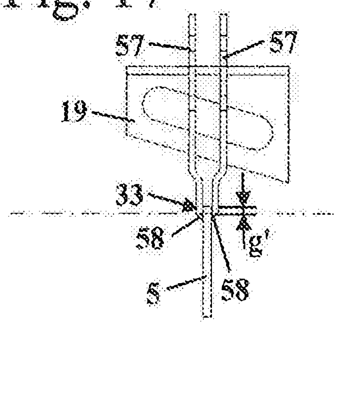


Fig. 17



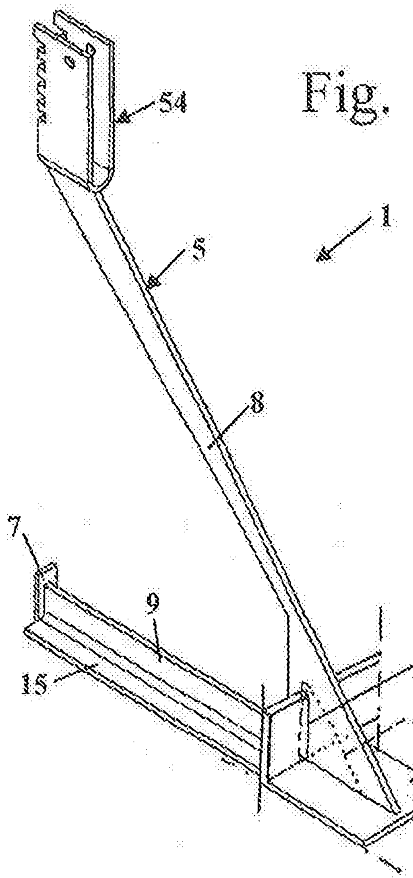


Fig. 18

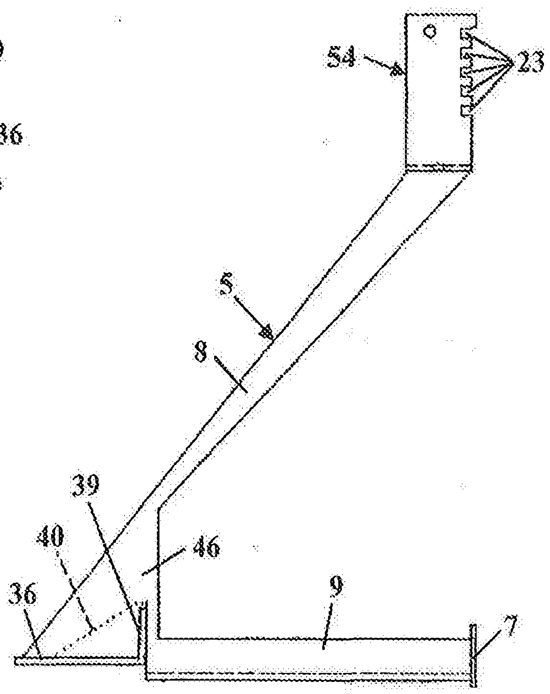


Fig. 19

Fig. 20