

[54] **WALL FACING**

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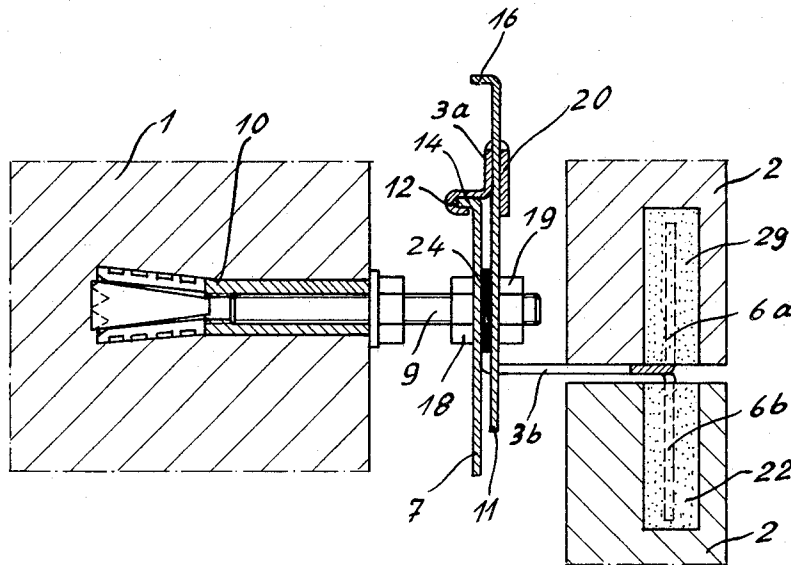
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[57] **ABSTRACT**

A wall facing consists of facing plates which are situated at a distance from the wall of a building, mounted in pairs on those branches of angular bearing rails which face away from the wall of the building and held in position by securing elements in the form of lugs affixed in a vertical position to the horizontal branch of each bearing rail. The securing elements extend into upper and lower recesses in the edges of the facing plates, each of said bearing rails being designed so that its vertical branch, provided with an elongated slit, can be screwed in a vertically adjustable position onto a wall clamp connecting it to the wall of the building. A first plate is attached to the vertical branch so as to be longitudinally displaceable in a guide between the two branches and has an elongated slot rising at a moderate angle and crossing that of the vertical branch and delimiting an aperture to give passage to a threaded portion of the wall clamp. A second plate is vertically displaceable on the vertical branch of the bearing rail and contains an inclined elongated slot which crosses over the elongated slot of the longitudinally displaceable plate in the opposite direction.

**10 Claims, 8 Drawing Figures**



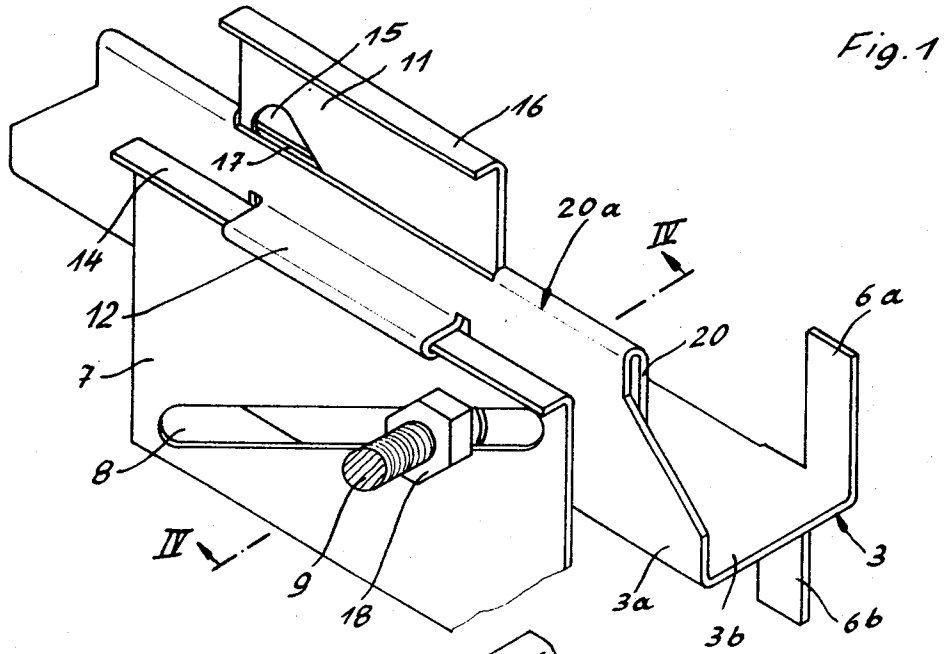


Fig. 1

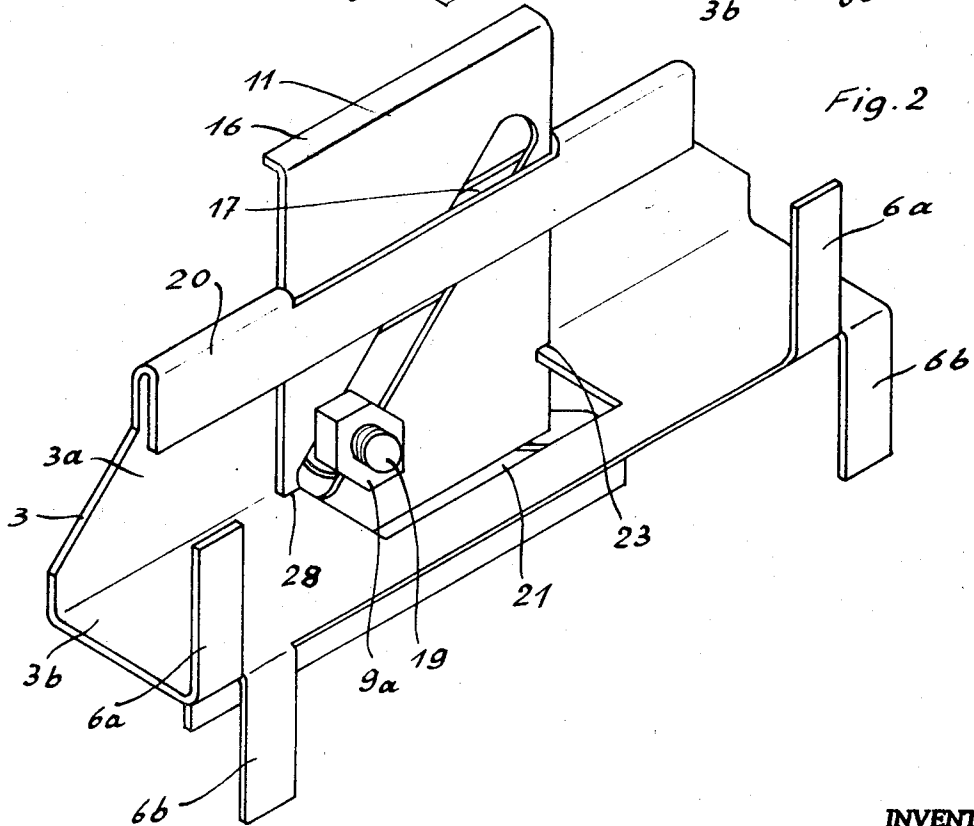


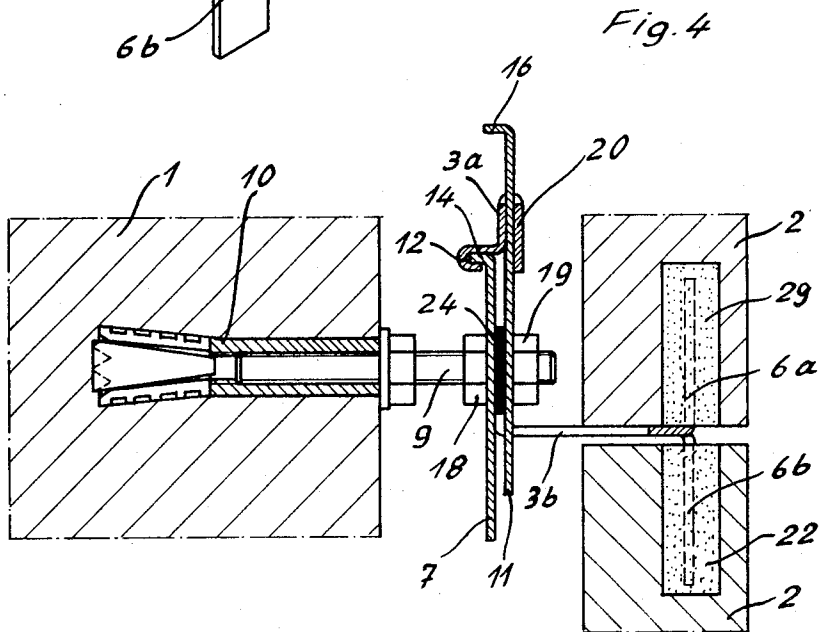
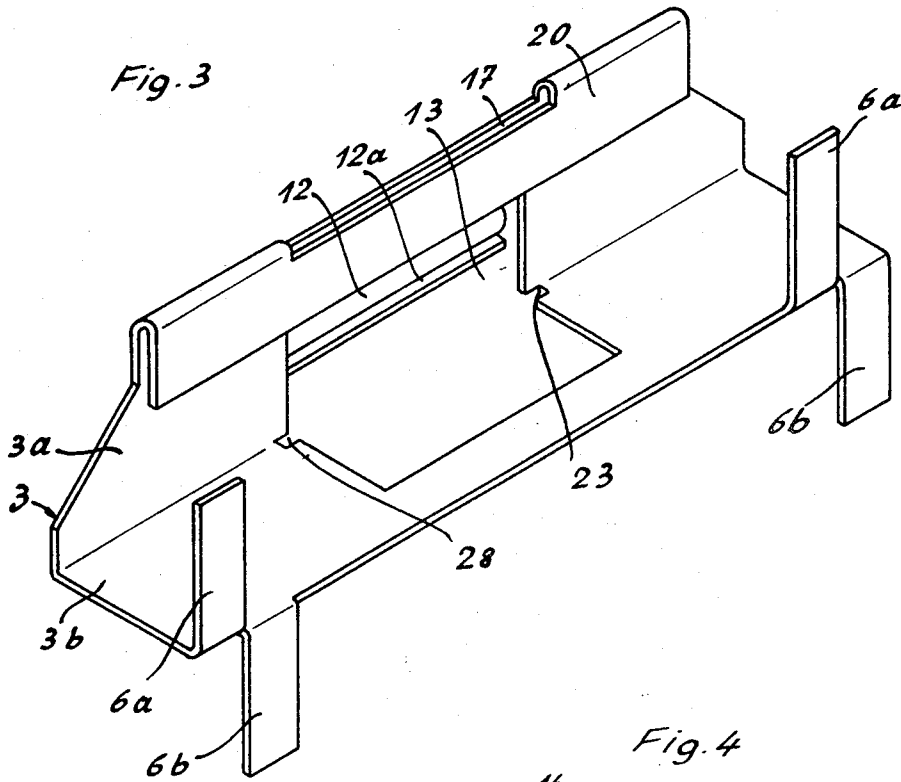
Fig. 2

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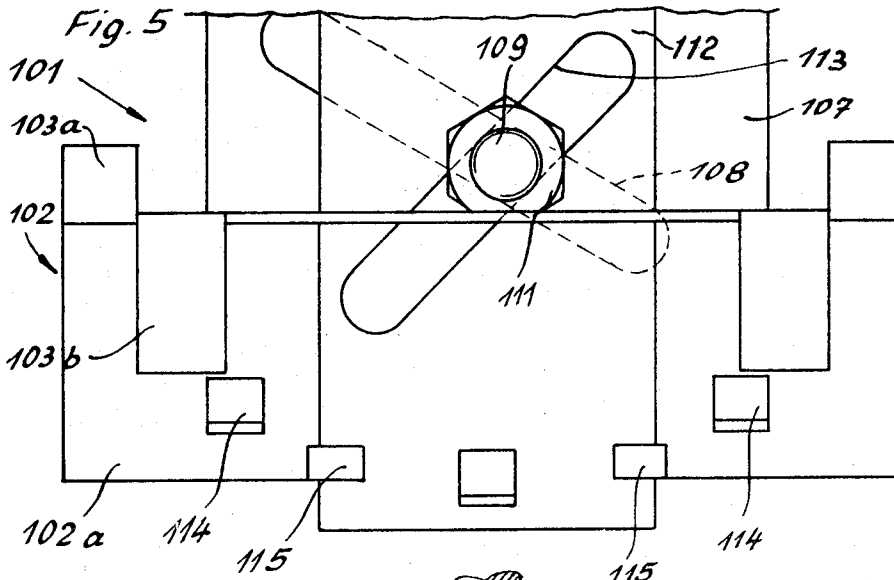


Fig. 6

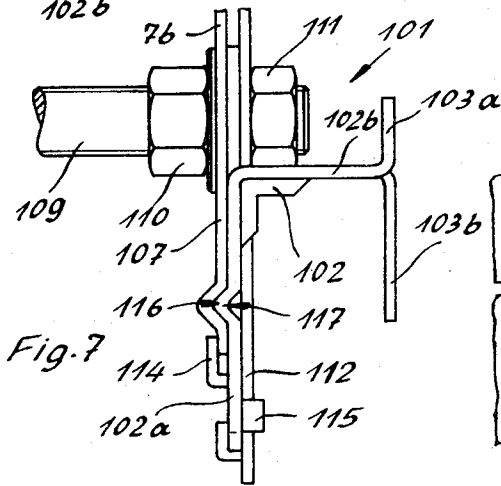
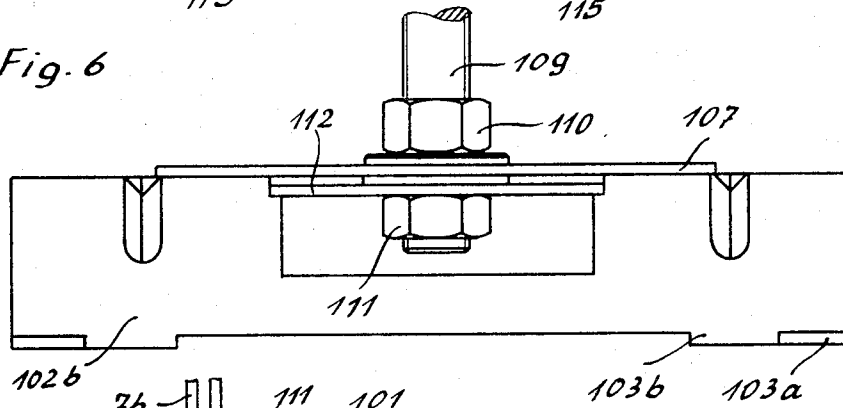
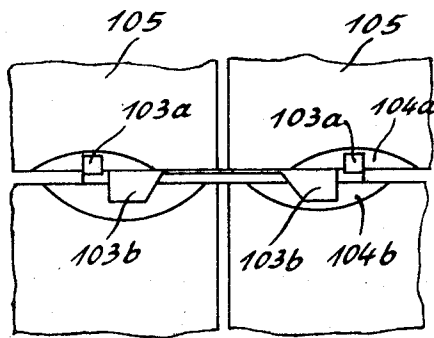


Fig. 8



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## WALL FACING

### BACKGROUND OF THE INVENTION

This invention relates to a wall facing consisting of facing plates which are situated at a distance from the wall of a building, mounted in pairs on those branches of angular bearing rails which face away from the wall of tee building and held in position by securing elements in the form of lugs affixed in a vertical position to the horizontal branch of each bearing rail, the securing elements extending into upper and lower recesses provided in the edges of the facing plates, each of said bearing rails being designed so that its vertical branch, provided with an elongated slot, can be screwed in a vertically adjustable position onto a wall clamp connecting it to the wall of the building, a first plate being provided which is attached to the vertical branch and is longitudinally displaceable in a guide between the two branches and has an elongated slot rising at a moderate angle and crossing that of the vertical branch and delimiting an aperture to give passage to a threaded portion of the wall clamp.

It has already been suggested that the vertical branch of a bearing rail should contain a vertical elongated slot which crosses over an elongated slot rising at a moderate angle in the longitudinally displaceable plate, so that the bearing rail can undergo a vertical displacement accompanied by a corresponding horizontal displacement of the longitudinally displaceable plate. In this known arrangement the angle of inclination of the slot rising at a moderate angle is so small in respect of the horizontal that the longitudinally displaceable plate is prevented by a self-locking action from undergoing an unintentional longitudinal displacement on the bearing rail when vertical forces are transmitted, via the anchoring wall clamp to the edges of the slot. It may nevertheless be necessary, in order to adapt the individual facing plates completely and evenly to one another and particularly in order to position them at exactly correct distances apart, to displace the facing plates not only vertically but also horizontally, which in the arrangement last mentioned is not possible.

### SUMMARY OF THE INVENTION

The object of the invention is therefore to provide a wall facing which for all practical purposes enables displacement to be effected in three coordinates, i.e., a vertical and a horizontal displacement in relation to one single wall clamp and also, by the aid of the preselectable point of attachment to this latter, an adjustment in the direction of its axis.

To attain this object the present invention provides a second plate which contains an inclined elongated slot and is vertically displaceable on the vertical branch of the bearing rail and of which the elongated slot crosses over the elongated slot of the longitudinally displaceable plate in the opposite direction.

This arrangement provides movement of the bearing rail in relation to the wall clamp with two degrees of freedom and enables both a purely horizontal displacement of the bearing rail in relation to the wall clamp and also a purely vertical displacement to be effected with the simultaneous displacement of both plates. In addition, all possible intermediate oblique displacements of the bearing rail in relation to the wall clamp can be effected. By adopting the appropriate angles of inclination for the slots in the two plates, the self-locking action in the vertical direction can nevertheless be preserved.

### BRIEF DESCRIPTION OF THE DRAWINGS

Two embodiments of the invention will now be described by way of example and with reference to the accompanying drawings, in which:

FIG. 1 is a perspective view of the mounting system for a wall facing according to the invention, as viewed from the wall of a building;

FIG. 2 is a similar view of the mounting system illustrated in FIG. 1, as viewed from the facing plates;

FIG. 3 is a similar view of the bearing rail of the mounting system, the displaceable plates being removed;

FIG. 4 is a section on the line IV—IV of FIG. 1;

FIG. 5 is an elevational view of a somewhat modified mounting system, as viewed from the facing plates;

FIG. 6 is a plan view thereof;

FIG. 7 is a side view, on a smaller scale, of the mounting system shown in FIG. 5; and

FIG. 8 is a fragmentary elevational view of a facade on which mutually adjacent facing plates are secured by a mounting system according to the invention.

### DESCRIPTION OF THE PREFERRED EMBODIMENT

According to FIG. 1, a bearing rail 3 is provided, which comprises a horizontal branch 3b and a vertical branch 3a. The free edge of the horizontal branch 3b bears, as shown in FIGS. 2 and 3, a pair of securing elements in the form of lugs 6a and a pair of lugs 6b pointing upwards and downwards respectively and engaging in edge recesses 22 and 29 (FIG. 4) of two facing plates 2. On that side of the vertical branch 3a which faces towards the wall of the building is a longitudinally displaceable plate 7 with an elongated slot 8 rising at a moderate angle, the bolt 9 of an anchoring wall clamp 10 (cf. FIG. 4) passing through said plate 7, locknuts 18 and 19 (cf. FIG. 4) enabling the longitudinally displaceable plate 7 and also vertically displaceable plate 11 to be secured against the vertical branch 3a of the bearing rail 3.

The longitudinally displaceable plate 7 is mounted in a guide comprising a turned-over edge of a recess 13 (cf. FIG. 3) and constructed as a flanging 12. The guide or flanging 12 embraces a bent portion 14 of the upper edge of the longitudinally displaceable plate 7. A further guide for the plate 7 is provided by the bolt 9 of the wall clamp 10 and its locknuts 18 and 19.

The vertically displaceable plate 11 contains a likewise inclined elongated slot 15 which crosses over the slot 8 of the longitudinally displaceable plate 7 and is inclined in the opposite direction to the slot 8 of said plate 7. On its free upper edge the vertically displaceable plate 11 has a bent end 16 which serves as a travel-limiting device for the vertically displaceable plate 11 and prevents the latter from sliding down out of a slit 17 of the vertical branch 3a during the assembly operation. The slit 17 forms an upper guide for the vertically adjustable plate 11, and a flanging 20 is formed at the top of the free edge of the vertical branch 3a. The slit 17 in the flanging 20 extends sufficiently far into the vertical branch 3a of the bearing rail 3 and into the opposite surface of the flanging 20 to ensure when the vertically displaceable plate 11 is in its lower position its bent end 16 of its outer edge is flush with the outer edge 20a of the flanging 20.

FIG. 2 shows a recess 21 in the horizontal branch 3b of the bearing rail 3 which affords passage to the end 9a of the wall clamp bolt 9 and the locknut 19. This enables the mounting system to be designed on space-saving lines.

FIG. 2 also shows that the vertically displaceable plate 11 is additionally held, at its bottom end, by lateral slots 23 and 28 which, immediately next to the vertical branch 3a of the bearing rail 3, form enlargements of the recess 21.

FIG. 3 illustrates the bearing rail 3 with the plates removed and shows, in particular, the rear of the flanging 12 with its guide slit 12a for the longitudinally displaceable plate 7 and its bent portion 14 (FIG. 1), in addition to indicating how said flanging 12 is formed. Furthermore, FIG. 3 shows the position of the slit 17 and the way in which it engages the flanging 20 and the vertical branch 3a of the bearing rail 3. Finally, FIG. 3 indicates the position and arrangement of the lateral slots 23 and 28.

FIG. 4 shows the position of the wall clamp 10 in the wall 1 of a building and also the way in which the edge lugs 6a and 6b engage in the edge recesses 22 and 29 of the facing plates 2. FIG. 4 also shows the positions of the locknuts 18 and 19 in relation to each other and the arrangement of an intermediate

disc 24 in the plane of the vertical branch 3a, the thickness of this intermediate disc 24 corresponding to that of the vertical branch 3a, so that the displaceable plates 7 and 11 are held parallel to said vertical branch 3a by means of said intermediate disc 24 situated in the recess 13 shown in FIG. 3.

The system described operates as follows:

The bearing rail 3, with its displaceable plates 7 and 11, and possibly after first having been fitted with the facing plates 2, is placed on the wall clamp 10 in such a way that the bolt 9 of the latter passes through the elongated slots 8 and 15. The locknut 19 is tightened to such an extent that the plates 2 can still be displaced, both horizontal and vertical movements being possible, as well as oblique displacements in all directions, the displaceable plates 7 and 11 then moving in the corresponding manner in relation to the bearing rail 3. This displacement can be assisted manually, by moving the plates in relation to said bearing rail 3. After the desired position has been reached the locknut 19 is tightened up.

FIGS. 5 to 8 show a somewhat modified embodiment of a mounting system indicated generally by the reference numeral 101 and comprising a bearing rail 102 of approximately rectangular cross section, this bearing rail being provided with an approximately vertical branch 102a taking a parallel direction to the plane of a wall (not shown), and an approximately horizontal branch 102b pointing away from said wall which is to be provided with the facing. The free edge of this horizontal branch 102b bears a pair of edge lugs 103a and a pair of edge lugs 103b, pointing upwards and downwards respectively and forming a structure of the nature of a double hook engaging in edge recesses 104a and 104b of facing plates 105 (FIG. 8). The wall belonging to the building and requiring the facing (cf. FIG. 4) is situated parallel to the facing plates 105 (FIG. 8).

On that side of the vertical branch 102b which faces towards the wall of the building is mounted a longitudinally displaceable plate 107 having an elongated slot 108 which rises at a moderate angle and through which passes a bolt 109 or similar attachment device to be secured. Locknuts 110 and 111 (FIG. 6) enable the longitudinally displaceable plate 107 and a vertically displaceable plate 112 to be clamped against the vertical branch 102a of the bearing rail 102. This system at the same time provides a securing point in respect of the longitudinal direction of the bolt 109, thus enabling the distance of the plates 105 from the wall of the building to be adjusted as desired. The plate 112 is likewise provided with an elongated slot 113 which rises in the opposite direction to the elongated slot 108 and crosses over the latter, thus providing for the bolt 109 a passage which can be adjusted in accordance with the displacements undergone by the plates 107 and 112 in relation to the bearing rail 102.

This arrangement of the elongated slots 108 and 113 results, with sufficiently long displacement paths for the plates 107 and 112, in an approximately rectangular zone in which the bolt 109 can be adjusted in relation to the bearing rail 102. Within this zone it is possible to compensate any dimensional deviations in respect of a borehole provided to enable the unit to be secured in the wall. On the other hand, the bolt 109 likewise can to some extent be adjusted in respect of the position theoretically required for it, e.g., if the wall of the building contains, in said position, an obstacle in the form of a fastening iron.

Tongues 114 and 115 formed integral with the vertical branch 102a of the rail part 102 are advantageously provided, for securing and guiding purposes, and in order to improve and assist the guiding action. The tongues 114 and 115 extend with a certain clearance over guide edges or longitudinal edges of the plates 107 and 112 and take the direction in which these latter are moved.

In order to increase the rigidity of the bearing rail 102 and enable the horizontally displaceable plate to be guided more satisfactorily, corrugations 116 and 117 (FIG. 7) are provided on said plate itself and on the vertical branch 102a respectively and take the direction in which the plate is displaced, and

these corrugations 116 and 117 provided on the mutually displaceable parts fit into each other. A firm and stable mounting and securing system is thus obtained at the cost of relatively moderate expenditure on production.

All the foregoing characteristics may be essential to the invention, whether considered separately from one another or in any desired combination.

What is claimed is:

1. A wall facing consisting of facing plates which are situated at a distance from the wall of a building, mounted in pairs on those branches of angular bearing rails which face away from the wall of the building and held in position by securing elements in the form of lugs affixed in a vertical position to the horizontal branch of each bearing rail, the securing elements extending into upper and lower recesses provided in the edges of the facing plates, each of said bearing rails being designed so that its vertical branch, provided with an elongated slot, can be screwed in a vertically adjustable position onto a wall clamp connecting it to the wall of the building, a first plate being provided which is attached to the vertical branch and is longitudinally displaceable in a guide between the two branches and has an elongated slot rising at a moderate angle and crossing that of the vertical branch and delimiting an aperture to give passage to a threaded portion of the wall clamp, characterized by a second plate which contains an inclined elongated slot and is vertically displaceable on the vertical branch of the bearing rail and of which the elongated slot crosses over the elongated slot of the longitudinally displaceable plate in the opposite direction.

2. A wall facing in accordance with claim 1, wherein the longitudinally displaceable plate is mounted on the inside of the vertical branch of the bearing rail, while the vertically displaceable plate is mounted on the outside of said vertical branch, i.e., on the side nearer to the facing plates.

3. A wall facing in accordance with claim 2, wherein the longitudinally displaceable plate is guided by a bent edge of a recess in the vertical branch of the bearing rail, said bent edge embracing in the form of a flanging a bent part which belongs to a horizontal edge of the longitudinally displaceable plate and which points away from the vertical branch.

4. A wall facing in accordance with claim 2, wherein the vertically displaceable plate is guided by a slot arranged adjacent to the vertical branch of the bearing rail in the horizontal branch of said bearing rail.

5. A wall facing in accordance with claim 4, wherein the vertically displaceable plate is additionally guided by a slit of a flanging on the free edge of the vertical branch of the bearing rail.

6. A wall facing in accordance with claim 5, wherein that horizontal edge of the vertically displaceable plate which faces towards the flanging on the free edge of the vertical branch comprises a bent end serving as a travel-limiting device.

7. A wall facing in accordance with claim 6, wherein the slit of the flanging on the free edge of the vertical branch of the bearing rail extends into this latter to a sufficient distance to ensure that when the vertically adjustable plate is in its lowest position the outer edge of the bent end is flush with the outer edge of the flanging.

8. A wall facing in accordance with claim 4, wherein a recess is provided in the horizontal branch of the bearing rail for the passage therethrough of the free end of the wall clamp, the slot which guides the vertically displaceable plate in the horizontal branch of the bearing rail consisting of two lateral enlargements of said recess in said horizontal branch.

9. A wall facing in accordance with claim 1, wherein tongues are formed integral with the vertical branch of the bearing rail and take a parallel course to the plane of the wall, said tongues serving to secure and guide the displaceable plates and passing with a certain amount of clearance around at least one guide edge taking the direction in which the plate in question is moved.

10. A wall facing in accordance with claim 9, wherein the horizontally displaceable plate and the vertical branch of the

bearing rail are each provided with at least one deformation of the nature of a groove taking the direction in which the plate is moved, these deformations being provided on the two mutually displaceable parts and fitting into each other.

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