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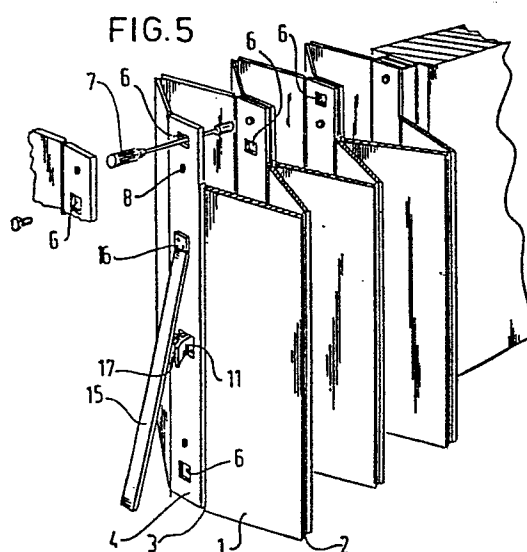
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(54) **Folding wall.**

(57) A folding wall mainly comprising a double row of panels (1) to be folded in zig-zag fashion by means of hinges (2) wherein every set of four panels (1) and two head strips (4) are assembled to form a hollow module, the head strips (4) being provided with means (8) for fastening the head strips (4) to one another, in order to simplify transport and mounting of the folding wall, since every module is suspended to the guide rail required for the wall first, and after which only one operator need fasten the modules to one another.



Folding wall

The invention relates to a folding wall mainly comprising a double row of panels to be folded in zig-zag fashion by means of hinges.

The invention has for its object to provide a
5 folding wall which reduces transport and mounting costs by its modular structure.

The folding wall according to the invention is distinguished in that every set of four panels and two head strips are assembled to form a hollow module, the head strips
10 being provided with means for fastening the head strips to one another.

Owing to its modular structure the mounting operation is drastically simplified, since every module is suspended to the guide rail required for the wall, after which only
15 one operator need fasten the modules to one another. Since the modules are easily maniable transport is also simplified.

A simple construction and an effective sound-prove assembly are obtained in that inter alia the panels and head strips are interconnected at the longitudinal edges by uninterrupted hinges profiles of synthetic resin.
20

In the case that the folding wall is provided with spring blades for exerting an inwardly directed force on the associated panels when the wall is drawn out in order to stretch the panels in the direction of length of the wall,
25 the invention further suggests to provide the head strip with a pair of relatively spaced guiding members for guiding said spring blades.

The invention will be described more fully with reference to an embodiment. The accompanying drawing
30 shows in:

Fig. 1 a perspective view of part of the folding wall in accordance with the invention,

Fig. 2 a plan view of a detail of the wall of Fig. 1,

Fig. 3 a horizontal sectional view of part of the folding wall in the stretched position,

5 Fig. 4 a vertical sectional view of the folding wall of Fig. 3,

Fig. 5 a perspective view of part of the folding wall illustrating the mounting operation.

The folding wall shown in the Figures is
10 composed of modules each consisting of two opposite pairs of relatively pivotable panels 1, the hinge being formed by a synthetic-resin strip along the edges thereof (see, in particular, fig. 5). By other longitudinal edges the panels 1 are connected through a pivotal strip 3 with head strips 4 in
15 a manner such that each module forms a hollow structure. Each module is suspended by a runner system fastened to the top side of each head strip 4 to a rail 5 along the top edge of a passage between two rooms.

The modules can be fastened to one another
20 with the aid of the head strips 4, for which purpose they are provided with fastening means. Fig. 5 shows that the head strips 4 have a square hole 6 for passing a tool 7 and a tapped hole 8 are alternately off-set in the head strips 4 so that when one module is mounted by means of the foremost head
25 strip, the hindmost can be fastened to the foremost head strip of the adjacent module.

The head strips 4 have furthermore an opening
10, which openings are in register after mounting (see fig.2) Through these openings are passed two blade springs
30 11, one end 12 of which is fastened to the inner side of the adjacent panels 1. The spring blades 11 are provided on their proximal sides with a coating of rough material 13, which may have a ridge profile in order to avoid slip between the two spring blades 11.

35 At the level of the hole 10 the spring blades are supported by supporting members 13 in the form of rollers, the distance between the supporting members 13 being such that the spring blades 11 contact with one another at point A.

Near the end of the spring blades 11 is provided a cam 14, which prevents the spring blades from snapping from between the supporting members when the panels 1 are in the folded position.

5 At a given distance above the supporting members 13 a lever 15 is secured to the head strip 4 by means of a hinge 16. At the level of the free ends of the spring blades 11 a pressing head 17 is fastened to the lever 15.

The folding wall according to the invention
10 can be actuated as follows.

By drawing the folding wall of. fig. 1 forwards by means of the handle 18, the modules are moved into the stretched state, in which the panels 1 fold towards one another. Owing to this movement the spring blades 11
15 shift in place with respect to the pressure point 13 so that the spring blades 11 are deformed. The point A will then shift as far as beyond the pressure points 13 in dependence on the shape of the spring blades 11 as a result of which in the semi-stretched state of the panels 1 an inwardly directed
20 force is exerted at the junction point 12 in the direction of the arrow P 1 in the panel 1. This force brings about stretching of the panels 1 in the direction of length of the wall.

When the wall is folded, the levers 15 will
25 come into contact by their free lower ends with the inner side of the opposite head strip 4, the lever thus exerting pressure by means of the pressing head 17 on the free end of the spring blades 11. This force in the direction of the arrow P 2 brings about an outwardly directed force P 3 at the
30 junctions 12 so that the panels 1 are urged outwards. As soon as the pressure point A is located on the side of the junctions 12 with respect to the pressing members 13, the spring force generated in the spring blades by the deformation will further the spread of the panels 1.

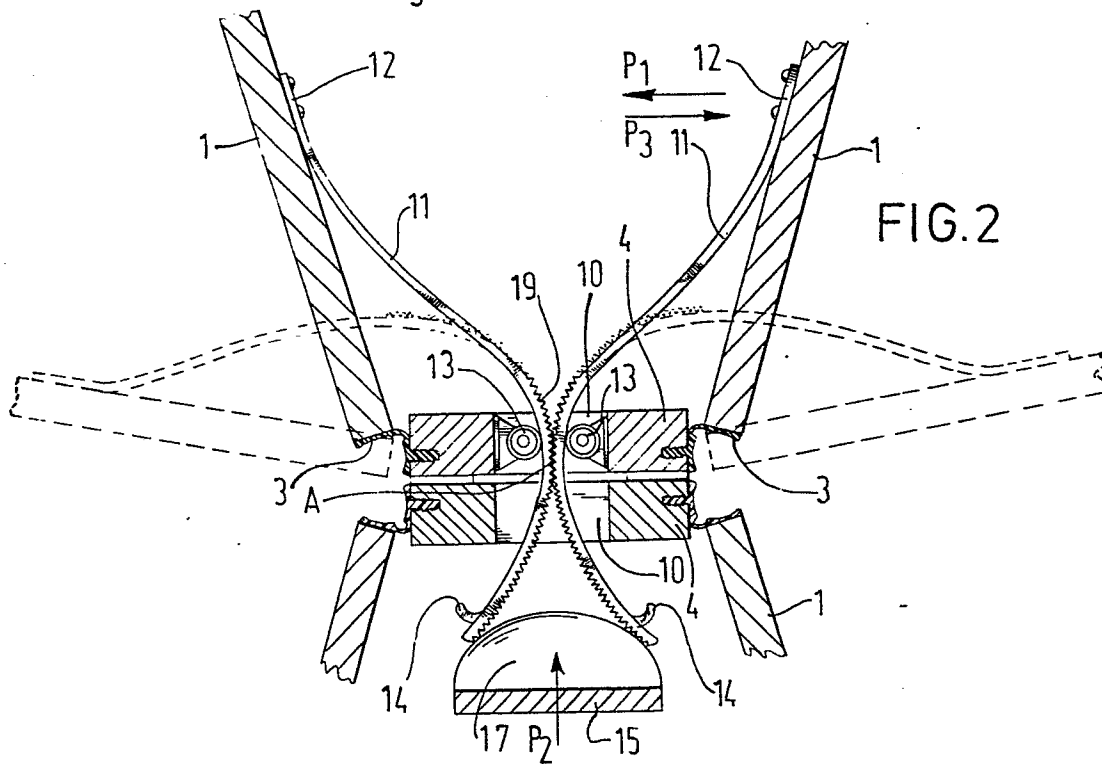
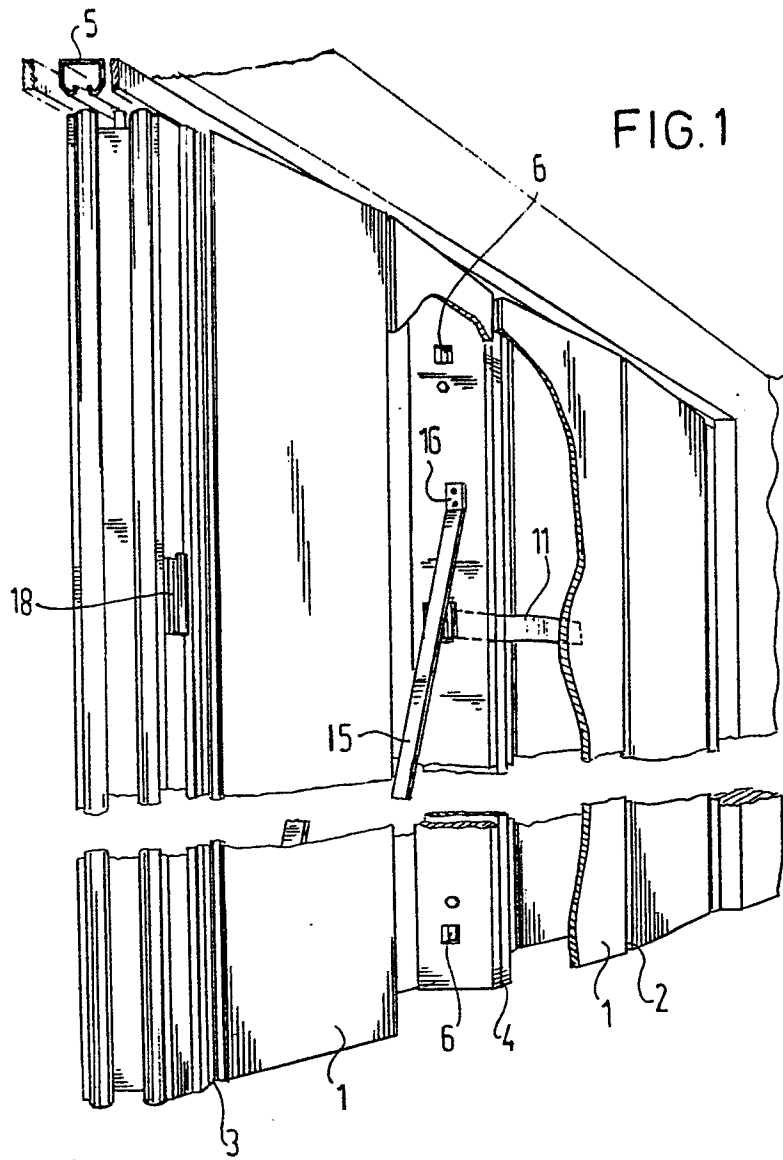
35 The invention is not limited to the embodiment described above. The flattening stretching design by means of the resilient blades 11 may as well be used in another construction than that having the above-described module structure.

WHAT IS CLAIMED IS:

1. A folding wall mainly comprising a double row of panels (1) to be folded in zig-zag fashion by means of hinges (2), characterized in that every set of four panels (1) and two head strips (4) are assembled to form a hollow module, 5 the head strips (4) being provided with means for fastening the head strips to one another.

2. A folding wall as claimed in claim 1, characterized in that the longitudinal edges of the panels (1) and the head strips (4) are interconnected by 10 uninterrupted pivotal profiles of synthetic resin (2, 3).

3. A folding wall as claimed in claim 1 and 2 provided with a pair of spring blades voor exerting an inwardly directed force on the associated panels when the wall is drawn out in order to stretch the panels (1) in the 15 direction of length of the wall, characterized in that said head strip (4) is provided with a pair of relatively spaced guiding members for guiding said spring blades.



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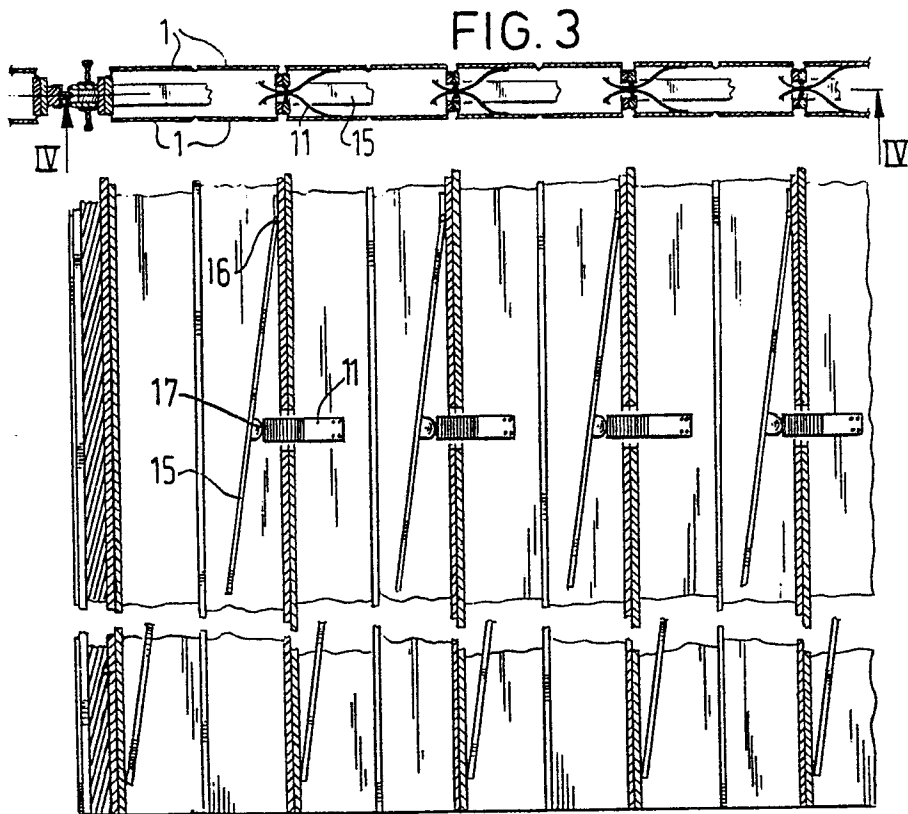


FIG. 4

