

[54] **FACADE SCREEN**

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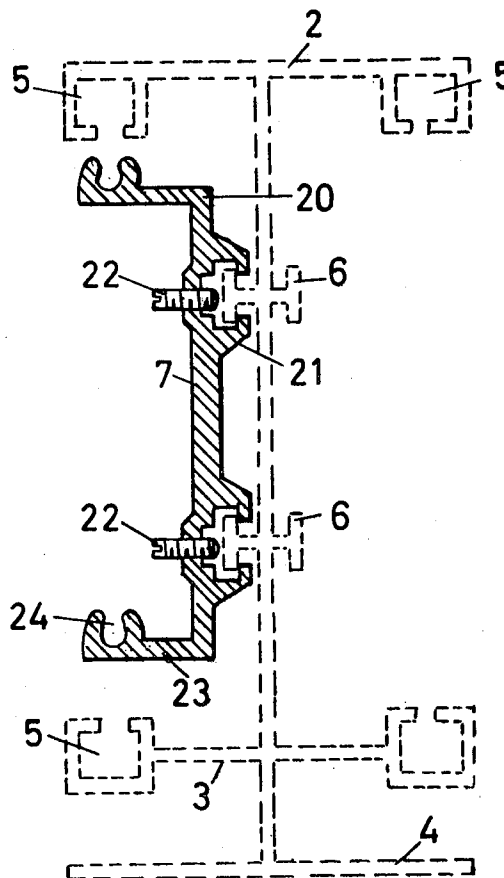
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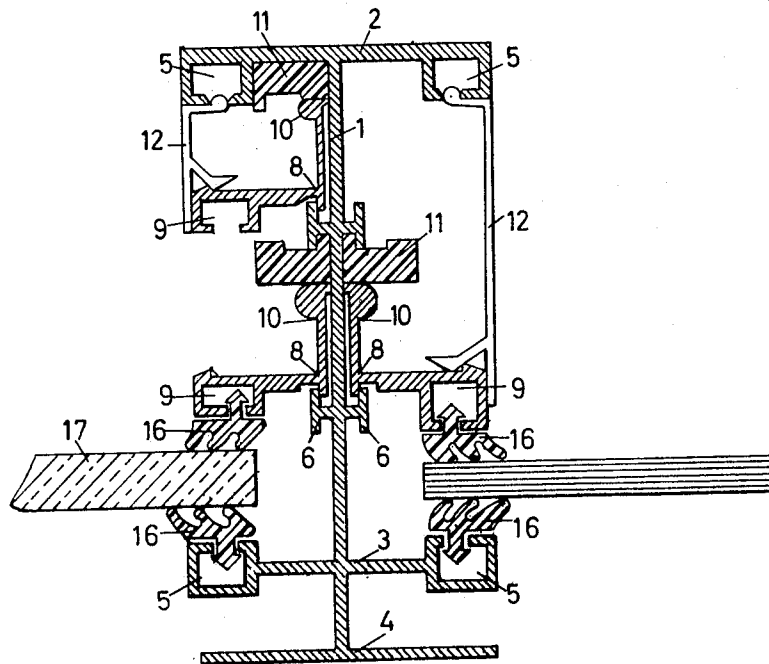
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[57] **ABSTRACT**

A facade screen for a building which can be assembled on site. Each screen consists essentially of I-shaped vertical members, sliding supports running on fins on the vertical members, and horizontal members affixed to the supports. Both vertical and horizontal members are adapted to receive flexible seals which extend between the members and glass or other panels forming part of the screen. Assembly of the frame uses a minimum of screwed fixtures, most of the parts being sprung or slid into position.

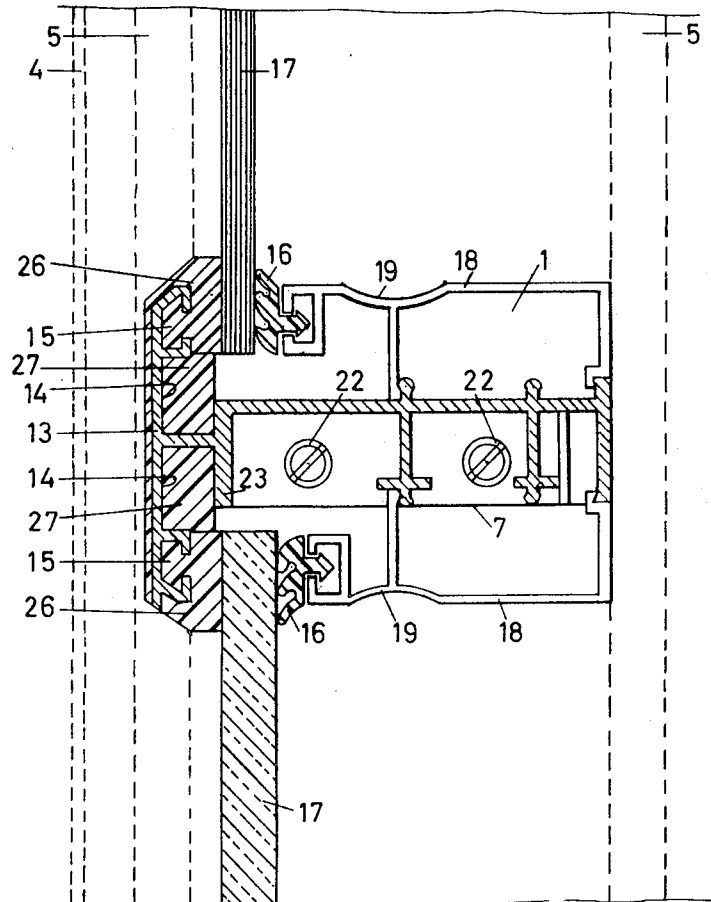
3 Claims, 4 Drawing Figures





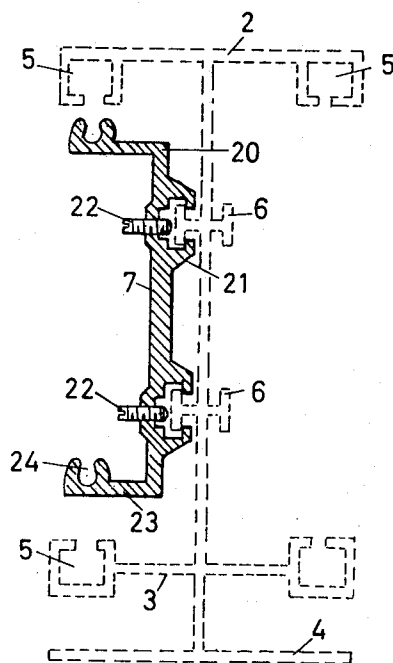
—FIG. 1.—

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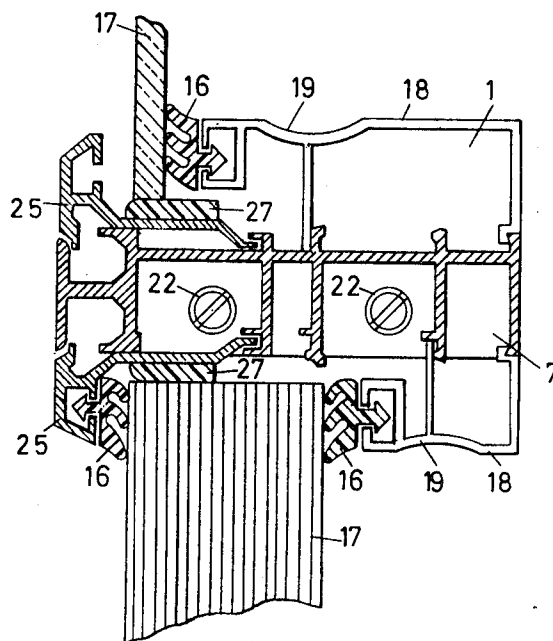


—FIG. 2.—

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—FIG. 3.—



—FIG. 4.—

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FACADE SCREEN

The present invention concerns construction elements of facade screens or panels and to a method of assembling these facade screens or panels from these elements.

The technique employed at present consists mainly in using vertical posts and horizontal sections which are assembled in the workshop in the form of large elements which are then taken to the building site. This technique, which has many disadvantages, the chief of which are difficulty and cost of transport and impossibility of modifying the assembly once put together, was necessary, however, on account of the fact that the parts constituting conventional facade screens require special means and skilled labor for their assembly which are difficult to employ on building sites.

Other construction elements of facade screens have already been proposed, but these do not give complete satisfaction, since they still require a good deal of preparatory work on the site, they cannot be very easily adapted to the skeleton or framework of the building, and they permit practically no thermal expansion of the facade screen assembly.

The present invention makes it possible to avoid all these disadvantages. It concerns parts of facade screens which can be easily transported and assembled on the site itself, without necessitating any skilled labor; moreover, they are easily fitted to the building framework and are designed to permit expansion of the assembly while ensuring that it is water- and airtight.

A facade screen of the present invention is formed substantially of the following main elements;

a. vertical members, each vertical member having a profile of rectangular form and consisting of a web and two end plates of equal size, perpendicular to the web, the latter ending at the center of each plate, the two plates being provided with a longitudinal recess at each end, the web of each member comprising one or more spurs, usually two, which serve as a guide for slide supports which are very thin and in cross section are preferably U-shaped; each support comprises a long side, the side sliding on the vertical member between the core thereof and two recesses, opposed to each other, the long side sliding along the web of the vertical member, the recesses enclosing the spurs of the web of the vertical member and being settable at a desired height by one or more locking members;

b. horizontal members, each member comprising means for securing glazing strips, provided with a channel for water of condensation and having a generally rectangular cross section, each horizontal member fitting onto a vertical member and resting on a support slide, the base of each horizontal member being provided with a socket receiving flexible material permitting expansion.

According to a feature of the present invention, each vertical section may comprise a guide for blinds or curtains, parallel to one of the end plates. A vertical member provided with this guide is reversible, so that the guide may be used either for inside curtains or for outside curtains.

The method of constructing facade screens from the above elements consists, in the main, in fitting the vertical members to the framework of the building, sliding the supports into these vertical members, fixing each support at the desired height by one or more locking members, then applying the horizontal members which are placed on the supports.

It will therefore be seen that the elements of the present invention have many advantages, such as:

- a. easy transport to and on the site,
- b. easy fixing of the vertical members to the framework as by clamps or other like devices permitting expansion of the said members,
- c. simple and rapid attachment of the horizontal members to the vertical members at any desired level without skilled labor,
- d. watertightness of the assembly,
- e. protection of the said elements from deterioration in that the flexible material in the socket will ensure watertight joints, permit thermal expansion and protect the vertical members from scratching,

- f. attractive appearance of the assembly,
- g. readily adaptable to receive any type of glass sheet, panel or frame.

The accompanying drawings show embodiments of the present invention, in which:

- FIG. 1 is a cross section through a vertical member;
- FIG. 2 is a cross section through a horizontal member;
- FIG. 3 is a cross section taken through a sliding support; and
- FIG. 4 is a cross section through an alternative form of horizontal member. Corresponding parts in the drawings are similarly numbered.

The vertical member shown in FIG. 1 comprises a central web 1 with two perpendicular end plates 2 and 3 and a guide 4 for a blind. At their outer ends the two end plates have recesses 5 for a flexible joint or seal member 16, or for a glazing strip.

The web 1 of this member is provided with spurs 6, which act as guides for a sliding support 7 (see FIG. 3) or glazing strips 8. Each glazing strip 8 is provided with recesses 9 for flexible joints 16 and with a vertical extension 10 sliding along the web 1 and held by a spur 6 and a packing strip 11. The flexible joints 16 may make a watertight seal by pressure against a glass panel 17. Closure strips or covers 12 are clamped between the strips 8 and the recesses 5 of the end plates 2 or 3 of the vertical member so that a tubular section of increased rigidity is formed.

The horizontal member shown in FIG. 2 rests on a slide 7, (FIG. 3) which is secured at any desired level to a vertical member by a locking means formed by screws 22 engaging a spur 6. The base 13 of this horizontal member is provided with two sockets 14 receiving flexible material 27 ensuring tightness but permitting thermal expansion and protecting the members themselves from scratching and other damage to the surface, when being assembled.

The base 13 is provided with recesses 15 which receive flexible joints 26. A glass panel or frame 17 is secured by glazing strips 18, each strip being provided with a recess for a flexible joint. These strips have a channel 19 for collecting and removing water condensing on the glass or panel.

FIG. 3 shows a slide support 7, having a base 20. There are recesses for enclosing the spurs 6 of FIG. 1, and sliding along them. The slide 7 is secured at a desired level in the vertical member by locking means formed by two screws 22. The side 7 comprises bars 23 serving as a support for a horizontal section.

Each of the bars 23 of the slide may include a portion of part ring cross section, having a slit 24, which allows the horizontal member to be screwed onto the vertical member by means of the slide 7. The web of the slide can be of any desired thickness.

The packing strip 11 prevents displacement of the web 10 (FIG. 1) by pressure from the joint 16 on the recess 9, and ensures the parallelism of the webs 10 and 1.

FIG. 4 shows another embodiment of the horizontal member, like parts being numbered similarly to those of FIG. 2.

When the facade panels must be assembled from the outside (assembly from the inside not being feasible due to some aspect of the construction) a horizontal member comprises three parts, the two parts 25 being clamped to the other and main part.

For the assembly of the different elements of the facade screen, the vertical members are fastened to aluminum shells which are bolted to a framework which is fastened to the surroundings (masonry or steel framework). Then the supports are slid into these vertical members on the left and right sides of each of the members. The supports are then secured at the desired levels and the horizontal members placed on the supports.

We claim:

1. A facade screen comprising:

- a. vertical members, each comprising a central web and two end plates of equal width, fixed to and being perpendicular to said web, and each vertical member being formed,

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with longitudinal recesses at each end of said two plates, said web of each vertical member having guide spurs fixed thereto on each side of said web;

b. slide supports slidable along said guide spurs and each having a long side, each support sliding on said guide spurs of said vertical member between said web thereof and two of said longitudinal recesses, said long side being formed with enclosing recesses enclosing said spurs of said web of said vertical member, and locking means carried by each support for engaging said web for fastening each support to said web; and

c. horizontal members, each comprising means for securing

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glazing strips thereto and for attachment of said horizontal member to a slide support with each horizontal member resting on a slide support, and each horizontal member being formed with a socket for receiving flexible expansion-permitting material.

2. A facade screen as recited in claim 1 in which each vertical member defines a guide parallel to one of said end plates for blinds.

3. A facade screen as recited in claim 1 wherein said spurs are adapted to guide and hold glazing strips.

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