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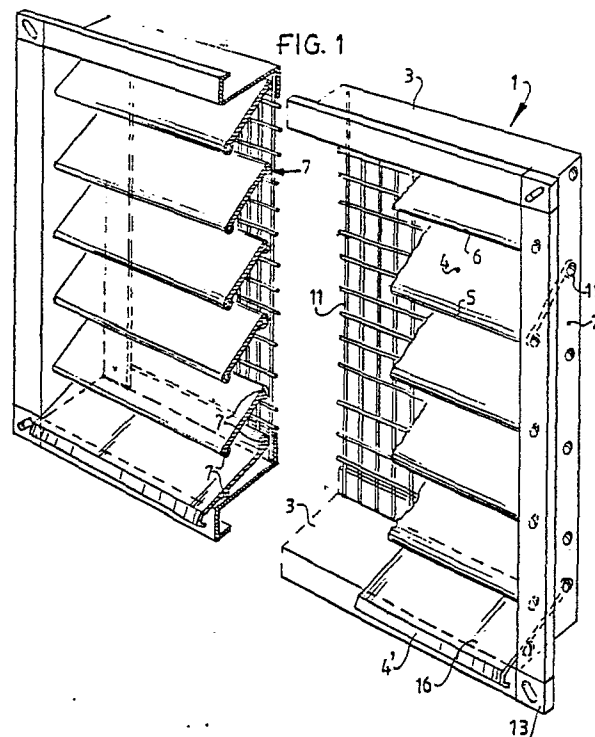
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54 Ventilator grid.

57 A grid for arrangement in a rectangular or square opening being in communication with an air feed duct system, which grid is provided with parallel grid blades, wherein each blade is a strip-like profile (4) having means extending along the edges (7) for receiving a pin-like abutment (15) that is directed perpendicularly to a wall of a side profile (2) bounding the grid, said profile having position indications (9) where the abutment pins have to be placed, so allowing an easy assembling of grid in any desired dimension using relatively few different components.



VENTILATOR GRID

The invention relates to an inlet or outlet grid for arrangement in a rectangular or square opening which is in communication with an air feed duct system, which grid is provided with parallel grid blades.

The air duct systems referred to in the preamble are mostly used for ventilation systems in buildings where the intake and outlet debouch into an outside wall of the relevant building. The usually rectangular or square openings in the outside wall have to be screened off by a grid. The making and fitting of such a grid is relatively complicated because of the lack of standard dimensions so that it is scarcely or not possible to manufacture the grids in accordance with uniform dimensioning.

The invention has for its object to obviate the above stated drawback and seeks to provide a grid which, in addition to having a construction of relatively few different components, is easy to assemble with regard to fitting.

The grid according to the invention is distinguished in that each blade is a strip-like profile having means extending along the edges for receiving a pin-like abutment that is directed perpendicularly to a wall of a side profile bounding the grid.

With this attachment system the side profile has only to be provided with pin-like members, either integrally cast or placed later, which fit into the recesses arranged in the continuous profile so that the blade profile can be sawn off at any desired length. Assembly is limited to insertion of the different elements into each other.

In the case the abutment pins have to be placed later, for instance in the form of screw bolts, it is then recommended to provide the side profile with position indications where the abutment pins have to be placed.

It is effective to bound the grid with a framework, which according to the invention preferably consists of four similar, substantially L-shaped profiles.

In accordance with a further feature of the invention the grid is provided with a wire mesh extending between the legs of the L-shaped edge profiles and situated adjacent to the grid blades. The wire mesh is hereby automatically enclosed between the edge profiles and the grid blades.

For an effective connection of the edge profiles the invention proposes to embody the edge portion thereof facing away from the wire mesh with a curl of U-shaped cross-section, whereby the corner connection is effected by an L-shaped coupling member, the legs of which fit into the U-shaped curl.

The invention will be further elucidated with reference to the following figure description of an embodiment.

In the drawing:

Fig. 1 shows a perspective front view of an inlet and outlet grid according to the invention.

Fig. 2 is a detail of the corner connection between two edge profiles of the grid from fig. 1.

Fig. 3 is a perspective view of a part of a side profile with integrally arranged abutment pins for a grid blade as according to a second embodiment.

The inlet or outlet grid shown in fig. 1 for an air duct consists substantially of a framework 1 built up of side profiles 2 and bottom and top profiles 3. Arranged between the side or edge profiles are a number of parallel grid blades 4 which have a strip-like shape and which display along the front and rear edges 5, 6 a receiving means 7, the function of which is further explained below.

The edge profiles 2 are substantially L-shaped whereby the long leg 8, see fig. 2, is provided with a pattern of pressed-out portions 9 for receiving pin-like abutment means.

The short leg 10 of the L-shaped edge profile serves to support a wire mesh 11 to be arranged between the grid blades 4 and that leg, see fig. 1. The other end portion of the L-shaped edge profile 2 is curled round into a U-shape, see 12, and this curled edge strip serves for fixing of the ends of the edge profiles sawn to length. Fixing is carried out by a separate L-shaped coupling member 13 provided with two mutually perpendicular legs 14 which can be received into the inside of the U-shaped edge strip 12 of the profile 2. Further fixing can take place in any suitable manner, for instance by spot welding and the like. The above mentioned pin-like abutments are formed in the embodiment according to fig. 1 by screw bolts 15 which can be placed through the pressed-out portions 9 into the hollow edge strip 7 of the grid blades 4. As a result of the predetermined pattern of pressed-out portions 9 the grid blades 4 are automatically arranged at an angle to the horizontal with respect to the edge profiles 2, such that raining-in and the like is avoided while air ventilation between the blades is still possible.

It will be apparent from the above description that the manufacture of the present grid is very simple because the fitter only has to shorten the grid blades 4 to length, starting from a long strip of profile material 4. Depending on the size of the opening to be covered the edge profiles 2 and 3 are shortened to length, and the grid can be assembled.

The grid blades 4 can be arranged between the edge strips 2 beforehand by means of the screw bolts 15 or later after the forming of the framework from the profiles 2 and 3.

Fig. 3 shows an alternative embodiment whereby the pin-like abutment means are fixed beforehand to the edge profiles 2 so that the grid blade profiles 4 can be pushed onto them. The pins can be of random type and can for instance be welded, riveted, integrally cast etc. onto the outer wall of the edge strip 2. The profile strip 4 can be manufactured from plate material whereby the edge strips are curled, whereby a slightly resilient effect can be exerted on the pin-like abutments 15.

Finally, it is noted that only a grid blade strip 4' is lengthened on one side beyond the receiving means 7 in order to obtain a curling over edge 16 which curls out past the bottom edge strip 3.

The invention is not limited to the above described embodiments, but within the scope of the claims different sectional profile shapes of the edge strips and profile blades are possible. It is nevertheless apparent from the above description that the number of parts of the grid is kept to a minimum.

blade has an edge strip (16) curling out beyond receiving means extending in lengthwise direction.

Claims

1. Inlet or outlet grid for arrangement in a rectangular or square opening which is in communication with an air feed duct system, which grid is provided with parallel grid blades, **characterized in that** each blade is a strip-like profile (4) having means extending along the edges (7) for receiving in each case a pin-like abutment (15) that is directed perpendicularly to a wall of a side profile (2) bounding said grid (1).

2. Grid as claimed in claim 1, **characterized in that** the side profile (3) has position indications (9) for abutments (15) each to be arranged later.

3. Grid as claimed in claims 1 and 2, **characterized in that** a framework (1) bounding the grid is arranged that consists of four similar, substantially L-shaped profiles (2).

4. Grid as claimed in claim 3, **characterized in that** a wire mesh (11) is arranged adjacent to the grid blades (4) and extending between the L-shaped edge profiles (2).

5. Grid as claimed in any of the foregoing claims, **characterized in that** each edge profile displays along a lengthwise edge thereof a curl (12) of U-shaped cross-section, and the corner connection is effected by an L-shaped coupling member (13), the legs (14) of which are arranged fitting into said U-shaped curl (12).

6. Grid as claimed in any of the foregoing claims, **characterized in that** the bottom grid

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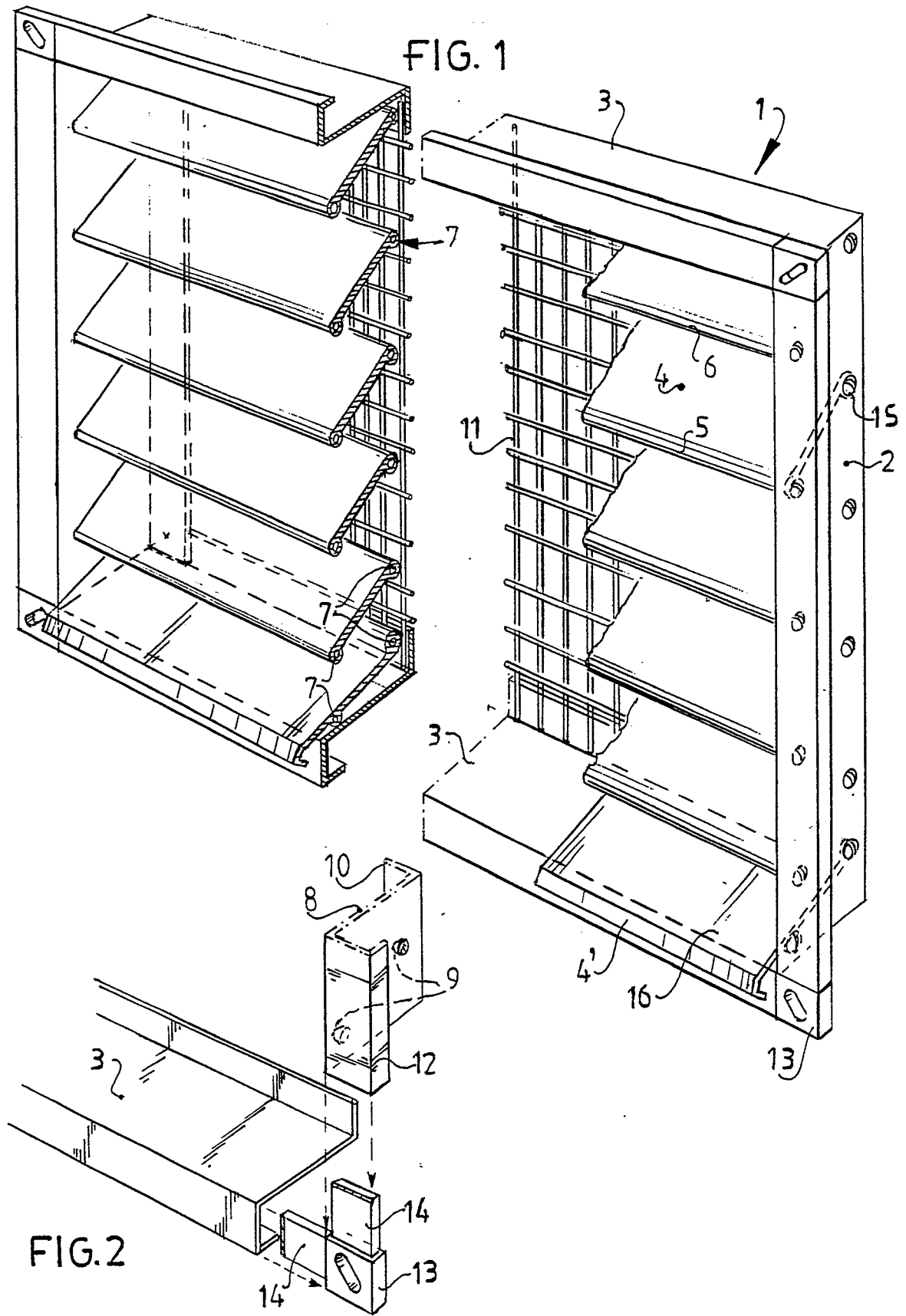
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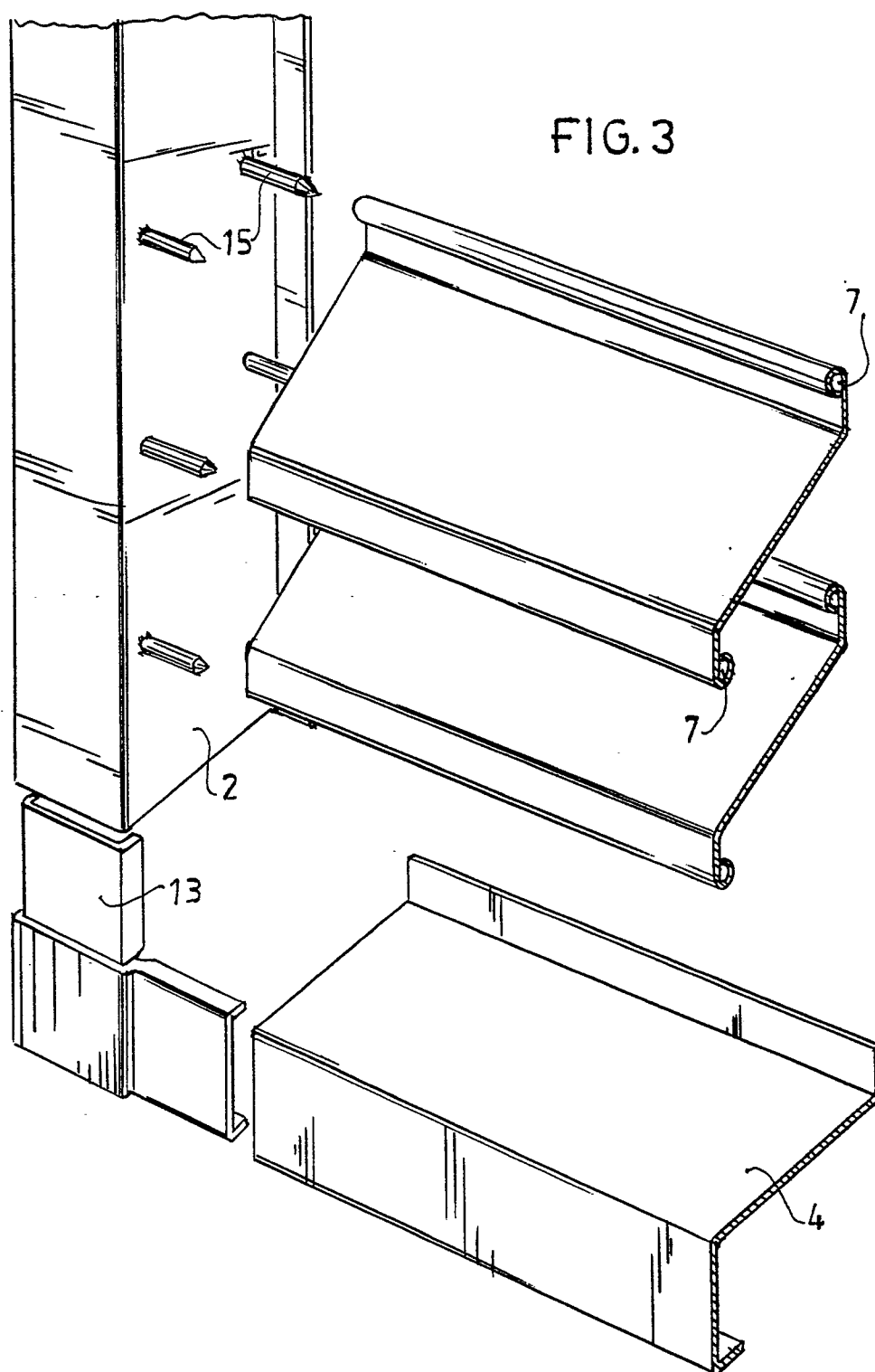
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	US-A-3 782 050 (DOWDELL) * Column 3, lines 4-17; figures 1,2,5 *	1	F 24 F 13/08
A	---	2,3	
X	EP-A-0 227 862 (RACHELS) * Figures 1,2,9,10 *	1	
A	---	2,3	
A	US-A-3 732 800 (GOETTEL) * Figure 4 *	4,6	

			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			F 24 F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 08-01-1990	Examiner PESCHEL G.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			