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(54) **Supporting construction for supporting outside air conditioning units**

(57) A supporting construction, particularly for supporting outside air conditioning units, is characterized in that it comprises at least a groove provided for slidably housing therein clamping means and being closed, at a

bottom portion thereof, by a plate-like element designed for preventing the clamping means from being disengaged by said groove, during adjusting and clamping operations for clamping and adjusting the unit to the support construction therefor.

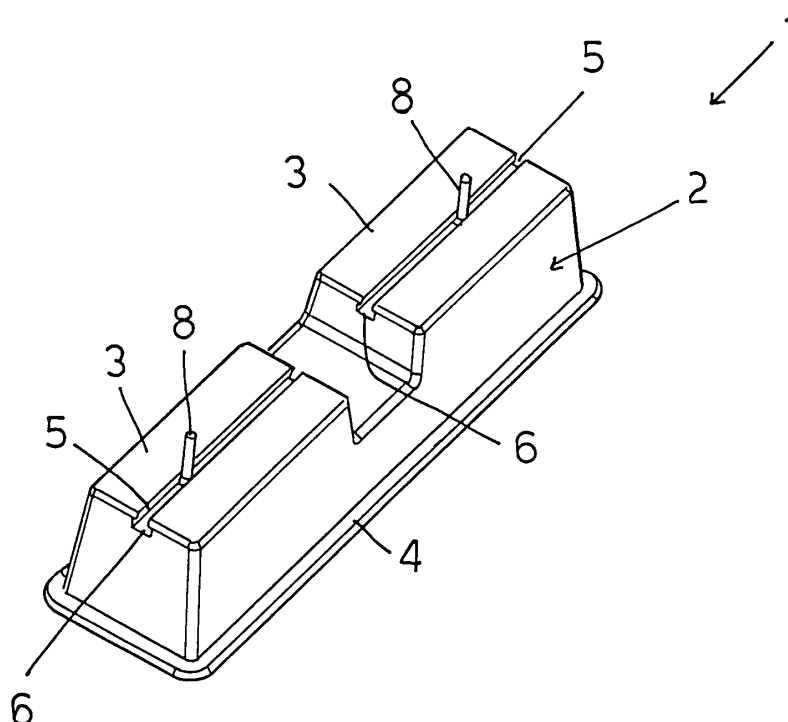


FIG 1

Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a supporting construction, specifically designed for supporting outside air conditioning units or apparatus.

[0002] As is known, air conditioning system outside units or apparatus are conventionally mounted on two floor support elements, designed for cushioning vibrations of cooling fans, while holding said cooling fans spaced from the floor.

[0003] A prior support comprises a single-block molded element, including closed bottom groove, preventing the unit or apparatus clamping bolts from falling as the apparatus is slidably adjusted.

[0004] The mentioned closed bottom grooves or slots are formed, in molding the piece, by a complex movement allowing the sliding elements to be outside displaced to free the pattern from the mold and withdraw it.

[0005] Another prior supporting construction comprises a single-block molded piece with a fixed seat for the clamping bolt and a closed bottom slot or groove for slidably adjusting a second clamping bolt.

[0006] The above mentioned assembling or supporting systems, however, are susceptible to improvements, both from a making and an operation standpoint.

SUMMARY OF THE INVENTION

[0007] Accordingly, the aim of the present invention is to provide such a support construction which is improved with respect to like prior supporting constructions.

[0008] Within the scope of the above mentioned aim, a main object of the present invention is to provide such a supporting construction including clamping bolts for clamping said supporting construction to the air conditioning unit or apparatus, said clamping bolts allowing said unit to be adjustably slidably fixed on the supporting construction.

[0009] Yet another object is to provide such a supporting construction including a very efficient restraining system for restraining said clamping bolts.

[0010] According to one aspect of the present invention, the above mentioned aim and objects, as well as yet other objects, which will become more apparent hereinafter, are achieved by a supporting construction, for supporting outside air conditioning units, characterized in that said supporting construction comprises at least a groove for slidably housing therein clamping means, said groove being closed, at a bottom thereof, by a plate element, designed for preventing the clamping means from disengaging from said groove, as said air conditioning unit is adjusted and clamped to said supporting construction.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] Further characteristics and advantages of the present invention will become more apparent hereinafter from the following detailed disclosure of a preferred, though not exclusive, embodiment of the invention which is illustrated, by way of an indicative, but not limitative example, in the accompanying drawings, where:

Figure 1 is a top perspective view of the supporting construction according to the invention;

Figure 2 is a further perspective view, taken from the bottom, of the supporting construction according to the invention;

Figure 3 is a further bottom perspective view, partially shown in an exploded form, of the supporting construction according to the invention;

Figure 4 is a further top perspective view, partially shown in cross-section, of the supporting construction according to the invention;

Figure 5 is a cross-sectioned side elevation view of that same supporting construction; and

Figure 6 is a further cross-sectioned side elevation view illustrating in exploded form the plate element.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0012] With reference to the number references of the above mentioned figures, the supporting construction according to the invention, which has been generally indicated by the reference number 1, comprises a single-block 2, made by injection molding a plastics material, and comprising two raised portions 3, designed for supporting an air conditioning unit or apparatus, not shown, and a bearing base 4.

[0013] At each raised or projecting portion 3 a longitudinal seat 5, coupled to a bottom slot 6, and being engaged between reinforcement legs 13, is provided.

[0014] The slot or groove 6 is open at the bottom thereof and said open bottom can be closed by a small plate 7.

[0015] The longitudinal seat or recesses 5 and grooves or slots 6 are designed for housing therein respective clamping bolts 8, to allow the head 9 to be slidably engaged in said groove, and to allow the stem 10 to project through the seat 5.

[0016] According to the present invention, said grooves or slots 6 are made by forming a throughgoing hollow or cavity, during the injection molding process, and by applying the plates 7.

[0017] Advantageously, each said plate 7 comprises preformed holes 11 designed to be fixedly engaged and/or hot welded on bosses 12 arranged on the bottom.

[0018] In this connection it should be apparent that the plates 7, upon application, will prevent the clamping bolt from falling away.

[0019] It has been found that the invention fully achieves the intended aim and objects.

[0020] In fact, the invention provides a supporting construction, in which the grooves or slots allowing the clamping bolts to be slidably adjusted, are made by forming a throughgoing cavities, by an injection molding process, and by applying a plate adapted to prevent the clamping bolt from falling away.

[0021] The economic advantage associated therewith would be self evident, both with respect to the construction of the mold and to the piece molding speed, allowing the end user to achieve great savings without modifying the weight and vibration resistance of the outside construction.

[0022] In practicing the invention, the used materials, as well as the contingent size and shapes, can be any, depending to requirements and the status of the art.

of the preceding claims, **characterized in that** said grooves are made by forming a throughgoing cavity, during the injection molding process, and by applying said plates.

8. A supporting construction, according to one or more of the preceding claims, **characterized in that** each said plate comprises preformed holes adapted to be fixedly coupled and/or hot welded on bosses formed on the bottom of the groove.

9. A supporting construction, according to one or more of the preceding claims, **characterized in that** said supporting construction comprises one or more of the disclosed and/or illustrated characteristics.

Claims

1. A supporting construction, for supporting outside air conditioning units, **characterized in that** said supporting construction comprises at least a groove for slidably housing therein clamping means, said groove being closed, at a bottom thereof, by a plate element, designed for preventing the clamping means from disengaging from said groove, as said air conditioning unit is adjusted and clamped to said supporting construction.
2. A supporting construction, according to claim 1, **characterized in that** said supporting construction comprises a single block made by injection molding a plastics material.
3. A supporting construction, according to claims 1 and 2, **characterized in that** said single block comprises two projecting portions, designed for supporting the air conditioning unit and a bearing base.
4. A supporting construction, according to one or more of the preceding claims, **characterized in that**, at each said projecting portion, a longitudinal seat coupled to a bottom groove or slot, engaged between reinforcement legs, is formed.
5. A supporting construction, according to one or more of the preceding claims, **characterized in that** said groove has an open bottom and can be closed by a closing plate.
6. A supporting construction, according to one or more of the preceding claims, **characterized in that** said longitudinal seats and grooves are adapted to house respective clamping bolts, to allow the bolt head portion to slide in said groove and the clamping bolt stem to project through said seat.
7. A supporting construction, according to one or more

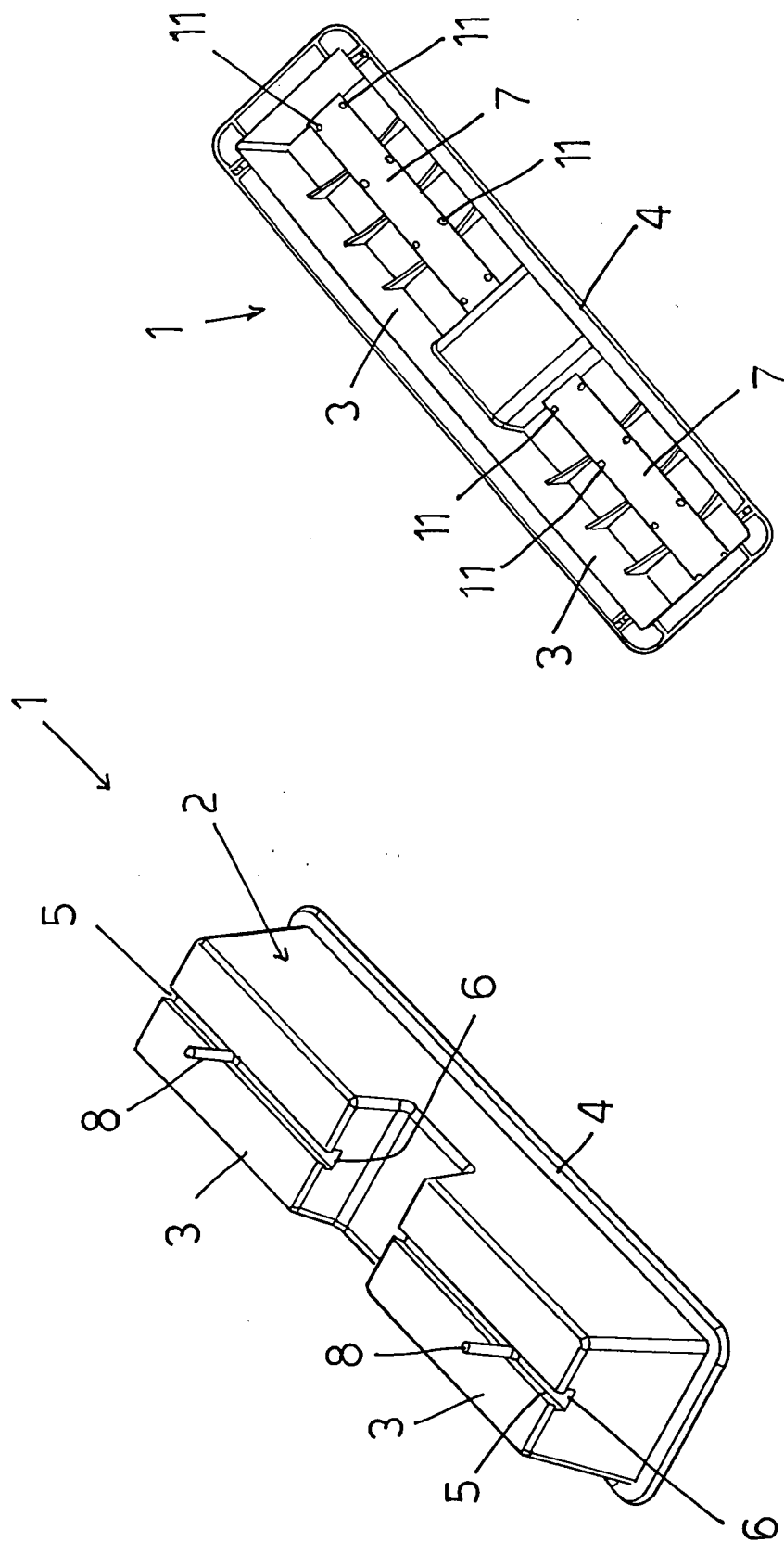
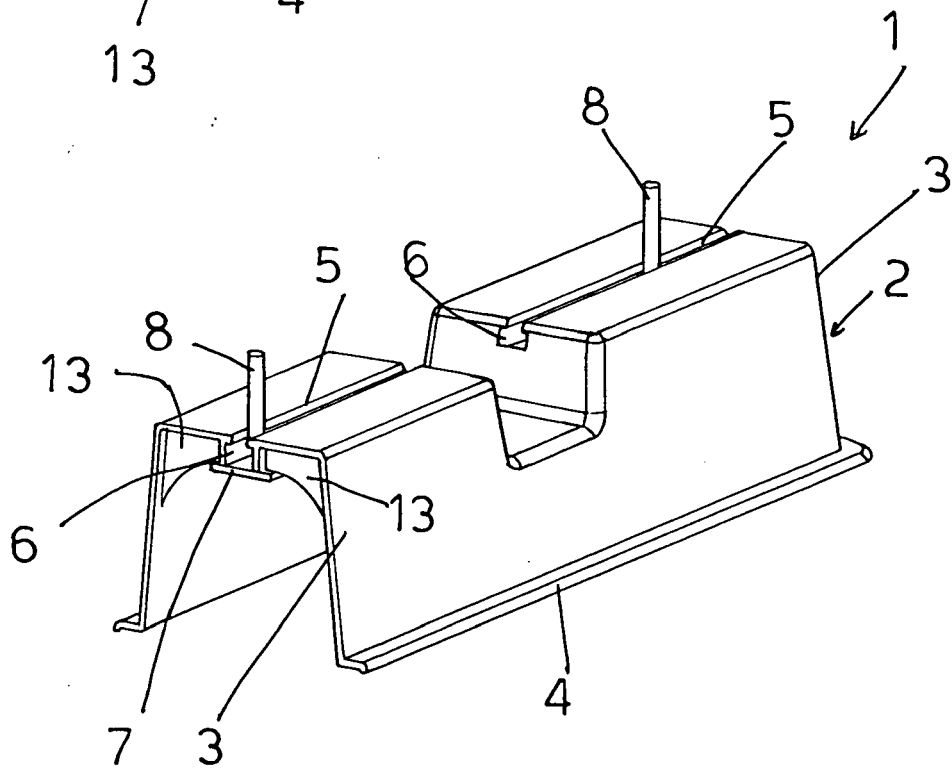
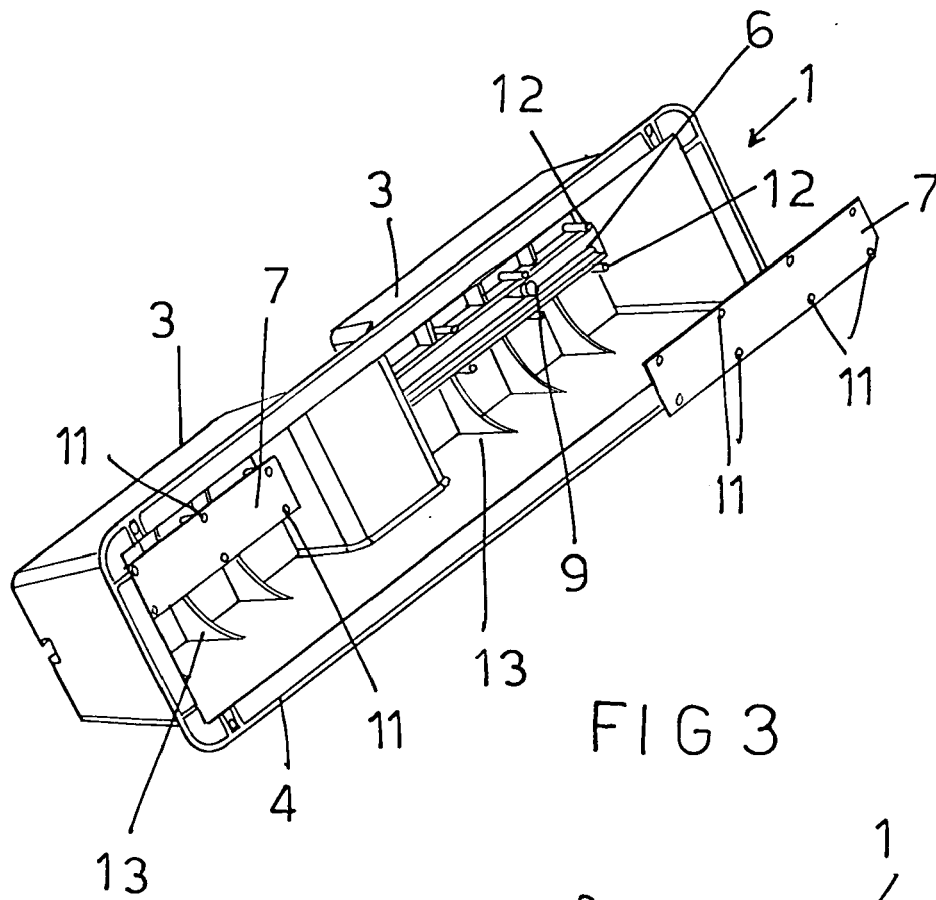


FIG 2

FIG 1



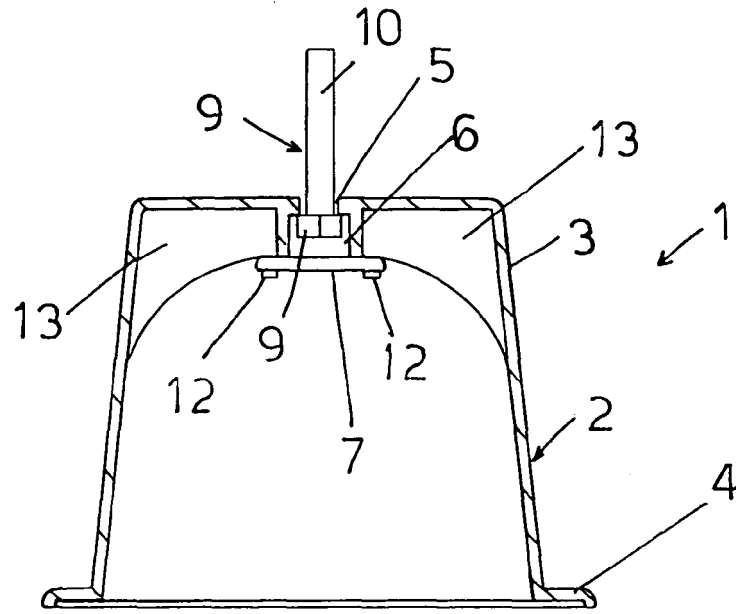


FIG 5

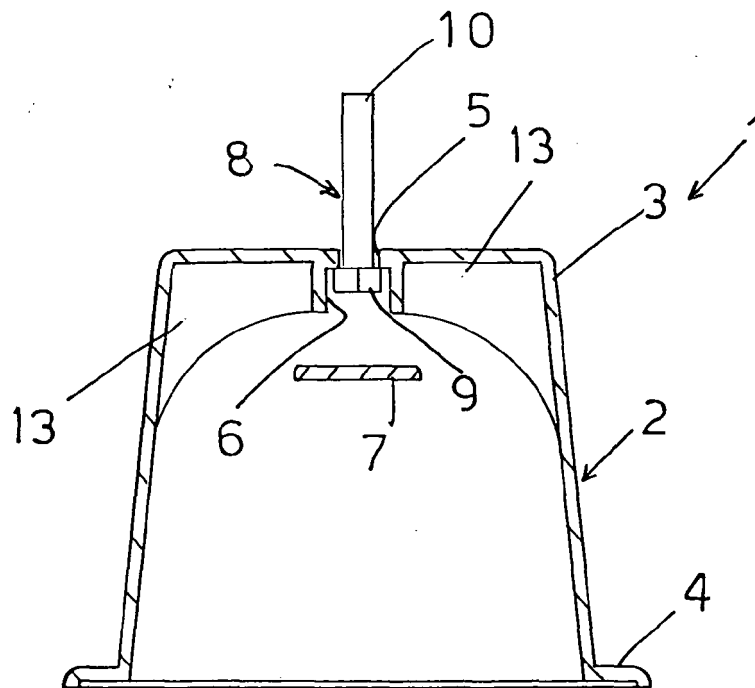


FIG 6