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(54) Improved modular seat for use in sports fields, cinemas, theatres, public rooms and in open-air environments

(57) An improved modular seat for use in sports fields, cinemas, theatres, public rooms and in open-air environments, comprises a backrest, a seat portion, which ends at a front portion thereof with downward turned and rounded flap.

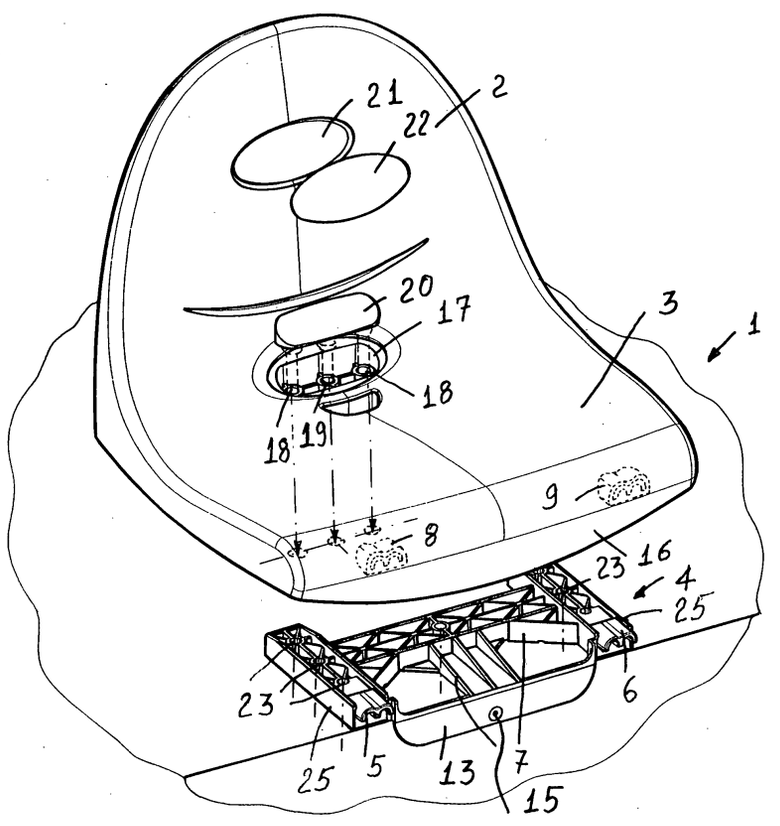

FIG. 1

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Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to an improved modular seat which has been specifically designed for use in sports fields, cinemas, theatres, public rooms and in open-air environments.

[0002] The inventive seat is characterized by a modular construction, i.e. it is constituted by several portions, essentially comprising an anchoring bottom or base, which can be coupled to a supporting slab or cross-member.

[0003] The anchoring base comprises a plurality of variously oriented stiffening ribs, providing an anchoring construction for anchoring the seat to the ground, which anchoring construction can be fixed by threaded pins or expansion plugs, to be housed in housing cavities formed in the body of the anchoring base.

[0004] The seat according to the invention comprises, moreover, a seat portion proper and a backrest made as a single-piece and including a plurality of anchoring seats and two contoured lugs.

[0005] The contoured lugs are formed in the front inner portion of the seat portion proper of the seat construction according to the invention.

[0006] The overall seat is made of a plastics material and has an anatomic configuration.

[0007] The seat portion comprises, at the front and rear parts thereof, a cavity, covered by a covering element.

[0008] At this covering element, the seat portion comprises a cavity having a grid-like construction, through which are provided a plurality of holes.

[0009] At least one of these holes is used for receiving fixing bolts, designed for fixing the seat portion to the anchoring base.

[0010] One or more other threaded bolts can be moreover used for fixing the anchoring base to any desired movable support, or to a support constituting an integrating portion of the building slab or floor.

[0011] From an examination of the constructional features of the modular seat according to the present invention, it immediately appears that the subject seat is very different from other available prior seats, since it can be assembled in a very easy and quick manner.

[0012] In fact, it can be applied by threaded bolts or expansion plugs or other suitable mechanical fixing elements.

[0013] The improved modular seat according to the present invention can be moreover easily repaired, if a portion thereof would be accidentally broken.

[0014] Another advantage of the subject seat with respect to prior seats is that the subject seat has a very long duration or life, since it is very strong and is made of a plastics material adapted to resist, in an open air environment, against weather agents.

[0015] A further advantage of the modular seat according to the present invention is that it is substantially free of any maintenance requirements.

[0016] Moreover, the inventive seat can be made by comparatively simple mold arrangements, since the seat portion and backrest portion of the seat are substantially separated from the anchoring bottom or base.

[0017] The anchoring base, in particular, is made of a separated piece and its reticular or grid construction comprises a plurality of suitably oriented ribs, thereby providing the anchoring base with a very high mechanical strength.

[0018] The anchoring base, moreover, is very simple construction-wise, and can be made by very simple mold arrangement allowing the anchoring base to be easily withdrawn from its mold, upon performing the molding process.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] The above and yet other advantages, of functional and constructional nature of the seat according to the present invention will become more apparent hereinafter from the following detailed disclosure of an improved modular seat embodiment, comprising a supporting base, which can be applied to a floor by bolts and can be associated with a top seat body by mutually joining elements, and a threaded throughgoing bolt, received in a specifically provided cavity.

[0020] Thus, the above mentioned and yet other characteristics of functional and constructional nature, of the improved seat according to the present invention will become fully understood from the following description with reference to the accompanying drawings, where:

Figure 1 is an exploded top side perspective view illustrating the modular seat according to the present invention, and clearly showing the constructional features of the structural elements forming the seat;

Figure 2 is a partially cross-sectioned view illustrating a side portion of the seat backrest, having peripheral edges provided with a hollow annular rounded or convex cross-section;

Figure 3 illustrates, in cross section, a partially disassembled side view of the seat portion and anchoring base, bearing on a concrete step-like slab;

Figure 4 is a further cross-sectioned side view illustrating the seat and anchoring base therefor applied to a building slab, also shown in cross-sectioned side view;

Figure 5 is a top plan view illustrating the inventive seat and backrest thereof;

Figure 6 is a bottom view illustrating the seat portion and anchoring base of the inventive seat;

Figure 7 is a side bottom perspective view showing the anchoring base of the seat according to the present invention; and

Figure 8 is a bottom plan view illustrating the seat

anchoring base.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0021] With reference to the number references of the above mentioned figures, the seat according to the present invention, which has been generally indicated by the reference number 1, comprises a backrest 2 and a seat portion proper 3, which, at the front part thereof, ends with a downward turned convex and curved flap 16.

[0022] At said downward turned flap 16, the seat portion 3 comprises, in its inside, receiving seats or recesses 8 and 9 for housing therein corresponding lugs 5 and 6 formed on the anchoring base for anchoring the inventive seat.

[0023] The anchoring base 4, in particular, comprises a plurality of stiffening ribs 7 and housing recesses 23, therein can be engaged threaded nuts or expansion plugs, for fixing the anchoring base 4 of the seat portion to a slab 14 or other supporting element.

[0024] The supporting and anchoring base 14, supporting the seat portion, is provided, at the front part thereof, with a turned edge 13, having a peripheral auxiliary hole 15, for receiving therein corresponding threaded bolts or expansion plugs for improving the fixing of the anchoring base 4 to the slab 14.

[0025] Said slab 14, as shown in figures 3 and 4, has preferably a step-like configuration, so as to hold the inventive seat 1 at a given height or level from the ground.

[0026] As shown, the lugs 5 and 6 engaging in said recesses 8 and 9, formed in the front inner part of the seat portion, have a 180°-reversed doubled "U" configuration.

[0027] In this connection it should be pointed out that said lugs could also have a different configuration, but adapted to fit that of the lugs 5 and 6 formed at the front portion of the anchoring base 4 of the seat portion 3 and of the backrest 2 of the inventive seat 1.

[0028] The backrest 2, in turn, comprises peripheral edges having a convex annular cross-section 11, with a lightening inner cavity 12.

[0029] Thus, the convex peripheral edges 11 define a sufficiently strong reinforcement or stiffening rib, having flexibility properties, allowing to provide the backrest 2 with a very good comfort and a long life duration.

[0030] The seat portion 3 comprises a cavity 17, on the bottom of which are provided receiving recesses 18 for engaging therein threaded bolts or expanding plugs.

[0031] The latter would operate as longitudinal anti-sliding elements for preventing the seat portion and backrest of the inventive seat 1 from sliding or slipping with respect to the anchoring base.

[0032] A further fixing element can be engaged in a housing recess 19, formed in the seat portion anchoring base, so as to mutually and firmly connect to one another the elements 3 and 4 forming the inventive seat 1.

[0033] The backrest 2 of the seat 1 comprises a housing recess 21 for engaging therein a small plate 22 on which it is possible to mark the number of the seat place, thereby allowing to properly locate the seat by the spectators, said small plate or label being moreover adapted to bear thereon a team logo, a sponsor data and so on.

[0034] The cavity 17 comprises moreover a plug/label 20 for covering the seats or recesses 18 and 19 for housing therein throughgoing bolts and on which can be printed the seat place or other wordings such as a team logo, sponsor name and so on.

[0035] As further shown, the anchoring base comprises, at constructional section members 25 laterally arranged of the ribs 7, a plurality of holes 23 for receiving therein bolts or expansion plugs for fixing the anchoring base to the slab or floor 14.

[0036] From the above disclosure it should be apparent that the inventive seats is very simple construction-wise.

[0037] Moreover, it can be easily made starting from plastics materials, by using simple molding patterns, allowing the seat to be easily removed from the mold.

[0038] While the inventive seat has been disclosed and illustrated with reference to a preferred embodiment thereof, it should be apparent that the disclosed embodiment is susceptible to several modifications and variations, all of which will come within the scope of the appended claims.

Claims

1. An improved modular seat, for use in sports fields, cinemas, theaters, public rooms and in open-air environments, **characterized in that** said seat comprises a backrest (2) and a seat portion (3), said seat portion (3) ending, at a front part thereof, with a downward turned convex and curved flap (16).

2. An improved modular seat, according to Claim 1, **characterized in that**, at said downward turned edge (16), said seat portion (3) comprises, in an inside thereof, housing recesses (8 and 9) for engaging therein corresponding lugs (5 and 6) formed at the anchoring base of said seat (1).

3. An improved modular seat, according to the preceding claims, **characterized in that** said anchoring base (4) comprises stiffening ribs (7) and housing recesses (23), in which can be engaged threaded nuts or expansion plugs, for affixing said anchoring base (4) of said seat portion (2) to a slab (14) or other supporting element.

4. An improved modular seat, according to one or more of the preceding claims, **characterized in that** said anchoring base (4) for supporting said seat portion (3) comprises, at a front part thereof, a turned edge (13) including an auxiliary hole (15) for

engaging therein threaded bolts or expanding plugs for improving the fixing of said anchoring base (4) to said slab (14).

5. An improved modular seat, according to one or more of the preceding claims, **characterized in that** said slab (14) to which said anchoring base is coupled, has a step-like configuration, so as to hold the seat (1) at a given level from the ground.

6. An improved modular seat, according to one or more of the preceding claims, **characterized in that** said lugs (5 and 6) to be engaged in said recesses (8 and 9) formed on said seat portion front part, have a 180°-reversed double "U" configuration.

7. An improved modular seat, according to one or more of the preceding claims, **characterized in that** said lugs (5 and 6) adapted to be engaged in said recesses (8 and 9) have a configuration mating that of said recesses formed on said front portion of said anchoring base (4) of the seat portion (2) and backrest (3) of said seat (1).

8. An improved modular seat, according to one or more of the preceding claims, **characterized in that** said backrest (2) comprises peripheral edges having an annular convex cross-section (11) including an inner lightening cavity (12).

9. An improved modular seat, according to one or more of the preceding claims, **characterized in that** said convex peripheral edges (11) constitute a strong stiffening and flexible rib.

10. An improved modular seat, according to one or more of the preceding claims, **characterized in that** said seat portion (3) comprises a cavity (17) having a bottom in which are formed recesses for engaging therein threaded bolts or expanding plugs.

11. An improved modular seat, according to one or more of the preceding claims, **characterized in that** said threaded bolts or expanding plugs operate as anti-slipping longitudinal elements for preventing said seat portion and backrest from slipping with respect to said anchoring base.

12. An improved modular seat, according to one or more of the preceding claims, **characterized in that** said seat comprises a further threaded bolt, adapted to be engaged in an engaging recess (19) formed in said anchoring base (4) of said seat portion (3), thereby mutually and firmly coupling to one another said elements (3 and 4).

13. An improved modular seat, according to one or more of the preceding claims, **characterized in that** said seat backrest comprises a further housing recess (21) for housing therein a small plate (22) for indicating the seat place or other wordings such a team logo, a sponsor name and the like.

14. An improved modular seat, according to one or more of the preceding claims, **characterized in that** said seat comprises moreover a cavity (17) covered by a plug/label (20) adapted to cover the recesses (18 and 19) for engaging therein through-going bolts, said plug/label (20) being adapted to bear thereon a place number or a team logo, sponsor name and the like.

15. An improved modular seat, according to one or more of the preceding claims, **characterized in that** said anchoring base comprises, at constructional cross-section members (25) thereof, laterally arranged of said ribs (7), a plurality of holes (23) for engaging therein bolts or expansion plugs for fixing said anchoring base to said slab or supporting element (14).

16. An improved modular seat, according to one or more of the preceding claims, **characterized in that** said seat comprises a plurality of constructional elements, specifically patterned, associated and arranged, and as broadly disclosed and illustrated in the preceding disclosure and several figures of the drawings accompangying the present Utility Model Patent Application.

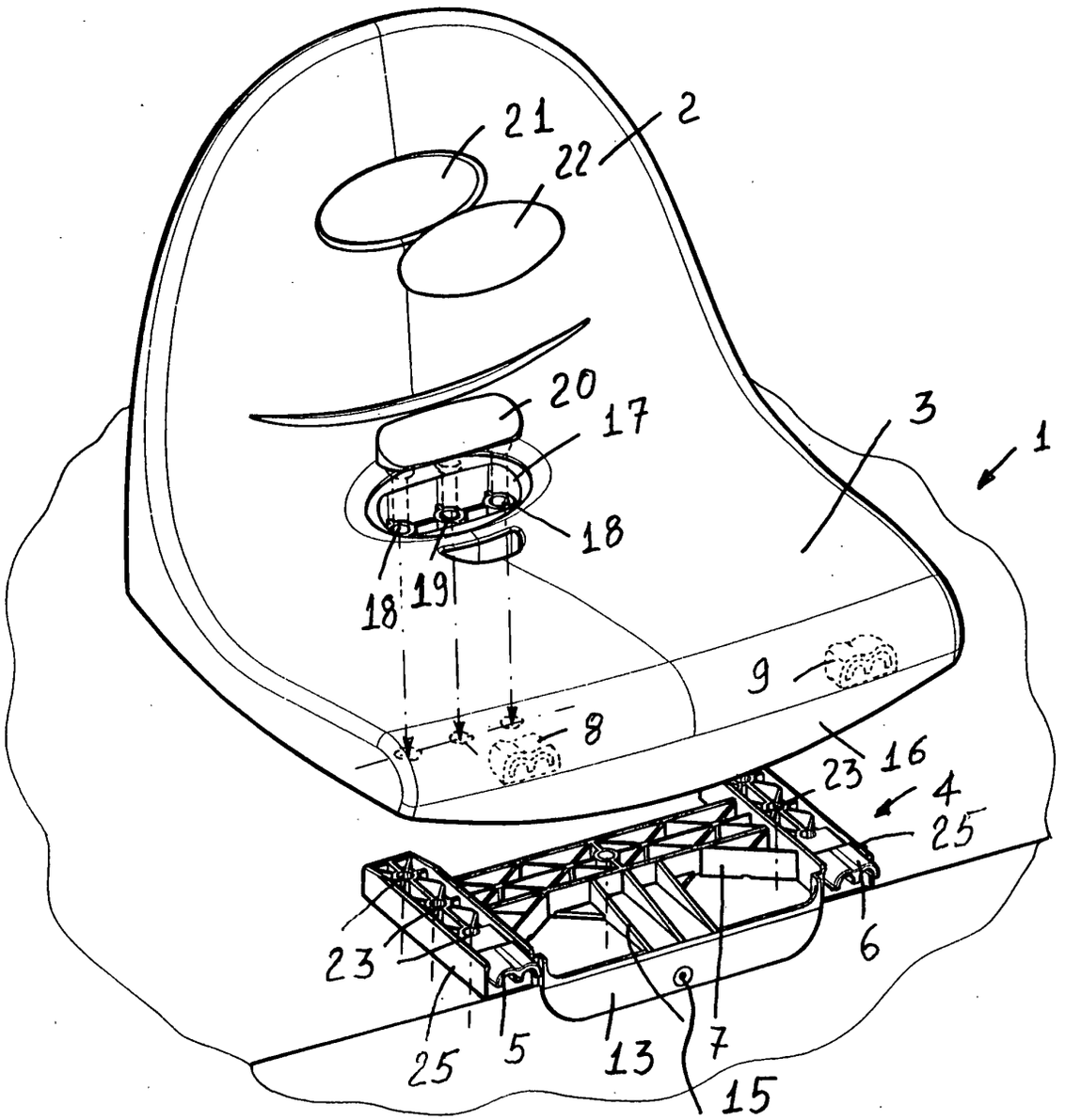

FIG. 1

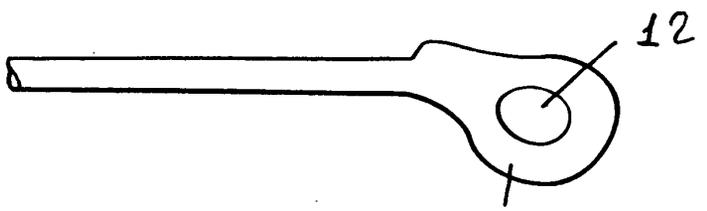

FIG. 2

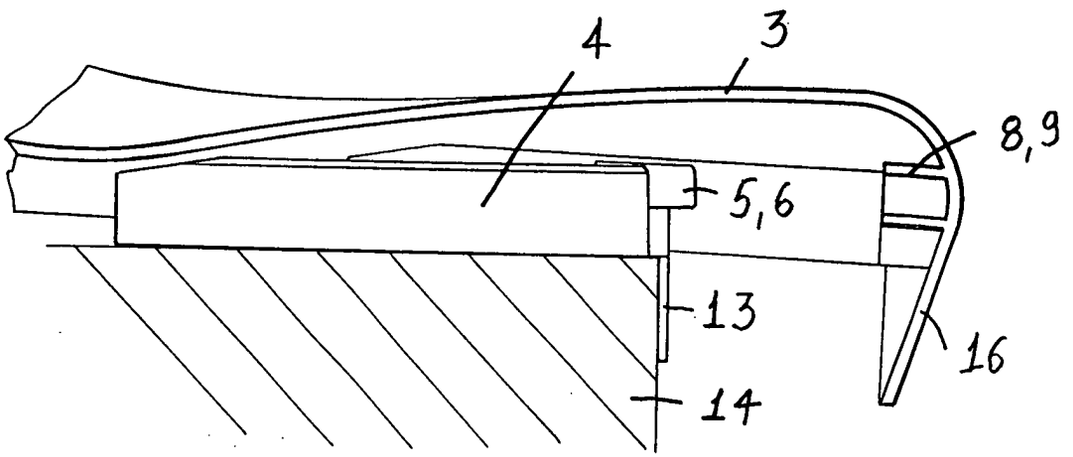

FIG. 3

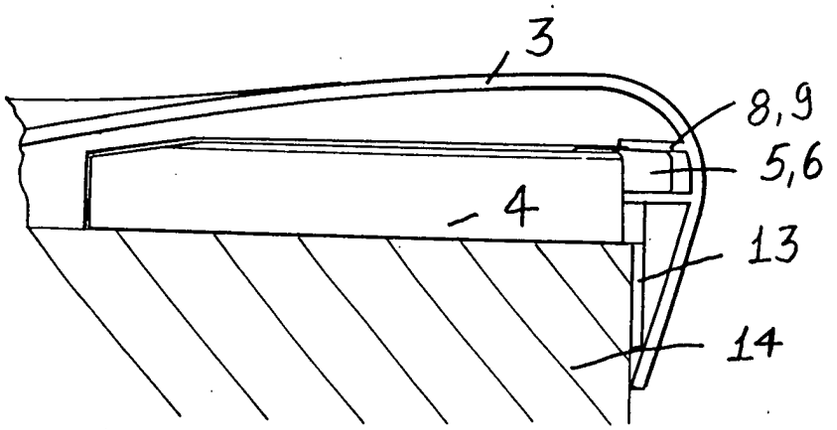

FIG. 4

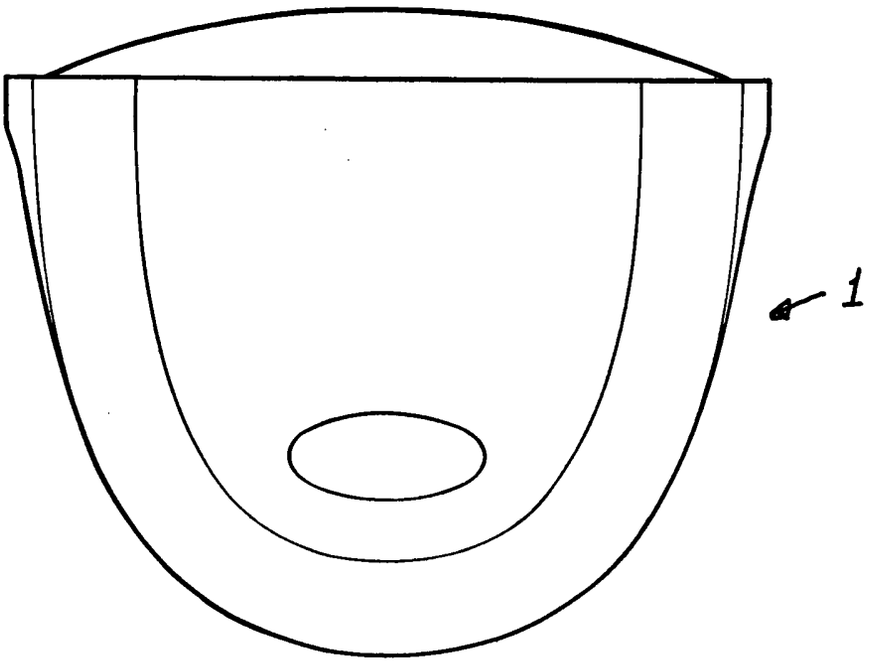

FIG. 5

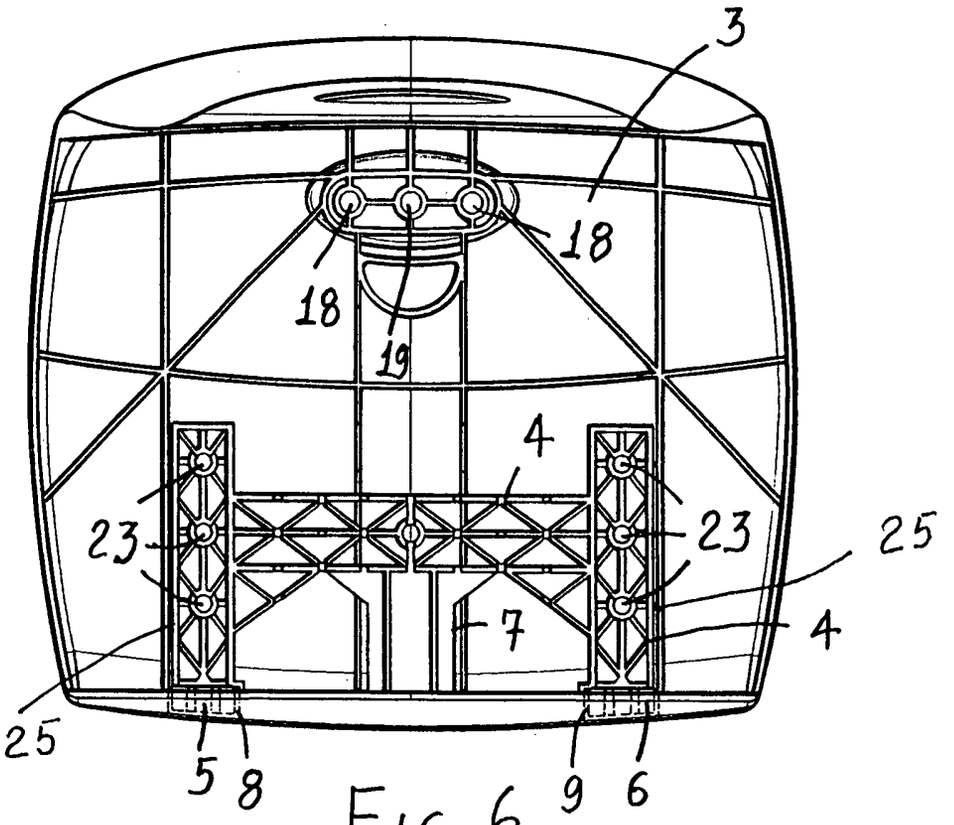

FIG. 6

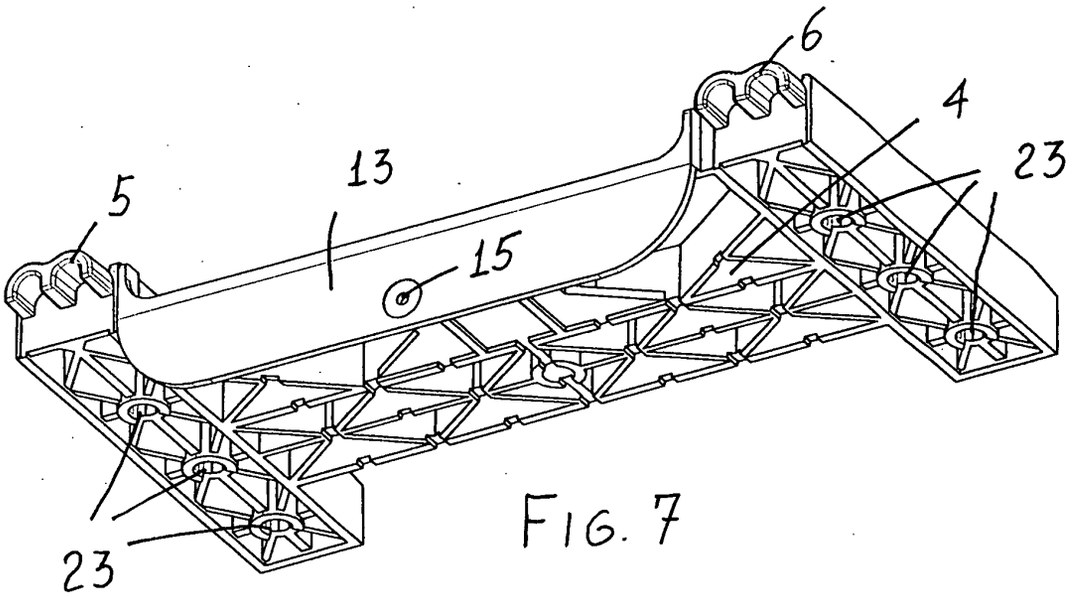

FIG. 7

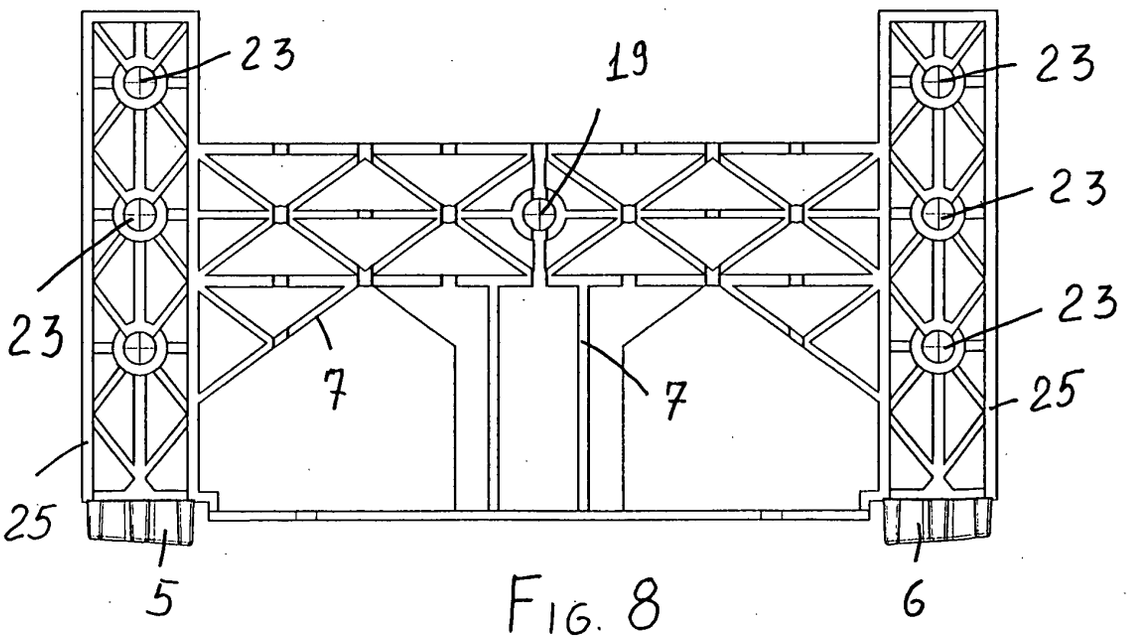

FIG. 8