United States Patent

Massonnet

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[54] **CHAIRS**

[72] Inventor: **Henry Massonnet,** Nurieux, Ain, France

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[30] **Foreign Application Priority Data**

Feb. 17, 1969 France.....6903959

[52] **U.S. Cl.**.....**297/445,** 248/188, 297/460
[51] **Int. Cl.**.....**A47c 1/12**
[58] **Field of Search**.....297/454, 445, 232, 458, 460; 248/188.1, 188, 188.8

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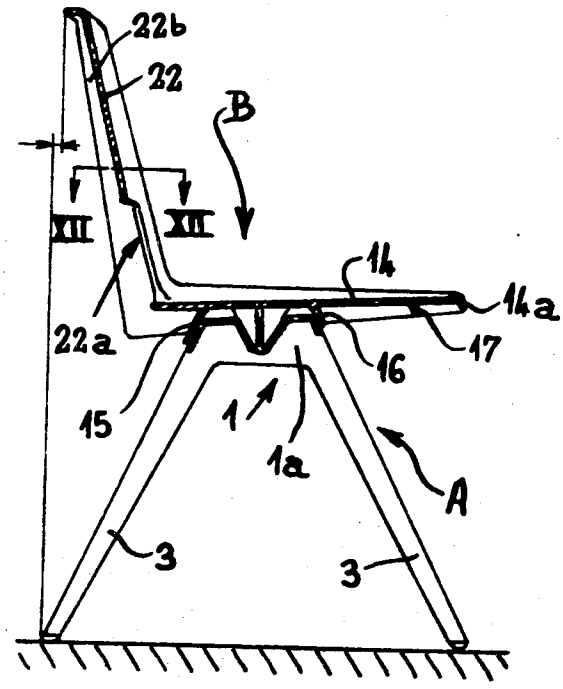
[57] **ABSTRACT**

A sectionalized chair comprising a stand including two pairs of legs joined by a cross bar and a unit comprising an integral back and seat, the cross bar having inclined and divergent rear and front faces and the lower surface of the seat being provided with formations for centering the seat relative to and attaching it to the inclined faces and the lateral or side edges of the seat fitting between the upper ends of the two pairs of legs.

2 Claims, 16 Drawing Figures



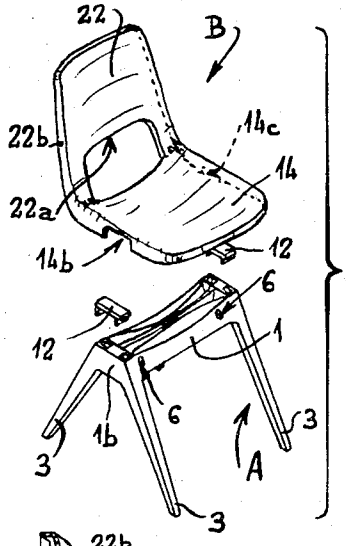


Fig. 1

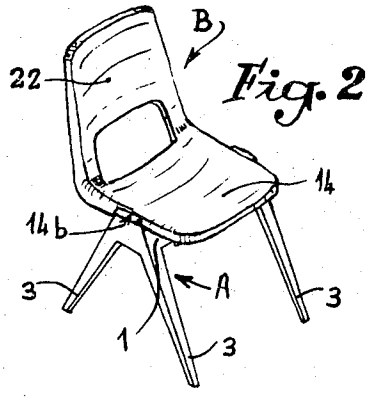


Fig. 2

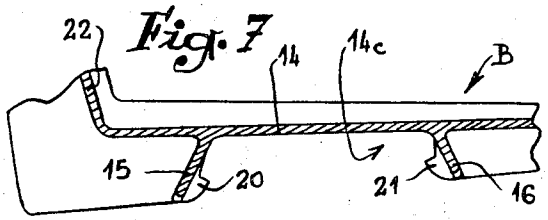


Fig. 7

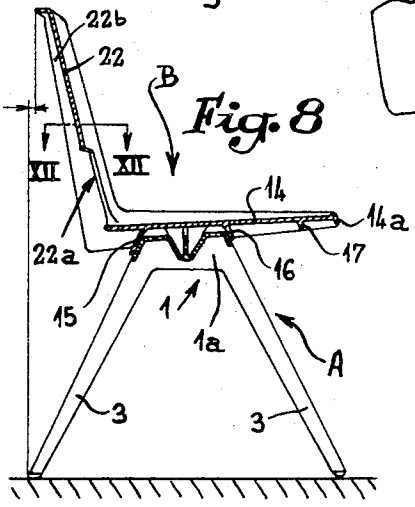


Fig. 8

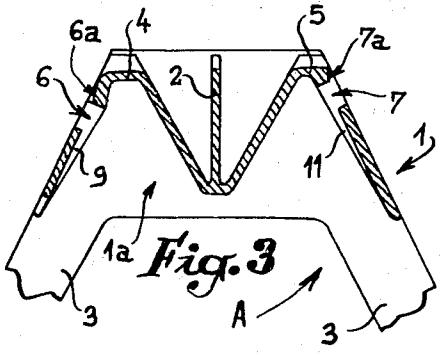


Fig. 3

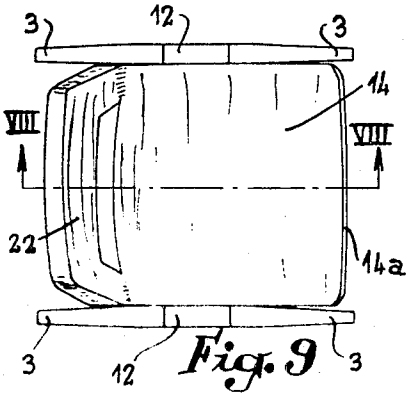


Fig. 9

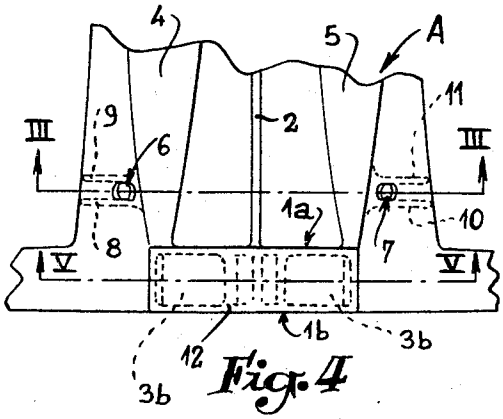


Fig. 4

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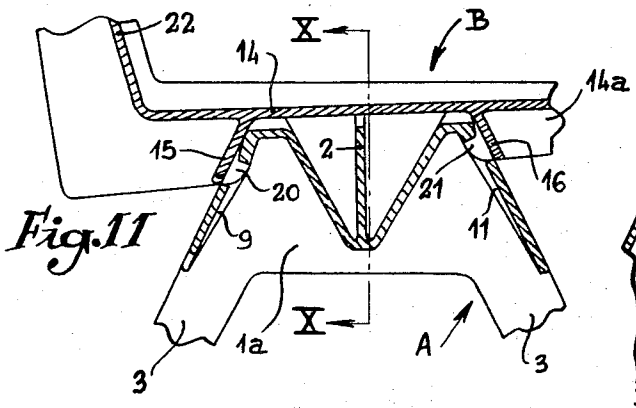


Fig.11

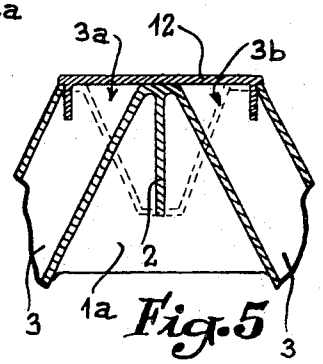


Fig.5

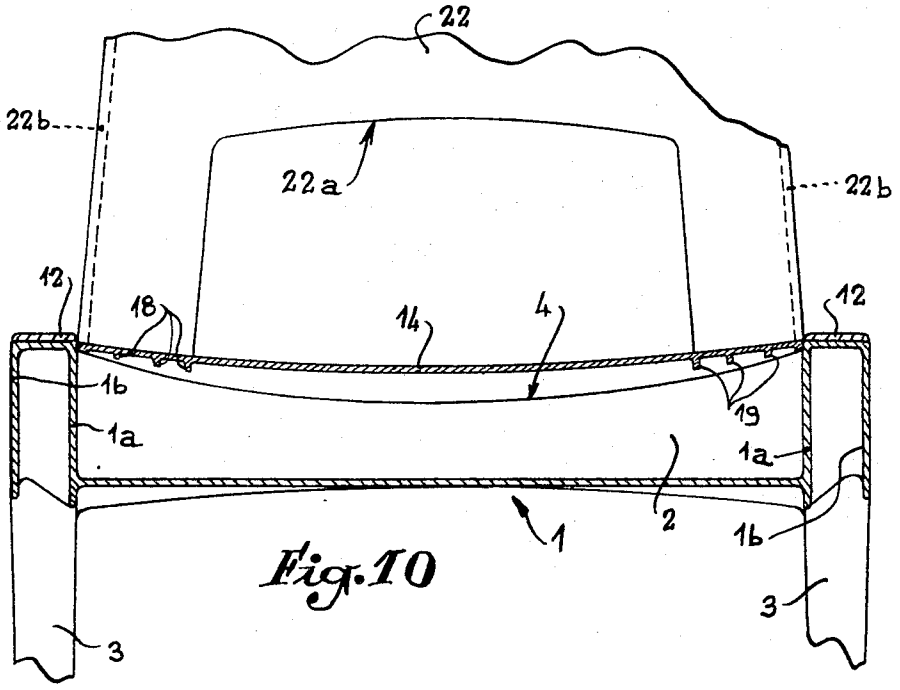
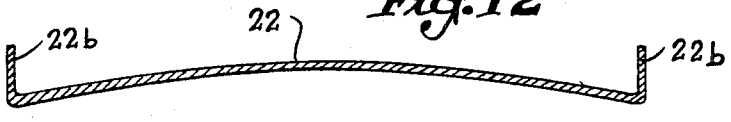


Fig.10

Fig.12



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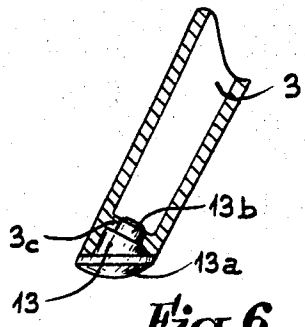

Fig. 6

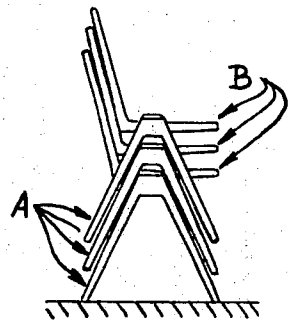

Fig. 15

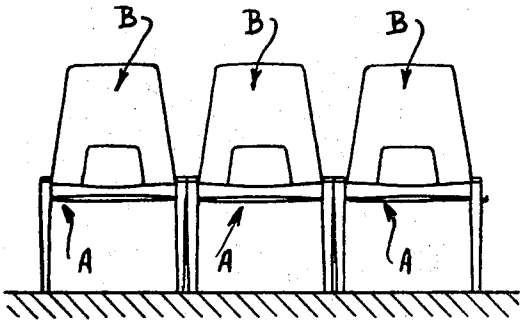

Fig. 14

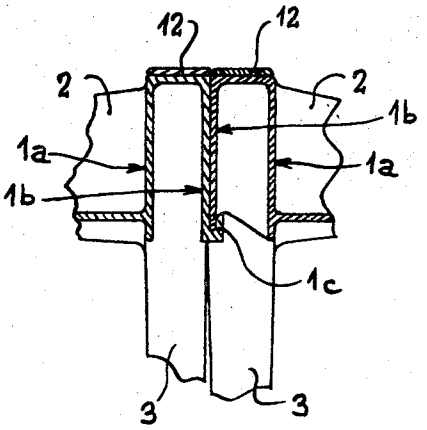

Fig. 13

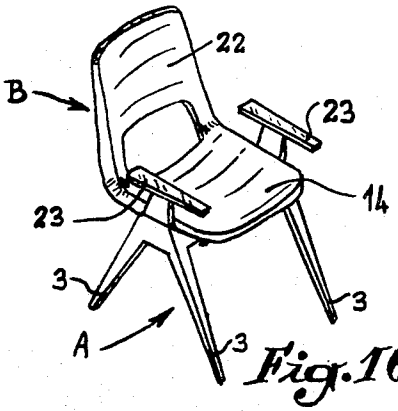

Fig. 16

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CHAIRS

This invention relates to chairs and especially to chairs intended to be used out of doors (gardens, cafe terraces, public places and similar places).

It is an object of the present invention to make possible the economic manufacture of a chair from moulded plastics material, which is able to fulfill any desired requirements.

According to the present invention there is provided a chair of sectionalized construction comprising a stand including two pairs of legs joined by a crossbar and a unit including an integral back and seat capable of being removably attached to the stand, the crossbar having inclined and downwardly divergent front and rear faces, and the lower surface of the seat being provided with means for centering and attaching it to said faces of the cross-bar with the lateral edges of the seat fitting between the upper ends of the two pairs of legs on the stand.

Embodiments of the present invention will now be described by way of example with reference to the accompanying drawings, in which:

FIG. 1 is an exploded, perspective view of the parts which constitute the chair according to the invention;

FIG. 2 shows the assembled chair in perspective;

FIG. 3 is a section of the crossbar of the stand on the line III—III of FIG. 4;

FIG. 4 is a partial plan view of the crossbar of the stand;

FIG. 5 is a partial section on the line V—V of FIG. 4;

FIG. 6 is a longitudinal partial section showing the end of one of the legs of the chair;

FIG. 7 is a partial cross section of the seat;

FIG. 8 is a vertical section of the assembled chair on the line VIII—VIII of FIG. 9;

FIG. 9 is a plan view of the chair;

FIG. 10 is a cross section of the mounted seat on the line X—X of FIG. 11;

FIG. 11 illustrates the detail of the assembly of the seat and stand;

FIG. 12 is a partial section on the line XII—XII of FIG. 8;

FIG. 13 shows in cross section the detail of the assembly of two chairs placed side-by-side;

FIG. 14 shows a row of chairs placed side-by-side by means of the assembly shown in FIG. 13;

FIG. 15 illustrates the method of stacking the chairs;

FIG. 16 shows a variation of the chair according to the invention.

The sectionalized chair of FIGS. 1 and 2 comprises essentially a stand A, and a unit or shell B of unitary construction.

The stand A is constituted by a crossbar 1 which has in cross section a W-shaped profile open at the bottom (FIG. 3). This crossbar 1 is reinforced by a partition 2 (FIG. 3) arranged along its longitudinal axis of symmetry and directed upwards. Each of the ends of the crossbar 1 is closed by an outer vertical wall 1*a* to which there are connected two diverging, obliquely-directed hollow legs 3 which are symmetrical in relation to the vertical axis of the crossbar 1. The upper edges 4 and 5 of the crossbar are rounded, as will be explained, in such a way, and as shown clearly in FIG. 4, that the width of each of them is not constant; it increases considerably from the vicinity of the beginning of the legs to midway of the crossbar.

Near to its ends, the crossbar 1 has on each of its outer inclined or oblique faces two oblong openings 6 and 7 which are suitably reinforced by rigs 8 and 9 and 10 and 11 respectively. As shown in FIG. 3 the upper part of the openings 6 and 7 are joined to the upper edges 4 and 5 of the crossbar by ramps 6*a* and 7*a*, the function of which will be described hereafter. The opening of the legs 3 at the level of the crossbar 1 defines two rectangular openings 3*a*, 3*b* (FIG. 4) which are preferably closed by a cover 12 (FIG. 5). It will be noted that the partition 2 extends beyond each wall 1*a* as far as an outer wall 1*b* which joins the outer faces of the legs 3.

A transverse partition 3*c* (FIG. 6) is arranged inside each of the legs 3 and set back slightly from its lower end. A stopper 13, preferably of rubber is engaged inside the foot in such a way that its head 13*a* abuts against the outer flange of the latter whereas the end 13*b* of its body co-operates with an opening provided in the partition 3*c*.

The seat 14 of the shell B is appropriately curved, it is surrounded by a perpendicular rim 14*a* (FIG. 8) in which two cut-outs 14*b* and 14*c* (FIGS. 1 and 2) are provided approximately opposite the transverse axis of the seat. These cut-outs are jointed by transverse ribs 15, 16 respectively (FIG. 7) directly obliquely so as to be able to co-operate with the outer faces of the crossbar, 1. A third rib 17 (FIG. 8) is arranged parallel to the rib 16, between the latter and the outer rim 14*a* of the seat 14.

The ribs 15 and 16 are connected in the vicinity of their ends by other perpendicular ribs 18 and 19 (FIG. 10). Each of these ribs 15 and 16 comprises, in addition, two hooks, 20 and 21, respectively, intended to snap into the openings 6 and 7 of the crossbar 1 (FIGS. 3, 7, and 11).

It will be understood that this assembly makes it possible to connect the unit or shell B with the stand A. The aforesaid snap-action is facilitated by the ramps 6*a* and 7*a* of the crossbar 1. When the seat 14 is in the rest position, the ribs 18 and 19 are not in contact with the upper edges 4 and 5 of the crossbar 1 (FIG. 10). In this manner, when a person sits down, they have the impression of comfort due to the contact with a resilient or supply surface. The displacement of the latter thus corresponds to the space between the lower edges of the ribs 18 and 19 and the edges 4 and 5 of the crossbar 1 and then when the latter abut against each other, the central part of the seat surface 14 can still be deformed resiliently downwards.

The back comprises a part 22 which at the level of its connection to the seat 14 has an opening 22*a* of substantially rectangular shape. The part 22 is surrounded by a rim 22*b* which is integral with the rim 14*a* of the seat 14. The part 22 is curved in order to correspond roughly to the shape of the back of the user (FIG. 12). In order that the latter does not rest against a rigid, uncomfortable surface, the cross section of the part 22 has a shape which becomes thinner starting at the edges in towards the center so as to have a certain pliability.

The lower edge of one of the two outer sides 1*b* of the stand A can comprise a hook 1*c* directed upwards and intended to co-operate with the lower edge of the corresponding side of another seat, in such a way as to allow the arrangement of rows, all the parts of which are held in place one in relation to the other (FIGS. 13 and 14).

The general shape of the chair has been designed such that the top of the back is in a vertical plane slightly displaced towards the outside in relation to that which is tangential to the extreme part of the two rear legs (FIG. 8) in such a manner that the back cannot be in contact with a wall.

The shape of the stand A, as well as the symmetrical arrangement of the front and rear legs and the shape of the shell, the seat of which has a width slightly less than that of the crossbar of the stand A facilitates the stacking of chairs in the manner illustrated in FIG. 15.

It can easily be seen that since the chair is inclined at its back (FIG. 8), rain water runs on to the latter and drains off onto the ground through the opening 22*a* of the back.

Moreover, it should be understood that the preceding description has only been given as an example and that it in no way limits the scope of the claimed invention. For example, the covers 12 can be replaced by arm-rests 23 (FIG. 16), the lower part of which would engage in the perforations 3*a*, 3*b* of the stand A, thus making it possible to produce a small armchair from the above-described chair.

What is claimed is:

1. A seat comprising:

a. A stand including two pairs of legs and a crossbar having two ends respectively joined to said pairs to connect same with each other, with said crossbar having an upwardly concave upper edge, and with said crossbar including:

a flat central vertical flange defining said arcuate upper edge and having a substantially straight lower edge;

two intermediate flanges diverging upwardly in V-shape from the lower edge of said central vertical flange, each intermediate flange having an upper edge;

and two lateral flanges diverging downwardly each from the upper edge of one of said intermediate flanges.

b. A resilient seat member having an underside including a central portion and lateral portions with said lateral portions resting on the upper edge of said crossbar while said central portion is spaced therefrom.

c. And means to secure said seat member to said crossbar adjacent the ends thereof.

2. In a seat as claimed in claim 1, the lateral portions of the underside of said seat member having downwardly extending projections to cooperate with said means to secure said seat member to said crossbar.

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