United States Patent

Nielsen

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[54] PIECE OF FURNITURE, PARTICULARLY A CHILD'S CHAIR

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[30] **Foreign Application Priority Data**

Aug. 20, 1969 Denmark 4472/69

[52] **U.S. Cl.** **297/170,** 297/1, 297/3

[51] **Int. Cl.** **A47c 9/04**

[58] **Field of Search** 297/3, 1, 441, 445, 456

[56] **References Cited**

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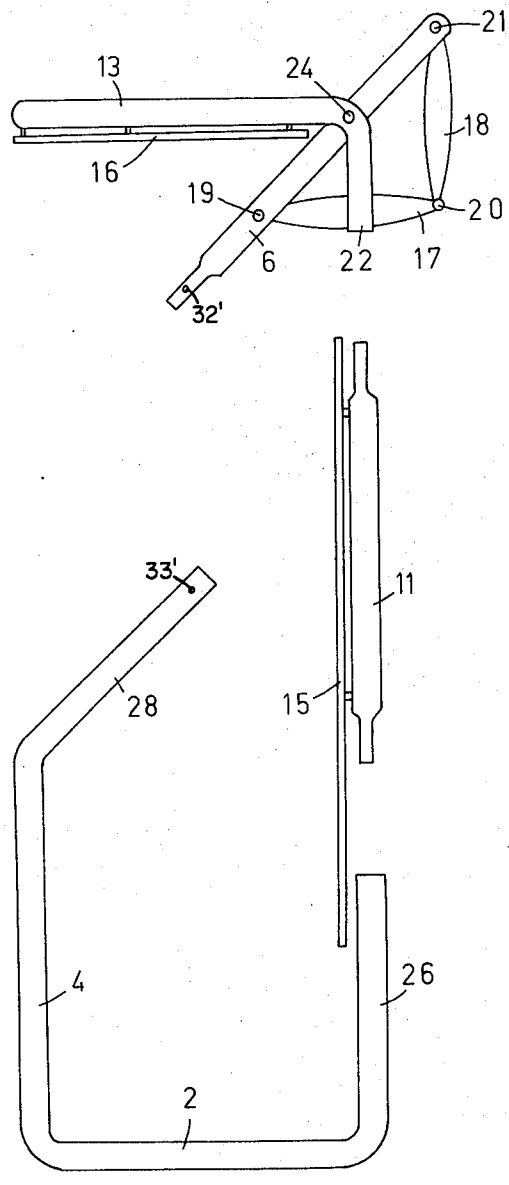
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Primary Examiner—James T. McCall
Attorney—Ernest A. Greenside

[57] **ABSTRACT**

The invention relates to furniture, particularly a child's chair, formed with table and seat portions arranged in such manner that the furniture is useable in two positions, in one of which it is independently useable and in the other of which it is useable in conjunction with a further piece of furniture, i.e., a dining table.

3 Claims, 7 Drawing Figures



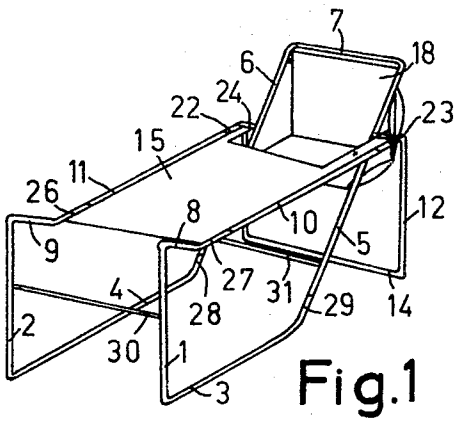


Fig.1

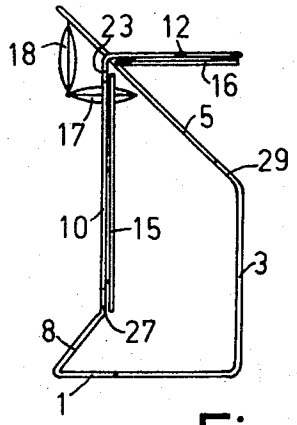


Fig.4

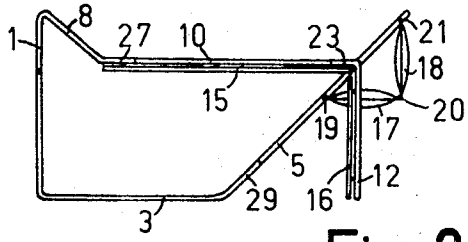


Fig.2

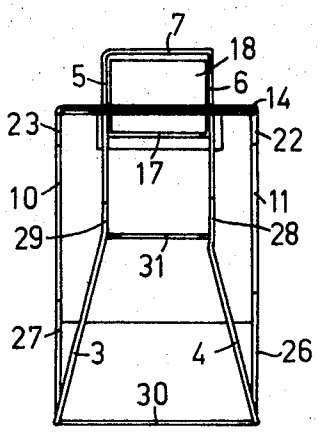


Fig.5

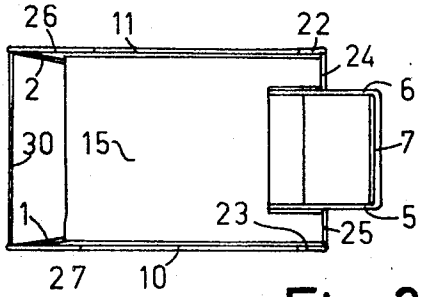
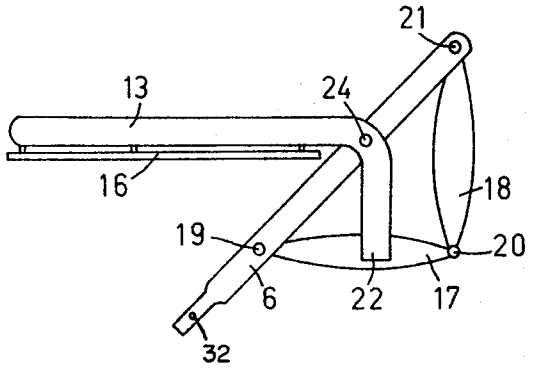


Fig.3


21
13
24
16
18
19
20
6
22
17
32

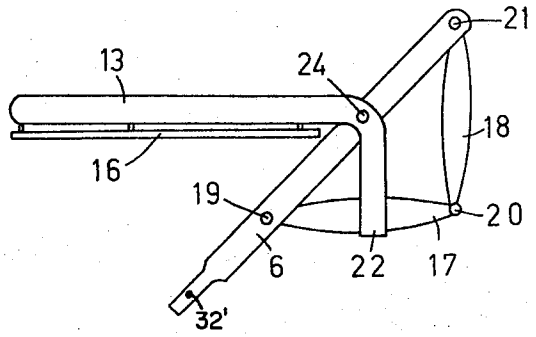

21
13
24
18
16
19
20
6
22
17
32'

Fig.7

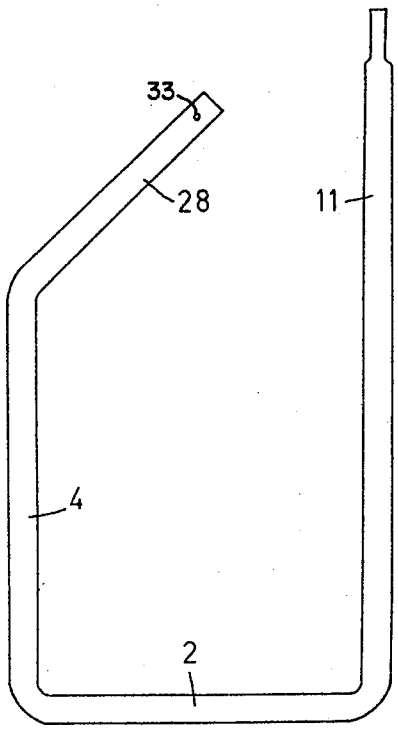
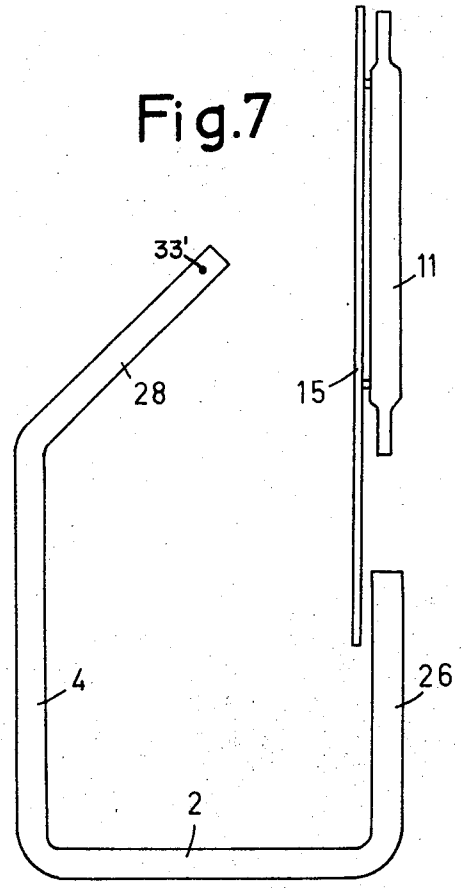

33
28
11
4
2

Fig.6


33'
11
28
15
4
26
2

PIECE OF FURNITURE, PARTICULARLY A CHILD'S CHAIR

The invention relates to a piece of furniture, particularly a child's chair with a frame of tubes or rods having two identical and parallel loop shaped lateral portions, where the two free end portions of each of the loops intersect each other and are mutually interconnected in pairs, preferably be means of two transverse frame parts, one set of corresponding end portions in the two loops forming part of a table portion which is horizontal in the chair's normal position of use, the other set forming part of an inclined seat frame portion, and that part of the closed portion of each of the loops which is arranged opposite the table portion being horizontal and serving as a support for the piece of furniture in the latter's normal position of use.

Child's chairs of this type which are composed of tubes have a very simple construction and may therefore be produced very inexpensively and are easy and comfortable to use, easy to clean and very durable. However, they take up relatively much space and are therefore expensive to forward and store.

The object of the invention is to devise a chair of the type indicated which may be packed to form a flat package, and which may be produced with substantially the same expense as previously known chairs of the same type, and which furthermore are easy to assemble after transport, and which are stable and durable in use, and according to the invention this is obtained by the fact that the two free end portions of each of the loops at their point of intersection are mutually interconnected, detachably or turnably on an axis at right angles to the plane of the loops, that end portion of each of the loops that forms part of the table portion being detachably connected to the closed loop portion at a portion which is directed downwards, while that end portion of each of the loops that forms part of the seat frame portion is swingably or detachably connected with the closed loop portion. The two closed loop portions will constitute two flat lateral parts, the seat frame portion will be arranged so as to abut the table portion and will preferably be fastened to the latter and be swung into the latter's plane, the piece of furniture thereby consisting of three separate parts which may be packed together as a flat package. On account of the angle which is formed between that lateral portions' two legs it is necessary, when assembling the chair, to pull the legs slightly away from each other when inserting the ends of the table portion and the seat frame portion, but after assembly the lateral portions' elastic clamping will prevent the chair from coming apart in an undesirable manner.

According to the invention, the piece of furniture may have a detachable transverse bar extending through the mutually interconnected end portions of the seat frame portion and the closed loop portions. By positioning the transverse bar it will be possible to lock all the chair's parts together so that they cannot come apart before the transverse bar is removed.

According to the invention, the portions of the closed loop portions which are connected to the table portion may be mutually interconnected by means of a table plate arranged substantially at right angles to the first table plate and swingably or detachably connected to the other portion of each of the other parts of the closed loops. Thereby a chair is obtained which may be used in two different positions, each position corresponding to one of the table plates. When the chair is disassembled it will preferably consist of an upper part consisting of the first table portion swingably connected to the seat frame portion and of the second table portion and the two lateral parts. It will be possible to pack the various parts into a flat package. After assembling the chair the second table portion will be elastically clamped between the first table portion and the two lateral parts so that the chair will not fall apart again by itself. A single transverse bar through the mutually interconnected end portions of the seat frame portion and the lateral parts will also in this case be able to lock all the chair's parts together.

The invention will be described more in detail below with reference to the accompanying drawings, wherein

FIGS. 1 — 3 show an embodiment of a chair according to the invention, the views being in perspective, lateral, and from above, respectively, the chair being arranged in a lying position,

FIGS. 4 and 5 show the chair in a standing position, the view being lateral and frontal, respectively,

FIG. 6 shows another embodiment of a chair according to the invention, the view being lateral and the chair being disassembled, and

FIG. 7 shows a lateral view of a third embodiment of a chair according to the invention corresponding substantially to the embodiment shown in FIGS. 1 – 5.

The piece of furniture shown in FIGS. 1 – 5 has a steel tube frame, two table plates and a seat. In the position shown in FIGS. 1 – 3 the frame has two nearly vertical lengths 1 and 2, two horizontal lengths 3 and 4, two inclined lengths 5 and 6, and a horizontal length 7 which connects the upper ends of the lengths 5 and 6. The upper ends of the lengths 1 and 2 are connected with short inclined lengths 8 and 9, the latter being connected with horizontal lengths 10 and 11, the latter being connected with two vertical lengths 12 and 13, and the latter being connected with each other by a horizontal length 14. A table plate 15 is suspended on the two lengths 10 and 11, and a table plate 16 is suspended on the two lengths 12 and 13. On the two inclined lengths 5 and 6 there is arranged a seat having a seat piece 17 and a backrest 18. The seat piece and the backrest are constituted by two cushions of plastics material which are connected by a common edge 20 and are suspended on two rods 19 and 21. Thereby it is obtained that the seat may be turned "inside out" to the position shown in FIG. 4, the backrest being folded together in the process of turning the seat inside out.

In the position shown in FIGS. 1 – 3 the seat piece 17 is placed relatively low, and the table plate 15 has a height suitable for a child sitting on the seat. In the position shown in FIGS. 4 and 5 the seat piece is placed relatively high, and the table plate is preferably at such a height that it can project in over the table top of an ordinary dining table.

The table plate 16 is riveted to the tube lengths 12, 13 and 14 and together with the later it constitutes the upper part of the chair to which the seat frame portion, comprising the tube lengths 5, 6 and 7, is connected swingably around shafts 24 and 25.

Seen from the side the chair has, as shown in FIGS. 6 and 7, the shape of a loop, where the two free end portions of the loop are constituted by the table portion and the seat frame portion which intersect each other at the shafts 24 and 25, while the loop's closed portion comprises the tube lengths 11, 2, 4, 28 and 10, 1, 3, 29, respectively. In the embodiment shown in FIG. 6 the tube lengths mentioned form the two lateral parts of the chair where the portions 10 and 11 at the free end have a narrowed portion which fits into the free end of the tube pieces 23 and 22 while the free ends of the tube pieces 28 and 29 fit around narrowed portions at the ends of the tube pieces 5 and 6.

In the embodiment shown in FIG. 7 the table plate 15 is riveted to the tube pieces 11 and 10 and forms the chair's second table portion together with said tube pieces while the lateral portions are constituted by the tube lengths 26, 2, 4, 28 and 27, 1, 3, 29, respectively. The downwards extending ends of the tube pieces 10 and 11 have narrowed portions which fit into the free ends of the tube lengths 27 and 26.

When the rod 19 in the chair shown in FIG. 6 or 7 is pulled out the seat and the backrest can be turned together with the seat frame portion into the plane of the chair's first table portion, and the flat upper part formed thereby can, together with the lateral parts and the second table portion if such is provided, be packed into a flat package.

Since the tube pieces 28 and 11 or 29 and 10 form an angle with each other it will be necessary during assembly to pull these somewhat away from each other before they are inserted into or around the corresponding tube ends of the upper part. But after assembly the resiliency of the tubes will prevent the

chair from falling apart again, as in the embodiment shown in FIG. 7 they at the same time keep the chair's second table portion in a clamped position. After inserting a transverse bar **31** through the ends of the tube pieces **6, 28** and **5, 29** the various parts of the chair will be locked together and cannot be separated before the bar is removed. It will, of course, be understood that before inserting bar **31** apertures **32, 33** (FIG. **6**) or **32'**, **33'** (FIG. **7**) should be in proper alignment to receive said bar.

It is to be understood that the chair according to the invention may be provided with further transverse bars, as for instance at transverse bar **30** as shown in FIGS. **1, 3** and **5** when particularly pronounced stability of the chair is desirable. Furthermore, it is to be understood that the various parts of the chair according to the invention may be connected in various manners. In the embodiment shown in FIG. **6** the lateral parts may thus be pivotably connected to the upper part at the points of connection between the tube pieces **6, 28** and **5, 29**, respectively, in such a manner that they are pivotable around the latter's longitudinal axes. By designing the tube portions in a suitable manner the lateral parts may thus be pivoted into the plane of the seat frame portion, and the later may be pivoted into the plane of the table portion, and the whole assembly may be packed in a package with practical dimensions. In the embodiment shown in FIG. **7** the lateral parts may be pivotably connected with the chair's second table portion and may be pivoted into the latter's plane.

I claim:

1. A piece of furniture, particularly a child's chair, with a frame of tubes or rods having two identical and parallel loop shaped lateral portions, where the two free end portions of each of the loops intersect each other and are mutually interconnected in pairs, preferably by means of two transverse frame portions, one set of corresponding end portions in the loops forming part of a table portion which is horizontal in the chair's normal position of use, the other set forming part of an inclined seat frame portion, and that part of the closed portion of each of the loops which is arranged opposite the table portion being horizontal and serving as a support for the piece of furniture in the latter's normal position of use, characterized in that the two free ends of each of the loops at their point of intersection are mutually interconnected detachably or turnably on an axis at right angles to the plane of the loops, that end portion of each of the loops that forms part of the table portion being detachably connected to the closed loop portion at a portion which is directed downwards, while that end portion of each of the loops that forms part of the seat frame portion is swingably or detachably connected with the closed loop portion.

2. A piece of furniture according to claim **1**, characterized in that it has a detachable transverse bar extending through the mutually interconnected end portions of the seat frame portion and the closed loop portions.

3. A piece of furniture according to claim **1**, characterized in that the portions of the closed loop portions which are connected to the table portion are mutually interconnected by means of a table plate arranged substantially at right angles to the first table plate and swingably or detachably connected to the other part of each of the other portions of the closed loops.

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