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⑤④ **Foldable chair with padded seat and backrest.**

⑤⑦ A foldable or collapsible chair with padded seat and backrest, comprising a rigid rear panel (1), two side panels (2) having a rear portion (2') fixed to the rear panel (1) and a front portion (2'') hingedly connected to the fixed portion (2'), and a seat (12)-backrest (13) assembly hinged together to be brought from their extended configuration to the folded one where they lay vertically against each other. In the latter condition, their bulk is such as to enable a 90° folding movement of the front portion (2'') of each side panel (2), thereby they bound a parallelepipedal space with the rear portions (2') and rear panel (1).

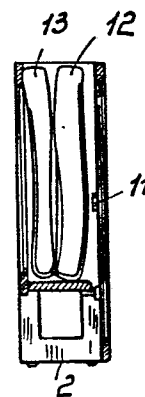


Fig. 6

COMPLETE DOCUMENT



EP 0 048 413 A2

This invention relates to a foldable or collapsible chair with padded seat and backrest.

Known are foldable chairs of various types: they generally comprise a rigid structure, of either
5 wood or metal, and a seat and backrest formed from canvas or similar flexible material having adequate tensile strength.

However, such known foldable chairs cannot be implemented with padded seats and backrests because
10 the padding would require a rigid frame, which obviously restricts the chair foldability.

Indeed, there have been provided padded chairs, but these merely have a tiltable seat and cannot be regarded as foldable chairs proper. Therefore, their
15 only advantage is that their bulk can be somewhat reduced, but are generally designed as fixed chairs and are specially useful for cinema house applications.

Also available are foldable chairs with padded seats, but these are not fitted with armrests, and
20 are of little use for traditional foldable chair applications.

Furthermore, conventional foldable chairs and foldable seats in general, in their folded condition, do occupy a volume which, although reduced with
25 respect to their in-use condition, is of irregular configuration and disallows any orderly arrangement of the folded chairs in either rows or stacks.

Accordingly the task of this invention is to obviate all such disadvantages, and provide a
30 fully padded foldable chair which occupies, in the

folded condition thereof, a perfectly parallelepipedal volume.

This task is achieved, according to the invention, by a foldable chair with padded seat and
5 backrest, characterized in that it comprises:

- a vertical rear rigid panel;
- two vertical side panels extending orthogonally to the rear panel and comprising a fixed rear portion fixedly engaged with said rear panel, and a front
10 portion hingedly connected to said fixed portion and having a length dimension substantially equal to one half the width of the rear panel; and
- a padded seat-backrest assembly, the seat and backrest thereof are mutually hinged to each other as
15 well as to the fixed portion of said side panels about a separate hinge axis, said assembly being arranged to be brought from an in-use configuration, in which the backrest deviates slightly from the vertical position and the seat deviates slightly
20 from the horizontal position and rests on supports provided on the inner surface of the front portions of said side panels, to a rest configuration, in which the seat and backrest extend vertically, substantially parallel and opposite each other, and are fully
25 included within the parallelepipedal volume bound by the rear panel, two rear portions of said side panels and two front portions thereof being turned through 90° to form a front wall extending parallel to said rear panel.

30 The invention will be further explained with

reference to a preferred embodiment thereof,
described herein by way of example and not of
limitation in conjunction with the accompanying
drawings, where:

5 Figure 1 is a perspective front view of the
foldable chair according to the invention;

Figure 2 is a rear perspective view thereof;

Figure 3 is a top plan view thereof;

10 Figure 4 is a side view taken in the direction
of the arrow IV-IV of Figure 3;

Figure 5 is a vertical section view taken along
the line V-V of Figure 3;

Figure 6 is a similar view to Figure 5, showing
the foldable chair in the folded condition thereof;

15 Figure 7 is a plan view of the chair in the
folded condition; and

Figure 8 is a perspective view of a number of
foldable chairs as folded and leaning against one
another.

20 As it may be seen in the drawing figures, the
foldable chair of this invention comprises a rigid
outer structure formed by a rear panel 1 and two
side panels 2, in turn comprising a rear portion 2',
fixedly engaged with the rear panel 1, and front
25 portion 2", hingedly connected to the rear portion 2'
by means of a hinge pair 3. The panels 1, 2', 2"
preferably include a peripheral frame 4 and an inner
portion 5 covered with cloth or any other suitable
material.

30 Moreover, in the upper region of the rear portion

2' of the panels 2, there are formed recesses 6 to facilitate the manual lifting of the chair.

Whereas the panels 2 extend downwards to the floor level and are provided with shoes 7, preferably 5 made of steel, the rear panel 1 ends at a higher level whereat a stiffening crossmember 8 is located the ends of which are secured to the fixed rear portions 2' of the side panels 2.

The width of each front portion 2" of the side 10 panels 2 is equal to one half the width of the rear panel 1.

The angular extension of each front portion 2" relatively to the corresponding rear portion 2' of each side panel 2 is from the position whereat the 15 two portions 2' and 2" are parallel to each other (see Figure 3) to the position where the two portions are perpendicular to each other (see Figure 7). The former position is limited by the provision of a guiding compass or caliper 9 for each panel 2, and 20 the latter position is limited by the portion 2" abutting against the front edge of the crossmember 8. The latter position is made stable by magnets 10 and 10' provided on said portions 2" and said crossmember 8.

25 On the inner wall of the portion 2", there are also secured two wedge-like supports 11 for resting thereon , as will be apparent hereinafter, the seat 12.

The seat 12 and backrest 13 of the folding chair according to the invention are of the padded type and 30 hingedly connected to each other at a horizontal axis



hinge 14.

The seat 12, moreover, is supported by the portions 2' of the side panels 2 through brackets 15 which are hingedly connected to said portions 2' about horizontal pivot pins 16 separate from the hinge 14.

The foldable chair of this invention operates as follows.

In the in-use condition of the foldable chair (see Figures 1 to 5), the portions 2' and 2" of each side panel 2 are held coplanar together, the seat 12 being held substantially horizontal and supported in that position by the brackets 15 on the rear, and by the wedge-like supports 11 on the front. Thanks to the linked condition of the seat 12 with the backrest 13, the latter arranges itself slightly inclined and abuts on the rear against the upper edge of the rear panel 1. In this arrangement, the upper edge of each side panel 2 forms an armrest for the chair.

To fold the chair down, one first raises the front edge of the seat 12 by tilting it about the hinge pins 16 of the brackets 15 in the direction of the arrow 17 of Figure 5. Thus, owing to the offcenter position of the hinge 14 relatively to said pivot pins 16, the backrest 13 is pulled downwards and at the same time brought to a vertical position. Upon completion of this tilting movement, the seat 12 and backrest 13 will be perfectly vertical and leaning against each other and, thanks to their relatively



small size, will occupy a limited volume, which enables the subsequent folding of the front portions 2" of the side panels 2 until they are brought to rest with their magnets 10 in abutment relationship 5 against the magnets 10' of the crossmember 8.

In this configuration, (see Figures 6 and 7) the foldable chair occupies a perfectly parallelepipedal volume bound on the rear by the panel 1, on the sides by the rear portions 2' of the 10 side panels 2, and on the front by the front folded portions 2" of said side panels 2. Thus folded, the chair can be readily stacked upon other similar chairs or leaned in rows thereagainst (see Figure 8).

The invention has been illustrated and 15 described with reference to a preferred embodiment thereof, but it will be appreciated that several modifications may be introduced in practicing it, without departing from its true scope.

CLAIMS

1 1. A foldable chair with padded seat and back-
2 rest, characterized in that it comprises:
3 - a vertical rear rigid panel (1);
4 - two vertical side panels (2) extending orthogonal-
5 ly to the rear panel (1) and comprising a fixed
6 rear portion (2') fixedly engaged with said rear
7 panel (1), and a front portion (2'') hingedly
8 connected to said fixed portion (2') and having a
9 length dimension substantially equal to one half
10 the width of the rear panel (1); and
11 - a padded seat (12)-backrest (13) assembly,
12 the seat (12) and backrest (13) thereof are mutually
13 hinged to each other as well as to the fixed
14 portion (2') of said side panels (2) about a
15 separate hinge axis (14), said assembly being
16 arranged to be brought from an in-use configuration,
17 in which the backrest (13) deviates slightly from
18 the vertical position and the seat (12) deviates
19 slightly from the horizontal position and rests on
20 supports (11) provided on the inner surface of the
21 front portions (2'') of said side panels (2), to a
22 rest configuration, in which the seat (12) and
23 backrest (13) extend vertically, substantially
24 parallel and opposite each other, and are fully
25 included within the parallelepipedal volume bound
26 by the rear panel (1), two rear portions (2') of
27 said side panels (2), and two front portions (2'')
28 thereof, being turned through 90° to form a front
29 wall extending parallel to said rear panel (1).

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1 2. A foldable chair according to Claim 1,
2 characterized in that said panels (1,2',2'') comprise
3 a peripheral frame (4) and an inner covered portion
4 (5).

1 3. A foldable chair according to Claim 1,
2 characterized in that on the rear portion (2') of
3 each side panel (2), there is formed an external
4 recess (6) for manually lifting the chair.

1 4. A foldable chair according to Claims 1 to 3,
2 characterized in that it comprises a crossmember (8)
3 joined to the rear panel (1) and rear portions (2')
4 of the side panels (2) and forming, with the front
5 edge thereof, an abutment for the front portions (2'')
6 of the side panels (2) in the folded condition of
7 the chair.

1 5. A foldable chair according to Claims 1 and 4,
2 characterized in that the front portion (2'') of
3 each side panel (2) and the front edge of the cross-
4 member (8) are provided with magnets (10,10') brought
5 mutually in contact when said front portions (2')
6 are in the folded condition.

1 6. A foldable chair according to Claims 1 to 6,
2 characterized in that the seat (12) is hinged to the
3 rear portion (2') of each side panel (2) about a
4 separate axis (16) from the hinge axis (14) between
5 the seat (12) and backrest (13).

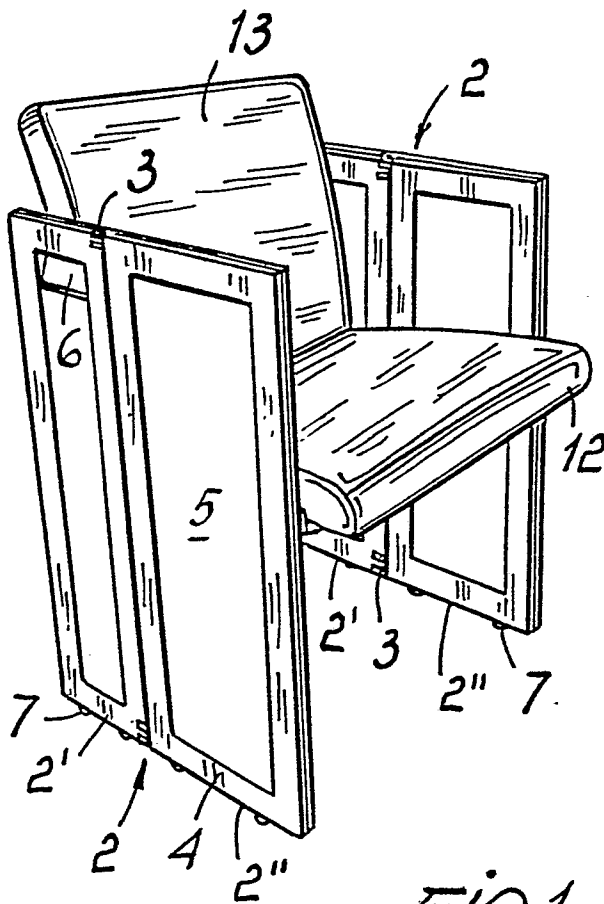


Fig. 1

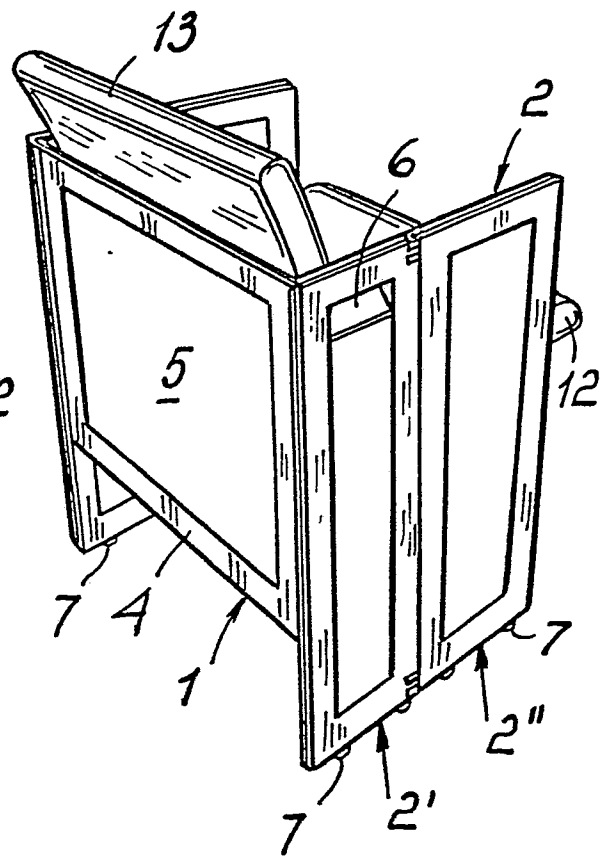


Fig. 2

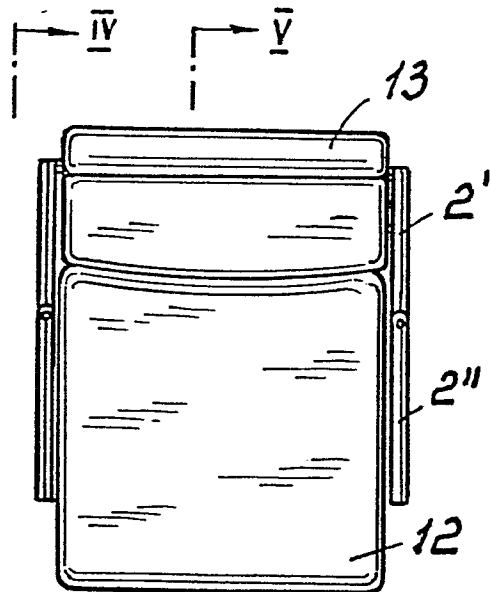


Fig. 3

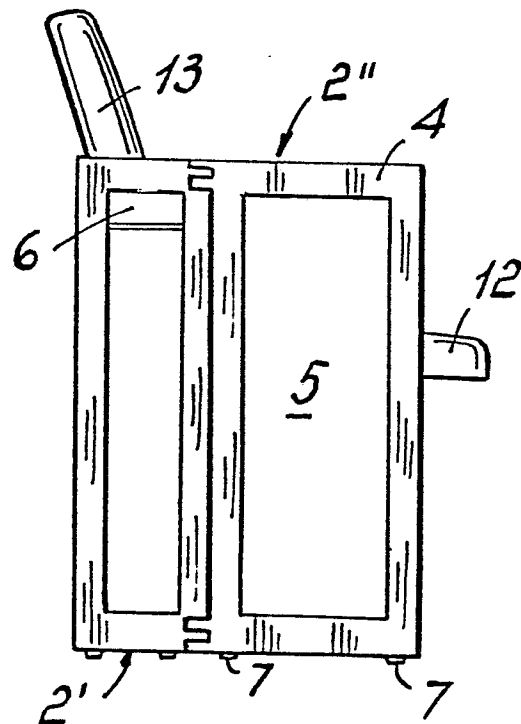


Fig. 4

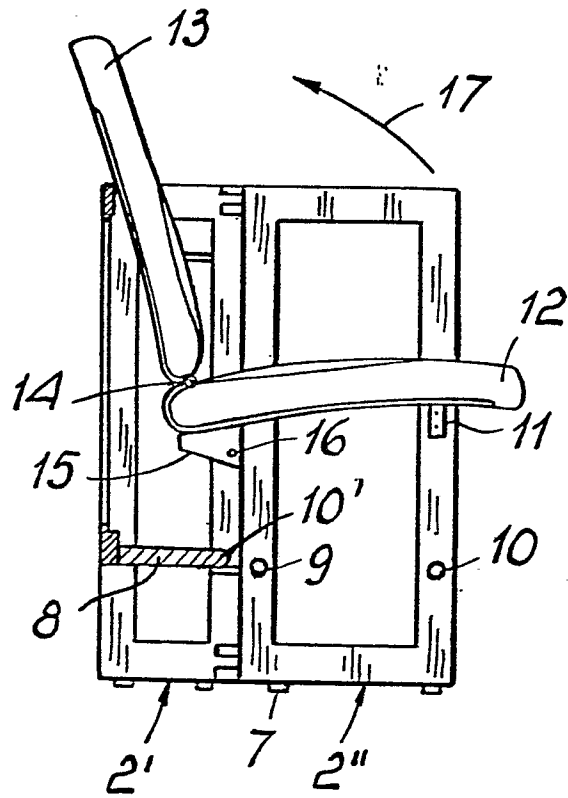


Fig. 5

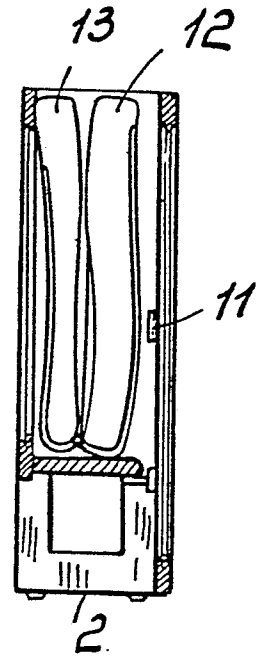


Fig. 6

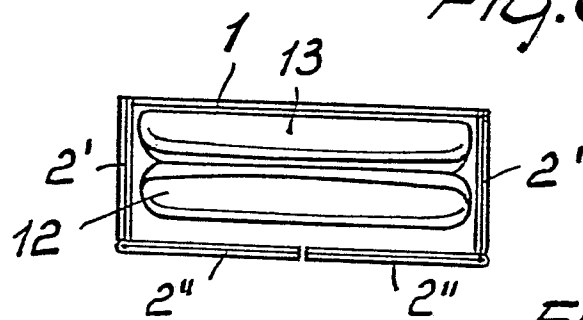


Fig. 7

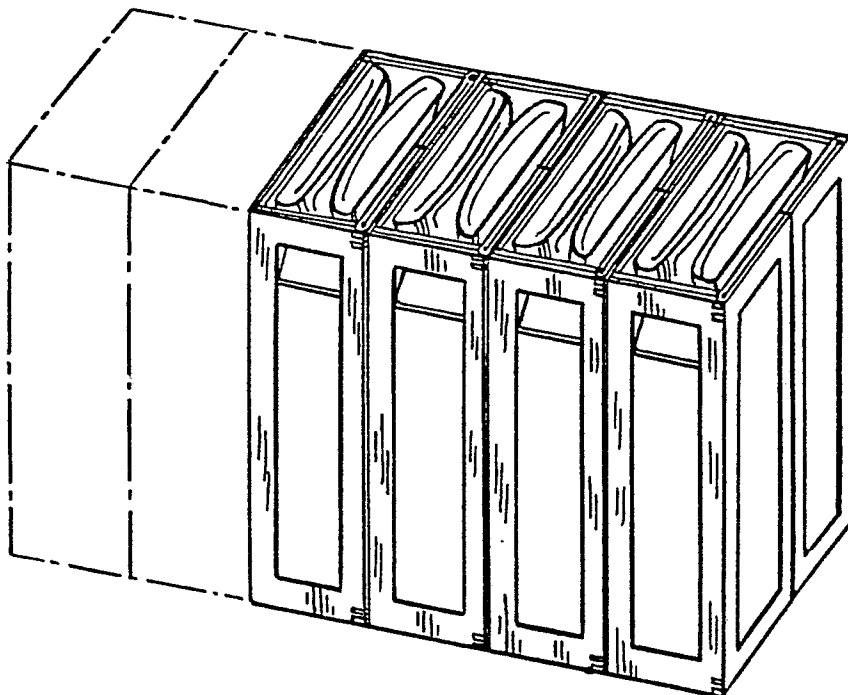


Fig. 8