July 28, 1964 J. J. GINAT 3,142,514

CHAIR

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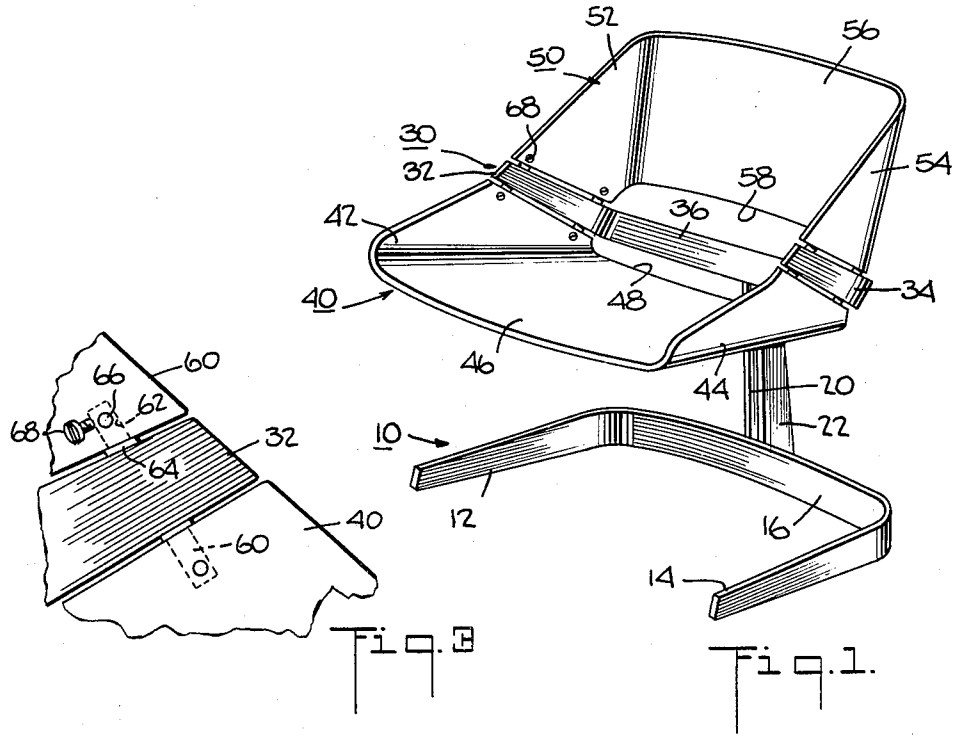


Fig. 3

Fig. 1.

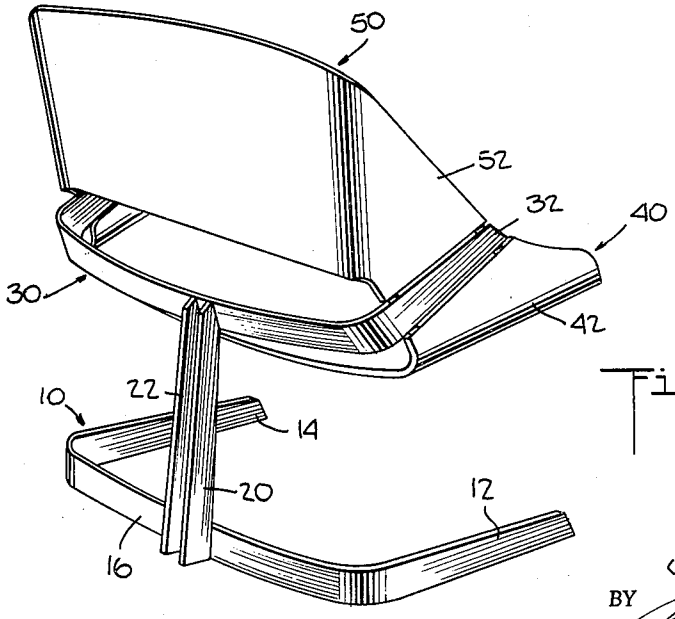


Fig. 2.

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CHAIR

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The present invention relates to an improved chair.

An important object of the invention is to provide a chair of a novel structure which presents an appearance of lightness and airiness and which tends to create an impression or illusion as if it floats in air.

A further object of the invention is to provide a chair of an improved and simplified construction having a relatively few different basic parts which can be easily manufactured and assembled on a mass production basis.

A still further object of the invention is to provide a chair of an improved construction which permits the chair to be easily assembled and disassembled and which permits its parts to be nested or stacked for shipping and storage purposes.

According to a broad aspect of my invention, the novel chair is characterized by a frame structure, a seat, and means for supporting the seat in cantilever fashion from the frame structure. More particularly, the frame structure includes a U-shaped member to provide a base of relatively large horizontal dimension or area for resting stably on a floor or other surface, the U-shaped member being also of relatively small vertical dimension to minimize its prominence and conspicuousness. The U-opening faces the front of the chair and the middle interconnecting leg of the member is disposed to the rear of the chair, this arrangement further minimizing the conspicuousness and prominence of the base when viewed from the front of the chair. To this middle interconnecting leg at the rear of the U-shaped member is attached an upright or substantially vertical member which carries the chair seat. The seat is supported in cantilever fashion from this upright member. This combination of base, upright and cantilever seat creates a remarkable appearance, particularly when viewed from the front end, of lightness and airiness and a virtual illusion as if the seat floats in air.

According to a further feature of my invention, the chair includes a first U-shaped member horizontally disposed to rest stably on the floor or other surface, at least one upright member attached to the U-shaped member, a second U-shaped member attached to the upright member and supported thereby above the first U-shaped member, and a seat carried by the second U-shaped member. The two U-shaped members are of the same material and configuration except the second is preferably of shorter dimension. This arrangement reduces the number of different basic parts to be manufactured. A chair back is also carried by the second U-shaped member, which is of the same material and shape as the seat, thus further minimizing the number of different basic parts. In addition, the upright support preferably consists of a pair of parallel, spaced vertical members, both of the same material and shape, thus further minimizing the number of different basic parts. In all, but three different parts need be manufactured, each part being in duplicate in each chair, that is, two U-shaped members, two vertical members, and two similarly curved members, one serving as the seat and the other as the back. In connection with the latter two members, the seat and the back are made of the same material and curved to the same shape, but they are preferably trimmed to slightly different dimensions, as in the case of the two U-shaped members.

According to a further feature of my invention, the seat and back of the chair are supported for quick and easy assembly and disassembly which permits these parts and

the frame structure to be nested or stacked for shipping and storage purposes.

The novel features that are considered characteristic of my invention are set forth with particularly in the appended claims. The invention itself, both as to its organization and method of operation, as well as additional objects and advantages thereof, will best be understood from the following description when read in connection with the accompanying drawings, in which:

FIGURE 1, by way of illustrating a preferred embodiment of my invention, is a front perspective view of a chair constructed in accordance with the invention;

FIGURE 2 is a rear perspective view of the chair of FIGURE 1; and

FIGURE 3 is an enlarged fragmentary view illustrating the manner in which the seat and back are supported from the frame structure for quick and easy assembly and disassembly.

As shown in the drawings, the novel chair comprises a frame structure consisting of a first U-shaped member, generally designated **10**, a pair of upright members **20**, **22**, and a second U-shaped member, generally designated **30**. A chair seat **40** and a chair back **50**, both supported by the second U-shaped member **30**, complete the basic parts of the chair.

U-shaped member **10** serves as the base of the chair and provides a relatively large horizontal supporting surface for resting stably on the floor or other surface. The vertical height of this member, however, is relatively small to minimize its prominence or conspicuousness, particularly where the chair rests on a carpeted floor. Member **10** consists of a pair of parallel end legs **12**, **14** and a middle interconnecting leg **16**, arranged such that leg **16** is disposed to the rear of the chair and the U-opening, that is the space between legs **12**, **14**, faces the front of the chair. Base **10** is preferably formed of metal stock of about 5/16 inch thick and of about 2 inches wide across middle leg **16**, the juncture of legs **12**, **14** with the middle leg also being of about 2 inches wide and tapering to 1 inch at their ends.

Upright members **20** and **22** are also of metal and are attached, as by welding, to the mid portion of interconnecting leg **16**. They serve as the sole support for the second U-shaped member **30**, the chair seat **40**, and the chair back **50**. Members **20** and **22** are made of slim but sturdy construction as it is desirably that they too be as inconspicuous as possible in the finished chair, consistent with their supporting function.

The second U-shaped member **30** is carried at the top of the upright members **20**, **22**, where it is attached as by welding. Member **30** is formed of the same material and shape as base **10**, namely with a pair of end arms **32**, **34** and a middle interconnecting arm **36**, except that the end arms **32**, **34** are somewhat shorter than legs **12**, **14** of base **10**. Member **30** extends above base **10** but is at a small angle relative to the horizontal. It is thus seen that member **30** is supported in cantilever fashion from uprights **20**, **22**.

I have found that welded joints between members **10**, **20**, **22** and **30** are adequate to provide a strong, sturdy frame structure for the chair, but it may be desirable in some applications to provide additional reinforcement at these joints.

Chair seat **40** and also chair back **50**, are carried by arms **32** and **34** of th upper U-shaped member **30** such that it may be easily assembled and disassembled. As shown particularly in FIGURE 3 illustrating an enlarged portion of the fastening arrangement, each of these arms carries four pins **60**, two secured to the top surface of the arm and extending upwardly and two secured to the lower surface of the arm and extending downwardly. FIGURE 3 illustrates only one of each of the upper and

lower pins 60 carried by arms 32. Pins 60 are secured to the arms 32 and 34 as by welding and are receivable in bores 62 extending for a small distance into the edges of chair seat 40 and chair back 50. The pins 60 are formed with an enlarged flattened head 64 which spaces seat 40 and back 50 from arms 32 and 34 a small distance, about ⅛ inch. The end of each pin 60 opposite to the enlarged head 64 is formed with a radial opening 66 adapted to receive a screw 68 which also passes through a corresponding opening in the chair seat 40 and back 50.

To remove or to assemble chair seat 40 from the frame structure involves merely removing or inserting the two lower screws 68 cooperating with lower pins 60 of arms 32 and the two lower screws 68 cooperating with the lower pins 60 of arm 34, or a total of four screws. Similarly, to remove or to assemble chair back 50 involves merely removing or inserting the four upper screws 68 cooperating with the upper pins 60 of arms 32 and 34.

Chair seat 40 is formed of pressed plywood, curved to provide a pair of upstanding ends 42, 44 bordering the seat portion 46, and a central cutout 48 to the rear of the seat portion 46. The chair back 50 is similarly formed of pressed plywood curved to the same configuration as seat 40, namely with a pair of ends 52, 54 curved from the back portion 56 with the same curvature as ends 42, 44 with respect to seat portion 46. Utilizing the same material and configuration for these two parts reduces the basic types of parts necessary for producing a chair. Back 50, however, is trimmed slightly differently from seat 40 so that the ends 52, 54 provide smooth, clean, continuous lines with ends 42, 44 of the seat.

The cantilever support for the chair seat, in the arrangement illustrated, produces an effect of lightness and airiness, almost as if the chair floats in air, when the chair is viewed from the front. This effect is enhanced by the U-shaped base 10 disposed so that the U-opening faces the front of the chair, and further by the small vertical distance the base extends from the floor. This arrangement places the chair seat (and back) in the foreground and the supporting frame structure in the background. The frame structure presents a neat and unbulky appearance, and yet it is sturdy enough for all normal applications.

With the two U-shaped members 10, 30 constructed of the same material and configuration, the two vertical uprights 20, 22 constructed of the same material and configuration, and the chair seat 40 and back 50 also constructed of the same material and configuration, the main parts for building a chair are reduced to three types, each part being substantially in duplicate. Of course, as explained above, the dimensions of these parts may vary, as was true in the case of arms 32, 34 of member 30 being shorter than legs 12, 14 of member 10, and back 50 being trimmed a little differently from seat 40. But the trimming expense to adjust for these dimensional variations is small compared to the manufacturing expense for making these parts, had they been of different material or configuration. In all, this chair lends itself nicely to being manufactured and assembled on a mass production basis.

Further, the ease in which the chair seat 40 and back 50 may be removed and inserted from the frame structure enables these parts to be conveniently stacked or nested for shipping or storage, which is a further highly advantageous feature in chair constructions.

While there has been described a chair constructed in accordance with a preferred embodiment of my invention, it will be understood this embodiment is illustrative only, and that many applications, variations or modifications of features of the invention as set forth in the following claims will be readily apparent to those skilled in the art.

I claim:

1. A chair of the character described, comprising: a first U-shaped member horizontally disposed to rest stably on a floor or other horizontal surface; a vertically extending support comprising at least one upright member attached to said first U-shaped member; a second U-shaped member attached to said upright member and supported thereby above said first U-shaped member; a chair seat supported by said second U-shaped member and extending therebelow; and a chair back supported by said second U-shaped member and extending thereabove.

2. A chair of the character described, comprising: a first U-shaped member horizontally disposed to rest stably on a floor or other horizontal surface; a vertically extending support comprising two spaced similarly configured upright members attached to said first U-shaped member; a second U-shaped member attached to said upright members and supported thereby above said first U-shaped member, said second U-shaped member being similarly configured as said first U-shaped member, but having shorter arms than said first U-shaped member; a curved chair seat supported by said second U-shaped member and extending therebelow; and a curved chair back supported by said second U-shaped member and extending thereabove.

3. A chair of the character described, comprising: a first U-shaped member including a pair of substantially parallel legs and an interconnecting leg all horizontally disposed to rest stably on a floor or other surface with the interconnecting leg disposed at the rear of the chair, a substantially vertical member attached to said interconnecting leg; a second U-shaped member attached to said substantially vertical member and supported thereby in cantilever fashion above said first U-shaped member; a chair seat carried by said second U-shaped member and extending therebelow; and a chair back supported by said second U-shaped member and extending thereabove.

4. A chair of the character described, comprising: a base; an upright member attached to said base; a U-shaped member attached to said upright member and supported thereby with the U-opening facing the front of the chair; a chair seat; and a plurality of pins carried by said U-shaped member and receivable in openings in said chair seat for attaching said seat to said U-shaped member.

5. A chair of the character described, comprising: a base; an upright member attached to said base; a U-shaped member attached to said upright member and supported thereby with the U-opening facing the front of the chair; a chair seat; a plurality of pins carried by the U-shaped member and receivable in openings in said chair seat for attaching said seat to said U-shaped member to extend therebelow; a chair back; and a further plurality of pins carried by the U-shaped member and receivable in openings in said chair back for attaching said back to said U-shaped member to extend thereabove.

6. A chair of the character described, comprising: a base of relatively large horizontal dimension to rest stably on a floor or other surface, said base being of relatively small vertical dimension; an upright member attached to a rear portion of the base; a U-shaped member attached to said upright member and supported thereby in cantilever fashion above said base; a chair seat; and a plurality of pins carried by said U-shaped member and receivable in openings in said chair seat for attaching said seat to said U-shaped member to extend therebelow.

7. A chair of the character described, comprising: a first U-shaped member horizontally disposed to rest stably on a floor or other horizontal surface; a vertically extending support comprising two closely spaced, similarly configured upright members attached to said first U-shaped member; a second U-shaped member attached to said upright members and supported thereby in cantilever fashion above said first U-shaped member, said second U-shaped member being similarly configured as said first U-shaped member, but having shorter arms than said first U-shaped member; a curved chair seat supported by said second U-shaped member and extending therebelow; and a curved chair back supported by said second U-shaped member and extending thereabove, the curvature

of said chair back being substantially the same as the curvature of said chair seat.

8. A chair of the character described, comprising: a first U-shaped metal member horizontally disposed to rest stably on a floor or other horizontal surface; a vertically extending support comprising two closely spaced upright metal members attached to said first U-shaped member; a second U-shaped metal member attached to said upright members and supported thereby in cantilever fashion above said first U-shaped member, said second U-shaped member being similarly configured as said first U-shaped member, but having shorter arms than said first U-shaped member; a curved, pressed plywood chair seat supported by said second U-shaped member and extending thereabove; and a curved, pressed plywood chair back supported by said second U-shaped member and extending thereabove, the curvature of said chair back being substantially the same as the curvature of said chair seat.

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