

April 16, 1957

J. W. HAUSER
ARTICLE OF FURNITURE

2,788,846

Filed March 29, 1955

2 Sheets-Sheet 1

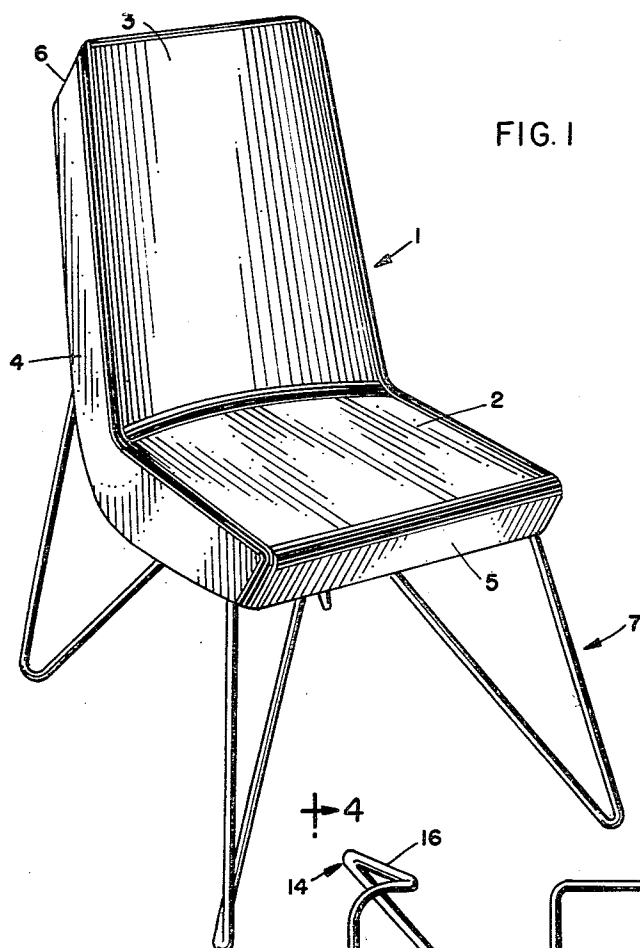


FIG. 1

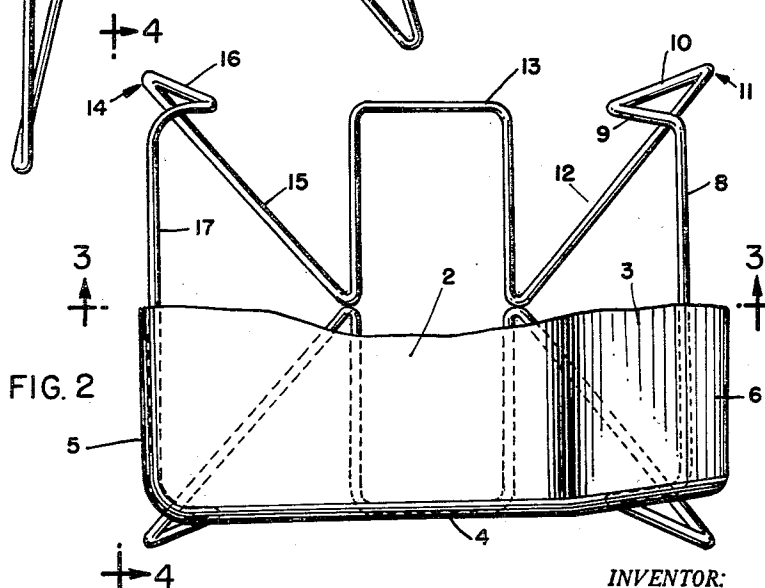


FIG. 2

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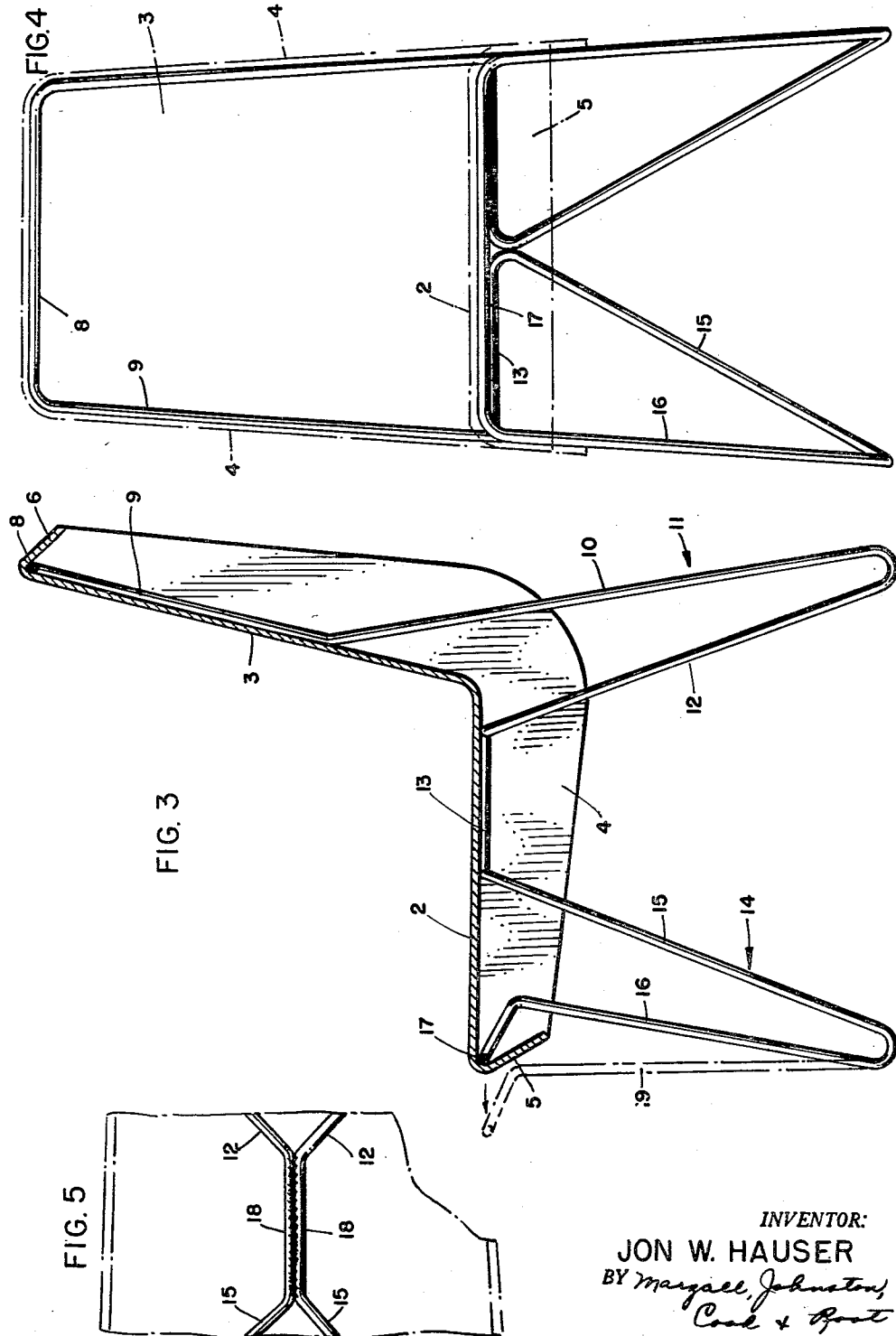
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2 Sheets-Sheet 2



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ARTICLE OF FURNITURE

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3 Claims. (Cl. 155—194)

This invention relates to an article of furniture and more particularly to a chair or the like.

One object of the invention is to provide an article of furniture, such as a chair or the like, which is constructed of a minimum number of parts.

Another object of the invention is to provide a chair or the like having a one-piece molded body portion and a supporting frame capable of being constructed from one continuous rod.

Still another object of the invention is to provide a chair or the like in which a unitary body portion can be mounted upon and locked to a supporting frame without the use of additional parts.

A further object of the invention is to provide a chair or the like which is pleasing in appearance, simple and economical in construction, and easily assembled or disassembled.

These and other objects and advantages will become more apparent from a consideration of certain novel features of construction, combination, and arrangement of elements and portions as will be hereinafter described in detail in the specification and illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view of a chair illustrating one embodiment having a body portion and supporting framework made in accordance with the invention;

Fig. 2 is a plan view of the chair with part of the body portion broken away to show the supporting framework;

Fig. 3 is a cross-sectional view taken on line 3—3 of Fig. 2;

Fig. 4 is a front elevational view of the supporting frame with the body portion being shown in broken lines; and

Fig. 5 is a plan view of an alternative embodiment of the central portion of the seat supporting frame.

In accordance with the present invention, an article of furniture, such as a chair or the like, is provided in which a molded body portion is formed to include a seat, back, oppositely disposed side panels integral with the seat and back, and a front flange and top flange integral with the side panels and with the seat and back respectively and forming an acute angle with the seat and back respectively. The supporting framework provided by the invention is capable of being constructed from one continuous rod which is bent to form a seat supporting frame, a back supporting frame, and four legs extending downwardly therefrom.

The seat supporting frame portion of the rod includes a front locking rod portion adapted to fit into the recess formed by the front flange with the seat and side panels. The back supporting frame includes a top locking rod similarly adapted to fit into the recess formed by the top flange with the back and side panels. When the body portion is mounted upon the framework, the front and top locking rods exert an outward pressure to lock the framework firmly in place. The chair provided by the invention is inexpensive since there are only two essential parts which must be constructed.

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The molded body portion 1 of the chair is clearly illustrated in Figs. 1 and 3 which show a seat 2 in a substantially horizontal position and a back 3 integral with the seat and extending upwardly therefrom. Two oppositely disposed side panels 4 are integral with and substantially perpendicular to the seat 2 and back 3. A front flange 5 is shown to be integral with the seat 2 and side panels 4 and to form an acute angle with the seat. Similarly a top flange 6 is integral with the back 3 and side panels 4 and forms an acute angle, preferably about 30° to about 60°, with the back.

The seat 2 and back 3 are preferably molded so as to have a slight transverse concave curvature (not shown). The side panels 4 are not perfectly perpendicular to the seat 2 and back 3 but are shown to taper upwardly to give a more pleasing appearance. Modification in the construction or design of the body portions is possible without departing from the spirit and scope of the invention. However, the angle formed by the front flange 5 and top flange 6 with the seat 2 and back 3 respectively must be sufficient to provide a locking feature as hereinafter described and preferably about 30° to about 60°.

The body portion 1 of the chair is preferably made by molding a fibrous material and/or a resin into a strong and durable unitary construction. The art of accreting and molding fibrous materials and molding resinous materials is well developed and many suitable materials are known to those familiar with the art. Likewise, the methods of molding these materials are also well-known in the art. The invention is not limited to the use of any specific type of resin or fibrous material, since any available material can be adapted to the practice of the invention without departing from the spirit of the invention.

The supporting framework 7 for the chair can best be described by tracing the continuous rod construction throughout a vertical section of the chair as illustrated by Fig. 3, the upper half of Fig. 2, and the left half of Fig. 4. Beginning at the top of the chair, a top locking rod 8 extends transversely across the back 3 fitting into the recess formed by the top flange 6 and the back 3. The rod next bends downwardly to follow the juncture of the back 3 with the side panel 4 to form a back supporting frame 9. The rod then bends outwardly from the back 3 at a position intermediate to the top and bottom thereof and extends downwardly to form a back member 10 of a back hairpin leg 11. The hairpin leg 11 is completed by bending the rod to extend upwardly forming a front member 12 which meets the underneath surface of the seat 2 at a position approximately halfway between the two sides and spaced towards the back 3. A central seat supporting frame 13 is then formed by bending the rod into a U-shape which follows the contour of the underneath surface of the seat, the base of the U fitting against the juncture of the side panel 4 with the seat 2. The front hairpin leg 14 is then constructed in a manner similar to the back leg, forming a back member 15 extending downwardly and a front member 16 extending upwardly toward the seat. The rod then bends to form a front locking rod 17 adapted to fit into the recess formed by the front flange 5 with the seat 2 and side panels 4 and to provide an additional supporting frame for the seat 2. The remaining half of the framework 7 is formed in exactly the same manner.

Fig. 5 illustrates an alternative embodiment of the central seat supporting frame. Instead of a U-shape supporting frame 13 as shown in Figs. 2 to 4, a straight bar support 18 is provided between the elements 12 and 15 of the back and front hairpin legs 11 and 14 respectively. The straight bar supports 18 formed between

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each set of legs follow the contour of the underneath surface of the seat 2 in a central position and abut each other longitudinally. Although it is not necessary, these straight bar supports 18 can be suitably connected together by welding, as shown, or by strapping, bolting or the like.

A continuous rod from which the supporting framework is formed is preferably made of tubular wrought iron, but other materials can also be used including any solid or hollow tubular metal which is capable of being bent into the required shape. The two ends of the continuous rod preferably meet at a point within the molded body portion, such as at the center of the front or top locking rods, and can be welded together or maintained separately as desired.

The chair is assembled by placing the top locking rod 3 into the recess formed by the top flange 6 with the back 3 and side panels 4, and then forcing the front elements 16 of the front hairpin legs 14 backwardly to a position sufficient to permit the front locking rod 17 to pass by the lower edge of the front flange 5 into the recess formed by the front flange 5 with the seat 2 and side panels 4. The front element 16 of the front hairpin leg 14 is illustrated in Fig. 4 by a dotted line 19 as a preferred position to which this element is originally bent when the framework is constructed.

When the chair is assembled, the front element is constrained to the position 16 and a spring tension is provided whereby the front locking rod will more forcefully press outwardly against the front flange 5. This force is also transmitted to the top locking rod 3 causing it to press upwardly against the top flange 6. The acute angle formed by the front flange 5 and the top flange 6 with the seat 2 and back 3 respectively prevents the front and top locking rods from slipping out of place even though the chair is lifted or moved about by grasping the body portion thereof. The weight of an occupant of the chair tends to spread the legs slightly apart, whereby a further outward or upward pressure is exerted by the front and top locking rods. Thus, the body portion of the chair is at all times firmly locked to the framework.

One of the principal advantages of the chair or similar article of furniture provided by the invention is that only two parts need be constructed, the body portion and a framework. In the preferred form of the invention, each part is a single unit, the body being of molded construction and the framework being formed by bending a continuous rod. Another advantage is that the unitary body portion can be firmly locked to the supporting frame without using additional parts. The construction and assembly of the article of furniture can be accomplished very easily and economically and is well suited to mass production methods.

A further advantage of the invention is that the chairs and frames can be readily disassembled and separately stacked and/or nested for shipping and storage.

The invention is hereby claimed as follows:

1. A chair comprising a molded body portion which in-

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cludes a seat, a back, oppositely disposed side panels integral with said seat and back, and a front flange and top flange integral with said side panels and with said seat and back respectively and forming an acute angle with said seat and back respectively, and a continuous rod bent to form a seat supporting frame including a front locking rod adapted to fit into the recess formed by the front flange with the seat and side panels, a back supporting frame including a top locking rod adapted to fit into the recess formed by the top flange with the back and side panels, and means connecting said top locking rod and said front locking rod, said means including downwardly extending legs.

2. A chair comprising a molded body portion which includes a seat, a back, oppositely disposed side panels integral with said seat and back, and a front flange and top flange integral with said side panels and with said seat and back respectively and forming an acute angle with said seat and back respectively, and a continuous rod bent to form a seat supporting frame including a front locking rod adapted to fit into the recess formed by the front flange with the seat and side panels and also including a central seat supporting frame having two U-shaped support members in which the sides of each U are substantially parallel to and spaced inwardly from the front and back edges of the seat and the base of each U fits against the juncture of the side panel and the seat, a back supporting frame including a top locking rod adapted to fit into the recess formed by the top flange with the back and side panels, and means connecting said top locking rod and said front locking rod, said means including downwardly extending legs.

3. A chair comprising a molded body portion which includes a seat, a back, oppositely disposed side panels integral with said seat and back, and a front flange and top flange integral with said side panels and with said seat and back respectively forming an acute angle with said seat and back respectively, and a continuous rod bent to form a seat supporting frame including a front locking rod adapted to fit into the recess formed by the front flange with the seat and side panels and also including a central seat supporting frame having two straight bar support members which follow the contour of the underneath surface of the seat in a central longitudinal position and abut each other longitudinally, a back supporting frame including a top locking rod adapted to fit into the recess formed by the top flange with the back and side panels, and means connecting said top locking rod and said front locking rod, said means including downwardly extending legs.

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