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STACKABLE CHAIR AND THE LIKE

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Fig. 1

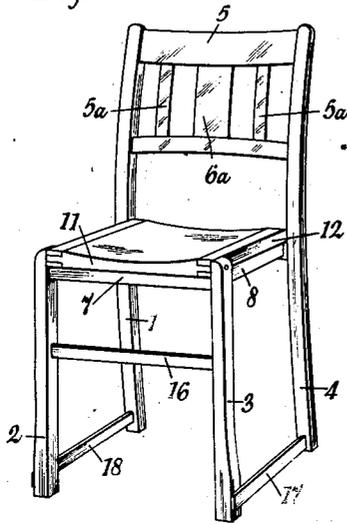


Fig. 2

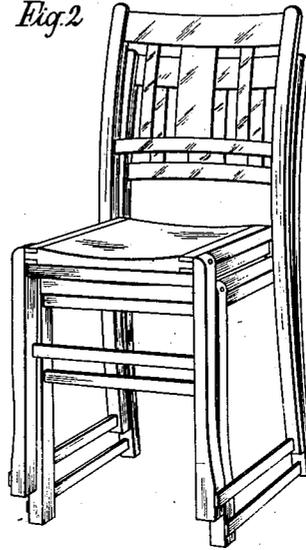


Fig. 3

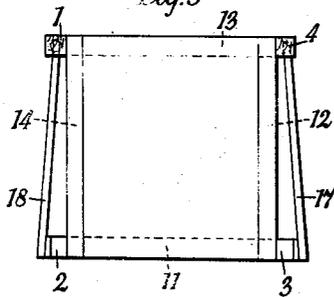


Fig. 4

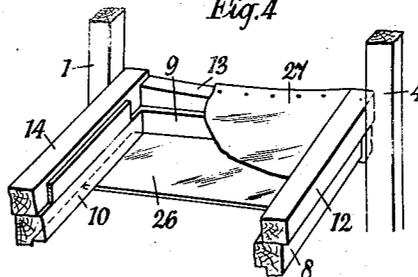


Fig. 5

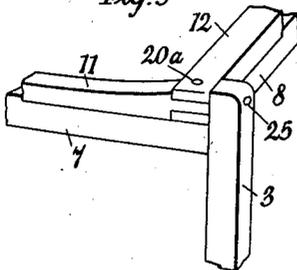
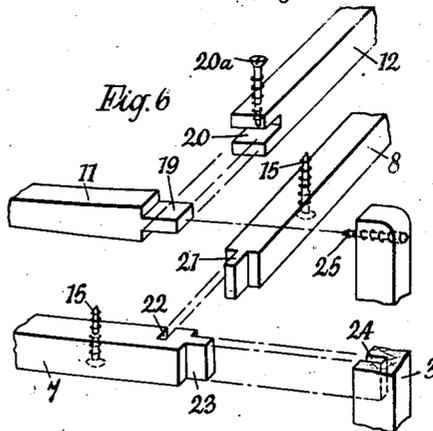


Fig. 6



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STACKABLE CHAIR AND THE LIKE

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5 Claims. (Cl. 155—2)

This invention is for improvements in or relating to stackable chairs, tables and the like and has for its object the provision of such an article of furniture which in addition to being stacked in as simple a manner as articles of furniture constructed for this purpose have been hitherto, nevertheless embody by their construction features which add considerably to the strength and appearance of the articles.

According to the present invention there is provided stackable chairs, tables and the like having each seat or table top thereof supported upon four substantially vertical legs, wherein the internal contour of a free opening formed by one pair of legs and the seat or table top respectively, is equal to or greater than the external contour of the figure formed by a cross-section extending through a plane parallel to the plane in which the free opening lies and which is bounded respectively by the seat or table top and planes extending vertically from the free edges of the said seat or table top but is less than the external figure formed by a cross-section extending through any plane parallel to the plane in which the free opening lies but which is bounded by the seat or table top and the remaining pair of legs. In other words, the distance between the inside opposed faces of the rear legs at all points below the seat, is equal to or greater than the width of the seat, but said distance is less than the distance between the exterior side face of the front legs of the chair at the front edge of the seat, the arrangement being such as to permit articles of furniture identical in shape and dimensions to be stacked in corresponding positions one upon the other by one seat or table top being lowered vertically upon the other with the front and rear legs of the upper chair lying close to and in front of the respective front and rear legs of the lower chair and with the underside of the seat of the upper chair supported upon the upper surface of the seat of the lower chair.

The invention will now be described by way of example in relation to a stackable chair and with reference to the accompanying drawing, in which:

Figure 1 illustrates in perspective a chair constructed in accordance with the present invention;

Figure 2 illustrates two chairs constructed in accordance with the present invention and stacked one upon the other;

Figure 3 is a cross-sectional plan view of the chair illustrated in Figure 1 upon a plane ex-

tending parallel to the seat of the chair and extending through the back thereof;

Figure 4 is a fragmentary view of the seat of a chair illustrating a receptacle formed therein;

Figure 5 is a detailed view of a front corner of a chair constructed in accordance with the present invention with the seat removed, and

Figure 6 is an exploded view of the corner illustrated in Figure 5.

Referring to the drawing, there is illustrated a stackable chair which comprises four substantially vertical legs 1, 2, 3 and 4, the back legs 1 and 4 being extended upwardly to form a back having cross bracing members 5 and 6 which are further braced by members 5^a and 6^a respectively. The four legs 1, 2, 3 and 4 are connected to a rectangular bracing frame which comprises four elements 7, 8, 9 and 10 the construction and arrangement of which will be hereinafter described. Rigidly secured to the bracing frame is a seat frame which comprises four members 11, 12, 13 and 14, the construction and arrangement of which will also be hereinafter described. The seat frame is rigidly connected to the bracing frame by screws 15 arranged to extend through the bracing frame into the seat frame.

The front legs of the chair are braced together by means of a strut 16 whilst corresponding front and back legs are braced together by struts 17 and 18 in a manner hereinafter described. The front legs 2 and 3 are shaped so that the lower end of each leg is enlarged at the base thereof for a purpose hereinafter specified. The bracing frame and the seat frame of the chair extend between the adjacent sides of both the rear legs 1 and 4 and the front legs 2 and 3 and the contour of the bracing frame and the seat frame is such that at any cross-section therethrough extending parallel to the plane of the back legs, the width of the said bracing frame and seat frame is never greater than the width between adjacent faces of the rear legs at those portions of the legs which extend beneath the bracing and seat frames. The rear legs of the chair are not braced together and thereby leave a free opening formed by the opposed inner faces of the rear legs and the underside of the seat which opening, in transverse dimension is equal to or greater than the external transverse dimension of the seat but which opening is less in transverse dimension than the overall width of the seat and front legs of the chair as measured between the exterior side faces of said front legs, the arrangement being such as to permit one chair to be stacked as shown in Figure 2 upon

a second chair identical in shape and dimensions, by one bracing frame which supports the seat frame and seat being lowered vertically upon the seat or seat frame of the other chair.

It is to be understood that the term "seat" employed in the appended claims embraces the bracing frame, seat frame and seat of the chair.

Referring to Figures 5 and 6, each front leg of the chair is secured to the seat frame and bracing frame in the manner hereinafter described with reference to the construction described with reference to the front leg 3 of the accompanying drawing.

The members 11 and 12 of the seat frame are connected together by a tongue 19 formed on the member 11 extending into a groove 20 formed in the member 12 and the joint so formed is rigidly secured by a screw 20^a whilst the elements 7 and 8 of the bracing frame are connected together by a tongue 21 formed on the element 8 extending into a groove 22 formed in the element 7. The element 7 is provided with a further tongue 23 which is arranged to extend into a groove or slot 24 formed in the leg 3 and the top of the leg is secured to the seat frame by a screw 25 extending into the tongue 19 of the member 11. By arranging the leg of the chair outside the contour of the bracing frame and chair frame it is possible to secure the bracing and seat frames to the leg of the chair in a more efficient manner than is possible in the case where the leg is arranged within the contour of the frame.

By providing an enlarged portion of the free end at the front legs of the chair in the manner indicated in Figures 1, 2 and 3, the bracing members 17 are secured to the exterior side surfaces of the front legs of the chair but can be connected to the rear legs of the chair by a mortice joint thereby providing strength at the portion of the chair where strength is most desired and in addition flaring the side braces 17 at the front of the chair, thereby providing ample clearance between side braces on one chair and the front legs on another chair when one chair is dropped over another. Further by mounting a seat or seat frame upon the upper bracing frame of the chair there is provided a space between the seat and the plane which includes the lower edges of the bracing frame which can be partially closed by means of a shelf 26 thereby providing a receptacle on the inside of the seat for the reception of books, hand bags or like articles.

It will be appreciated that the seat frame of the chair can be covered in any desired manner to form the seat of the chair but in the example illustrated in the accompanying drawing, the frame is covered by a piece of ply wood 27 which provides a strong and resilient seat which can be constructed in a simple and cheap manner.

Thus, it will be seen that according to the present invention there is provided a stackable chair, table and the like, which can be stacked one upon the other in a simple and efficient manner and which by the similarity of construction of the rear and front legs provides a uniformly constructed article of furniture pleasing to the eye and yet enables the chair, particularly at the front legs and the connection between the front and rear legs to be constructed with considerable strength, thereby eliminating all possible weaknesses which are prevalent in chairs in which the arrangement of the elements does not provide the same possibilities of strength and uniform appearance.

What I claim as my invention and desire to secure by Letters Patent of the United States is:

1. A stackable article of furniture comprising a top member having four substantially vertical legs secured to the exterior side faces of the top member, adjacent to the front and rear edges thereof, the transverse dimension of the free opening formed by the inner opposed faces of one pair of legs and the under side of the top member being equal to or greater than the extreme width of the top member immediately adjacent to the points of attachment of the said one pair of legs to said top member but which free opening is less in transverse dimension than the overall width of the top member and said other pair of legs as measured between the exterior side faces of said other pair of legs, the said legs being arranged so that one such article may be stacked upon another like article with the front and rear legs of the upper article lying in front of the respective front and rear legs of the lower article and with the under side of the top member of the upper article supported upon the upper face of the top member of the lower article, the free ends of the front and rear legs at each side of the article being connected by braces extending from front to rear, said front legs each being provided with a lateral extension at the free end thereof, projecting outwardly of the respective planes defined by the front and rear legs at each side of the article, said braces each being connected to the front legs at a point on said lateral extensions whereby to flare said braces forwardly and outwardly to permit stacking of the articles as described.

2. A stackable article of furniture comprising a top member having four substantially vertical legs secured to the exterior side faces of the top member, adjacent to the front and rear edges thereof, a bracing frame underlying the said top and including front, rear and side frame members interconnected by mortise joints to form a rigid frame of substantially the same general contour as the said top, means for connecting the said top and brace frame together in substantially face to face contact, means for connecting the brace frame to said legs including mating mortise and tenon joint members respectively provided on the legs and brace frame, the transverse dimension of the free opening formed by the inner opposed faces of one pair of legs and the under side of the brace frame being equal to or greater than the extreme width of the top member immediately adjacent to the points of attachment of the said one pair of legs to said top member but which free opening is less in transverse dimension than the overall width of the top member and said other pair of legs as measured between the exterior side faces of said other pair of legs, the said legs being arranged so that one such article may be stacked upon another like article with the front and rear legs of the upper article lying in front of the respective front and rear legs of the lower article and with the under side of the brace frame of the upper article supported upon the upper face of the top member of the lower article, whereby the stacked articles are interlocked against lateral displacement.

3. In a chair including a seat frame, front and rear legs secured to the exterior side faces of the seat frame adjacent to the front and rear edges of the frame, for supporting said frame, a bracing frame underlying the seat frame and includ-

ing front, rear and side frame members interconnected by mortise joints to form a rigid frame of substantially the same general contour as the seat frame, means for connecting the seat frame and brace frame together in substantially face to face contact, and means for connecting the brace frame to said legs including mating mortise and tenon joint members provided on the legs and brace frame.

4. A stackable article of furniture comprising a substantially rectangular top member having four substantially vertical legs extending downwardly from the exterior side faces of the top member, adjacent to the rear and front edges thereof, a bracing frame underlying the top member and including front and rear and side frame members interconnected by mortice joints to form a rigid frame of substantially the same general contour as the top member, means for connecting the top member and bracing frame together in substantially face to face contact and means for connecting the bracing frame to the said legs including mortice and tenon joint members provided on the legs and the bracing frame, the transverse dimension of the free opening formed by the inner opposed faces of one pair of legs and the underside of the top member and bracing frame being equal to or greater than the extreme width of the top member and bracing frame immediately adjacent to the points of at-

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tachment of the said one pair of legs to the said bracing frame but which free opening is less in transverse dimension than the overall width of the top member and bracing frame and said other pair of legs as measured between the exterior side faces of said other pair of legs, the said legs being arranged so that one such article may be stacked upon another like article with the front and rear legs of the upper article lying in front of the respective front and rear legs of the lower article and with the underside of the bracing frame of the upper article supported upon the upper face of the top member of the lower article, whereby the stacked articles are interlocked against lateral displacement.

5. In a stackable chair including a seat, front and rear legs arranged to extend downwardly from the exterior side faces of the seat at points adjacent to the front and rear edges of the seat, a bracing frame underlying the seat and including front, rear and side frame members interconnected by mortice joints to form a rigid frame of substantially the same general contour as the seat, means for connecting the seat and bracing frame together in substantially face to face contact, and means for connecting the bracing frame to the said legs including mating, mortice and tenon joint members provided on the legs and the bracing frame.

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