Sept. 13, 1960 M. R. COHEN 2,952,300

CHAIR CONSTRUCTION

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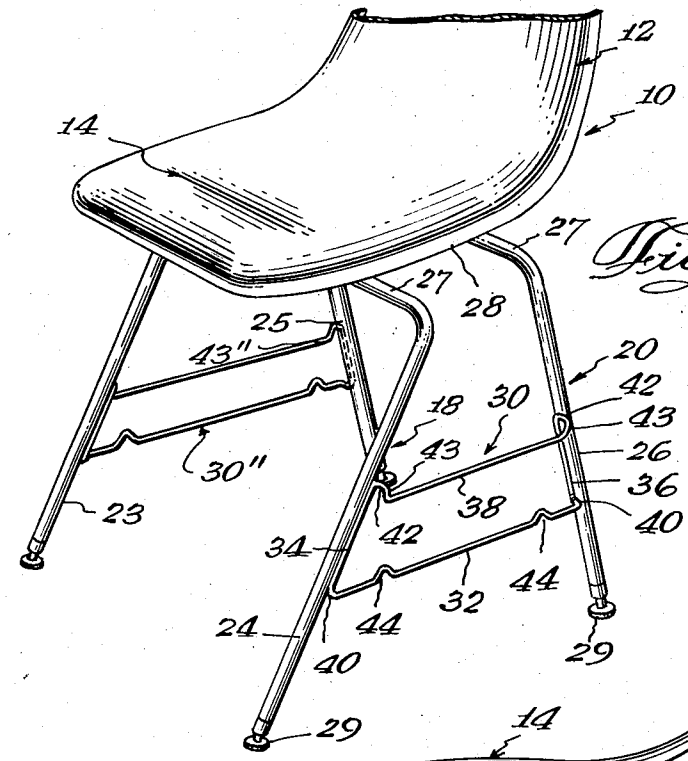

Fig. 1.

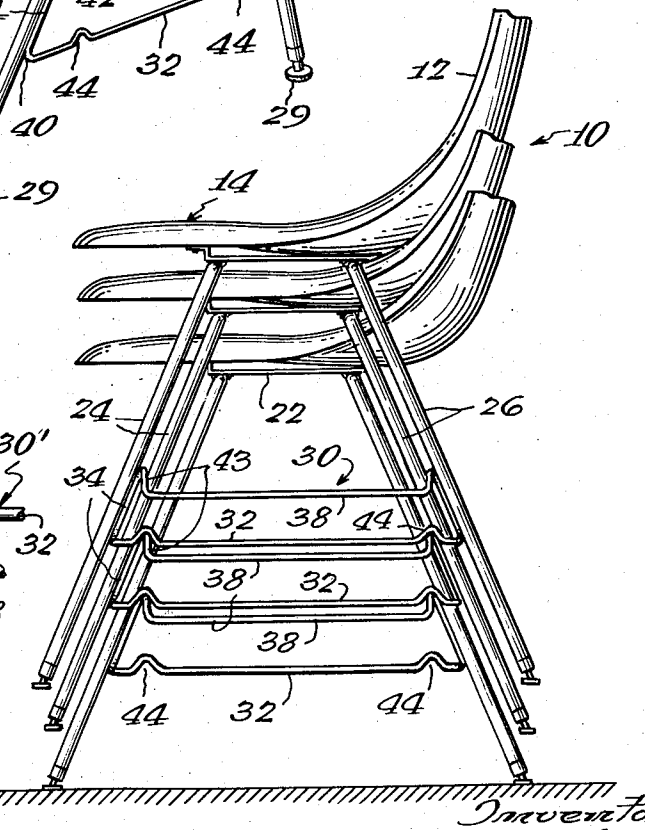

Fig. 2.

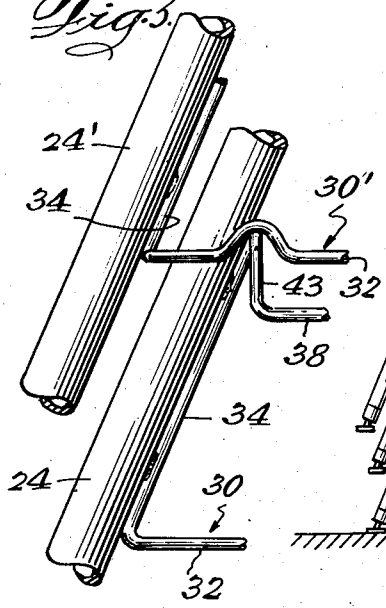

Fig. 3.

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Fig. 5.

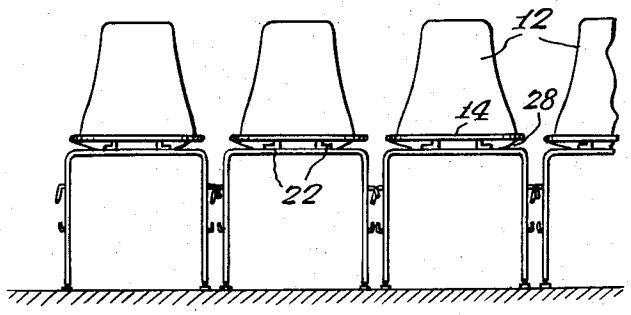


Fig. 6.

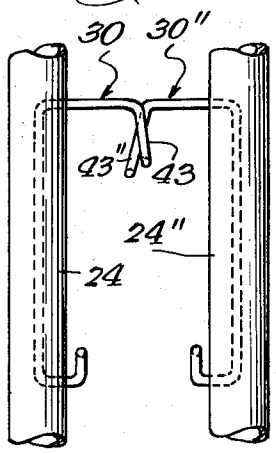
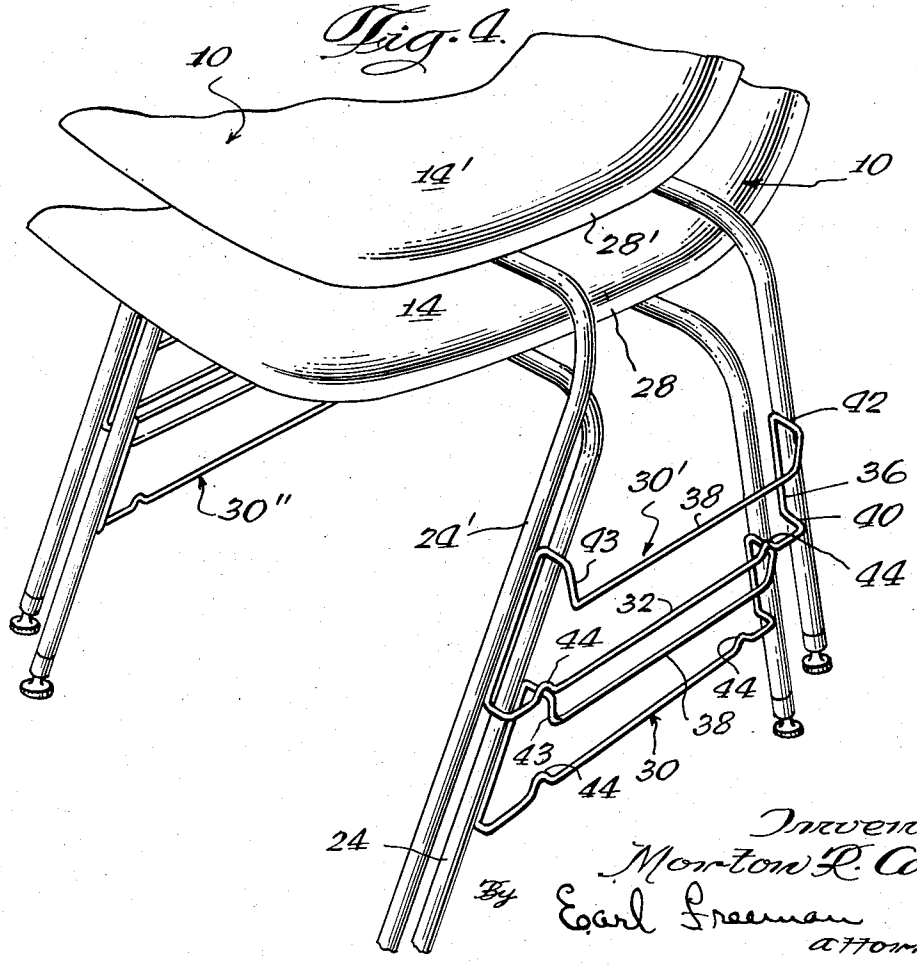


Fig. 4.



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United States Patent Office 2,952,300
Patented Sept. 13, 1960

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CHAIR CONSTRUCTION

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Filed July 15, 1957, Ser. No. 672,080
13 Claims. (Cl. 155—2)

This invention relates generally to furniture and more particularly, relates to the construction of a chair having novel means enabling a plurality of the chairs to be stacked one on top of the other. An ancillary object of the invention is the provision of such means in a chair construction which also enables a plurality of the chairs to be arranged in a row one alongside the other with adjacent chairs releasably interlocked to prevent displacement one relative the other.

It is an important object of the invention to provide a chair construction of the character described which comprises generally a utility chair for providing additional seating capacity as occasion demands as in auditoriums, halls and the like. In this connection, the chair embodying the invention may be as large as the conventional chair intended for regular use, yet which by reason of the means provided for stacking said chairs, is capable of being stored in reduced volumes of space when not being used.

Another object of the invention is to provide a chair construction of the character described having means enabling a plurality of the chairs to be vertically nested or stacked, said means comprising a pre-formed wire member secured to the leg structure of the chair.

In connection with the object recited immediately preceding, another advantage to be realized from the invention is that said stacking means may be modified slightly also to enable the chairs to be arranged in a row side by side with adjacent chairs having the stacking means thereof releasably interlocked to prevent inadvertent separation thereof.

The foregoing and other objects of the invention will become apparent as the description thereof proceeds. A preferred embodiment of the invention has been described in detail in the following specification and illustrated in the accompanying drawing. It is contemplated that minor variations in the size, arrangement, construction and proportion of the several parts may occur to the skilled artisan without sacrificing any of the advantages or departing from the scope of the invention.

In the drawing:

Fig. 1 is a fragmentary perspective view of the chair construction embodying the invention.

Fig. 2 is a fragmentary side elevational view of a stacked assemblage of said chairs.

Fig. 3 is a fragmentary elevational view showing the novel means for stacking a plurality of said chairs.

Fig. 4 is a fragmentary perspective view of a pair of stacked chairs enlarged to show details of the invention.

Fig. 5 is a front elevational view of a section of a row of chairs releasably interlocked.

Fig. 6 is a fragmentary front-elevational view looking between a pair of interlocked chairs to illustrate the manner in which they are interlocked.

Referring now to the drawing, illustrated in Fig. 1 is

a chair construction embodying the invention which has been designated generally by the reference character **10**. Chair **10** includes a molded body formed from suitable resinous material, such as a synthetic plastic, which may or may not be reinforced with fibres, to provide a curved backrest member shown partially at **12** and a seat member **14**. The molded body of the chair is supported on substantially U-shaped leg members **18** and **20** secured to the bottom of the seat **14** by a pair of suitable brackets **22** (Figs. 2 and 5). The leg members may be mounted to the brackets by welding or by means of suitable clips. As orientated relative the chair seat **14**, member **18** provides the front legs and member **20** provides the rear legs of the chair. Various modifications in the seat and backrest components, as well as the leg members of the chair are possible within the principles of the invention. For example, the seat and backrest members may be of the padded or upholstered variety and the leg members may be formed of individual elements otherwise suitably attached to the underside of the chair seats.

The leg members **18** and **20** are identical in construction. As shown, each is formed of metal tubing bent to inverted U-shaped configuration. Leg member **18** provides a pair of front uprights, or standards **23** and **24** and member **20** provides the rear uprights or standards **25** and **26**. Each leg member is connected across the upper end thereof by the transverse support bar **27** which is secured to the brackets **22** transversely thereacross. Thus, the front uprights **23** and **24** are respectively arrayed in front of and aligned with the rear uprights **25** and **26**. Each cross-bar **27** is of sufficient length so as to protrude at opposite ends respectively thereof beyond the side edges **28** of the chair seat **14**. Consequently, the pairs of uprights **23**, **25** and **24**, **26** also are arranged respectively outboard of a side edge **28** of the chair seat. The lower end of each upright or standard carries a self-adjusting foot member **29** of well-known structure. As seen in side elevational view of Fig. 2, the rear uprights are canted rearwardly and the front uprights are canted forwardly to increase the stability of the chair.

The novel means provided for stacking the chairs **10** has been designated generally by the reference character **30**, and as seen in the drawings, same is installed in a vertical disposition. Same comprises a pre-formed metal member, preferably of wire of suitable diameter to render the member **30** sufficiently rigid to achieve its functions. The member **30** is generally of open, rectangular configuration providing a bottom section **32**, a pair of side sections **34** and **36** and a top section **38** generally parallel to the bottom section **32**. The bottom section **32** is connected between the bottom ends of the side sections **34** and **36** and slightly offset from the side sections by the connecting segments **40** bent at right angles to said side sections. The top section **38** is connected between the upper ends of the side sections and likewise offset therefrom by the horizontally arranged connecting segments **42** extending outwardly perpendicular to said side sections and longer in length than the connecting segments **40**. The segments **42** further are bent downwardly to provide the continuation segments **43** secured to the ends of section **38** so that the top section **38** is disposed below the upper ends of the side sections. Because of the greater length of the segments **42**, the top section **38** is offset outwardly from the bottom section **32**.

A member **30** preferably is secured vertically arranged between each pair of front and rear uprights with the sections **32** and **38** thereof facing outwardly of the chair. Thus, each chair has a pair of such members **30** installed

thereon. Considering the front and rear uprights 24 and 26 of the chair 10, the member 30 is secured therebetween with the side section 34 affixed to the upright 24 and the side section 36 affixed to the upright 26. Suitable welding techniques will suffice for installing the member 30 between said uprights 24 and 26 to achieve a smooth joint. It will be noted that the side sections 34 and 36 are angularly disposed one relative the other at the same angle as the uprights 24 and 26 are canted so that the member 30 fits in complementary fashion between said uprights with each of the sections 34 and 36 juxtaposed an upright substantially the entire length of said section and the sections 32 and 38 laterally spaced outwardly from the plane of said uprights. The sections 34 and 36 are thus secured to facing surfaces of said uprights 24 and 26. It will be appreciated that as the angle at which the uprights 24 and 26 are canted varies, the angle of inclination of the side section 34 and 36 one relative the other also may be varied so as to permit such complementary installation of the member 30 between facing surfaces of said uprights.

The bottom section 32 of the member 30 has a pair of inverted U-shaped bends 44 therein which open downwardly or away from the upper section 38. Each of the bends 44 is located so as to align vertically with a horizontal connecting segment 42.

Referring to Figs. 3 and 4, there has been illustrated the manner of nesting or stacking a pair of chairs. For purposes of this disclosure, the uppermost chair of Fig. 4 has been designated 10', and parts thereof corresponding to identical parts of the bottom chair 10 likewise have been primed. As seen in Fig. 3, the bend 44' of the member 30' receives therein the segment 42 of the member 30 of the bottom chair. As seen in Fig. 4, the upper chair 10' is thus supported by means of the bends 44' thereof resting upon the segments 42 of the lower member 30. The nested chairs are prevented from sliding laterally one relative the other by reason of the member 30' provided on the opposite side of each chair. Thus, the sections 32' and 38' of the member 30' on both sides of the chair 10' spaced outwardly of the plane of each pair of front and rear uprights will prevent the uppermost chair 10' from being slided off the chair 10. Of course, engagement of the sections 42 in the bends 44 also prevents lateral shifting of the chairs when stacked.

It will be appreciated that the member 30 may be installed spaced from the ends of the uprights between which secured at a predetermined desired distance so that when chairs are nested, the backrest members of the nested chairs are complementarily nested also one with the other on adjacent chairs. This is seen in Fig. 2 to advantage, the members 30 of said nested assembly of chairs being located on the chairs to permit this compact nesting likewise to be achieved. By deposing the uprights outboard of the lateral edges 28 of the seat, the chairs may be nested with the seat member of the upper chair close adjacent or resting upon the seat of the chair immediately below.

The member 30, by reason of its advantageous construction, also can be constructed to enable the chairs to be arranged in a row one alongside the other and releasably interlocked. Such an arrangement is seen in Fig. 5, adjacent chairs being interlocked to prevent separation and lateral displacement one relative the other. This is accomplished as seen in Fig. 6, where the system of double primed characters are used to distinguish between chairs. Thus, on each chair, one of the members designated 30'' on the same side of each chair is formed so that segments 43'' are slightly longer than their counterparts 43 on the member 30 of the adjacent chair and slightly canted outward of the segment 42' to which connected. The segments 43'' thus can be passed downwardly between the segments 43 of member 30 on the adjacent chair and the chairs are interlocked. In order to separate adjacent chairs, it is necessary to lift the

chair having member 30 to retract said member 30'' from between the segments 43. To facilitate such interlocking engagement, the segments 43'' may be canted outwardly of the adjacent upright 24'', as are the segments 43 relative the upright 24.

It is believed the invention has been described in sufficient detail to enable the skilled artisan to understand and practice the same. The principles of the invention have been incorporated in the claims hereto appended wherein it is intended that the language thereof be construed broadly commensurate with the broad principles of the invention.

What it is desired to secure by Letters Patent of the United States is:

1. A chair construction having a seat and aligned leg members front and rear on the chair for supporting the seat, means rigidly attached between a pair of aligned front and rear legs of the chair enabling a plurality of said chairs to be stored in a stacked assemblage one on top of the other comprising, a pre-formed rigid member of open substantially rectangular configuration having top and bottom sections, a portion of each being offset one relative the other, and side sections interconnecting said top and bottom sections, said member being vertically arranged between said front and rear legs with said top and bottom sections laterally spaced outwardly of the plane of said legs and the side sections secured to said aligned legs, said pre-formed member enabling such stacking of at least a pair of chairs with the uppermost chair having the offset portion of the bottom section of the pre-formed member thereof supported on the top section of the pre-formed member of the nether chair, said offset portions having cooperating means for preventing relative sliding movement of the chairs of said stacked pair in a direction parallel with said aligned leg members.

2. A stacking member adapted to be secured between a pair of front and rear legs of a chair for enabling a plurality of chairs each having such a member to be stacked one on top of the other, said member comprising, a preformed wire structure of open, substantially rectangular configuration, said member adapted to be rigidly secured in vertical arrangement to facing surfaces of said legs with each side section of the member abutting a said surface substantially along the length of the section, said member having top and bottom sections connected respectively to the upper and lower ends of said side sections with a portion of the top and bottom sections offset from the plane of said leg members, the said portion of the bottom section being so offset a distance less than the offset portion of the top section, said offset portion of the bottom section having downwardly opening bends therein and said top section having lateral extensions thereof each aligned with a said bend.

3. A stacking member as described in claim 2 in which the said offset portion of the top section is disposed below the upper ends of said side sections.

4. A stacking member as described in claim 2 in which the said offset portion of the top section is disposed below the upper ends of said side sections and said lateral extensions have downwardly directed segments thereof angularly disposed relative said extensions.

5. A chair construction having a seat and leg members front and rear on the chair for supporting the seat, means attached between a pair of aligned front and rear legs enabling a plurality of said chairs to be stacked one on top of the other comprising, a preformed rigid member having a pair of vertically arranged laterally spaced side sections attached to said front and rear legs, and an elongate section connected at its opposite ends transversely to said side sections adjacent the bottom ends of the side sections, said side sections having extensions at the upper ends thereof protruding outwardly of the plane of said pair of legs, said elongate section having a portion thereof offset from the side sections, said pre-formed member enabling stacking of at least a pair of such chairs

with the uppermost chair having the said offset portion of the pre-formed member thereof supported on the extensions of the pre-formed member of the nether chair.

6. A construction as described in claim 5 in which said offset portion of the pre-formed member has seating formations for cooperating with said extensions in such stacking.

7. A construction as described in claim 5 in which each extension includes a horizontally arranged segment connecting with the upper end of a side section and a downwardly directed segment connected to said first mentioned segment.

8. A construction as described in claim 7 in which the downwardly connected segments of the pre-formed member are connected one with the other.

9. A chair construction having a seat and aligned leg members front and rear on the chair for supporting the seat, means rigidly attached between a pair of aligned front and rear leg members enabling a plurality of said chairs to be stored in a stacked assemblage one on top of the other comprising, a preformed rigid member of open substantially rectangular configuration having top and bottom sections, a portion of each being offset one relative the other, and side sections interconnecting said top and bottom sections, said member being vertically arranged between said front and rear legs with said top and bottom sections laterally spaced outwardly of the plane of said legs and the side sections secured to said aligned legs, said pre-formed member enabling such stacking of at least a pair of chairs with the uppermost chair having the offset portion of the bottom section of the pre-formed member thereof supported on the top section of the pre-formed member of the nether chair, the offset portions of said top and bottom sections of the pre-formed member having cooperating support means for achieving such a stacked assemblage comprising, said bottom section offset portion having at least one inverted U-shaped bend therein opening downwardly and said top section offset portion comprising a transverse substantially horizontal segment thereof in vertical alignment with the opening of said bend.

10. A chair construction having a seat and aligned leg members front and rear on the chair for supporting the seat, means rigidly attached between a pair of aligned front and rear leg members enabling a plurality of said chairs to be stored in a stacked assemblage one on top of the other comprising, a preformed rigid member of open substantially rectangular configuration having top and bottom sections, a portion of each being offset one relative the other, and side sections interconnecting said top and bottom sections, said member being vertically arranged between said front and rear legs with said top and bottom sections laterally spaced outwardly of the plane of said legs and the side sections secured to said aligned legs, said pre-formed member enabling such stacking of at least a pair of chairs with the uppermost chair having the offset portion of the bottom section of the pre-formed member thereof supported on the top section of the pre-formed member of the nether chair, said offset portions of the top and bottom sections of the pre-formed member having cooperating support means for achieving such a stacked assemblage, said stacking means including said top section connected to the offset portion thereof by angularly disposed segments to enable a plurality of said chairs to be arranged in a row one alongside the other with the top sections of adjacent pre-formed members releasably interlocked.

11. A chair construction having a seat and aligned leg members front and rear on the chair for supporting the seat, means rigidly attached between a pair of aligned front and rear leg members enabling a plurality of said chairs to be stored in a stacked assemblage one on top of the other comprising, a preformed rigid member of open substantially rectangular configuration having top and bottom sections, a portion of each being offset one relative the other, and side sections interconnecting said top and bottom sections, said member being vertically arranged between said front and rear legs with said top and bottom sections laterally spaced outwardly of the plane of said legs and the side sections secured to said aligned legs, said pre-formed member enabling such stacking of at least a pair of chairs with the uppermost chair having the offset portion of the bottom section of the pre-formed member thereof supported on the top section of the pre-formed member of the nether chair, said pre-formed member being formed of wire and the side sections being angularly disposed one relative the other, said top section being connected to the upper ends of the side sections and arranged laterally outward and below said upper ends, said offset portion of the top section comprising a pair of horizontally arranged segments thereof connected respectively with said upper ends and substantially normal thereto, the offset portion of the bottom section having downwardly opening seat formations therein each aligned with a said segment, adjacent chairs of said stacked assemblage having the seat formations of the uppermost of the adjacent chairs cooperatively engaged with the segments of the chair immediately below.

12. A chair construction comprising a body member providing a backrest and seat, two pairs of front and rear leg members of which the rear legs are rearwardly canted and the front legs are forwardly canted, means secured between each pair of front and rear aligned legs for nesting a plurality of the chairs one on top of the other comprising, a rigid, wire member of open, substantially rectangular configuration providing a top, bottom and two side sections, said side sections being secured along facing surfaces of said front and rear aligned legs with the top and bottom sections substantially parallel and laterally offset outwardly from the plane of said aligned legs, the top section being connected between the upper ends of said side sections and the bottom section being connected between the bottom ends of the side sections, said bottom and top sections having cooperating seating formations for nesting the chairs with the bottom and top sections respectively of adjacent chairs supporting such adjacent chairs in said nested assemblage, said top and bottom sections having extensions at each end thereof substantially perpendicular to the side sections and extending outwardly, the extensions of the top sections being longer than the extensions of the bottom sections and said extensions connecting with the upper and lower ends of the side sections respectively, the longer extensions being connected to the upper ends of the side sections whereby the top and bottom sections are offset one relative the other considered in a vertical plane.

13. A chair construction comprising a body member providing a backrest and seat, two pairs of front and rear leg members of which the rear legs are rearwardly canted and the front legs are forwardly canted, means secured between each pair of front and rear aligned legs for nesting a plurality of the chairs one on top of the other comprising, a rigid, wire member of open, substantially rectangular configuration providing a top, bottom and two side sections, said side sections being secured along facing surfaces of said front and rear aligned legs with the top and bottom sections substantially parallel and laterally offset outwardly from the plane of said aligned legs, the top section being connected between the upper ends of said side sections and the bottom section being connected between the bottom ends of the side sections, said bottom and top sections having cooperating seating formations for nesting the chairs with the bottom and top sections respectively of adjacent chairs supporting such adjacent chairs in said nested assemblage, said top and bottom sections having extensions at each end thereof substantially perpendicular to the side sections and extending outwardly, the extensions of the top sections being longer than the extensions of the bottom sections and said extensions connecting with the upper and lower

ends of the side sections respectively, the longer extensions being connected to the upper ends of the side sections whereby the top and bottom sections are offset one relative the other considered in a vertical plane, said longer extensions each having a downwardly extending segment thereof connecting with the top section at an end thereof whereby the top section is disposed below the upper ends of the side sections.

References Cited in the file of this patent

UNITED STATES PATENTS

D. 182,790	Cohen	May 20, 1958
2,098,888	Schadler	Nov. 9, 1937
2,893,469	Eames	July 7, 1959

FOREIGN PATENTS

135,980	Austria	Dec. 27, 1933