March 19, 1963 H. W. ANDERSON 3,082,037

LOCK-JOINT CHAIR

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FIG. 1.

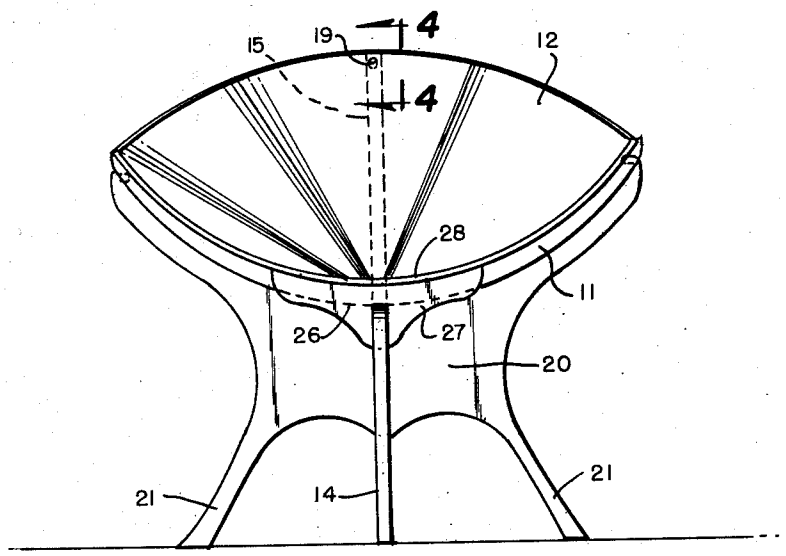


FIG. 2.

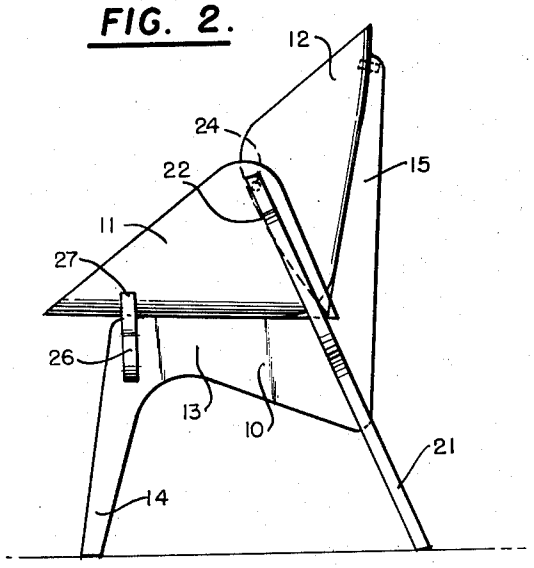
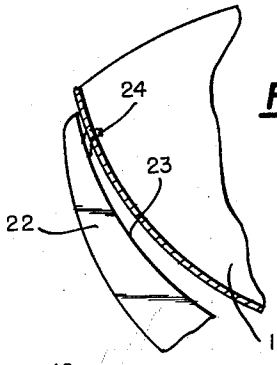


FIG. 3.



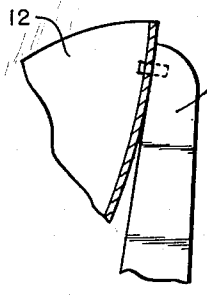


FIG. 4.

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FIG. 5.

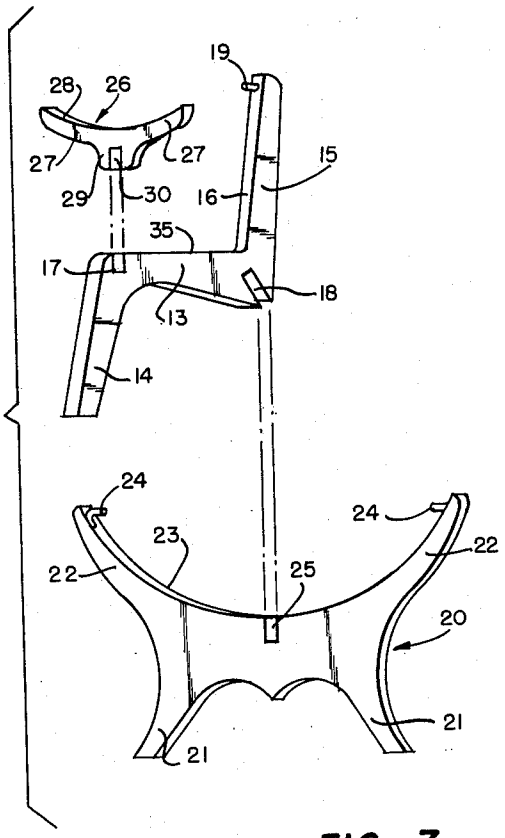


FIG. 7.

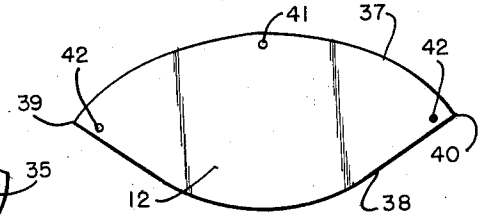
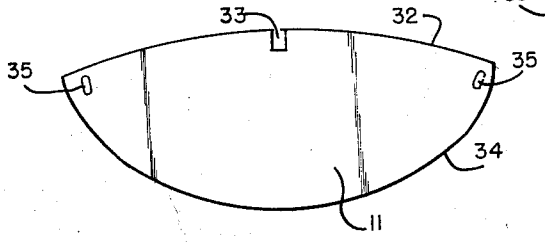


FIG. 6.



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3,082,037

LOCK-JOINT CHAIR

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1 Claim. (Cl. 297—440)

This invention relates generally to furniture, and particularly to the construction of a novel self interlocking chair.

The design of modern furniture has demanded some measure of ingenuity from the manufacturer who must produce a stable and economical structure to meet the designers requirements. One of the high costs in the manufacture of furniture involves the actual assembly of the different parts. Another important factor is shipping cost which is a function of the volume of the crated article. This invention is concerned with minimizing these factors without sacrifice to design or utility.

It is therefore a primary object of this invention to provide a chair constructed of parts which may be assembled without adhesives and which may be dismantled at will for storage purposes.

It is a further object of this invention to provide a chair constructed of parts which are self interlocking to provide a chair of modern design and comfortable in use.

It is a still further object of this invention to provide a chair constructed from a minimum number of parts which are self interlocking to provide a chair which is highly economical in manufacture and in distribution to the consumer market.

The invention consists of a vertically disposed central support member having a downwardly extending leg projecting from the forward end and an upwardly extending back support spaced rearwardly of the leg. A cradle member is provided with two spaced legs and upwardly disposed cradle arms spaced to receive an arcuately sprung seat. The cradle interlocks with the central support to form a tripod support with the three legs, and a back rest embraces the back support and is arcuately sprung to engage and interlock between the cradle arms. A transverse seat brace interlocks with the support member above the leg to provide further support for the seat.

A full understanding of the construction of this invention, together with further novel features and advantages, will be had from the following detailed description of a preferred embodiment thereof, taken in conjunction with the attached drawings wherein:

FIG. 1 is a front elevation of the chair fully assembled.

FIG. 2 is a side elevation of the chair which comprises my invention.

FIG. 3 is a fragmentary view shown partly in cross section showing the method of securing the back support to the leg framework.

FIG. 4 is a fragmentary cross sectional view taken along the line 4—4 of FIG. 1.

FIG. 5 is an exploded view of the three interlocking members which combine to form the frame.

FIG. 6 is a plan view of the seat in a flat unassembled condition.

FIG. 7 is a plan view of the chair back, also in the flat unassembled state.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring now to the drawings in detail, and particularly to FIG. 2 and FIG. 5, the numeral **10** represents a Z-shaped central support member which provides support for a seat **11** and a back rest **12**. The member **10** has a central section **13** having an upper edge **35** adapted to locate substantially parallel to the ground. The forward end of member **10** terminates with a downwardly extending front leg **14**. The rear end of member **10** projects upwardly to form a support **15** for the back rest **12**. The back support **15** has a forwardly facing support surface **16** disposed at a slightly obtuse angle relative to the upper edge **35** of the central section **13**. The leg **14**, central section **13** and back support **15** are cut from one piece of material. A vertical slot **17** is provided transversely across the forward end of the central section **13** and a second slot **18** is formed at the junction between the back support **15** and the rear end of the central section **13**. The slot **18** is cut from the underside of the mentioned location and is formed at an acute angle relative to the front leg **14**. A spur or spigot **19** projects from the upper end of support surface **16** to complete the central frame support member **10**.

A cradle member **20** is provided with two spaced downwardly projecting legs **21**. Curving outwardly and upwardly above each leg **21** are cradle arms **22**. The upwardly directing edge of the arms **22** connect to form an arcuate face **23** which terminates at each end with inwardly projecting spigots **24**. The cradle member is likewise cut from a single sheet of material and is further provided with a transverse slot **25** cut into the centre of the arcuate face **23**.

A seat brace **26** consists of two arms **27** which provide an arcuate seat support face **28**. Centrally of the two arms is a downwardly extending protrusion **29** which is bifurcated by a vertical transverse slot **30**.

The seat **11** shown in FIG. 6, is shaped with a slightly convex rear edge **32** having a slot **33** cut into the centre. The forwardly disposed edge **34** is substantially oval in shape and completes the peripheral edge of the seat. A small hole **35** is formed at each end of the seat at the points of intersection of the two edges **32** and **34**.

The back rest **12** shown in FIG. 7, has an upper edge **37** of arcuate form and a lower edge **38** of substantially elliptical shape. The two edges **37** and **38** meet at points **39** and **40**. A small hole **41** is located adjacent the centre of the upper edge **37** and two further holes **42** are formed adjacent the meeting points **39** and **40**.

The assembly of the lock joint chair may be carried out in the following sequence. The cradle member **20** and the central support member **10** are connected by interlocking the slots **25** and **18** respectively in an overlapping manner such that the arcuate face **23** of the cradle aligns with the upper edge **25** of the central support member. Leg **14** and legs **21** now support the two elements in a tripod configuration. The seat brace **26** is now interlocked with the central support member **10** by means of the two slots **17** and **30**. Engagement is made such that the support face **28** transversely aligns with the upper edge **35** of the central support member. The support framework is now complete. The seat **11** is then bowed such that the small holes **35** engage over the spigots **24** which project from each end of the arcuate face **23**. At the same time the slot **33** engages about the base of the back support **15**. The back rest **12** is then bowed in a similar manner to that of the seat such that the spigot **19**, projecting from the back support **15**, engages in the hole **41** and the spigots **24** engage in the holes **42**. The sprung condition of the seat and the back rest provide a rigid relationship with the support framework to complete a sturdy utilitarian chair of exceedingly pleasing design.

Having described the invention with considerable particularity, it should be understood that various modifications may be made to the detail thereof, without departing from the scope or spirit of the invention as defined in the appended claim.

I claim:

A self interlocking chair comprising, a flat vertically

disposed rearwardly extending central support member, a leg extending downwardly from the forward end of the support member, an upwardly extending back support rearwardly spaced from said leg by a horizontally extending seat support section, a flat cradle member having two spaced legs and two upwardly extending arcuately formed cradle arms, inwardly projecting spigots projecting inwardly from the ends of the cradle arms, a slot formed intermediate the cradle arms inwardly of their upper edge for interlocking engagement with a second slot formed in the underside of said seat support section, a flat seat brace interlocking transversely with the forward end of the upper edge of the seat support section, a seat arcuately sprung to engage between the ends of the cradle arms and embrace the seat support section and the seat brace, the ends of the seat having means interlocking with said spigots, and a back rest arcuately

sprung to engage between said cradle arms and embrace the back support, said back rest having similar means for interlocking with said spigots, said arcuately sprung seat and said arcuately sprung rest maintaining the interlocking engagement of the flat cradle member with the central support member and said seat brace with the central support member.

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