Sept. 8, 1970 R. L. SELF 3,527,497

PORTABLE MULTIPURPOSE CHAIR

Filed June 28, 1968

Fig. 1

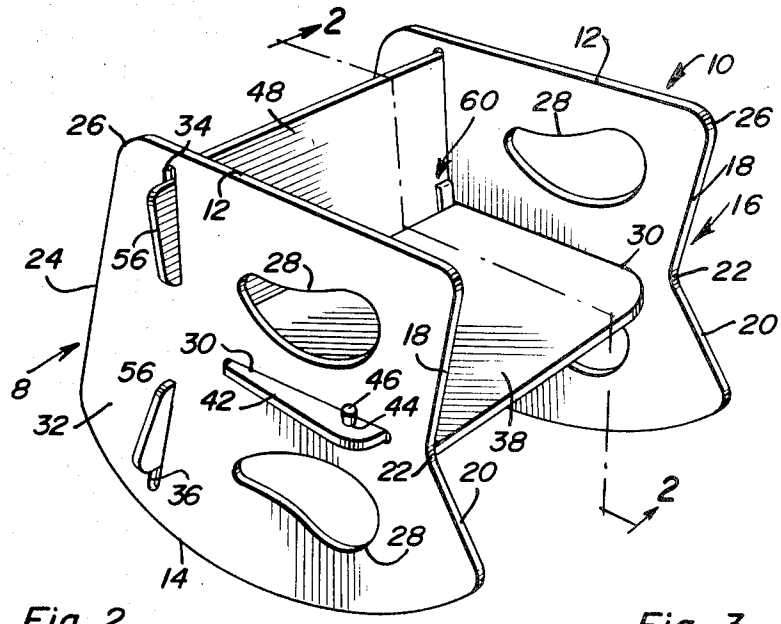


Fig. 7

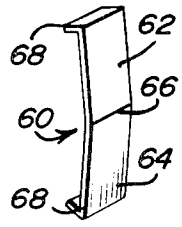


Fig. 2

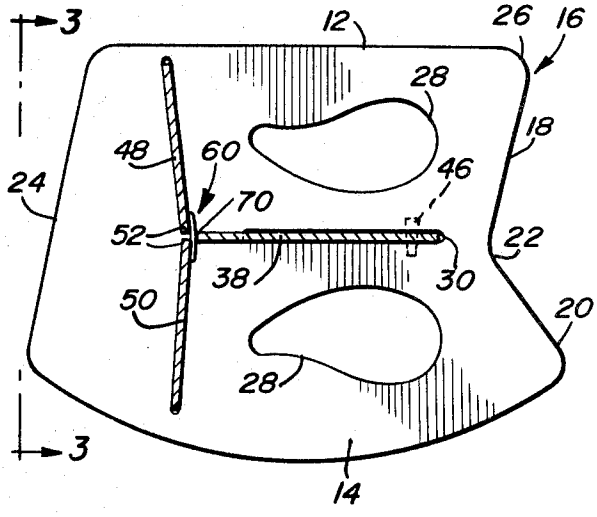


Fig. 3

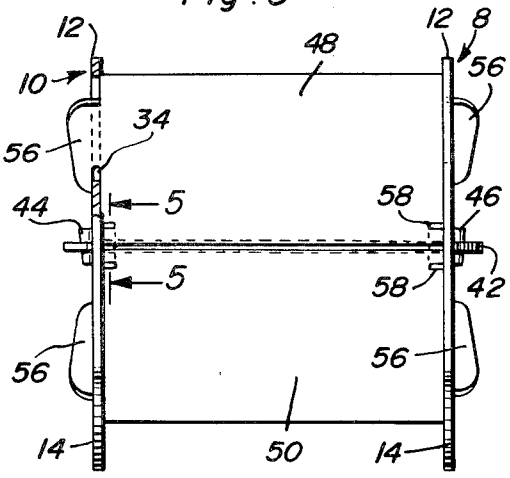


Fig. 4

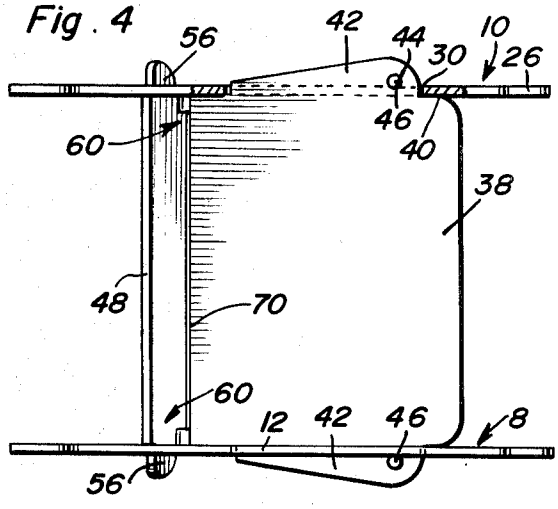


Fig. 5

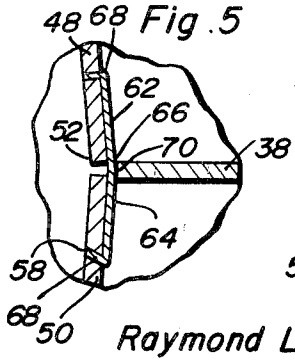
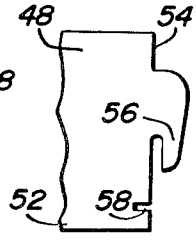


Fig. 6



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PORTABLE MULTIPURPOSE CHAIR

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ABSTRACT OF THE DISCLOSURE

A multipurpose convertible knockdown chair for use by children. It comprises five cooperatively delineated flat-faced panels. The two vertical end panels have adapter slots for insertable and removable interlocking members on the respective ends of several complemental panels which, when installed between the end panels, provide a seat and selectively usable backrests for said seat. Metal or plastic clips are employed between coacting edges as stabilizing clips.

This invention relates to a portable knockdown multipurpose chair wherein the component parts can be acceptably made from many kinds of materials such as, for example, hard rubber, moldable commercial plastics of varying colorful grades, wood, and the like and which, while intended primarily for children, can be suitably enlarged for practical use by adults.

An object of the present invention is to structurally, functionally an din other ways improve upon prior art convertible knockdown chairs and to provide a simple, practical and meritorious chair which is well balanced, is susceptible of practical and safe use in numerous different ways, such as will be hereinafter more fully explained, and which well serves the purposes for which it has been perfected and successfully used.

Briefly the improved chair comprises five panels which can be readily put together for use and subsequently quickly dismantled for compact and convenient storage and handling purposes. The first and second panels, which are vertical in use, are herein designated as vertical end panels and provide the desired spaced parallel coacting end walls. A third panel is interposed between opposed interior surfaces of the two end panels and has projecting flanges or tongues which extend through slots provided therefor in median portions of the vertical panels. These flanges are assembled and held in place by accessible insertable and removable retaining pegs. This third panel constitutes a seat member. The forward and rearward lengthwise edges of the third panel are spaced inwardly from adjacent forward and rearward marginal edges of the two end panels in a manner to accommodate, that is adjacent the rear marginal edge, the fourth and fifth panels which constitute selectively usable backrests and are used for other purposes to be later set forth. Thus, these five panels are quickly put together and are separably interlocked in a manner to provide the unique chair.

It may be well to explain at the outset that the chair herein comprehended is an improvement on design Pat. 205,840, issued to William W. Jones, Richard P. Niesz, and Lawrence H. Sharp. A general comparison of the instant invention with design Pat. 205,840 will show that certain structural and functional features covered in the instant application are comparably shown in the prior design patent. It will be noted however that in the prior patent the respective terminal end portions of the upper and lower backrests (FIG. 1) are inserted into keeper notches which open outwardly through the curvate marginal edges of the respective apertured end walls. One improvement in the instant matter has to do with the substitution of slots which take the place of the open-

ended notches and which have closed ends to accommodate insertable and removable hooks which are interlocked with their bill portions amply and firmly located and retained in the respective slots. This improved adaptation provides a more stable chair construction and overcomes the likelihood of coacting component parts to break off easily and to permit highly undesirable and often dangerous results to the young occupants of the prior art chair.

Another feature has to do with the provision of kerfs in the lower portions of the backrest panels which serve as keepers for bent tongues on the ends of insertable and removable reinforcing metal or plastic clips, that is, clips which when properly lodged in place function to effectually coordinate the backrest panels and also the seat panel.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refere to like parts throughout, and in which:

FIG. 1 is a view in perspective of a portable multipurpose chair constructed in accordance with the principles of the present invention and showing the parts assembled and thus readied for use as a rocking chair.

FIG. 2 is a sectional view taken on the plane of the section line 2—2 of FIG. 1.

FIG. 3 is a rear elevational view with a portion broken away and shown in section and which is taken approximately on the plane of the vertical indicating line 3—3 of FIG. 2.

FIG. 4 is a top plan view with a portion of one end panel broken away and shown in section to illustrate the details of construction.

FIG. 5 is a section taken approximately on the plane of the section line 5—5 of FIG. 3, said view being fragmentarily presented on a slightly enlarged scale.

FIG. 6 is an end view of one of the aforementioned backrest panels, and

FIG. 7 is a view in perspective of one of the assembling and reinforcing clips.

As is evident from the views of the drawing and particularly FIG. 1 the improved chair is characterized by five wooden, plastic or equivalent panels. The two panels of the first pair are identical in construction and one panel, the one at the left in FIG. 1, is denoted by the numeral **8** while the one at the right is denoted by the numeral **10**. A description of one panel will suffice for both. It will be noted that the upper straight across marginal edge is denoted by the numeral **12**. In this connection it is to be pointed out that the terms "upper," "lower" and so on are used in relation to the rocking chair adaptation illustrated in FIG. 1. Continuing the description with such reservations in mind it will be noted that the curvilineal bottom edge is denoted by the numeral **14** and constitutes a suitable rocker. The forward marginal edge **16** is substantially V-shaped in side elevation as shown for example in FIG. 2 and one inclined marginal portion is denoted at **18** and converges toward the other edge portion **20** and wherein these edges converge toward the centralized crotch **22**. The vertical straight rear or rearward edge is denoted at **24**. All of the four corners are appropriately rounded as denoted at **26**. The upper and lower median portions of each panel are provided with teardrop-shaped openings **28**. The intermediate portion is provided with a horizontal slot of requisite length as denoted at **30**. The slot **30** has its forward and rearward ends terminating in spaced relation from the corresponding forward and rearward marginal edge portions of the panel **8**. The portion of the panel to the rear of the slot **30** and which is denoted at **32** is provided with converging

upper and lower slots **34** and **36**. These slots are closed at their respective ends and are spaced inwardly from the marginal edges **12** and **14** as clearly shown in FIG. 1. The third panel is conveniently referred to here by the numeral **38** and it is primarily of rectangular form in plan as shown in FIG. 4 and is of a length and width to fit between the interior opposed surfaces of the two end panels **8** and **10** when it is being used. For best results the respective transverse end portions **40** (FIG. 4) are provided with outstanding keying and assembling tongues or flanges which are denoted at **42** and which project through and beyond the respective exterior surfaces of the panels **8** and **10** by way of the aforementioned slots **30**. Each flange is provided with a circular hole **44** which serves to accommodate a tapered insertable and removable retaining peg **46**. When the flanges **42** are fitted through their companion slots **30** and the pegs **46** are forcibly plugged into the holes **44** provided therefore it will be obvious that the two end panels **8** and **10** are partly assembled and held together.

In addition the fourth substantially rectangular panel is denoted by the numeral **48** and it provides an upwardly and outwardly inclined backrest when the chair is used in the manner illustrated in the views of the drawing. This fourth panel cooperates with a fifth and an identical selectively usable backrest panel which is denoted at **50**. The adjacent marginal edge portions **52** of these panels are in spaced apart parallel relationship. Each transverse end portion **54** (FIG. 6) has an assembling and interlocking hook **56**. The respective hooks fit through the cooperating slots **34** and are forcibly interlocked in the slots in the manner shown. Each transverse end portion is also provided with a kerf **58** which opens through the edge **54** as shown best in FIG. 6. These kerfs, being just inwardly of the interior surfaces of the respective end walls serve to accommodate the stabilizing metal or plastic clips **60**. Each clip is of the construction shown in FIG. 7 and comprises inclined portions **62** and **64** having a median transverse angular bend at **66**. The terminal end portions are provided with laterally bent flanges which are here conveniently designated as detents **68**. These upper and lower detents fit removably into the aforementioned kerfs **58** in the manner shown in FIG. 5. It follows that when all of the panels are assembled the rearward marginal or longitudinal edge **70** of the seat panel **38** firmly engages the crest of the angular bend **66** with the result that these several panels **38**, **48** and **50** are securely oriented and fastened together to provide a strong and reliable convertible chair. It should be noted also in connection with FIG. 5 that the edges **52** are spaced apart and that the cooperating crease or bent portion **66** is in alignment with the space so as to provide a slight yielding result in a manner to better interrelate the component parts.

It is believed that the views of the drawing show the construction of the five individual panels and how they are put together and also how it is possible to disassemble the same for compact and convenient storage purposes (not illustrated).

This chair can be used in many ways, for example, (1) a rocker, (2) turn it over and you will have a solid chair, (3) turn it over and it makes a foot stool for the children to use in the bathroom for washing their hands, brushing their teeth, or combing their hair, (4) put the chair in the solid position on another chair at the table, and it makes a high chair for the young ones, (5) turn it half over and it makes a small chair for smaller children or the same position makes a bookcase by putting it close to the wall, (6) put it in the car seat and put seat belts through the teardrop openings, and it makes a seat for small children and by securing them in place with the seat belts, they can see out of the car window, (7) take two plastic or wooden pegs out of each side and two steel or plastic clips from the back, and it can be taken apart easily and stacked flat in a small space. It is easy to put away in closets, or

trunks of cars, or behind car seats, and it is easy to assemble.

Taking the two vertical end panels **8** and **10** and inserting the two backrest panels **48** and **50** into position between the interior surfaces of the end panels and interlocking the assembling hooks **56** with the slots closed-end **34** and then putting the reinforcing clips **60** into position it will be seen that the next step of inserting the seat panel **38** can be readily accomplished by simply spreading the end panels **8** and **10** and inserting the flanges **42** and pinning the same in their respective slots **30**. It will be understood however that persons setting up a chair of this type may follow other procedural steps in both assembling and subsequently dismantling the chair. In any event by forcing the edge **70** of the seat panel **38** firmly against the bent portions **66** of the clips a firm cooperative association of component parts as brought out in FIG. 5 is achieved.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A multipurpose convertible knockdown chair comprising a plurality of cooperating panels, namely, duplicate vertical end panels providing a pair of spaced parallel end walls, like median portions of said vertical panels having aligned horizontal slots which are closed at their respective ends, a third panel disposed in a horizontal plane and spanning the space between said vertical end panels and provided at its respective ends with assembling and retaining tongues projecting through the respectively cooperating slots and outwardly beyond exterior surfaces of said slots and having keeper holes, said third panel providing a seat panel and said keeper holes having retaining pegs firmly but removably plugged therein and retaining said seat panel in its given usable position, said third panel occupying a plane midway between upper and lower marginal edges of said end panels, and a fourth panel providing a backrest, said fourth panel also spanning the space between said vertical end panels, having a lower marginal edge abutting and cooperable with a rearward marginal edge of said third panel, being disposed at an angle oblique to the horizontally of said seat panel, the respective ends of said fourth panel being provided with outstanding assembling hooks projecting through and outwardly beyond coordinating slots provided in said vertical end panels and separably interlocked with coacting end portions of said slots, and, in combination, a fifth panel like said fourth panel providing a backrest and likewise wherein the respective ends of said fifth panel having outstanding assembling hooks which also project through and outwardly beyond coordinating slots which are provided in said vertical panels and which are likewise interlocked with coacting ends of said slots.

2. The chair defined in and according to claim **1** and wherein the marginal edge portions of the fourth and fifth panels are provided adjacent to but below the plane of the assembling hooks with keeper notches which open outwardly through the adjacent marginal edges, and, in combination, reinforcing clips, said clips bridging adjacent marginal edges of the fourth and fifth panels and being interposed between the forward surfaces of said panels and a rearward edge of the third seat panel, said edge abutting said clips and said clips having lateral detents on upper and lower ends thereof fitting removably into the respectively cooperable keeper notches.

3. A multipurpose convertible knockdown chair comprising five readily connectible and separable panels, namely, a pair of vertical end panels providing spaced parallel end walls, each end panel having a straight upper

marginal edge, a curvilineal bottom edge, a straight rearward edge and a forward V-shaped edge, the rearward upper and lower portions of said panels being provided with slots, said slots having outstanding terminal closed ends spaced from the adjacent upper and lower marginal edges, a pair of inwardly converging backrest panels interposed between the end panels and having hooks on transverse ends thereof fitting removably into the cooperating slots, said backrest panels being provided adjacent outward marginal edges thereof with keeper notches, reinforcing cleats, each cleat having a laterally bent end portion providing a detent and said detents fitting into said keeper notches, and a seat panel having end flanges fitting through and beyond slots provided therefor in median portions of said end panels, a rearward lengthwise marginal edge of said seat panel having contact with median portions of said cleats.

4. The multipurpose knockdown chair defined in and according to claim 3, and wherein said transverse ends are disposed in firm abutting contact with contiguous interior surfaces of the respective vertical end panels and

are of a dimension in length greater than the length of the respective slots so that only the hooks extend through and beyond the slots.

5. The multipurpose knockdown chair defined in and according to claim 4, and wherein the median transverse portion of each cleat is provided with a forwardly disposed angular bend which is aligned with and is oriented with that portion of said rearward lengthwise marginal edge which is cooperable therewith.

References Cited

UNITED STATES PATENTS

1,735,851	11/1929	Burton	297—442
2,518,955	8/1950	Stelzer	297—442
2,543,875	3/1951	Silverman	297—440 X
3,121,588	2/1964	Beckman et al.	297—440 X

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U.S. Cl. X.R.

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