Nov. 23, 1954 L. T. QUICK 2,695,050

CHILD'S CHAIR

Filed July 2, 1948

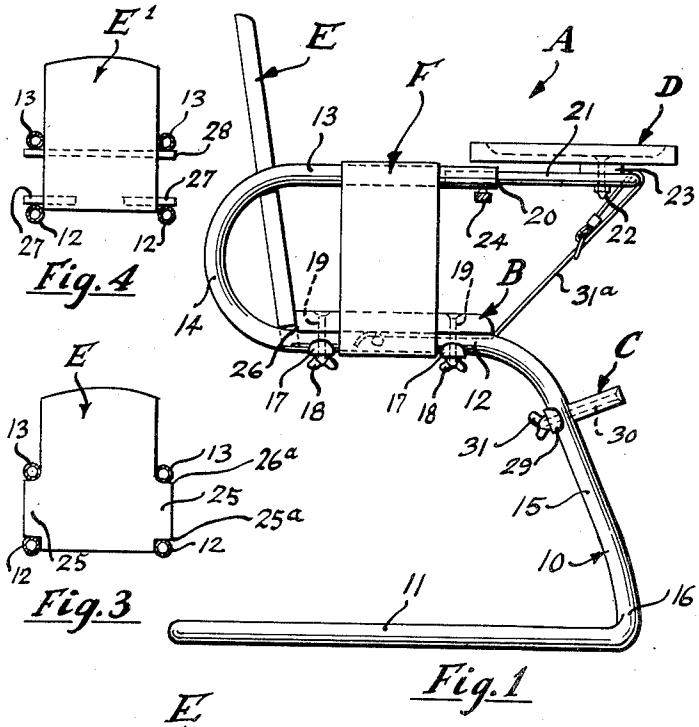


Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

Fig. 9

INVENTOR
L. T. QUICK

By: Fetherstonhaugh & Co.
ATT'YS

United States Patent Office 2,695,050 Patented Nov. 23, 1954

2,695,050

CHILD'S CHAIR

Leonard Thomas Quick, Mimico, Toronto, Canada

Application July 2, 1948, Serial No. 36,582

2 Claims. (Cl. 155—127)

This invention relates to chairs and particularly to a child's chair.

The average child's chair used for eating purposes and in some cases for holding a young child during play is a high-chair with a tray. This type of chair is difficult to accommodate in a practical manner, particularly in small quarters, because it cannot be used for any other purpose and usually takes up space in a small room which could be used by an ordinary chair serving more practical needs. I have found that it is more convenient to have a child's chair which is substantially lower than a high chair and the present invention deals with such a chair, but which has the tray characteristics of the usual high-chair.

It is an object of the present invention to provide a simplified form of child's chair, which may be made in a modernistic styling and which readily may be pushed under a table or folded in a simple manner to fit in a convenient space when not in use, or when it is desired to transport the chair.

A further object of the invention is to provide a chair which is made up of a minimum number of main elements which may be set up from a knock-down position very quickly, and with little work.

A still further object of the invention is to provide a chair of this kind wherein the tray is readily manipulated toward and away from the child when seated in the chair and from which the tray may be readily disengaged completely from the chair structure when desired.

A still further object of the invention is to provide a chair of this character wherein the parts thereof when detached and folded may be cooperatively packed in a compact manner and wherein a securing strap may be employed for holding the parts in this compact relation, said strap being also designed to function as a cooperative element of the chair, if desired, when the chair is in its set-up position.

A still further object of the invention is to provide a chair of this kind in which the child may be safely held without any practical danger of the child's falling out of it.

A further object of the invention is to provide a chair of this kind which may be employed for any given child over a period from practically babyhood until the age of substantially seven to eight years.

With these and other objects in view, the invention generally comprises a body formed from two substantially S-shaped, preferably metal, tubular members, detachably secured in relation one to the other by a horizontal seat, and including a detachable tray and support rods therefor, the latter being slidably related to and securable to the forwardly projecting arms of the chair formed by the upper portion of each substantially S-shaped member. Preferably the chair embodies a removable back supported in normal upright position merely by bearing against parts of the chair frame, while the chair preferably includes a foot rest, which is adjustable and detachable to meet particular requirements. In the preferred chair, which includes both tray and foot rest, the tray, the seat, and foot rest form, in effect, tie members for maintaining the chair framework rigid in its normal set up position.

The invention will be more fully understood by reference to the following detailed specification taken in conjunction with the accompanying detailed drawings.

In the drawings:

Figure 1 is a side elevation of the chair according to the present invention.

Figure 2 is a front elevation thereof.

Figure 3 is a view illustrating one form of back rest and the manner that it engages with the side frames of the chair, the latter being shown in section.

Figure 4 is a similar view to Figure 3 but showing an alternative form of back rest and alternative construction designed to support the back rest.

Figure 5 is an enlarged fragmentary section taken through the upper portion of one side frame and showing the manner in which the side frame is preferably connected to the seat.

Figure 6 is a fragmentary detail to show an alternative positioning of the foot rest.

Figure 7 is a fragmentary detail illustration of an alternative manner of constructing the tray to provide a channel for clearing the arms of the chair when the tray is slid inwardly towards the arms.

Figure 8 is an exploded view of the various parts of the chair illustrated in perspective and with the side frames folded to illustrate the manner in which the parts of the unit may be detached and the whole structure folded.

Figure 9 is a side elevation of the collapsed chair packed for carrying as a compact unit.

Referring to the drawings, A indicates the chair as a whole which is made up of a pair of symmetrical side frames **10** of generally S-shaped form and preferably from tubular stock. Being of generally S-shaped form, the lower bar of the S-shaped element indicated by the numeral **11** forms the base or bearing support for the side frames. The intermediate parallel section of the side frame indicated by the numeral **12** forms the seat support and the upper parallel portion **13** forms the arm of the chair. The connecting portion of the frame between the parts **12** and **13** is indicated by the numeral **14** and is preferably curved as shown. The connecting portion **15** between the parallel portions **12** and **11** is off-set outwardly as at **16** (see Figure 2 particularly) so that the portions **11** are disposed laterally outwardly of the normal vertical axis of each side frame thereby to provide for a sturdy chair which will not tend to tip sidewise, whereas the members **11** are extended far enough back of the centre vertical axis of the chair to prevent tipping backwards. The same is the case in respect to the possibility of the chair tipping in the forward direction.

These symmetrical side frames are connected together by the seat B which bears upon the upper surface of the portions **12** of each side frame and is preferably secured thereto by means of the clamps **17**, the clamping action of which is controlled by the wing nut **18** and the screw element **19** which preferably pass through the chair seat as shown more particularly in Figure 5. When these clamps are secured the whole chair is made quite rigid by the addition of either the foot rest C or the tray D, both elements being preferably employed as part of the chair but either of which could be omitted. Maximum rigidity, however, is attained when both these elements C and D are employed.

The arms of the chair formed by the portions **13** of the side frames and formed of tubular stock present an open socket at their extremities **20**. These form sockets for the rearwardly projecting support bars **21** of the tray D which bars are secured suitably to the tray by the securing means **22** which include a spacer **23**, so that the tray is spaced from the support rod **21** at least sufficiently to clear the upper surface of the arms **13**. Therefore, the tray D may be adjusted inwardly and outwardly in respect to the child seated in the chair and the tray is readily secured by the securing members **24** passing through the extremities of the arms **13** into engagement with the supporting bars **21**. Alternatively, instead of employing the spacer **23** to space the tray upwardly from the rod supports **21**, the tray may bear in some measure against these rod supports and by means of grooves **23***a* disposed in the bottom of the tray and aligned with the arms **13** of the chair, the tray may be slid inwardly towards or outwardly away from the arms **13** in which case the grooves **23***a* will permit the tray to slide over the arms.

The over-all height of the side frame **10** is preferably chosen to be not greater than the normal spacing between the under surface of a kitchen table and the floor upon which it is supported. Therefore, when not in use the chair may be pushed under such a table and is then com-

pletely out of the way. In this instance, the chair back E is completely detachable and, in fact, is freely mounted on the chair. In this connection, it will be seen, by reference to Figure 3, that the chair back E is provided with the laterally projecting wings **25** formed between the lower notches **25***a* and the upper recessed portion **26***a* of the back so that the wings will fit between the intermediate and upper horizontal portions of the side frames **12** and **13** respectively, so that when the lower edge of the back E rests against the rear edge **26** of the seat B the back E is supported in the upright position in a solid manner. Moreover, when it is desired to move the chair to position under a table, as above referred to, the back is very readily swung downwardly and attached or caused to lie upon the seat.

An alternative form of construction of chair back is shown in Figure 4, where the back E^1 is provided with the laterally projecting lugs **27** designed to support it in bearing relation on the intermediate portion **12** of the side frame, while a cross bar **28** may be attached to the back so that its ends project laterally beyond the side edges of the back and thus function to support the back in a similar manner to that described in connection with Figure 3. As a further alternative, however, the bar **28** might be secured to the side frame instead of being an attached portion of the back E^1.

The foot rest C is designed to be attached by means of clamps **29** of similar character to the clamps **17** used in conjunction with the seat and more clearly shown in Figure 5. The screw elements **30** of these clamps cooperating with the wing nuts **31** are designed to pass through the foot rest to one side of the ends of the foot rest so that the curved clamping portion of the clamp **29** like that of the clamp **17** may engage the frame and clamp the foot rest against it. Obviously, as shown in Figure 6, the foot rest can be readily detached and reversed in order to accommodate the feet of smaller children, whereas it is an easy matter to set the foot rest at any desired elevation for this purpose also.

In the case of particularly small children, it will be desirable as a safety measure to employ a strap **31***a* extending substantially between the tray and the seat and which the legs of the child may straddle. In this connection, the strap may be looped about the transversely extending tubular bar **21***a* forming a continuation of and connecting the support bars **21** and one end of the strap then secured to the chair seat such as by means of a slit extending over a projecting pin **31***b* projecting from the bottom of the seat.

The use of the S-shaped side frames as shown makes it possible readily to include flexible side covers F which may be turned at their upper and lower extremities to form tubular channels so that by slipping one over the outer free extremity of each arm and sliding it around the curved portion to locate it on the intermediate section **12** the other end of it can be readily slipped over the free end of arm **13** to assume the normal position shown in Figure 1. This provides against any possibility of the child slipping out sidewise from the seat.

In addition to the features of the chair as above described, it will be obvious that the chair can be readily collapsed into a compact unit for storage or transportation. This is clear from a consideration of Figure 7. By removing the foot rest C and the tray D and loosening the clamping element **17**, the side frames may be swung so that the arms move outwardly and the base support **11** moves inwardly, thus substantially to assume the position shown in Figure 7. Therefore, by placing the back, the tray, and the foot rest on the seat a very compact collapsed unit results. Obviously, of course, it is readily re-assembled merely by swinging the side frames upwardly to proper position, securing the seat clamp, and then applying the tray, foot rest, and back.

I preferably employ the type of clamp shown, having a main base plate **32** and a curved clamping portion to one side thereof, since this provides for quick, easy, and practical adjustment or detachment when required.

The various features of this chair will be clearly apparent from the foregoing and it will be observed that by employing two independent S-shaped side frames all the various edvantages of adjustment and collapsibility are realized. Moreover, by providing the free ends on the arms **13**, I automatically provide tubular sockets which permit the practical mounting, the adjustment and steady support of the tray D.

In Figure 8 the parts are illustrated in exploded relation to show the manner in which the chair is collapsed readily and from Figure 9, it will be clearly understood that the parts are so designed that the collapsed unit may be packed in a very compact manner for carrying. In this respect the side frames when moved such as in Figure 8 to the collapsed interlapping position form a base for the packed unit and the upper face of the tray D may then be positioned to lie upon the seat B with the support bars **21** projecting rearwardly. In this instance the securing means **22** which secure the tray D to the arms **21** project upwardly and when the back E is placed on top of the tray, the upper shoulders formed by the recesses **26***a* (Figure 3) at the upper extremity of the wings **25** are caused to abut the securing means **22** so that when a securing strap **31***a* is caused to encircle the parts so packed, the back E is held securely between the strap and the securing means **22**. Moreover, it will be noted that the upper end of the back will rest in a natural manner against the upwardly projecting edge of the foot rest C so that a firm compact unit is provided for carrying the chair from one location to another as when travelling.

The packing of the chair in the manner described is readily achieved and securement of the packed units made by use of the strap **31***a* which also may form a general utility element of the chair as described particularly in the case of very young children and where its use in the set-up chair becomes no longer necessary, it then becomes solely a utility element for securing the chair in the packed arrangement.

From the foregoing it will be appreciated that I attain the general objects of my invention and it should be noted that the chair is of such character that it may be used for any given child from practically babyhood until substantially seven to eight years of age. In this respect, it should be obvious that the chair is of very sturdy construction so that it will conveniently support a child of substantial size whereas by reason of the adjustability of the foot rest C upwardly or downwardly along the section **13** of the side frames or its reversal inwardly as previously described, the chair is readily fitted to the size of the child. Consequently, in the later years the chair may be employed as a general utility chair and the tray employed somewhat in the manner of a desk or book rest. Finally, it will be appreciated that the chair is produced of a minimum number of main elements, readily folded to collapsed position or moved to set-up position while obviously the parts where desired may be readily detached and stored.

What I claim as my invention is:

1. A foldable chair comprising: two side members each having three substantially horizontal spaced apart sections, the mid horizontal section of each side member connecting with the top horizontal section at one of its ends by means of a curved section, and with the bottom horizontal section at the other of its ends by means of an inclined section; a seat member; connecting means for swingably connecting the mid horizontal section of each side member to said seat member, one side member being connected to said seat member adjacent one side edge and the other side member being connected to said seat member adjacent the opposite side edge of said seat member, the mid horizontal section of each of said side members being parallel to the other one; locking means for locking said swingably connected side members with respect to said seat member with their principal planes in parallel relation to each other; and a back member having wings in interlocking relation with the curved section of each of said side members that joins the mid to the upper horizontal section when they are disposed in parallel relation to each other as aforesaid.

2. A foldable chair comprising: two side members each having three substantially horizontal spaced apart sections, the mid horizontal section of each side member connecting with the top horizontal section at one of its ends by means of a curved section, and with the bottom horizontal section at the other of its ends by means of an inclined section; a seat member; connecting means for swingably connecting the mid horizontal section of each side member to said seat member, one side member being connected to said seat member adjacent one side edge and the other side member being connected to said seat member adjacent the opposite side edge of said seat member, the mid horizontal section of each of said side members being parallel to the other one; locking means

for locking said swingably connected side members with respect to said seat member with their principal planes in parallel relation to each other; and a back member having wings in interlocking relation with the curved section of each of said side members that joins the mid to the upper horizontal sections thereof the lower edge of said back member resting against the rear edge of said seat member.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
D. 150,076	Logan	June 29, 1948
390,801	Parker	Oct. 9, 1888
1,800,668	Shaver	Apr. 14, 1931
1,943,081	Leibo	Jan. 9, 1934
2,030,635	Horwitt	Feb. 11, 1936
2,457,294	Wood	Dec. 28, 1948
2,459,257	Wood	Jan. 18, 1949
2,462,377	Flinn	Feb. 22, 1949

FOREIGN PATENTS

Number	Country	Date
7,070	Great Britain	1885
215,376	Switzerland	Sept. 16, 1941