Feb. 1, 1944. F. O. AYLOR 2,340,789

COLLAPSIBLE OR FOLDING SEAT FOR YOUNG CHILDREN

Filed May 22, 1942 2 Sheets-Sheet 1

Fig. 1.

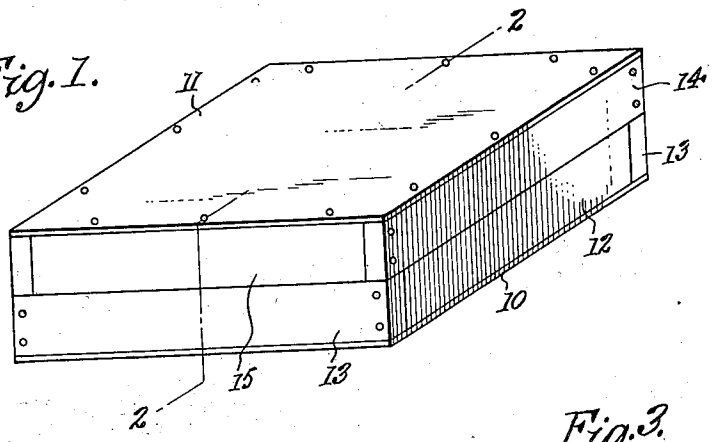



Fig. 2.

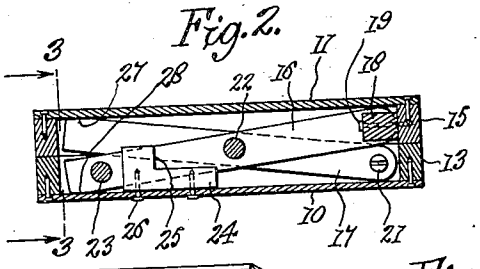



Fig. 3.

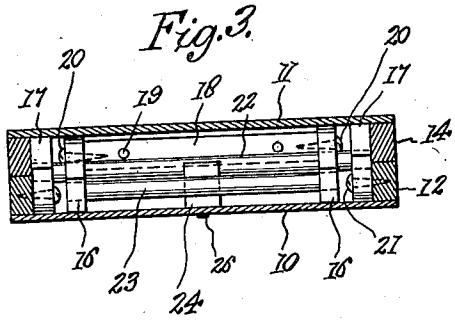



Fig. 4.

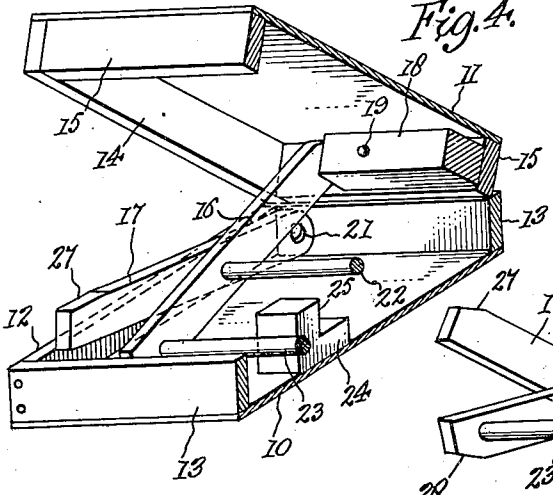
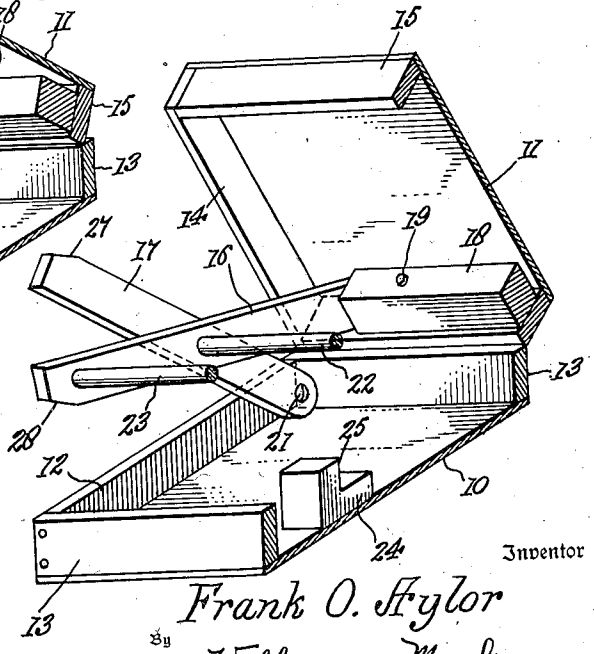



Fig. 5.




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COLLAPSIBLE OR FOLDING SEAT FOR YOUNG CHILDREN

Filed May 22, 1942 2 Sheets-Sheet 2

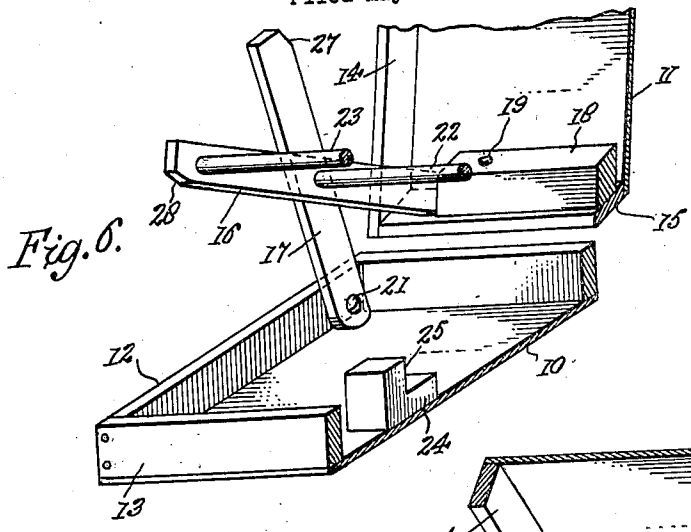



Fig. 6.

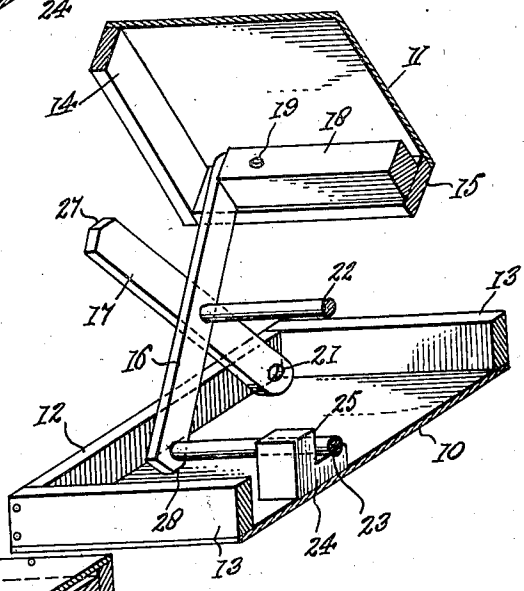



Fig. 7.

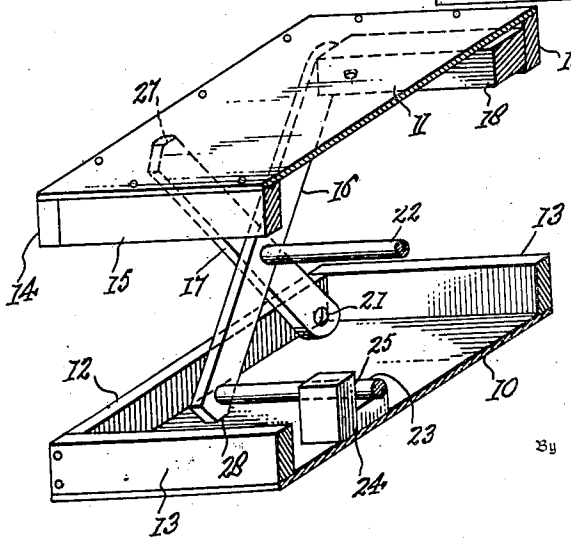



Fig. 8.

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# UNITED STATES PATENT OFFICE

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## COLLAPSIBLE OR FOLDING SEAT FOR YOUNG CHILDREN

Frank O. Aylor, Miami, Fla.

Application May 22, 1942, Serial No. 444,079

1 Claim. (Cl. 155—151)

The present invention relates to improvements in collapsible or folding seat for young child, and has in general the same purposes and objects as those set forth in my co-pending application filed February 11, 1942, Serial No. 430,469.

The present invention, in common with the prior application aforesaid, aims to provide a seat for a very young child which may be set up on a table or other elevated support or upon the ground or floor to accommodate a very young child in a sitting posture; and which may be very quickly and conveniently collapsed from the set-up to a knock-down condition where the parts are contained within very small compass with all of the interior movable parts contained and concealed within base and seat members which, in the knock-down position, become parts of a folding case, enabling the seat to be carried about and transported with ease and economy.

The invention has for a further object to provide the relative mounting and motions of the leg assemblies conjointly upon the base and seat members, and to establish a novel relationship of these assemblies, to the end that parts are few, simple and inexpensive, the assemblies made simply and with small effort and attached with equal facility; and the parts in their conjoint relationship combining to afford an extremely strong construction which will support all reasonable weights for which the same is adapted without the risk of casual or accidental collapse.

The invention has for a still further object an assembly of base and seat members and leg arrangements in which a novel movement is required in opening and closing the device to enable the parts to cooperate in a novel manner with a stirrup or step device which sustains the parts set up strongly and without susceptibility to collapse, but at the same time admits of ready disengagement when the folding of the device is to be purposely accomplished.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claim appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views,

Figure 1 is a perspective view of an improved collapsible or folding seat for young child constructed in accordance with the present invention and illustrated in the collapsed or folded condition.

Figure 2 is a vertical section taken on the line 2—2 in Figure 1.

Figure 3 is a vertical cross section taken on the line 3—3 in Figure 2, and

Figures 4 to 8 inclusive show fragmentary perspective views, with parts broken away and parts shown in section, illustrating the method of movement of the parts in erecting and collapsing the device.

Referring more particularly to the drawings, 10 designates the base and 11 the seat of the improved device, it being understood that these parts are interchangeable and that the seat 11 may be disposed lowermost with the base 10 elevated and serving as a seat. The member 10 is affixed to the base side flanges 12 and end flanges 13 by nails or other suitable fastenings and these flanges and base are preferably secured to one another to form a cup-shaped member of a containing case.

In the same way the seat is provided with side flanges 14 and end flanges 15 to compose a second complemental encasing member.

To these two members are connected the seat legs 16 and the base legs 17. These legs are preferably provided in pairs. The seat legs 16 are pivoted, one to each end of a beam 18 carried within the case member 11 affixed to an end flange 15 thereof as by nails, screws or other fastenings 19. The pivots for the seat legs are indicated at 20, enabling the seat legs to pivot or hinge about the ends of the beam 18. The beam 18 is a convenient means by which the legs 16 are pivotally carried by the case member 11. The beam 18 is shorter than the width of the case member 11 so that the seat legs 16 may pivot in vertical planes inside the base legs 17 and without interference from or with the latter.

The base legs 17 are also preferably two in number and lie outside the seat legs 16 for independent vertical pivoting movement about pivots 21 which secure ends thereof to the side sills 12 of the case member 10. In other words the legs 16 are pivoted to one case member and the similar or near ends of the legs 17 are pivoted or hinged to the other or companion case member. The case members are unconnected save through the legs.

A pivot or scissors bar 22 connects all four legs 16 and 17 at their intermediate portions, and a cross connecting bar 23 joins the free end portions of the two inner legs 16. Thus the two inner legs 16 with the cross bars 22 and 23 form a leg assembly which pivots about one case member

11 and within the other two legs 17 which with the pivot or scissors bar 22 constitute a second leg assembly having a pivotal motion about the other case member. The pivot or scissors bar 22 is common to the two leg assemblies and connects the same together for relative pivotal movement at their intermediate parts. The arrangement is such that two of the legs 16 and 17 of each unit constitute a couple at each side of the device.

On one case member, for instance 10, is a block 24 having a step, stirrup or shoulder 25 extending substantially vertically and being open upwardly and toward the hinge pivots 20 and 21. This block 24 terminates in spaced relation to the adjacent end flange 13 to provide accommodation for the cross connecting bar 23 between these parts in the infolded condition of the parts, for which see Figures 2 and 4. Nails or other appropriate fastenings may be used to affix the block 24 to the base 10.

The free ends of the legs 16 and 17 are provided with inclined edges 28 and 27 respectively for mating with the plane surfaces of the members 10 and 11 in the erect position of the parts, for which see Figures 7 and 8.

Figures 1, 2 and 3 show the nested, infolded or collapsed condition of the parts in which the flanges of the case members come together to form a complete enclosure in which the folded leg assemblies are entirely contained and wholly concealed from view.

In opening the device for set-up, it may be convenient to proceed from the position shown in Figure 2 first to that shown in Figure 4, in which the seat member 11 is caused to hinge upwardly substantially about the pivots 20. This motion will necessarily to some extent entrain the leg assemblies due to the drag upon the legs 16 which will transmit itself to the companion legs 17 only and necessarily by an upward pivoting movement of the legs 17 about the centers 21. This initiates opening movement of the legs, which is enhanced or increased by shifting the case member 11 from the position shown in Figure 4 to that shown in Figure 5 in which the case member 11 has not only been opened upwardly to a greater angular extent but has also been pushed back comparatively. The purpose in view is to not only open the legs to seat sustaining condition but also to bring the cross connecting bar 23 to a position above the block 24 where it may descend back of the shoulder or stirrup 25. In accomplishing this purpose the case member 11, while being opened up by the same original hinging movement, is pulled further back and is also elevated, as shown in Figure 6, from its companion case member. When, by this action, the cross connecting bar 23 arrives at a suitable overhead position with reference to the block 24, the seat leg assembly 16 is rotated about the pivot bar 22 to further elevate the seat member 11 and to lower the cross connecting bar 23 to a position where it will rest on the block 24 in back of the step or shoulder 25, for which see Figure 7. When this is accomplished the case member 11 may simply be allowed to fall or descend angularly about the pivot pins 20 to a horizontal position where its free end portion will rest upon the free end portions, now elevated, of the legs 17. The member 11 is thus horizontal and elevated and constitutes the seat while the member 10 is also horizontal and provides a base for supporting the elevated seat upon a table or other support. It will be seen from Figure 8 that the inclined edges 27 and 28 of the legs afford substantial areas of the legs in alignment with the plane surfaces of the case members with which they respectively engage.

The seat may be collapsed by reversing the movements as above described, the main purpose being to rotate both leg assemblies about the pivots 21 and at the same time to rotate the legs 16 about the pivot bar 22, which companion or composite motion will result in freeing the cross connecting bar 23 from the stirrup 25, thus leaving the leg assemblies free to be collapsed together about the scissors bar 22 and in the same act the two case members to approach one another and to finally close upon the leg assemblies in the manner of Figures 1, 2 and 3.

The legs 16 and 17 at each side of the device reinforce and strengthen one another against side sway. The beam 18 and the cross connecting bar 23 perform a like function inwardly of the legs 16 while the function referred to is being performed externally by the legs 17. The beam 18, cross connecting bar 23 and the legs 16 form a rectangle which is a strong mechanical construction, the strength of which is increased by the presence of the pivot or scissors bar 22. The rectangle is reinforced laterally by the legs 17 and by the fact that these legs are tied to the pivot or scissors bar 22 and are reinforced against spreading by lying inside the side flanges 12. Thus the parts nest and fold readily together without interference from one another and at the same time present a mutually reinforced construction of great strength although involving the use of only few parts simply designed where the case members are entirely free, except for the leg connections, to either pivot about one another or to move forwards or backwards or towards and from one another in motions of translation which achieves readily and quickly the opening and setting up of the device as well as its subsequent collapse and knock-down condition; and moreover the device affords a composition of movement of the case members and leg assemblies such as makes it very easy to bring the cross bar 23 into and out of its engaging relationship to the stirrup 25. The construction of this stirrup is such as to be centrally arranged, to distribute the stress and strain of support throughout the rectangular assembly and its side reinforcement and yet the cross connecting bar 23 is free both forwardly and above for quick positioning on the stirrup and its ready removal.

The parts may be made from wood, plastic or metal, and if desired the case members may be faced with leather, or other appropriate material or upholstered or otherwise decorated.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claim.

What is claimed is:

In a collapsible or folding seat for a young child, a base member having upstanding side and end flanges, a seat member having downwardly extending side and end flanges, a beam secured to the seat member on the inside of end flange thereof and terminating short at both ends of the beam from the side flanges of the seat member to provide spaces within the seat member, seat legs pivoted at their upper ends to the end portions of said beam within said spaces, base legs pivoted to the side flanges of the base in substantially vertical line with the pivots of the seat

legs both in the collapsed and the set-up position of the parts, a scissors bar connecting all of the legs at their intermediate portions, the two legs at each side of the device forming collapsing and opening couples in contact with one another and reinforcing one another and reinforced in turn by said beam and side flanges of the base, a cross connecting bar connecting the free end portions of the seat legs, a block affixed to the inside of the base in spaced relation to an end flange thereof to provide a space between the block and end flange to accommodate said cross connecting bar in the folded position of the parts, and a shoulder rising up from the portion of the block nearest the last mentioned end member and adapted to receive vaultingly thereover said cross connecting member, the free end portions of the legs having inclined surfaces which in the set-up position align with the horizontal to contact the inside faces respectively of the base and seat members.

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