July 14, 1959 D. D. OWENS 2,894,267

FURNITURE FOR A PHYSICALLY HANDICAPPED PERSON

Filed Nov. 9, 1956 2 Sheets-Sheet 1

FIG. 1

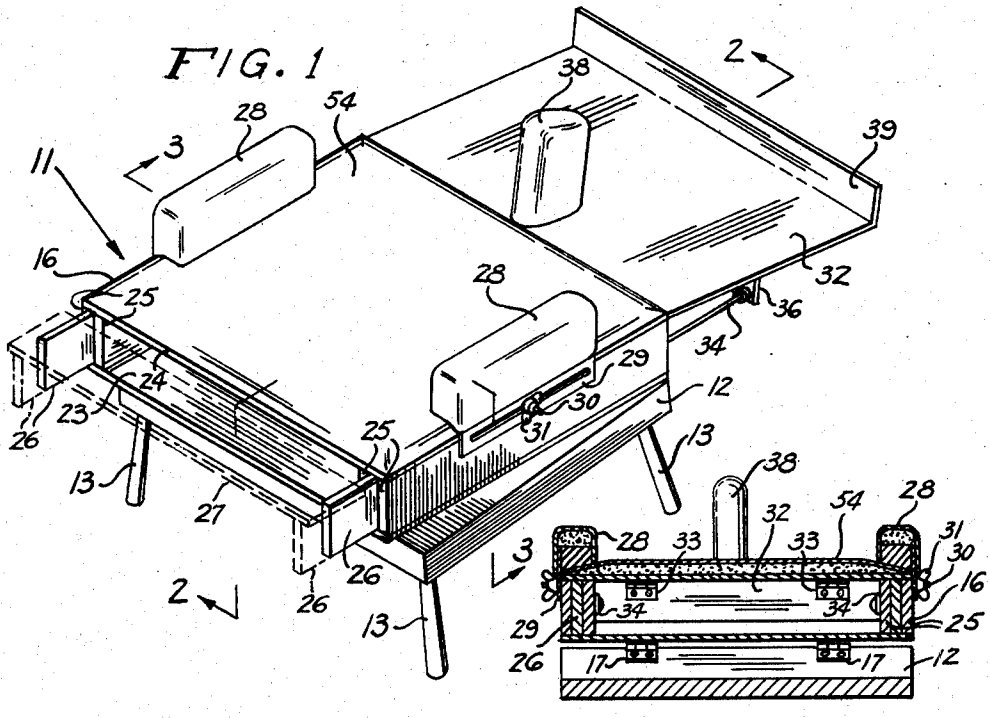


FIG. 3

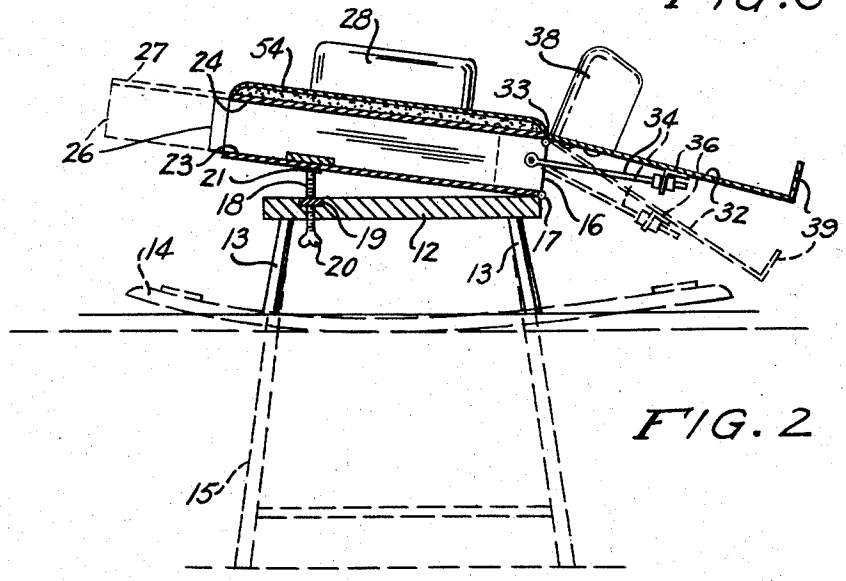


FIG. 2

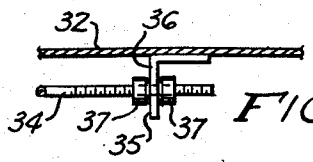


FIG. 4

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FURNITURE FOR A PHYSICALLY HANDICAPPED PERSON

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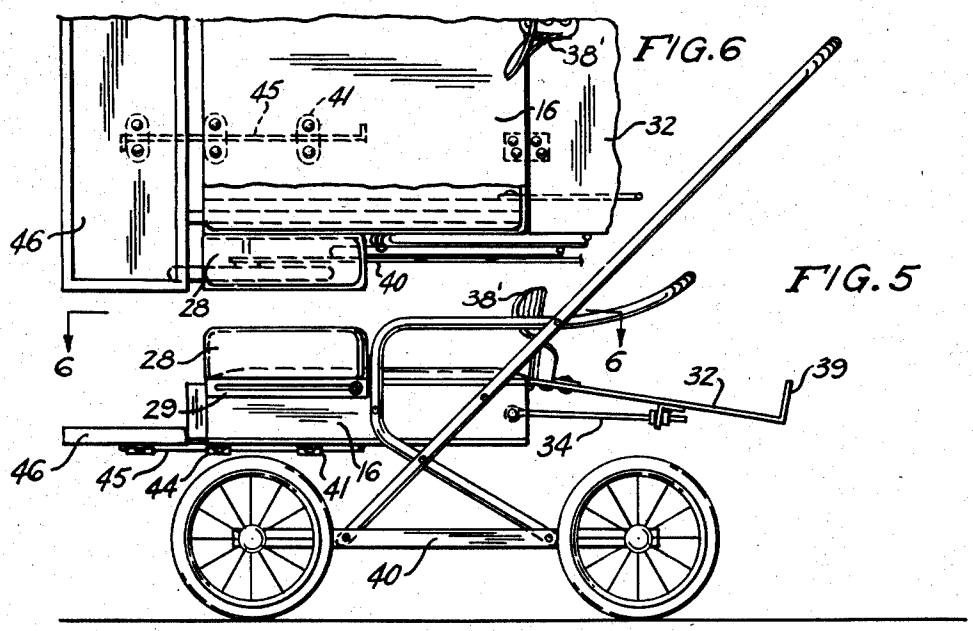


FIG. 6

FIG. 5

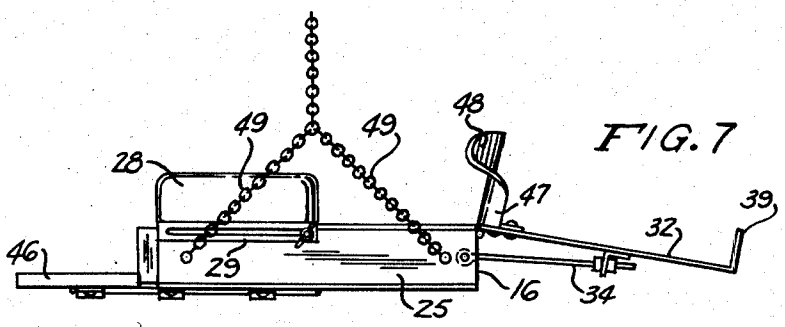


FIG. 7

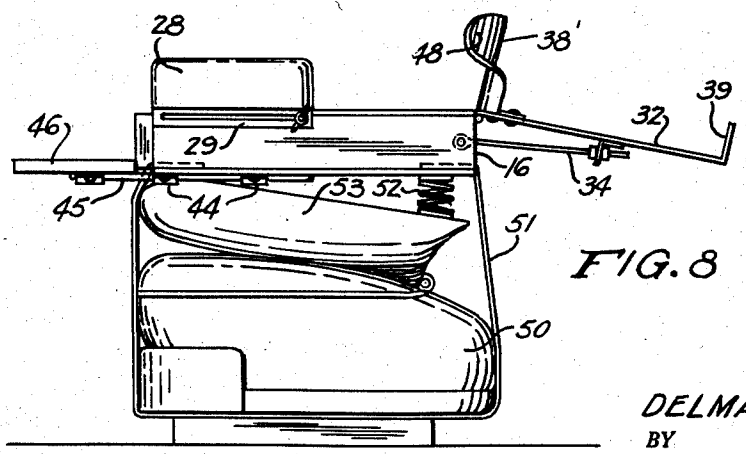


FIG. 8

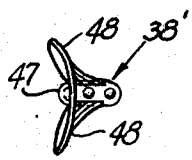


FIG. 9

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FURNITURE FOR A PHYSICALLY HANDICAPPED PERSON

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Application November 9, 1956, Serial No. 621,339

3 Claims. (Cl. 5—68)

This invention relates to articles of furniture for a physically handicapped person, and more particularly to furniture for a child having physical defects which require the child to remain in a downwardly facing prone position at substantially all times.

A main object of the invention is to provide a novel and improved furniture article for a physically handicapped person required to remain in a downwardly facing prone position, said furniture article being simple in construction, being adjustable in accordance with the requirements of the person using same, and providing an opportunity for a physically handicapped child to take part in many normal childhood activities.

A further object of the invention is to provide an improved furniture article for a physically handicapped person, such as a child, required to remain in a downwardly facing prone position substantially at all times, the furniture article being inexpensive to fabricate, being durable in construction, being adjustable in accordance with the size of the child using same and with the necessary physical requirements of the child, providing a means of enabling the child to participate in many activities, such as games, writing, coloring, drawing, reading, or the like, without undue physical strain, whereby the child's moral is maintained at a high level and whereby the child experiences a feeling of independence and self-confidence.

Further objects and advantages of the invention will become apparent from the following description and claims, and from the accompanying drawings, wherein:

Figure 1 is a perspective view of one form of furniture article for a handicapped child, constructed in accordance with the present invention, the full lines indicating partial extension beyond the side wall elements of the vertical bar members and the dotted lines indicating further extension of the bar members beyond the side walls with a horizontal extension panel supported upon the extended bar members.

Figure 2 is a longitudinal vertical cross sectional view taken through the furniture article of Figure 1 and illustrating possible modifications thereof.

Figure 3 is a transverse vertical cross sectional view taken on line 3—3 of Figure 1.

Figure 4 is an enlarged cross sectional detail view showing the means for adjusting the position of the foot board-supporting strut member employed in the article illustrated in Figures 1 to 3.

Figure 5 is a side elevational view of a furniture article according to the present invention mounted on a wheeled frame, whereby the article is employed as a stroller.

Figure 6 is a fragmentary top plan view of the wheeled article of furniture shown in Figure 5.

Figure 7 is a side elevational view showing the manner in which a furniture article according to the present invention can be employed as a swing.

Figure 8 is a side elevational view showing how an article of furniture according to this invention can be mounted on a folded automobile seat.

Figure 9 is a top view of the crotch-receiving member employed in the furniture article of Figures 6 to 8.

Referring to the drawings, and more particularly to Figures 1 to 5, 11 designates one form of furniture article for a physically handicapped person, such as a child compelled to remain in a downwardly facing prone position, the article comprising a generally rectangular horizontal main support 12 which may be mounted on suitable legs 13, as shown. Respective legs 13 are provided at the respective corners of the support 12, and said legs may be secured to respective rocker bars provided at the opposite sides of the support, as shown in dotted view at 14 in Figure 2, to provide a rocker.

The legs may be of any desired length, and may be relatively short, to support the rectangular member 12 a short distance above the floor, or alternatively may be relatively long, as shown in dotted view at 15 in Figure 2 to support the member 12 at a substantial distance from the floor, in the manner of a highchair.

Designated at 16 is an auxiliary support which is generally rectangular in shape and which is hinged to the rear margin of the main support 12, as shown at 17, whereby the auxiliary support 16 may be tilted to an adjusted angular position with respect to the main support 12, as by the provision of a vertical adjusting screw 18 threadedly engaged through a plate member 19 secured in the main support 12 and provided with a wing-shaped head 20 on its lower end and with an abutment foot element 21 on its top end engaging the bottom surface of the auxiliary support 16.

The auxiliary support 16 comprises a bottom wall 23, a top wall 24 and respective spaced pairs of vertical side wall elements 25, 25 secured between the respective longitudinal side marginal portions of the top and bottom wall elements 23 and 24 to define longitudinal guides. Slidably received in said longitudinal guides are respective vertical, longitudinal extending rigid bar members 26, 26 adapted to supportingly receive a transversely extending horizontal extension panel 27 which may be thus supported on the bar members 26, 26 flush with the top wall member 24, if required.

Designated at 28, 28 are suitably padded respective upstanding longitudinal retaining members, and which are adjustably secured at the respective longitudinal sides of top wall 24, the members 28 being of substantial length and being provided with depending, longitudinally slotted vertical flanges 29 at their outer sides, as shown in Figure 1. Extending through the slots in the flanges 29 are respective outwardly projecting studs 30 on each of which is engaged a wing nut 31, which, when tightened, locks the associated retainer member 28 in an adjusted position along the top wall 24 of the auxiliary support member 16.

Designated at 32 is a leg-supporting board which is hinged to the rear transverse margin of the top wall 24 of the auxiliary support 16, as shown at 33, said board 32 being supported in an adjusted angular position with respect to the top wall 24 by a pair of strut rods 34 pivoted to the inner side wall elements 25. The ends of the strut rods 34 extend through the depending vertical flanges of respective angle brackets 36 secured to the underside of the board 32 and are adjustably secured to the depending flanges 35 by respective nuts 37, 37 threadedly engaged on the ends of the strut rods on opposite sides of the flanges 35.

Designated at 38 is an upstanding padded crotch-receiving member secured on the intermediate portion of the forward margin of the leg-supporting board 32, the upstanding member 38 being adapted to engage the crotch of a child supported on the device. The rear edge of the

board 32 is provided with the upstanding flange or wall 39, serving as a foot rest to support the child and to cooperate with the upstanding crotch-engaging member 38 to maintain the child on the device comfortably when the auxiliary support 16 is in an angularly adjusted position, for example, as shown in Figures 1 and 2.

Referring now to Figures 5 and 6, an article such as that previously described may be mounted on a wheeled frame 40, whereby the article may be employed as a stroller. In the modified form of the device shown in Figures 5 and 6, the auxiliary support 16 is secured directly between the sides of the stroller frame 40 without employing an underlying support, such as the support 12 in Figures 1 and 2. Slidably supported adjacent the bottom surface of the bottom wall 23, as by the provision of longitudinally aligned sleeve brackets 41, 41 at opposite side marginal portions of the auxiliary support 16 are respective rods 45 on the forward ends of which are secured a transversely extending horizontal tray 46, which is thus adjustably supported at the forward end of the device, and which may be employed by a child using the device for supporting various objects, such as coloring books, toys, blocks, or the like.

In the form of the invention shown in Figures 5 and 6, a modified form of crotch-engaging member is employed, said member being designated at 38'. The member 38' comprises a body of rigid sheet material suitably formed to define an arcuately curved, rearwardly concave crotch-engaging portion 47 and laterally extending arcuately curved wing elements 48, 48 spaced above and merging with said rearwardly concave crotch-engaging portion 47, as is shown in Figures 5 to 9. The member 38' is fastened rigidly to the intermediate portion of the forward margin of the board 32 and is employed in the same manner as the member 38 previously described in connection with the embodiment of the invention illustrated in Figures 1 to 4.

The article of furniture shown in Figures 5 and 6 may be employed as a swing, as shown in Figure 7, by fastening the lower ends of the chain elements 49, 49 at the side of a conventional swing chain assembly to the respective end portions of the outer longitudinal vertical side bars 25 of the auxiliary support 16.

The article of Figures 5, 6 and 7 may be mounted on the top of a folded automobile seat 50, as shown in Figure 8, by fastening the auxiliary support 16 over the folded seat in the manner shown in Figure 8, as by employing suitable fastening bands 51 extending around the seat and connected to the front and rear marginal portions of the bottom board 23 of the auxiliary support 16. When thus employed, the rear portion of the auxiliary support 16 is resiliently supported on a plurality of coil springs 52 which are fastened to the bottom surface of the rear marginal portion of bottom board 23 of the auxiliary support 16, the springs 52 engaging the rear portion of the folded seat top 53, as shown in Figure 8 to provide the cushioned support of the auxiliary member 16 required for maximum comfort of the child employing the device.

Suitable padding may be provided wherever required on the device to improve the comfort of the person employing same. Thus, suitable padding may be provided over the entire area of the top wall 24 of the auxiliary support 16, as shown at 54.

It will be further understood that the article of furniture described above is suitable for use not only by children, but by adults having similar physical handicaps, and that the dimensions employed in designing the device will be in accordance with the size of the person using same.

While certain specific embodiments of an improved article of furniture for physically handicapped persons have been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore it is intended that no limitations be placed on the invention except as defined by the scope of the appended claims.

What is claimed is:

1. In an article of furniture for a physically handicapped person, a horizontal main support, an auxiliary support hinged at one transverse margin to a transverse margin of said main support and being adapted to receive the body of a person in a downwardly facing prone position, means to adjust the auxiliary support upwardly relative to the main support and to hold said auxiliary support at an angle to said main support, a board hinged to said one transverse margin of the auxiliary support above the hinged connection of said auxiliary support to the main support, coacting means connected between said one transverse margin of the auxiliary support and said board and being formed and arranged to support said board at an adjusted angle relative to said auxiliary support, said last named means being connected to the auxiliary support between the hinge connections of the board and the main support, said board being adapted to receive the person's legs, upstanding foot rest means on the free transverse margin of said board, an upstanding crotch-receiving member on said board located intermediate the side margins thereof, respective longitudinal guides at the respective sides of said auxiliary support, respective bar members slidably engaged with said longitudinal guides, an extension member supported transversely on said bar members and located forwardly adjacent said auxiliary support, and respective upstanding longitudinal retaining members adjustably secured to the longitudinal side margins of said auxiliary support.

2. In an article of furniture for a physically handicapped person, a horizontal main support, an auxiliary support hinged at one transverse margin to a transverse margin of said main support and being adapted to receive the body of a person in a downwardly facing prone position, means to adjust the auxiliary support upwardly relative to the main support and to hold said auxiliary support at an angle to said main support, a board hinged to said one transverse margin of the auxiliary support above the hinged connection of said auxiliary support to the main support, a strut member connected between said one transverse margin of the auxiliary support and said board and being formed and arranged to support said board at an adjusted angle relative to said auxiliary support, said strut member being connected to the auxiliary support between the hinge connections of the board and the main support, said board being adapted to receive the person's legs, upstanding foot rest means on the free transverse margin of said board, an upstanding crotch-receiving member on said board located intermediate the side margins thereof and adjacent the hinged margin of said board, respective longitudinal guides at the respective sides of said auxiliary support, respective bar members slidably engaged with said longitudinal guides, an extension member supported transversely on said bar members and located forwardly adjacent said auxiliary support, and respective upstanding longitudinal retaining members adjustably secured to the longitudinal side margins of said auxiliary support.

3. In an article of furniture for a physically handicapped person, a horizontal main support, an auxiliary support hinged at one transverse margin to a transverse margin of said main support and being adapted to receive the body of a person in a downwardly facing prone position, a vertical screw member threadedly engaged through said main support and being engageable with the bottom surface of said auxiliary support to adjust the auxiliary support upwardly relative to the main support and to hold said auxiliary support at an angle to said main support, a board hinged to said one transverse margin of the auxiliary support above the hinged connection of said auxiliary support to the main support, a strut member connected between said one transverse margin of the

auxiliary support and said board and being formed and arranged to support said board at an adjusted angle relative to said auxiliary support, said strut member being connected to the auxiliary support between the hinge connections of the board and the main support, said board being adapted to receive the person's legs, upstanding foot rests on the free transverse margins of said board, an upstanding crotch-receiving member on said board located intermediate the side margins thereof and adjacent the hinged margin of the board, respective longitudinal guides at the respective sides of said auxiliary support, respective bar members slidably engaged with said longitudinal guides, a tray member supported transversely on said bar members and located forwardly

adjacent said auxiliary support, and respective upstanding retaining members adjustably secured to the longitudinal side margins of said auxiliary support.

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