Aug. 8, 1944. H. J. SMITH 2,355,569

INFANT EXERCISER

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Fig. 1.

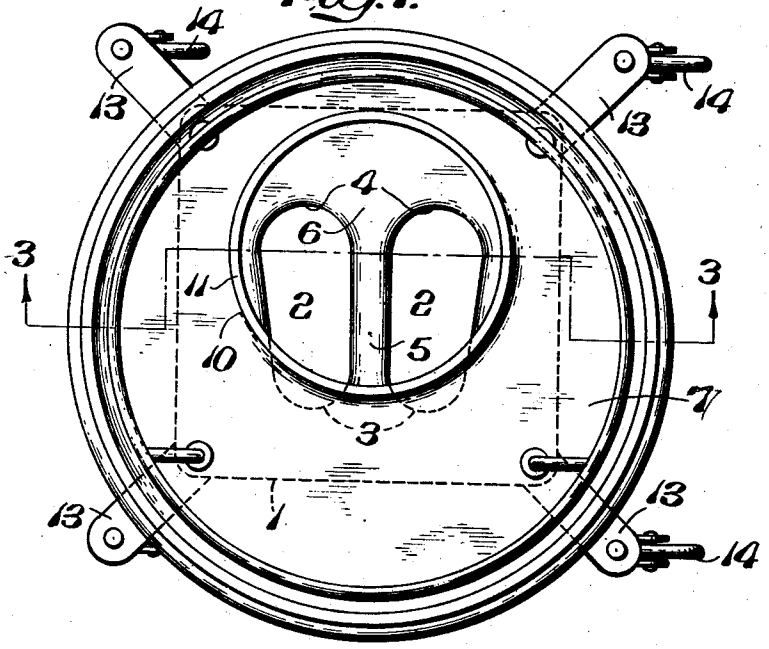

Fig. 2.

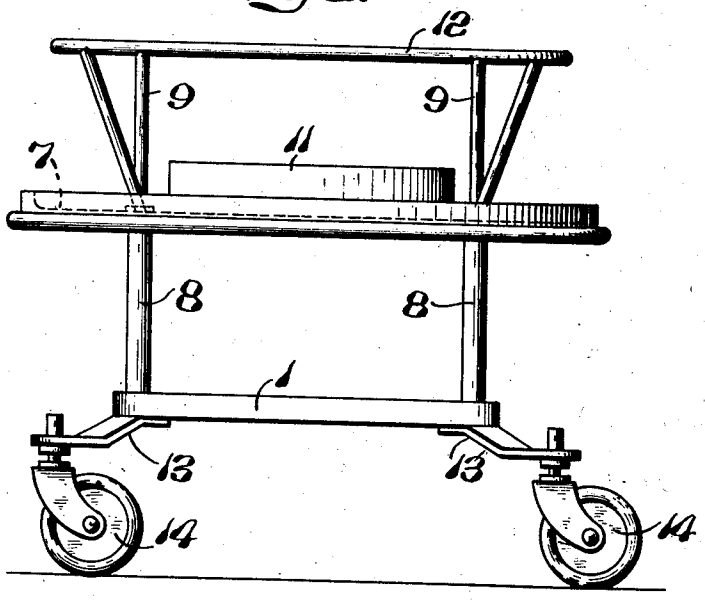

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Fig. 3.

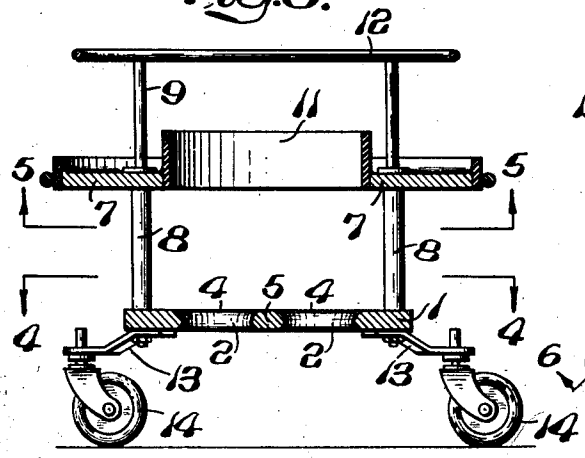


Fig. 4.

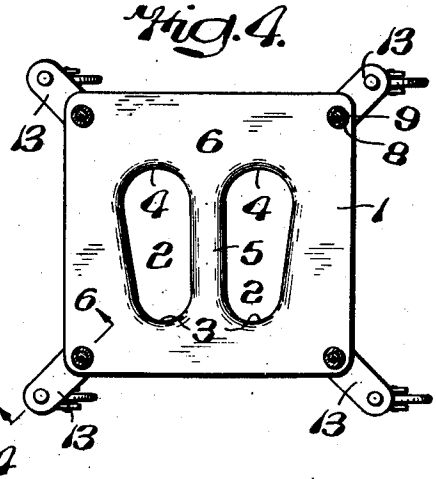


Fig. 5.

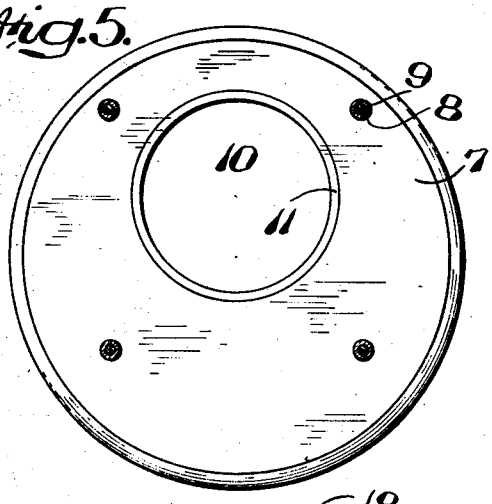


Fig. 8.

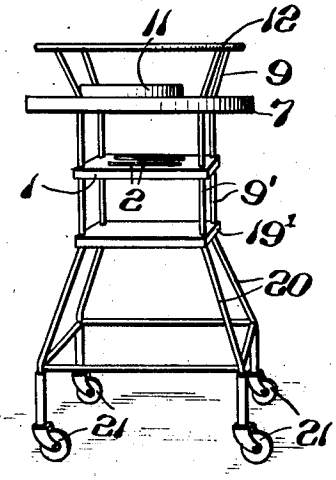


Fig. 7.

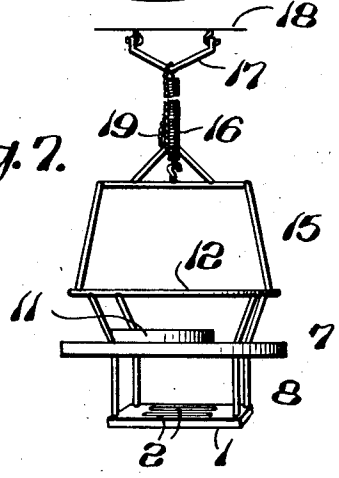
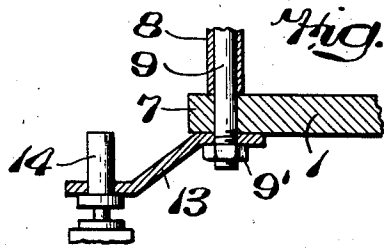


Fig. 6.



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Patented Aug. 8, 1944

2,355,569

UNITED STATES PATENT OFFICE

2,355,569

INFANT EXERCISER

Henry J. Smith, Philadelphia, Pa.

Application February 16, 1942, Serial No. 431,099

2 Claims. (Cl. 155—22)

My invention is an exerciser particularly designed for the use of infants and especially for infants too young to walk or sit without body support, and a leading object of my invention is the provision of simple apparatus for strengthening the leg, arm and body muscles of young infants by facilitating natural and pleasurable movements of their limbs and body while providing adequate support of the legs, body and arms and avoiding the tendency to slump and slide.

The essential characteristic of my improved exerciser is the provision of a substantially horizontal seat containing adjacent oblong leg apertures through which an infant's legs may be projected in a natural posture and permitting free movements of the legs up and down and forward and backward while supporting the legs laterally on both sides of and between them.

Preferably the oblong leg apertures have rounded ends and are spaced from one another by a crotch bar having a flaring end forming a somewhat pyriform saddle, and the edges of the leg apertures opposite the crotch bar preferably converge slightly toward one another toward the front to maintain approximately the same spacing between the edges of the apertures and the lower portions of the leg when the infant stands that exists between the aperture edges and the upper portions of the legs when the infant sits.

Preferably such a seat is combined with a back rest and body support preferably consisting of a wide waistband fixed to a table above the seat, with the waistband spaced horizontally away from the ends of the leg apertures adjacent the saddle and with the forward ends of the leg apertures projecting frontward horizontally beyond the forward portion of the waistband so as to permit free forward leg movements when the abdomen of the child rests against the forward part of the waistband in standing.

A reach bar is also preferably provided above the table to facilitate rising and balancing in a standing position, as well as reaching and stetching of the arms from a sitting position.

The characteristics of the improvements of my invention may be embodied in various forms of equipment supported on a base or suspended from a hanger, and the characteristic features and advantages of my improvements will further appear from the following description and the accompanying drawings in illustration thereof:

In the drawings, Fig. 1 is a top plan view illustrating the embodiment of my improvements in a wheel chair or rambler; Fig. 2 is a front elevation of the wheel chair shown in Fig. 1; Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 1; Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 3; Fig. 5 is a transverse sectional view taken on the line 5—5 of Fig. 3; Fig. 6 is a detached fragmentary sectional view on the line 6—6 of Fig. 4; Fig. 7 is a perspective view illustrating the embodiment of my improvement in a swing or jumper; and Fig. 8 is a perspective view illustrating the embodiment of my improvements in a high chair.

The embodiment of my invention illustrated in the drawings comprises a seat 1 containing a pair of adjacent oblong leg apertures 2 having rounded forward edges 3 and rearward edges 4 and spaced by a bar 5 having an outwardly flaring forward end and an outwardly flaring rearward end forming a saddle 6 with concavely curved edges.

A rimmed table 7 is supported above the seat by tubes 8 sleeved on rods 9 and contains a circular body aperture 10 encircled by a wide waistband 11.

The waistband 11 extends horizontally rearwardly beyond the rearward ends 4 of the leg apertures 2 so as to provide a comfortable support for the back of an infant seated on the saddle 6 with legs projecting through the leg apertures 2 in ambulatory position.

The forward ends 3 of the vertical leg slots 2 extend horizontally forward beyond the forepart of the waistband 11 so that even when standing and pressing forward against the waistband the infant may step forward, but it can never slide so far forward as to be caught between the seat 1 and table 7.

The upper portions of the forward rods 9 are flared outwardly, and, with the rearward rods 9, provide a support for a circular reach bar 12 spaced above the table 7 but well within the periphery of the resilient bumper on the latter so that hands grasping the reach bar cannot be pinched when the wheel chair is propelled into an obstruction.

In the embodiment of my invention illustrated in Figs. 1 to 6 inclusive, the apparatus is supported on brackets 13 secured to the seat 7 by the rods 9 and nuts 9'. Each bracket 13 is mounted on the vertical shank of a castor 14 and the axes of these shanks lie horizontally beyond the peripheries of the table 7 and reach bar 12 so that the wheel chair cannot be tilted by side thrusts against the latter.

Figure 7 illustrates the conversion of the apparatus into a jumper or swing by removing the

brackets 13 and castors 14 and suspending the reach rod 12 from a yoke 15 which is connected by a spring 16 with a hanger 17 suspended from any suitable support 18. The expansion of the spring may be limited by inserting a slack tension member, such as a chain 19, between the yoke 15 and hanger 17.

Figure 8 illustrates the mounting of the apparatus above a platform 19' of a frame 20 supported by castors 21 to form a high chair. In this adaptation of my invention the bars 9 may be formed integrally with or may be secured to the upright bars 9' of the frame 20.

It will be observed that when an infant is seated in the exerciser with its legs projecting through the openings 2, its body is securely supported by the waistband 11 and it cannot slip down through the waistband so as to become caught between the seat 1 and table 7, as frequently occurs when a young infant is placed in a conventional high chair even though supported therein by a strap. The freedom afforded the infant's feet projected through the openings 2 encourages it to kick and step out and it soon learns to pull itself erect by grasping the reach bar 12 and is encouraged to walk by being steadied by its hands grasping the reach bar, the waistband 11 encircling the body and the bar 5 supporting the crotch.

When the apparatus is supported on castors within leg distance of the floor, as illustrated in Figures 1 to 6, the infant quickly learns to propel itself from place to place. When the apparatus is yieldingly supported, as in Fig. 7, the infant quickly learns to flex its legs and jump while holding the bar 12 so that every part of the little body and limbs are brought into play and strengthened while securely supported in a natural position and without imposing excessive weight or strain on the legs, feet or back.

When the apparatus is mounted above the platform, as in Figure 8, the infant may sit, stand, and stretch without sliding out of the chair or being confined to a tiresome position.

Having described my invention, I claim:

1. An exerciser comprising a seat and an apertured table spaced therefrom, said table having a waistband connected therewith and said seat containing a pair of oblong leg apertures having their front edges extending horizontally beyond said waistband and said waistband extending horizontally beyond the rearward edges of said leg apertures.

2. An exerciser comprising a substantially horizontal seat containing substantially vertically disposed elongated leg openings having curved ends, said leg openings being spaced by a bar, and the edges of said leg openings opposite said bar converging toward one another, and a body support connected with said seat and including a back support spaced horizontally from the rearward ends of said leg apertures.

HENRY J. SMITH.