

June 26, 1962

N. S. McEWEN
FLYING TROLLEY SLIDE

3,040,678

Filed March 7, 1960

2 Sheets-Sheet 1

Fig. 1.

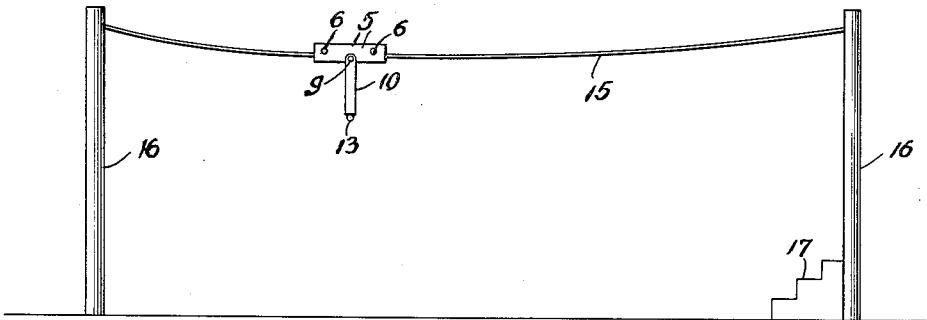


Fig. 2.

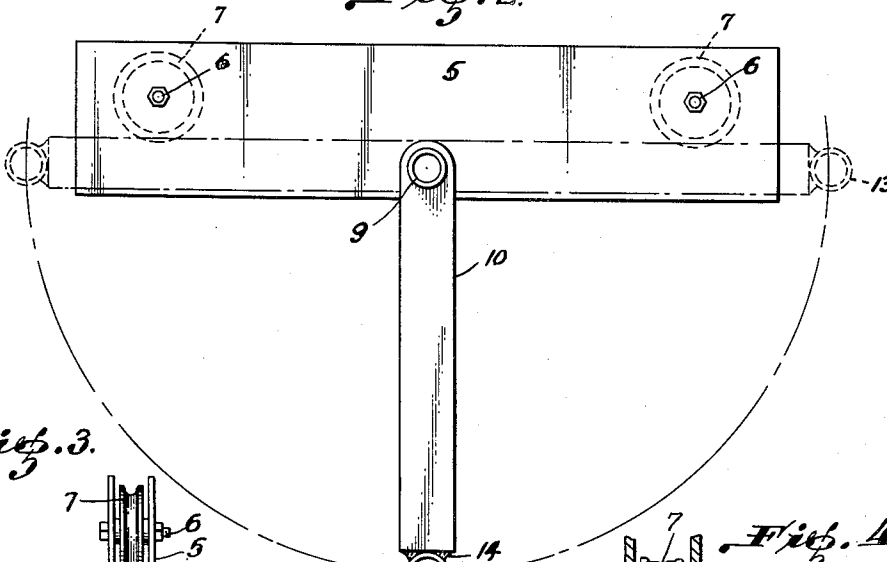


Fig. 3.

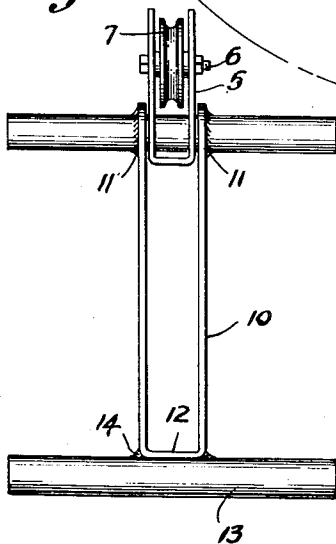
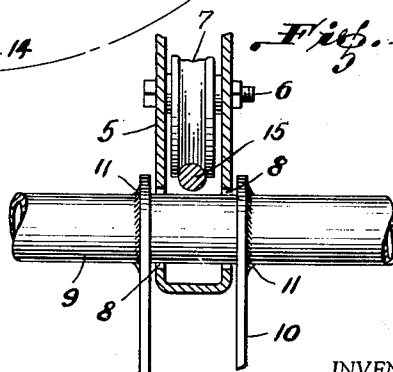


Fig. 4.



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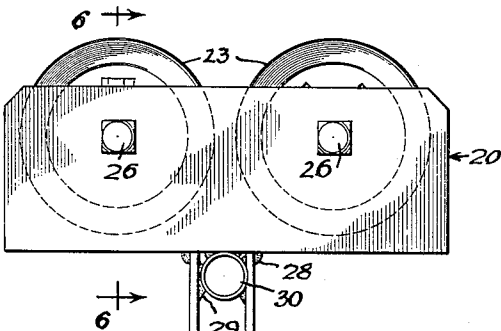


Fig. 5.

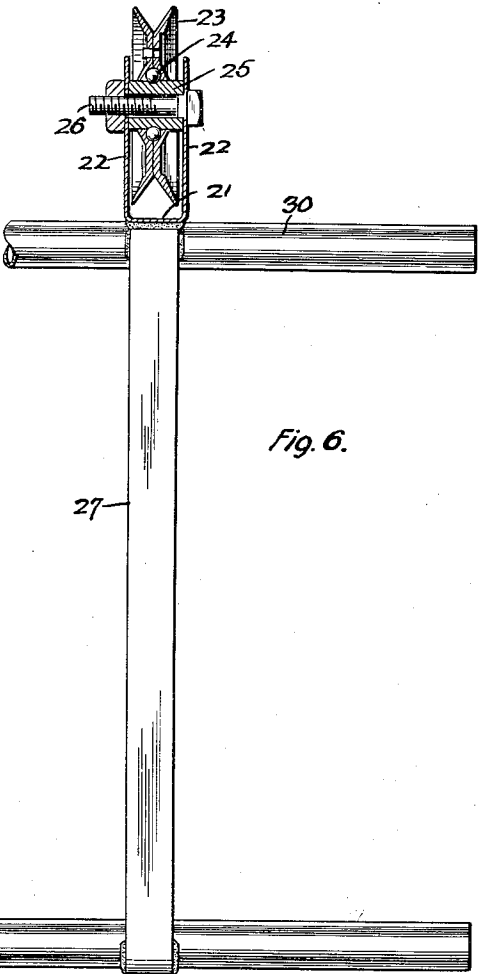


Fig. 6.

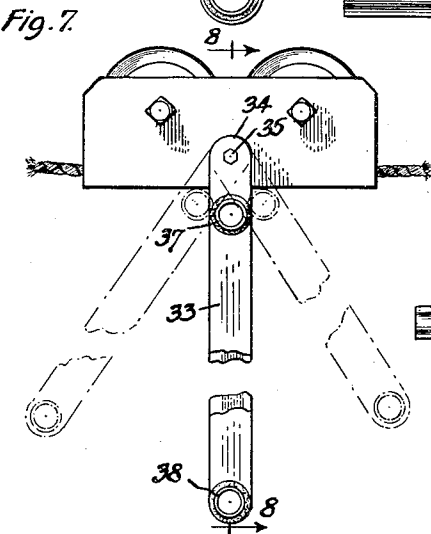


Fig. 7.

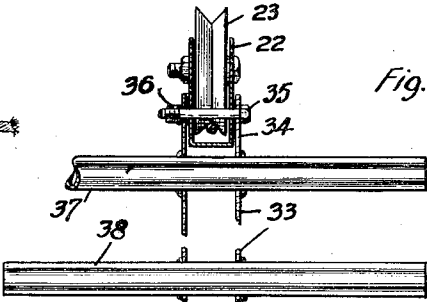


Fig. 8.

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FLYING TROLLEY SLIDE

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4 Claims. (Cl. 105—150)

This invention relates generally to amusement devices and particularly to a slide trolley for the exercise and entertainment of children.

The primary object of the invention is to provide a trolley device or slide to be applied to and supported by a cable or rope in a generally horizontal or slightly inclined direction and elevated above the ground so equipped as to permit a child to readily or easily support himself thereon and to safely indulge in a limited way in gymnastics while so doing.

A further object of the invention is to provide a trolley slide of simple and inexpensive construction and with few parts, all of which are so assembled or coordinated as to enable the device to be readily operated by children or others having limited knowledge of mechanical devices, and which is constructed in such manner as to enable the device to be successfully and effectively used by small children for their exercise and entertainment and yet which is of such construction as to minimize the opportunity for the child to have its fingers or other body portions caught or injured by the device.

A further object of the invention is to provide a device capable of carrying out the foregoing generally stated objects, which may be manufactured and marketed most economically, which is relatively small in size and which may be folded compactly in order to economize space in storage as well as space in transportation, and yet which will prove highly effective in carrying out its objects.

With the foregoing objects in view, together with others which will appear as the description proceeds, the invention resides in the novel construction, combination and arrangement in parts, all as will be described more fully hereinafter, illustrated in the drawing, and particularly pointed out in the claims.

In the drawing:

FIG. 1 is a side elevation of a trolley slide disclosing one form of my invention as it appears in suspended position upon a rope or cable,

FIG. 2 is an enlarged side elevation of the device showing some of the details of its construction,

FIG. 3 is an end view of the trolley slide,

FIG. 4 is a fragmentary transverse sectional view taken through the slide device at substantially the mid portion thereof,

FIG. 5 is a side elevation of a trolley structure varying slightly from that shown in the above views,

FIG. 6 is a sectional view taken on line 6—6 of FIG. 5,

FIG. 7 is a side elevation of a further modification of the trolley, and

FIG. 8 is a sectional view taken on line 8—8 of FIG. 7.

Referring now, more particularly to FIGS. 1 to 4 of the drawing, the slide of one form of my invention involves a body or carriage 5 which may be pressed from metal to provide an elongated channel shaped body as shown more particularly in FIGS. 3 and 4, having parallel sides as shown. Extending transversely through this body and near each end thereof are axles or shafts 6 having their ends suitably anchored in the spaced channel members of the body 5 and each of which rotatably supports a grooved roller 7. The structure is such that the rollers will be wholly confined and enclosed between the side plates of the body 5 so that no portion thereof will project beyond the body. It will be observed, also, that

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the shafts or axles 6 are in horizontal alignment with one another and are spaced substantial distances above the bottom or bight portion of the carriage.

The body 5 is provided midway its ends and near the lower portion thereof with transversely aligned openings 8 to rotatably support an upper bar 9. This bar has its outer ends disposed substantial distances beyond the trolley slide body and may be hollow or solid as desired. The bar 9 has depending therefrom a yoke member 10, the upper arms of which receive the upper bar 9 and are rigidly secured thereto as by welding indicated at 11. The bight portion 12 or lower end of the yoke has secured thereto a second or lower bar 13 disposed in spaced parallelism with the upper bar 9. This lower bar may be of the same size and construction as the upper bar and is welded intermediate its ends as at 14 to the said yoke.

It will be observed, particularly with reference to FIG. 2 of the drawing, that the length of the yoke is such that it may be swung upon its pivot or upper bar 9 upwardly so as to enclose the body 5, the bight portion 12 of the yoke being spaced from the upper bar a distance slightly greater than the distance from the pivot or bar 9 to either end of the trolley body or carriage 5.

The trolley thus constructed is applied to a rope or supporting cable 15 secured at its ends to spaced posts, trees or other supports 16 such distance above the ground as to support a child on either the upper or lower bars 9 and 13 well above the surface of the ground. Steps 17 may be provided at one or both of the supports 16 to enable the child to elevate himself properly to mount the slide.

In practice, the child may grasp the handles provided by the upper bar 9 with his hands and place his legs on the lower bar 13, and swing by his knees from said lower bar while sliding from one end to the other of the supporting wire or cable 15. This double bar enables the smaller child to swing from the lower bar as it is closer to the ground, permitting the child to become more readily accustomed to the use of the device. Larger or more experienced children may use the higher or upper handle or bar from which to swing.

By mounting the rollers in the manner shown, either with or without roller bearings, it is obvious that sliding movement of the trolley upon the supporting wire will be free at all times. The pivotal support of the yoke or standard in the manner illustrated and described permits of free swinging movement of the yoke at all times to assist the child in carrying out various gymnastic movements. By constructing the standard or yoke in the manner set forth, it is apparent that it may be swung into either of the positions shown by dotted lines in FIG. 2 so as to closely lie upon the body 5, thus economizing space in storage or transportation.

The inventive idea disclosed in FIGS. 5 and 6 of the drawing includes a trolley housing indicated generally at 20, made of metal of substantially U-shape in cross section, having a bottom 21 and parallel side plates 22, the channel thus formed receiving groove rim rollers 23 supported by roller bearings 24 upon the core 25 through which passes retaining bolt 26. It will be noted with reference to FIG. 5 that this housing is of less length than the corresponding housing shown in FIGS. 1 and 2; the rollers 23 being relatively close together. Rigidly secured at its upper end to the bottom 21 of the housing is the elongated yoke 27, the upper arms of which are welded or in any other desired manner rigidly secured as at 28 to the bottom 21 so that the yoke depends from the housing midway between the spaced groove rollers 23. Also welded as at 29 to the upper ends of this yoke, as well as to the bottom 21, is upper bar 30 which extends

laterally of the housing and to be engaged by the hands of the user. A lower bar 31 is welded as at 32 midway its ends within the bight portion of the yoke 27. In this form of the device there is no swinging movement of the depending yoke.

FIGS. 7 and 8 show a further slight variation in the structure of the trolley, the housing and wheel mounting being similar to that shown in FIGS. 5 and 6. However, the yoke 33 has the upper ends of its arms 34 straddling the housing and secured thereto by a bolt 35 having an adjusting nut 36 on one end. In this form of the invention, by slightly loosening the adjusting nut 36, swinging movement in the depending yoke and the bars 37—38 supported thereby is permitted. This swinging movement is indicated by the dotted lines shown in FIG. 7. However, tightening of the bolt will bring about a substantially rigid or semi-rigid connection between the upper end of the yoke and the body of the trolley member.

From the foregoing, it is apparent that I have provided a trolley slide capable of being manufactured inexpensively and by simple operations, capable of being produced and marketed at low cost. In those forms of the development shown in FIGS. 1 to 4 inclusive, the swinging yoke member may be moved to the position substantially as shown by dotted lines in FIG. 2 so that the entire device may occupy small space for economy in storage or transportation. Moreover, the swinging action of the depending yoke member adds to the enjoyment of those using the trolley. The structure shown in FIGS. 5 and 6 further economizes the manufacture or production of the device, as the carriage is shortened, reducing the amount of material necessary in its production. The form of the invention disclosed in FIGS. 7 and 8 obtains the economic virtues of the device as illustrated in FIGS. 5 and 6, yet enables the user to so adjust the depending yoke as to obtain the effectiveness either of a rigid or swinging yoke. Moreover, the structure of FIGS. 7 and 8 enables the yoke to be readily detached from the trolley carriage to facilitate storage or shipping.

By providing the body 5 with a closed bottom, opportunity for children having their fingers or other parts of their bodies caught in or injured by the rotating wheels will be minimized. Thus, the wheels are substantially confined within the borders of the body.

I claim:

1. In a trolley slide, a body comprising a channel member open at its ends having a closed bottom and spaced parallel sides, grooved rollers disposed within said channel member and wholly within said body and rotatably supported by said spaced sides, a bar rotatably mounted transversely of said body midway the ends thereof and below the lower periphery of said rollers, a yoke rigidly secured at its open end to and depending from said bar, and a second bar rigidly secured to the lower end of said yoke in spaced parallelism with the first named bar.

2. In a trolley slide, a body comprising an elongated

channel member open at its ends having spaced parallel sides and a closed bottom, shafts disposed transversely of said body and secured at their ends in said sides one near each end of said body, grooved rollers rotatably mounted on said shaft, said rollers wholly confined between said side members, said body having transverse axially aligned openings near the lower end thereof and midway the ends of said body, a bar rotatably mounted in said openings and disposed transversely of said body, a yoke having spaced parallel arms embracing said body, said arms rigidly secured to said bar, and a second bar secured to the free end of said yoke member in spaced parallelism with said first named bar.

3. In a trolley slide, an elongated body open at both ends to receive a track, grooved wheels rotatably supported in spaced relationship in said body and resting upon said track, a bar rotatably mounted transversely of said body midway the distance between said wheels, a yoke member having its arms embracing said body and secured to said bar, the distance between said bar and the free end of said yoke member being greater than the distance between said bar and each end of said body, and a second bar secured to the free end of said yoke member in spaced parallelism with the first named bar.

4. A vehicle comprising an elongated metallic plate bent upon itself to provide a body closed at its bottom with spaced apart parallel sides and open at its ends, shafts disposed transversely of said body in spaced parallelism and fixedly secured at their ends in said sides, a roller rotatably supported by each shaft within said body and having its periphery disposed a substantial distance above the bottom thereof, said sides having transverse aligned openings therein midway the length of said body and below the lower periphery of said rollers, a bar rotatably disposed in said openings with its ends protruding from said sides to provide hand grips, a yoke formed of a single length of metal bent upon itself into U-shape to provide parallel arms embracing said body sides and secured to said bar inwardly of its ends, the distance between said bar and the free end of the yoke being greater than the distance between the bar and each end of said body whereby to permit folding of the yoke upon and in parallelism with said sides, and a second bar secured to the free end of said yoke and disposed transversely thereof.

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