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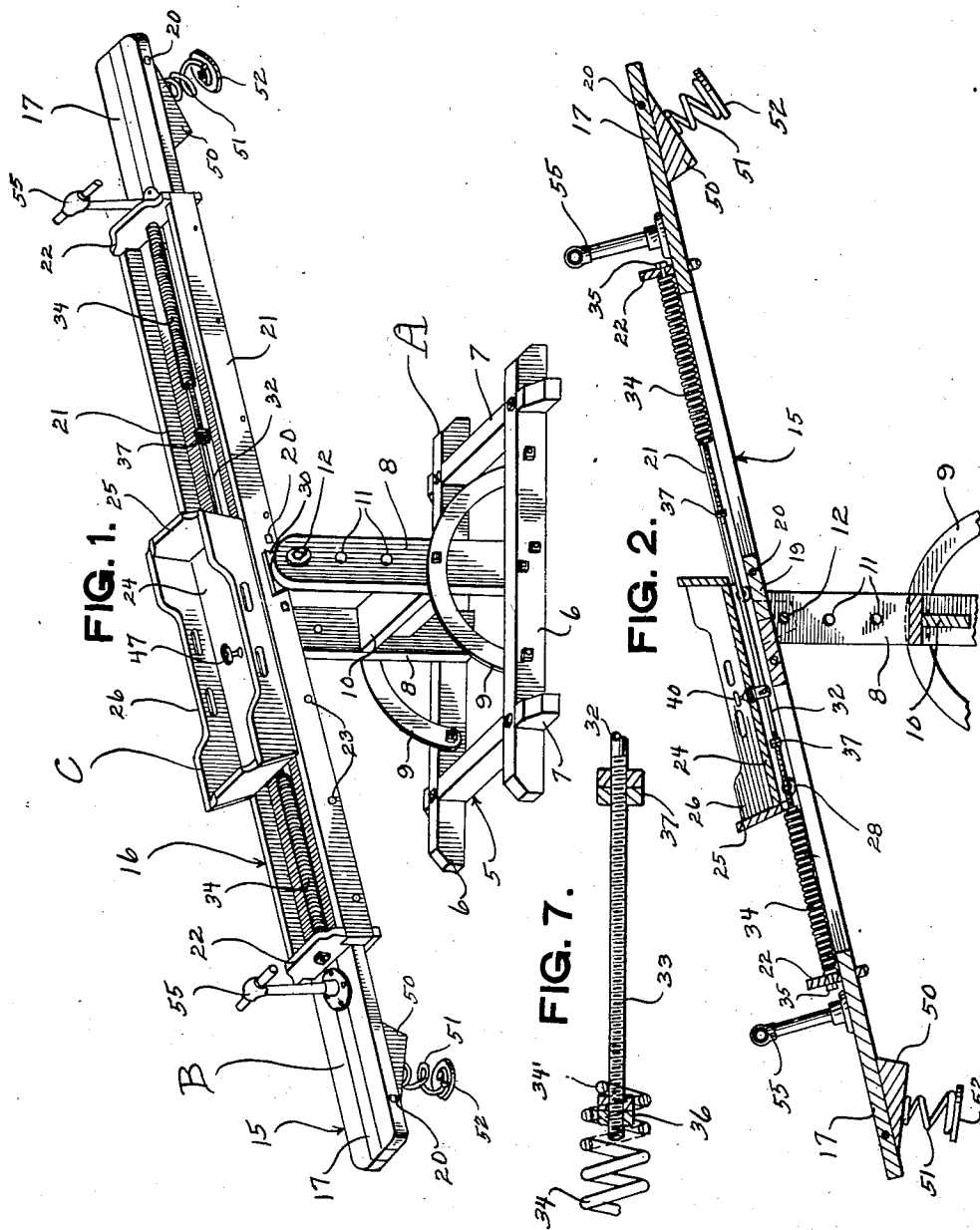
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1,898,466

AMUSEMENT DEVICE

Filed June 12, 1931

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

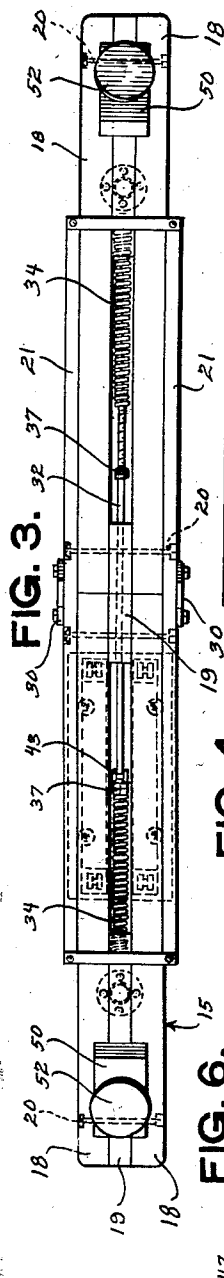


FIG. 3.

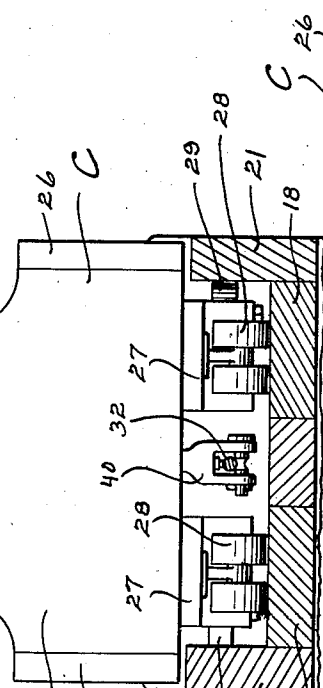


FIG. 4.

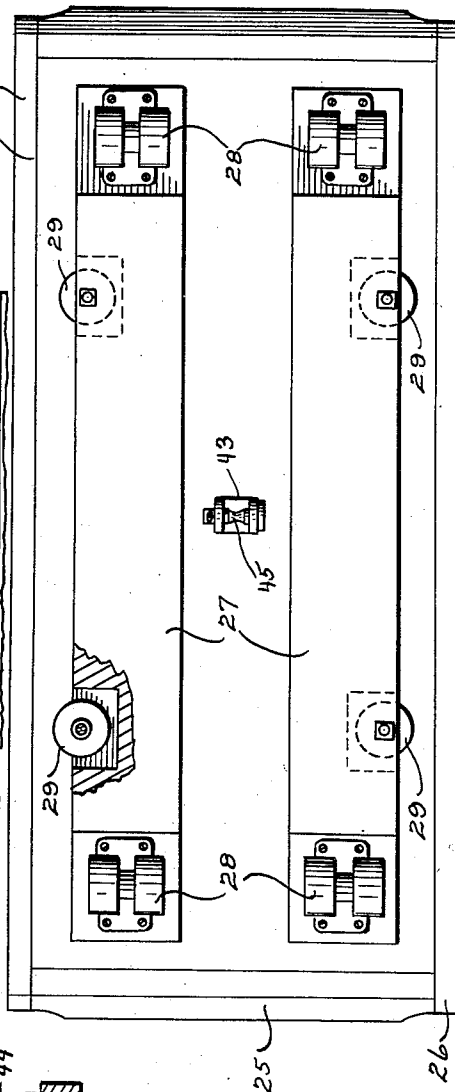
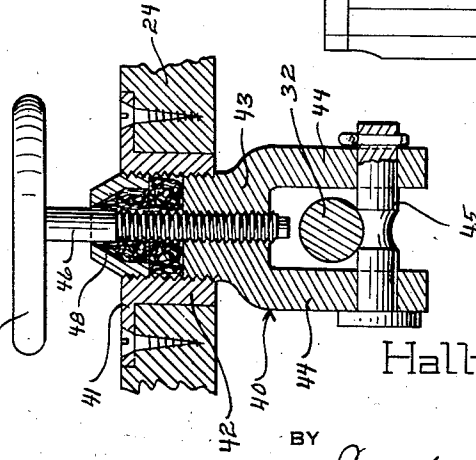


FIG. 5.



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AMUSEMENT DEVICE

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The present invention relates to amusement devices primarily intended for the entertainment and amusement of children and the primary object of the invention is to provide a device of this character embodying the general principle of a see-saw, but with added features whereby the action of the up and down movement of the swing board or beam is aided by spring means acted upon by an automatically shifted weight.

A further object of the invention is to provide a device of this character which is adjustable as to height and also having counterbalancing means whereby children of different weight may be evenly balanced.

A further object of the invention is to provide a device of this character which may be economically constructed and may be readily dismantled and compactly bundled for shipping and storing purposes.

A still further and important object of the invention is to provide a device of this character embodying a movable carriage or car adapted to move longitudinally of the swing board or plank with the up and down movement of the board and embodying cushioning means for preventing jarring at the limit of movement of the car in each direction.

A still further object resides in the novel manner in which the car is held against displacement and the novel manner in which the car may be secured at various positions longitudinally of the swing beam to act as a counter-balance.

Other objects and advantages of the invention will be apparent during the course of the following detailed description, taken in connection with the accompanying drawings forming a part of this specification and in which drawings:

Figure 1 is a perspective view of the improved amusement device.

Figure 2 is a longitudinal section thru the same and showing a portion of the support broken away.

Figure 3 is a bottom plan view of the swing board or beam.

Figure 4 is an enlarged transverse section thru the swing board or beam and showing the car mounted thereon.

Figure 5 is an enlarged bottom plan view of the car.

Figure 6 is an enlarged fragmentary detail view of the combined clutch and retaining device for retaining the car in position upon the swing beam.

Figure 7 is an enlarged fragmentary view of one end of the guide rod for the car.

Referring to the drawings in detail, and wherein similar reference characters designate corresponding parts thruout the several views, the letter A designates a stand for pivotally supporting a swing board or beam B.

The stand A is preferably of knock down construction and embodies the open frame base 5 including the side bars 6 and end bars 7 preferably bolted to the side bars 6 adjacent the ends thereof. Secured as by bolting or the like to each side bar 6 midway between the end bars 7 is an upright 8 and these uprights may be braced by arcuate brace members 9 connected to the side bars 6 and are held by suitable spacing strips 10. The upper portions of the uprights 8 are provided with a series of adjustment opening 11 for receiving the pivot bolt 12 serving to pivotally support the beam B. Thus it will be seen the adjustment openings 11 permit raising and lowering of the pivotal mounting for the beam B so that the device may be adjusted for use by either small or large children.

The beam B comprises a seat board 15 to which is secured a guide frame 16 which terminates short of the ends of the seat board to provide seats 17 at each end of the seat board beyond the ends of the guide frame. While the seat board 15 may be of one piece construction, it is preferred that the board be of sectional construction as shown for preventing warping and permitting collapsing of the board into such compact form as to be received within the guide frame 16 for storage and shipping purposes. From Figure 3 it will be seen that the seat board 15 is constructed of four side bars 18 of equal length and slightly separated by spacer blocks 19 arranged between the ends of the bars. Suitable bolts as at 20 serve to connect the side bars.

The guide frame 16 aside from providing

a runway for the car C also serves as a connecting and reinforcing means for the sectional seat board 15. This guide frame 16 embodies a pair of longitudinal side rails 21
5 connected at their ends by cross rails 22 which extend across the upper side of the seat board 15. The side rails 21 are secured to the side edges of the seat board 15 by suitable fastening elements 23 so that the rails project above
10 the upper surface of the seat board to provide guides for the car C.

The car C may be of any preferred construction and in the example shown is provided with a bottom 24 provided with the end
15 walls 25 and the side walls 26, the side walls 26 preferably being provided with hand hole openings as clearly shown in Figure 1. Secured longitudinally to the under side of the car C is a pair of parallel spaced apart spacing
20 strips 27 to the ends of which are secured suitable rollers 28 for rolling contact with the upper surfaces of the seat board side bars 18. Mounted in the outer side edges of the spacing strips 27 are suitable rollers 29
25 which bear against the confronting surfaces of the side rails 21.

Secured to each side of the beam A midway the ends thereof is a metal pivot plate
30 30 which projects below the beam and which are provided with suitable openings for receiving the pivot bolt 12 whereby the beam is pivotally supported between the uprights 8.

A combined counter-balancing and shock relieving means is provided for the car C during swinging movement of the beam B and embodies a guide rod 32 having threaded
35 end portions 33. The guide rod 32 is of less length than the guide frame 16 and is connected at its ends to coil springs 34 which in turn are connected at their ends as by suitable bolts 35 to the end cross rails 22. The
40 coil springs 34 have reduced end convolutions 34' as shown in Figure 7 and the ends of the guide rods are provided with suitable nuts 36 for preventing withdrawal of the ends of the guide rods from the springs. The threaded
45 ends 33 of the guide rod are provided with adjustable stop nuts 37 which are spaced a substantial distance from the nuts 36 whereby the threaded ends 33 may have movement
50 into the coil springs 34 when the guide rod is moved longitudinally. As will be observed in Figure 3, the guide rod 32 and springs 34 are connected in longitudinal alignment midway
55 between the side rails 21 so that the guide rod extends between the spacing strips 27 of the car as shown in Figure 4.

Referring particularly to Figure 6, the car C is provided with a combined retaining and adjusting device 40 which is so associated with the guide rod 32 as to retain the car
60 upon the runway formed by the guide frame 16 and also permits the car to be held against movement at various positions along the

guide rod between the stop nuts 37. The device 40 comprises a mounting plate 41 secured in the car bottom 24 and provided with a threaded sleeve portion 42. Threaded into
70 the lower end of the sleeve portion 42 from the under side of the car is a forked coupling member 43 providing arms 44 adapted to straddle the guide rod 32. The lower ends of the arms 44 are apertured to receive a retaining pin 45 which extends across the lower
75 side of the guide rod and prevents movement of the rod from between the arms. Threaded into the upper portion of the coupling member 43 is a clamping screw 46 which projects upwardly into the car and is provided at its
80 upper end with a suitable operating handle or wheel 47. A suitable guide bushing 48 may be threaded into the upper end of the sleeve 42. Upon turning of the clamping screw 46 into engagement with the guide rod
85 32, the car C may be secured against longitudinal movement.

Provided beneath each end of the beam B is a cushioning means which also serves for assisting in raising the ends of the beam at
90 their limit of downward movement. Secured to the under side of each seat 17 is a triangular-shaped block 50 to which is secured the smaller end of a frusto-conical shaped coil spring 51 provided at its lower
95 end with a flat metallic shoe 52 which may be of disc-shape as shown in Figure 3. These shoes 52 serve to prevent dirt or analogous material from jamming the coils of the spring. As will be observed in Figure 2, the
100 cushioning springs 51 are arranged with their axes in upwardly converging relation and with this arrangement, the shoes 52 will be in substantially parallel relation to the ground surface when the springs are in a
105 lowered position.

Provided at the inner end of each seat 17 is an upstanding T hand grip 55 to be grasped by children seated on the seat 17.

In use, when a child is seated upon each end of the beam B and an up and down movement of the beam has been started, the cushioning
110 springs 51 will act as rebound springs for assisting in raising the ends of the beam from the lowered position. The springs 51 will materially reduce the pressure of the child's feet upon the ground required for raising the
115 lowered end of the beam. During rocking movement of the beam, the car C will move to and fro along the beam to opposite sides of the pivot 12 and alternately exert a tension
120 on the springs 34.

Referring particularly to Figure 2, when the left end of the beam is in a lowered position as shown the car C will naturally roll
125 toward the left until the forked coupling member 43 engages the stop nuts 37 at the left side of the pivot 12. Engagement of the coupling member with the stop nuts will exert a pull upon the guide rod 32 and extend the
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upper spring 34. This extending of the spring 34 occurs at about the time the lower cushioning spring 51 contacts with the ground. The spring 51 now tends to raise the lower end of the beam and at the same time the upper coil spring 34 acts with a rebound and exerts a pull upon the car C toward the pivot 12. As the right hand end of the beam lowers, the car will roll by gravity to the right and upon striking the stop nuts 37 will exert a pull upon the spring at the left of the pivot bolt. Thus the springs 34 alternately act to relieve shock at the limit of movement of the car in each direction and also assists in starting the car on its return movement. The car or carriage C may accommodate one or more children and the car is prevented from leaving its runway thru its sliding connection with the guide rod 32.

When it is desired that the car be held against to and fro movement along the swing beam, the wheel 47 may be turned for turning the clamping screw 46 into binding engagement with the guide rod at any desired point therealong whereby the car will act as a counter-balancing means for unequal weights placed upon the ends of the beam.

With the arrangement shown, the device may be used by one or more children and when used by a single child the car C may be adjusted along the guide rod to counter-balance the weight of the child upon one end of the beam. The device may be constructed of wood, metal or the combination of both and may be made in various sizes.

Changes in detail may be made to the form of invention herein shown and described, without departing from the spirit of the invention or the scope of the following claims.

I claim:

1. In an amusement device of the class described, a stand including a pair of uprights, a swing beam fulcrumed midway its ends upon the uprights, a carriage guided for limited longitudinal movement along the beam to opposite sides of the fulcrum point, cushioning means for the carriage upon its limit of movement in either direction, and a seat provided at each end of the beam beyond the limit of movement of the carriage.

2. In an amusement device of the class described, a support, a swing beam fulcrumed midway its ends upon the support, a guide rod mounted longitudinally of the beam, a car guided for to and fro movement longitudinally of the guide rod, and means for securing the car to the guide rod at adjusted positions along the guide rod.

3. In an amusement device the combination with a beam fulcrumed midway its ends for vertical swinging movement, of a guide frame mounted longitudinally of the beam and providing a runway, a car guided in the runway, a guide rod extending longitudinally of the guide frame beneath the car,

coil springs connecting opposite ends of the guide rod to the ends of the guide frame, and a coupling member carried by the car for movement along the guide rod between said springs.

4. In an amusement device the combination of a stand, a swing beam fulcrumed midway its ends upon the stand, a guide frame mounted longitudinally of the beam and terminating short of the ends thereof to provide seats beyond the ends of the frame, a car, wheels supporting the car for movement longitudinally of the guide frame, a guide rod provided with stops disposed at opposite sides of the fulcrum point of the beam, a coil spring connecting opposite ends of the guide rod to the ends of the guide frame, and a coupling member carried by the car for sliding movement along the guide rod between said stops.

5. In an amusement device the combination of a stand, a swing beam fulcrumed midway its ends upon the stand, a guide frame mounted longitudinally of the beam and terminating short of the ends thereof to provide seats beyond the ends of the frame, a car, wheels supporting the car for movement longitudinally of the guide frame, a guide rod provided with stops disposed at opposite sides of the fulcrum point of the beam, a coil spring connecting opposite ends of the guide rod to the ends of the guide frame, a coupling member carried by the under side of the car for guided movement along the guide rod between said stops, a rest pin carried by the coupling member to extend transversely beneath the guide rod, and a clamping screw carried by the coupling member for binding engagement with the guide rod for retaining the car in adjusted positions along the guide rod.

6. In an amusement device embodying a pivotally mounted beam, a runway forming guide frame mounted longitudinally of the upper side of the beam, a car guided for movement to and fro in the runway, a guide rod having stops provided adjacent each end thereof, a spiral coil spring connected between each end of the guide rod and the ends of the guide frame, said guide rod beyond the stops thereon having movement into the coil springs, and a coupling member carried by the car embodying spaced arms straddling the guide rods between the stops and means for preventing withdrawal of the guide rod from between the arms of the coupling member.

7. In an amusement device of the class described, the combination of a swing beam fulcrumed midway its ends for vertical swinging movement, a guide frame including side rails secured to the side edges of the beam and projecting thereabove to provide guide flanges, end rails connecting the side rails, a car having bottom wheels engaging the beam and side wheels engaging said guide flanges, a guide rod having stops provided adjacent

each end thereof, yieldable means connecting the ends of the guide rod with said end rails of the guide frame, and a coupling member carried by the car for guided movement along the guide rod between the stops provided thereon.

8. In an amusement device of the class described, a swing beam, a car guided for to and fro rolling movement longitudinally of the beam, and cushioning means for yieldably limiting movement of the car in each direction including coil springs attached at one end to the beam at points adjacent the ends of the beam and joined by means engageable by the car.

9. An amusement device of the class described comprising a stand embodying a pair of spaced apart uprights, a beam fulcrumed intermediate its ends between the uprights, a runway provided on the upper side of the beam and extending equally to each side of the pivot point for the beam, a car movable in the runway, a guide rod in the runway and having a stop provided adjacent each end thereof, coil springs connecting the ends of the rod to cross rails at the ends of the runway, a coupling member carried by the car and slidable along the guide rod into engagement with said stops, and a cushioning spring provided at the under side of each end of the beam.

10. In an amusement device of the class described, a stand, a beam fulcrumed midway its ends upon the stand, a guide frame mounted longitudinally of the beam and terminating short of the ends of the beam to provide seats at each end of the beam, a T-handle at the inner end of each seat, a car for rolling movement in the guide frame, and yieldable means for limiting movement of the car in each direction.

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