

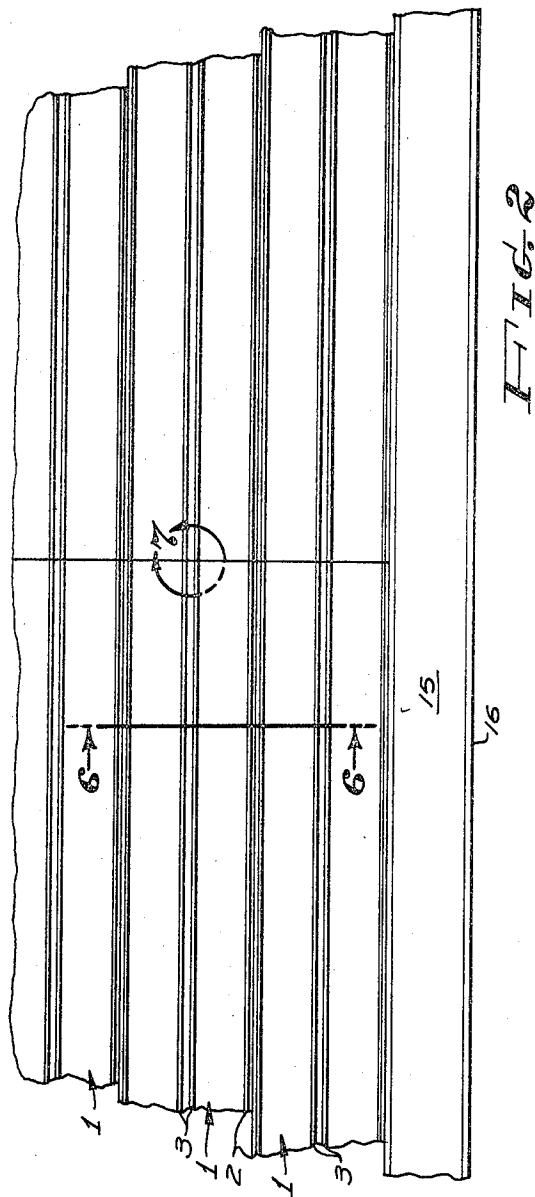
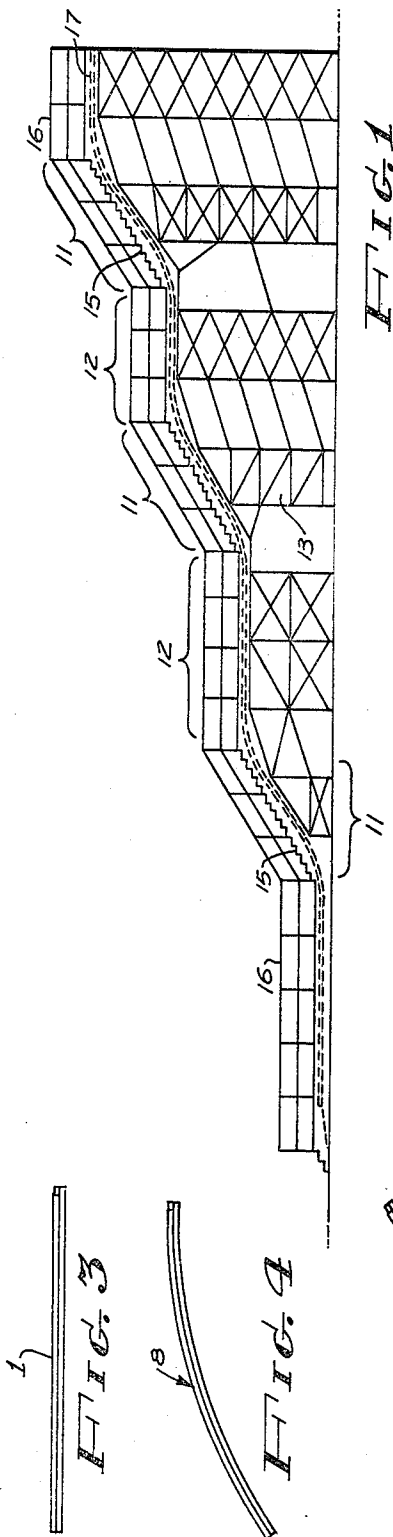
Jan. 20, 1970

L. A. MOULTON  
AMUSEMENT SLIDE

3,490,765

Filed April 28, 1967

3 Sheets-Sheet 1



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3. Sheets-Sheet 2

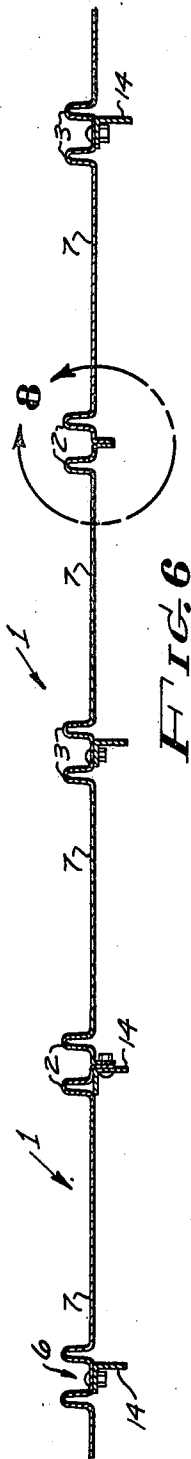


FIG. 6

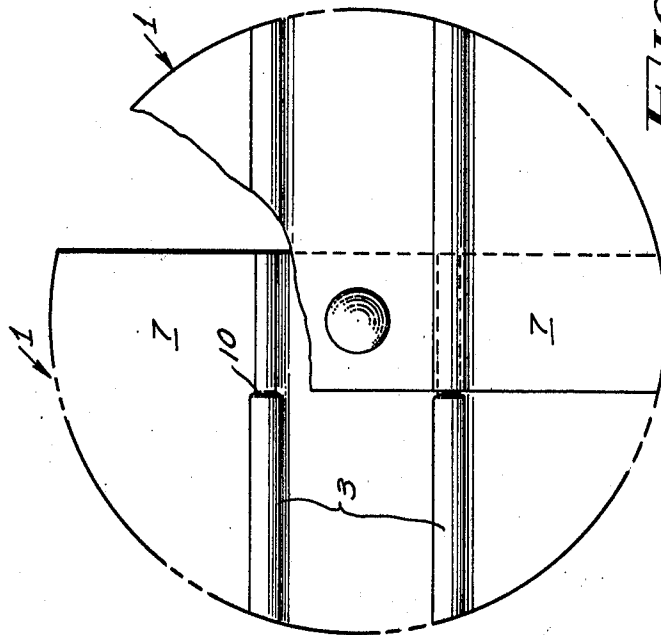


FIG. 7

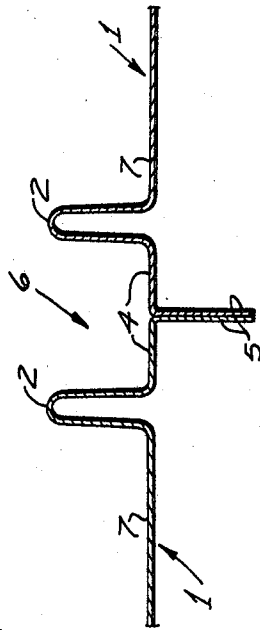


FIG. 8

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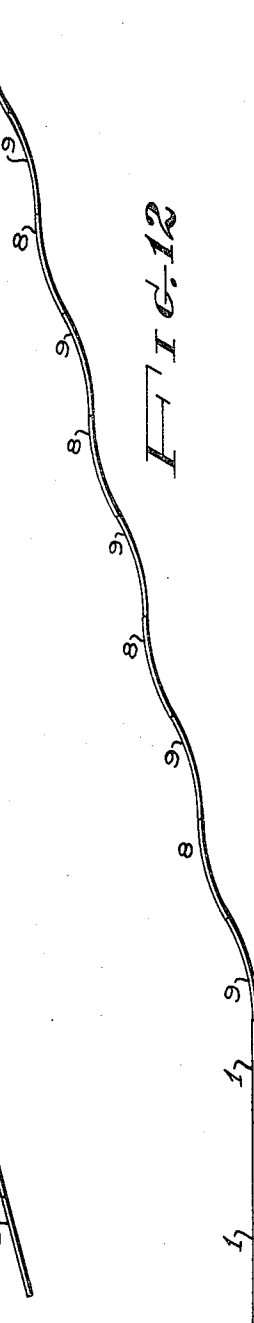
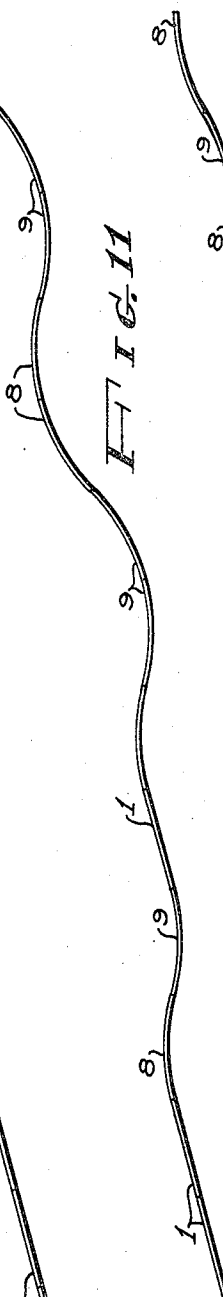
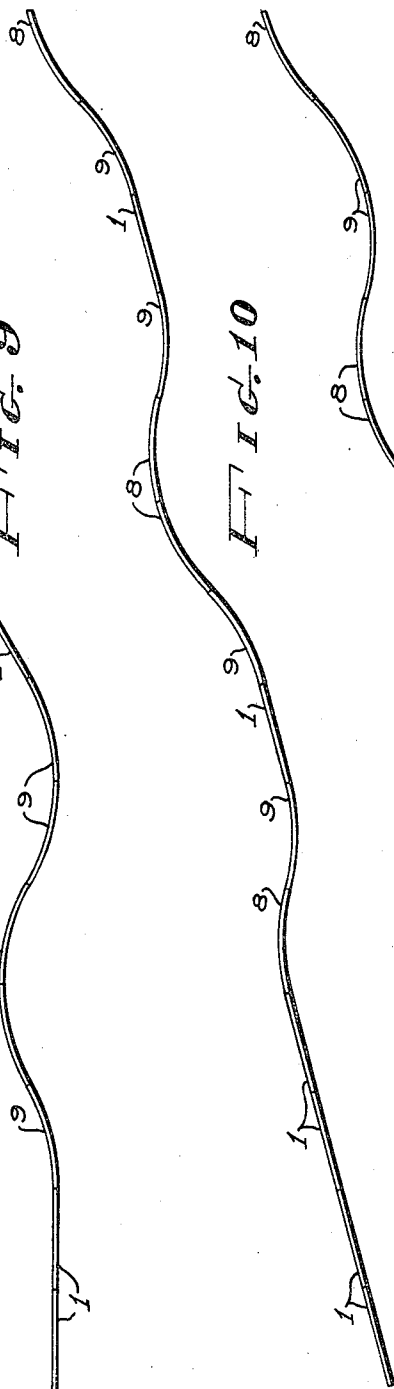
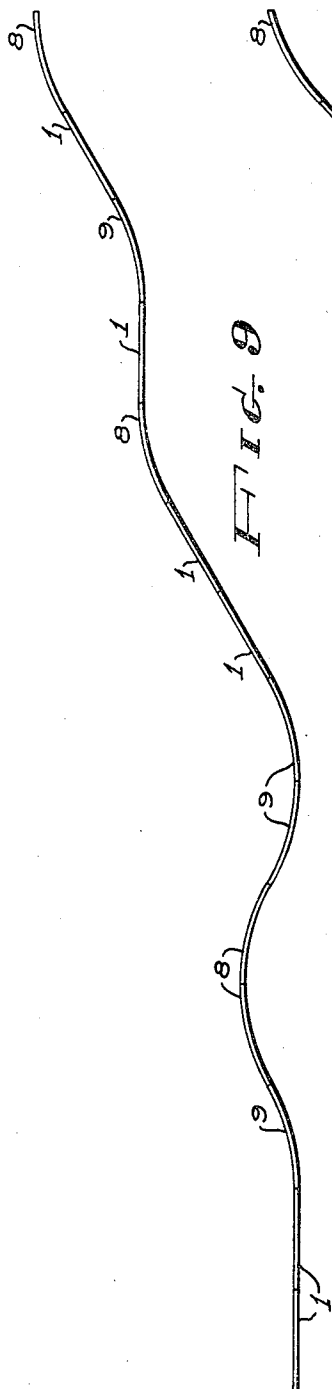
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AMUSEMENT SLIDE

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3 Sheets-Sheet 3



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3,490,765

## AMUSEMENT SLIDE

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Int. Cl. A63g 21/02

U.S. Cl. 272—56.5

9 Claims

### ABSTRACT OF THE DISCLOSURE

An amusement slide for use by several persons simultaneously, the slide having dip sections to accelerate the user and essentially flat sections to decelerate the user, proportioned to maintain the speed of movement below a hazardous level; the slide being made of modular sections of flat, concave or convex contour and provided with hand flanges, the margins being arranged for connection to other sections so that a bank of slides are provided side-by-side.

### BACKGROUND OF THE INVENTION

The prior art developed in a search is: Townsend 1,239,848; Rohmer 1,648,196; McIntyre 2,224,405; Steel 277,625; Boyle 880,964; Beauregard 2,581,572; and Malcolm 1,603,393.

### OBJECT OF THE INVENTION

The objects of this invention are:

First, to provide a multiple slide whereby several persons may slide simultaneously and which is provided with convex, concave and straight sections so arranged that a person may be accelerated, then decelerated so as to maintain an average as well as a peak velocity within safe limitations, yet provide a relatively long slide.

Second, to provide a multiple slide in which the slide units are similar in transverse section and incorporate novel means whereby concave, convex and straight units may be joined end-to-end and side-by-side to form slides of different configuration.

Third, to provide a multiple use amusement slide which is easy to assemble and disassemble into easily handled sections for transportation.

### DESCRIPTION OF FIGURES

FIGURE 1 is a substantially diagrammatic side view of the amusement slide.

FIGURE 2 is an enlarged fragmentary plan view thereof.

FIGURE 3 is an edge view of a flat slide unit.

FIGURE 4 is an edge view of a convex slide unit.

FIGURE 5 is an edge view of a concave slide unit.

FIGURE 6 is a further enlarged, fragmentary transverse view, taken through 6—6 of FIGURE 2.

FIGURE 7 is an enlarged, fragmentary plan view, taken within circle 7 of FIGURE 2.

FIGURE 8 is an enlarged, fragmentary sectional view, taken within circle 8 of FIGURE 6.

FIGURES 9, 10, 11 and 12 are diagrammatical profiles, showing a few of the other slide configurations.

The operating surface of the amusement slide comprises a plurality of slide units 1, arranged end-to-end, and side-by-side. Each slide unit includes a pair of marginal hand rails 2, and one or more pairs of intermediate hand rails 3. Each of the marginal hand rails 2 is bordered by a narrow, laterally extending marginal strip 4, which terminates in a downwardly extending edge flange 5.

Several slide units are joined side-by-side by means of bolts or other fasteners extending through contiguous edge flanges 5. The marginal hand rails 2 are thus arranged

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in pairs, with substantially the same spacing as the intermediate hand rails 3. The pairs of hand rails form, therebetween, channels 6, the webs of which provide a means for securing the slide units to underlying framework. The spaces between the pairs of hand rails form slide courses 7.

All of the slide units are initially formed in a flat condition. Selected slide units are then roll formed to form convex units 8 and concave units 9.

The slide units may be joined end-to-end by flanges similar to the flanges 5; however, it is preferred to overlap the ends of the slide units, that is, the preceding slide unit overlaps the succeeding slide unit. The hand rails at the entrance end of each slide unit are reduced in width, and in height, the distance equal to the thickness of the metal comprising the slide unit, as indicated by 10 in FIGURE 7.

The slide units may be joined end-to-end to provide various slide configurations. Convex and concave slide units may be joined end-to-end, but this is not preferred. It is preferred to provide a single, flat slide unit between the convex and the concave slide units, and toward the bottom of the slide, to provide an additional flat, horizontal slide unit. Then, at the lower end of the slide, to provide several horizontal, flat slide units. The slide is thus divided into inclined sections 11, and essentially horizontal sections 12. The length and angularity of the inclined sections 11 are so related to the lengths of the horizontal sections 12 that the deceleration occurring along the horizontal sections subtracts a substantial portion of the acceleration developed on the preceding inclined section. This is important for reasons of safety. It is highly desirable that the velocity at the crest of each inclined section be low enough that a person using the slide will not become airborne, as this might result in injury when the person strikes the inclined portion of the slide.

The desired deceleration may be accomplished without the sections 12 being strictly horizontal. They may be slightly inclined downward, providing that the proper deceleration occurs, or may be inclined upwardly to obtain a greater deceleration in a shorter length. At the top of the slide, a person starts from essentially an at rest condition, but the following crest the person will have residual velocity in order to avoid the possibility that the person will stall on the horizontal section. As a consequence, it is desirable that the next horizontal section be somewhat longer to compensate for the added velocity gained on movement down the second inclined section.

The slide units are mounted on a conventional supporting framework 13, which includes structural members 14, to which the slide units are secured by fasteners located in the region of the chambers 6. With this arrangement no fastening means are required within the boundaries of the slide courses 7 or the hand rails 2 and 3.

A walkway 15 is provided along either or both sides of the area occupied by the slide units, and a marginal fence 16 is provided. At the top end of the slide, a platform 17 provides access to the slide courses 7.

Reference is directed to FIGURES 9, 10, 11 and 12 which show a few of the many slide configurations that are possible by use of the straight unit 1, convex unit 8 and concave unit 9.

While particular embodiments of this invention have been shown and described, it is not intended to limit the same to the details of the constructions set forth, but instead, the invention embraces such changes, modifications and equivalents of the various parts and their relationships as come within the purview of the appended claims.

I claim:

1. An amusement slide comprising:
  - (a) a plurality of slide units each having at least a pair of slide courses of longitudinal, convex, concave or flat contour;
  - (b) a supporting structure;
  - (c) said slide units joined end-to-end and mounted on said structure to form a series of downwardly sloping sections which accelerate a person riding thereon and an interposed series of essentially horizontal sections on which the person decelerates;
  - (d) the proportions of downwardly sloping and horizontal sections being such that the major portion of the acceleration occurring on each downward section is counteracted by deceleration occurring on the subsequent horizontal sections, to maintain peak velocities within a predetermined limit;
  - (e) each slide unit is formed of sheet material and includes at least said pair of slide courses, each said pair of slide courses separated by upwardly folded integral hand rails forming a channel therebetween.
2. An amusement slide, as defined in claim 1, wherein:
  - (a) sets of said slide units are arranged side-by-side, adjacent margins thereof having upwardly folded integral hand rails, there being edge strips bordering said marginal hand rails and means for joining said edge strips whereby each pair of said marginal hand rails forms a channel therebetween.
3. An amusement slide, as defined in claim 1, wherein:
  - (a) the supporting structure is a framework supporting said slide units; and
  - (b) securing means within said channels join said slide units to said framework.
4. An amusement slide comprising:
  - (a) a supporting framework defining the contour of a slide;
  - (b) a plurality of slide units formed of sheet material and arranged end-to-end and side-by-side and contoured longitudinal and installed on said framework;
  - (c) a plurality of side-by-side intermediate hand rails on each slide unit dividing each slide unit into at least two slide courses; and
  - (d) marginal rails separating laterally adjacent slide units.
5. An amusement slide, as defined in claim 4, wherein:
  - (a) said hand rails are disposed in pairs to define channels therebetween;
  - (b) and fastening means are disposed in said channels for joining said slide units to said framework.
6. An amusement slide, as defined in claim 4, wherein:
  - (a) certain of said slide units are flat, others are longitudinally convex and still others are longitudinally concave;
  - (b) said installed slide units defining longitudinally a series of sloping sections to accelerate movement of a person sliding thereon and interposed essentially horizontal sections to decelerate movement of a person sliding thereon.
7. An amusement slide comprising:
  - (a) a supporting structure;
  - (b) a plurality of modular slide units defining a slide surface comprising a plurality of side-by-side courses or lanes, said slide units being formed of sheet material and fixedly mounted on said structure by fastening elements;
  - (c) said slide surface being provided with longitudinally extending guide means comprising portions of said sheet material folded to define channel-shaped configurations having spaced generally vertical side walls serving to guide a plurality of persons longitudinal of said slide surface along parallel, side-by-side courses or lanes;
  - (d) said slide units being respectively of longitudinally

convex, concave or flat contour, and being joined end-to-end and side-by-side to form a series of downwardly sloping slide portions which accelerate a person riding thereon and a series of flat slide units interposed therebetween forming essentially horizontal slide portions, which decelerate a person riding thereon, said slide portions being such that the peak velocity of a person riding thereon is less than the velocity which would cause the person to become airborne;

- (e) said slide units having at least a portion of one of said channel-shaped configurations extending along each longitudinal side edge portion thereof, said fastening elements extending through said side edge portions between said spaced side walls and being positioned entirely below the upper margins thereof whereby said side walls further function to shield persons sliding on said slide surface from contact with said fastening elements.
8. An amusement slide as defined in claim 7 wherein each of said slide units is provided with at least one further longitudinally extending channel-shaped guide means between and spaced from said longitudinal edge portions.
  9. An amusement slide comprising:
    - (a) a supporting structure;
    - (b) a plurality of modular slide units defining a slide surface comprising a plurality of side-by-side courses or lanes, said slide units being formed of sheet material and fixedly mounted on said structure by fastening elements;
    - (c) said slide surface being provided with longitudinally extending guide means comprising portions of said sheet material folded to define channel-shaped configurations having spaced generally vertical side walls serving to guide a plurality of persons longitudinal of said slide surface along parallel, side-by-side courses or lanes;
    - (d) said slide units being respectively of longitudinally convex, concave or flat contour, and being joined end-to-end and side-by-side to form a series of downwardly sloping slide portions which accelerate a person riding thereon and at least one of said flat contour units being positioned essentially horizontal, and on which a person decelerates, said slide portions being such that the peak velocity of a person riding thereon is less than the velocity which would cause the person to become airborne;
    - (e) said slide units having at least a portion of one of said channel-shaped configurations extending along each longitudinal side edge portion thereof, said fastening elements extending through said side edge portions between said spaced side walls and being positioned entirely below the upper margins thereof whereby said side walls further function to shield persons sliding on said slide surface from contact with said fastening elements.

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U.S. Cl. X.R.