

April 2, 1940.

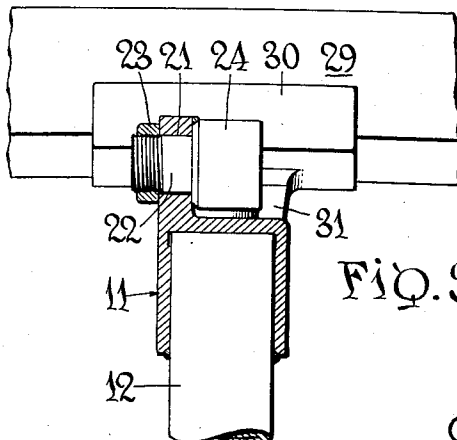
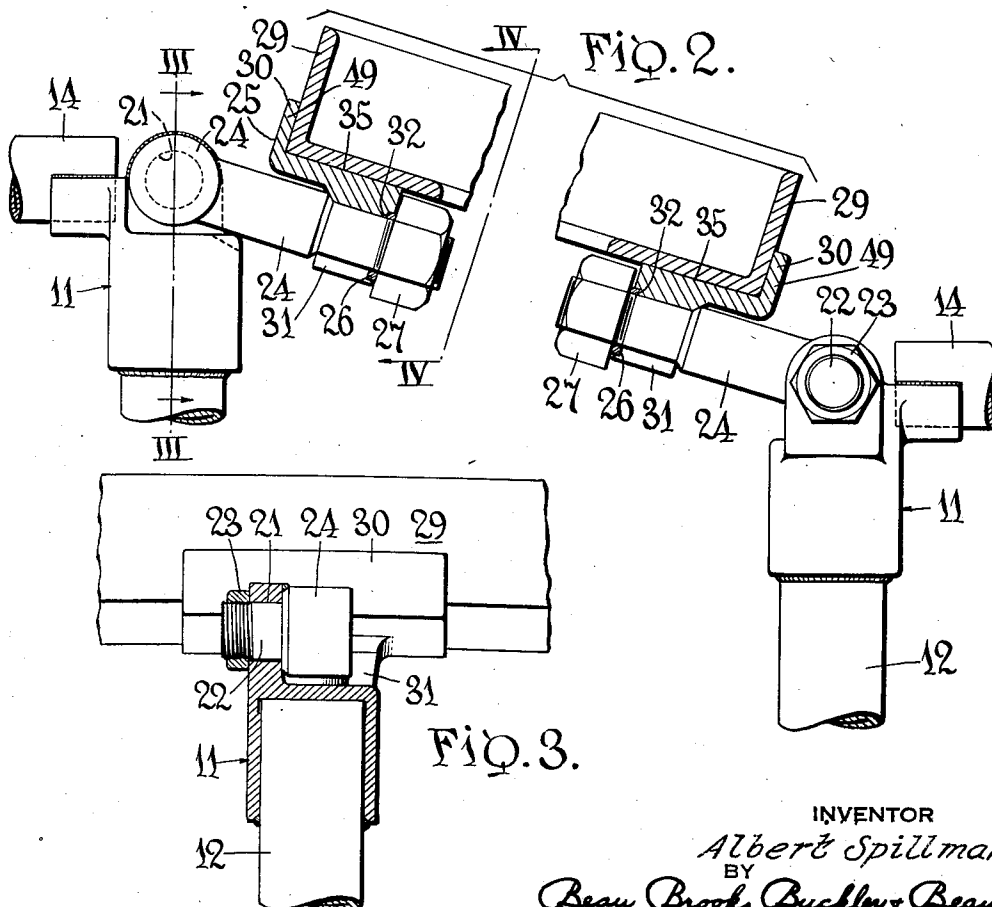
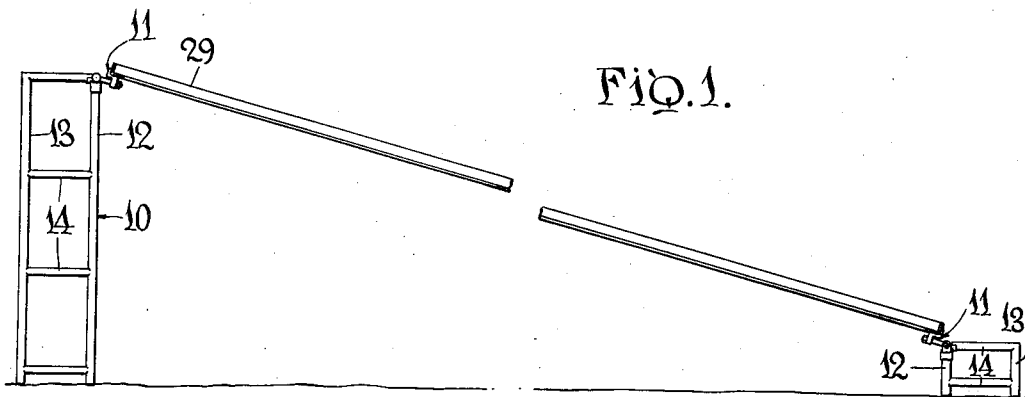
A. SPILLMAN

2,195,588

TRACK CONNECTION

Filed Dec. 7, 1938

2 Sheets-Sheet 1



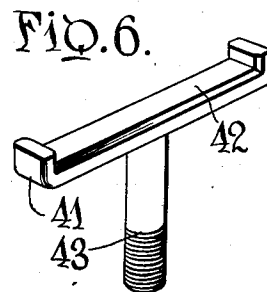
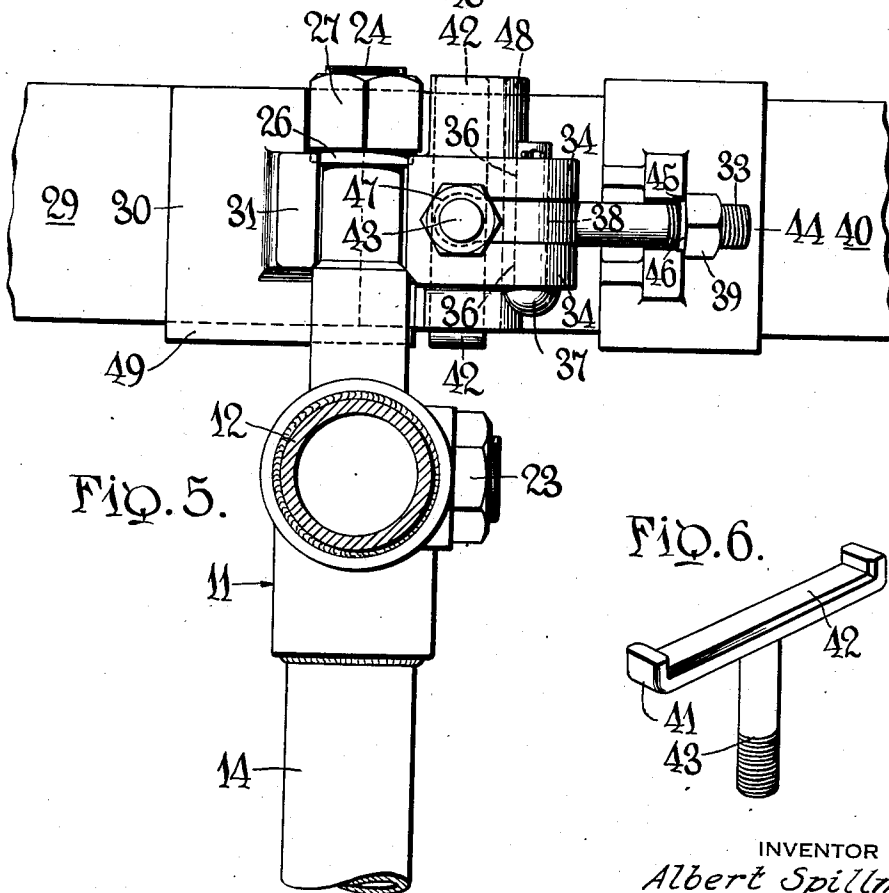
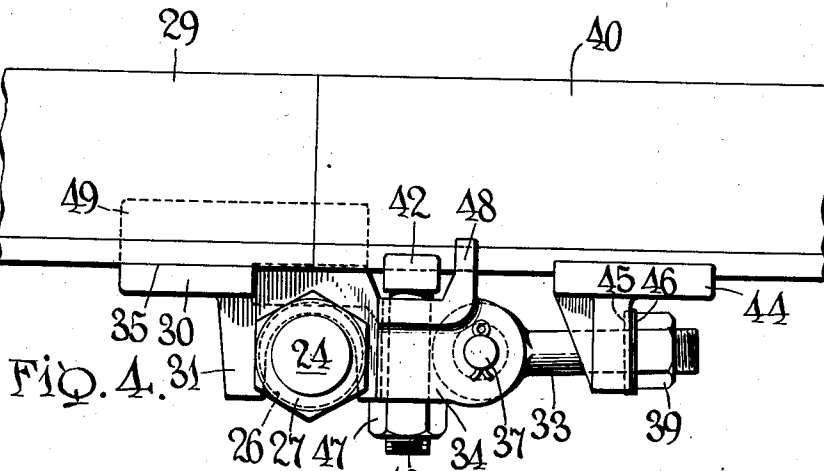
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,195,588

TRACK CONNECTION

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5 Claims. (Cl. 104—126)

This invention relates to a method and means for connecting and supporting tracks, such as of amusement park rides and the like. In particular, it relates to tracks or trackways of such devices which are positioned and supported in a plane inclined to the horizontal.

Heretofore considerable difficulty has attended the installation of amusement park rides in which the trackways are in a plane inclined to the horizontal, due to the fact that the track supporting devices or members must each assume a different angle or inclination in order to properly support the tracks. For example, in an amusement ride having eighteen frames or supporting stands for the trackway, the track connecting devices thereon must assume eighteen separate and different angles or inclinations in order to properly and adequately support the track. The use of adjustable devices, which are adjusted in the amusement park where the amusement ride may be set up, is difficult and dangerous in that such adjustable devices may become released during use of the ride. The use of shims or wedges to give the varying inclinations is inadequate.

In addition, amusement park rides are ordinarily of a semi-permanent nature, that is, they should be adapted to be easily set up and subsequently taken down for setting up in another place. In such a construction the track should be divided into sections, and the sections should be easily and quickly attachable to each other and to the support.

It is therefore an object of this invention to provide a device for supporting the track of an amusement park ride at an angle inclined to the horizontal.

It is another object to provide a plurality of such devices employing different angles of inclination to the horizontal.

It is still another object to provide such a device in which the angle of inclination to the horizontal is easily and quickly adjusted and permanently predetermined.

It is a further object to provide a method for securing such a track support.

It is a still further object of this invention to provide an amusement ride structure in which the sections of the track structure are connected in such a way that they fit tightly together when set up and at the same time can be easily taken apart.

It is another object to provide an amusement ride in which the track structure can be easily

and quickly adjusted so that adjacent track sections are in tight abutting relationship.

These and other objects will appear by reference to the following specification and accompanying drawings, in which:

Fig. 1 illustrates a cross sectional elevation of a ride device having a track structure, according to the present invention, built on an inclined plane;

Fig. 2 illustrates a greatly enlarged detail of parts of Fig. 1;

Fig. 3 is a cross section taken along the lines III—III of Fig. 2;

Fig. 4 is a view taken along the line IV—IV of Fig. 2, but applied to the track connection at the end of a track section;

Fig. 5 is a bottom plan view of the device shown in Fig. 4, and

Fig. 6 is a perspective view of a detailed part of the structure shown in Figs. 4 and 5.

Referring to the drawings, Fig. 1 shows a frame or supporting stand 10 upon which the track connection, indicated generally at 11, is adapted to rest. There are a plurality of these frames or platforms, as many as eighteen or more in a standard installation. This frame may be composed of inner upright members 12, outer upright members 13, and cross pieces 14, as shown. The uprights 12 of the frame are situated at appropriately spaced points approximately along the path which it is desired that the track eventually take its position. At the top or near the top of each upright member 12 is attached a track connection 11 in a manner hereinafter more specifically pointed out.

This attachment is secured by the provision of a hole 21 at the top of the inner upright members 12 through which passes a threaded stud 22. This stud, held in place by a nut 23, forms an integral part of an arm 24, said arm extending generally inwardly at an angle from the upright 12. Until the nut 23 is tightened, the arm 24 is free to rotate about the stud 22 as an axis. When it is tightened, however, it can rotate only with difficulty due to the friction between the bolt and the parts with which it cooperates. As shown in Figs. 1 and 2, when the track is at an angle to the horizontal, the angle of the arm 24 with respect to the upright 12 varies at different points along the length of the track, so that some of the arms 24 will be at different angles from others. Thus, in Figs. 1 and 2 the angle is much less in the case of the arm at the left of the figure than in the case of the arm at the right of the figure. Once adjusted, how-

ever, the angle at which each arm 24 is maintained is permanently secured by welding the three parts 12, 23 and 24 together, or other convenient locking means.

5 When an amusement ride track structure comprising such a device is first assembled, for example at the factory where it is built, the proper angle or inclination is determined by actual assembly of the structure. When this is done, the supports will be self-aligning or adjusting so that they will assume the different positions necessary to properly support the track in its inclined position. In standard installations of this sort the track of the amusement ride may have 10 eighteen or more jacks or supporting stands for the track and it will be understood that the track supporting brackets or holding means to properly support the track will therefore have to assume 15 eighteen or more different positions. I therefore provide the readily adjustable members 24 which may be preliminarily, frictionally secured in position to permit the initial set of the track in assembly. When once set these members may be 20 readily hammered or tapped to proper aligning position, and then secured in such position either by means of welding, fusing or by suitable mechanical means.

Cooperating with arm 24 is a member 30 having a flat portion 35, an upstanding portion 49 30 and two depending arms 31, said arms forming a U-shaped depression into which the outer end of member 24, cylindrical at this point, fits. This U-shaped depression is provided at one end with a counterbore 32 into which fits, over the end 35 of the arm 24, a washer 26. A nut 27 is threaded over the end of arm 24 and when tightened forces the washer 26 into the counterbore 32 so that the member 30 cannot be lifted off the arm 24. To the member 30 is rigidly attached or welded 40 a track section 29.

The construction shown in Figs. 2 and 3 is adapted to attach a track section 29 at various points along its length to the frame 10. At the end of the track section 29, however, a modified 45 structure is necessary to connect the track section 29 both to the frame 10 and to an adjacent track section 40. This structure is shown in Figs. 4 and 5. In this position the flat portion 35 and the upstanding portion 49 of the member 30 extend somewhat beyond the end of the track section 29 so that the adjacent track section 40 can be adequately supported as hereinafter described. Member 30 is further modified by the provision of two arms 34 extending approximately 50 horizontally and at right angles to arms 31. The arm 34 on the side of the track opposite the upstanding portion 49 is provided with an upstanding lug 48. Each arm 34 has at its outer end a hole 36. Through both of these holes 36 passes a shaft 37, which also passes through a hole 38 in a member 33 which freely pivots around shaft 37 as an axis. The member 33 is cylindrical at its outer end and is threaded for the reception of a nut 39.

65 An adjacent track section 40 is welded, near its end, to a T-shaped member 41. This T-shaped member consists of a cross piece 42 upon which the track 40 rests, and a cylindrical upright 43 threaded at its lower end for the reception of a nut 47. The upright 43 is of such a diameter as to fit between the arms 34, as hereinafter described. Spaced somewhat farther from the end of track section 40 is a U-shaped member 44, also welded firmly to the track section 40. Between the arms of the U of member 70

44, the cylindrical portion of member 33 is adapted to fit. In order to prevent members 33 and 44 from becoming disengaged, when tightened into place as hereinafter described, the outer edge of the U-shaped depression of member 44 is counterbored at 45 for the reception of a washer 46.

In assembling the track sections, the section 29 is attached to an upright 12 by fitting the arms 31 of member 30 over the cylindrical portion of arm 24. The washer 26 and the nut 27 are placed over the end of arm 24 and the nut tightened into place. The adjacent track section 40 is then superimposed upon the member 30 so that the end of track section 40 rests on the flat portion 35 and the upright 43 passes through the slot defined by the arms 34 and the shaft 37. The track section 40 in this position is kept from lateral movement because it is confined between upstanding portion 49 and lug 48. The member 33 is then swung upwardly so that its cylindrical portion fits between the arms of the U of member 44. The washer 46 and the nut 39 are then fitted over the end of member 33, and the nut tightened into place, forcing the washer 46 into the counterbore 45. This tightening action draws track sections 29 and 40 together, until they fit snugly against each other in the position shown in Fig. 4. The last operation (which may alternatively be performed before member 33 is swung into place or before nut 39 is tightened) is the fitting of nut 47 over the end of upright 43 and the tightening of said nut into place.

As many modifications may obviously be made from the form shown in the drawings without departing from the spirit of the invention, the invention is not intended to be limited thereto except as defined in the appended claims.

I claim:

1. A device for connecting two track sections together in end to end relationship and to a support comprising an arm extending from said support at a predetermined angle thereto, a track section, a first member permanently attached to said track section and detachably connected to said arm, a second track section, a supporting surface on said first member for said second track section, a second member permanently attached to said second track section and detachably connected to said first member, and means for drawing together the two track sections.

2. A device for connecting two track sections together in end to end relationship and to a support comprising an arm extending from said support at a predetermined angle thereto, a track section, a first member permanently attached to said track section and detachably connected to said arm, a second track section, a supporting surface on said first member for said second track section, a second member permanently attached to said second track section and detachably connected to said first member, an arm swingably attached to said first member, a third member permanently attached to said second track section and detachably connected to said swingable arm, and means on said swingable arm for drawing together the two track sections.

3. A device for connecting a track section to a support comprising an arm extending from said support, a rotatable connection between said arm and said support whereby the angle which said arm occupies with respect to said support can be predetermined, means for locking said arm permanently in position at said predetermined angle,

and means for detachably connecting a track section to said arm.

5 4. A device for connecting a track section to a support comprising an arm extending from said support, a rotatable connection between said arm and said support whereby the angle which said arm occupies with respect to said support can be predetermined, means for locking said arm permanently in position at said predetermined angle, 10 and means for detachably connecting a track section to said arm, said track section being inclined at an angle to the horizontal.

5. A device for connecting a track section to a support comprising an arm extending from said support, a rotatable connection between said arm and said support whereby the angle which said arm occupies with respect to said support can be predetermined, said arm being welded to said support at said predetermined angle, and means 5 for detachably connecting a track section to said arm, said track section being inclined at an angle to the horizontal.

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