No. 749,130. PATENTED JAN. 5, 1904.

B. B. FLOYD.

TOBOGGAN SLIDE.

APPLICATION FILED MAY 10, 1902.

NO MODEL. 4 SHEETS—SHEET 1.

Fig. 3.

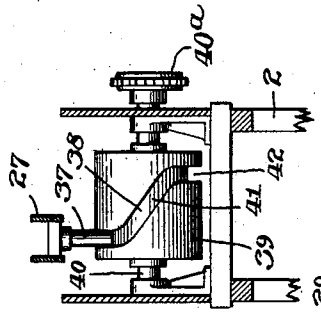


Fig. 2.

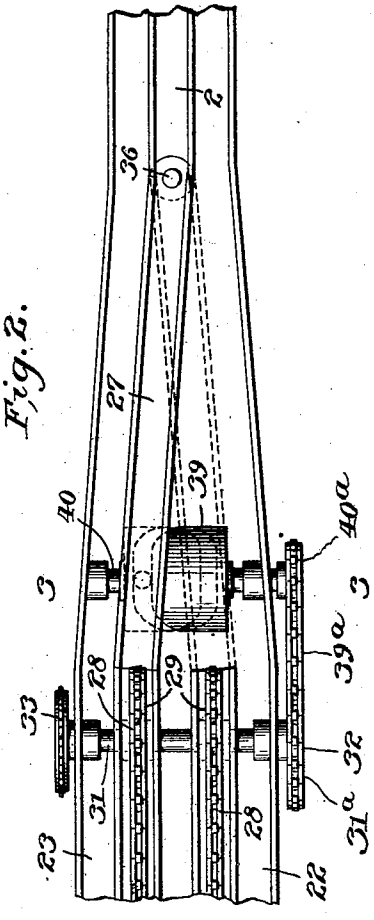
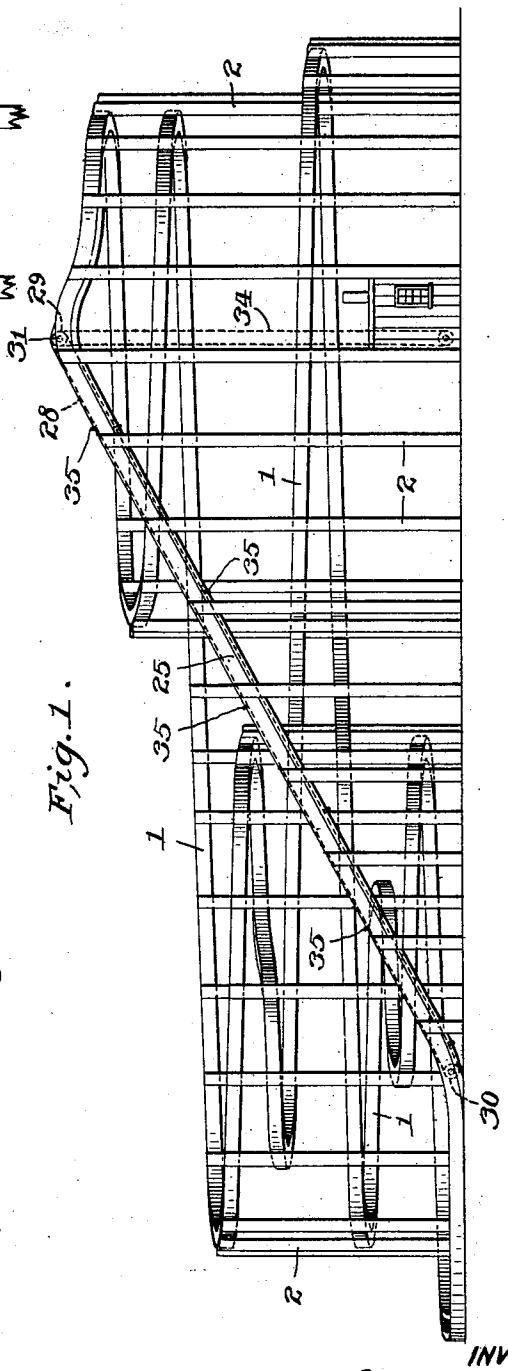


Fig. 1.



WITNESSES:

H. W. Leanby

R. H. Gamble

INVENTOR:

Byron B. Floyd

BY A. V. Groupe

ATTORNEY

No. 749,130. PATENTED JAN. 5, 1904.

B. B. FLOYD.

TOBOGGAN SLIDE.

APPLICATION FILED MAY 10, 1902.

NO MODEL. 4 SHEETS—SHEET 2.

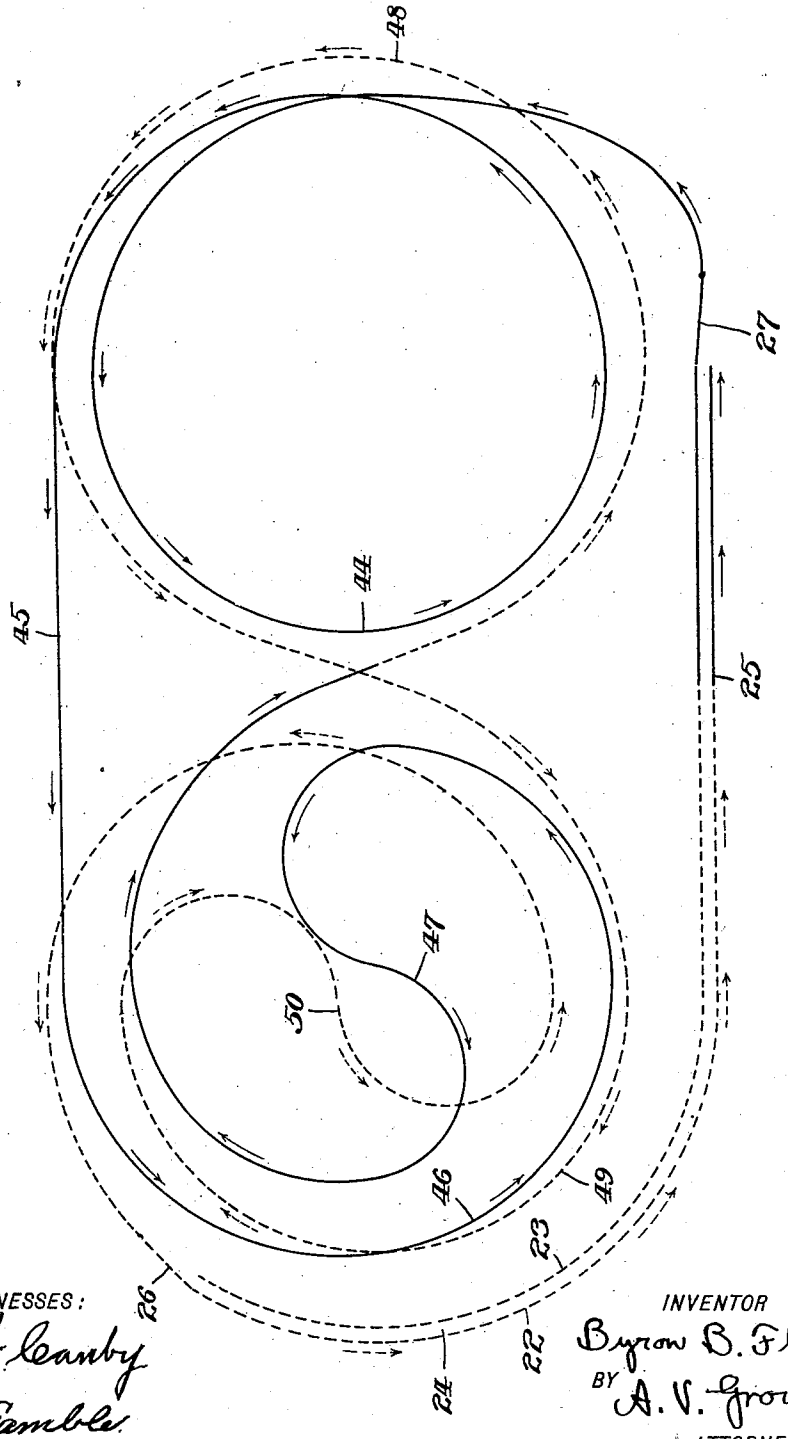


Fig. 4.

WITNESSES:

H. W. Leanby

R. H. Gamble

INVENTOR

Byron B. Floyd

BY A. V. Groupe

ATTORNEY

No. 749,130. PATENTED JAN. 5, 1904.

B. B. FLOYD.

TOBOGGAN SLIDE.

APPLICATION FILED MAY 10, 1902.

NO MODEL. 4 SHEETS—SHEET 3.

Fig. 6.

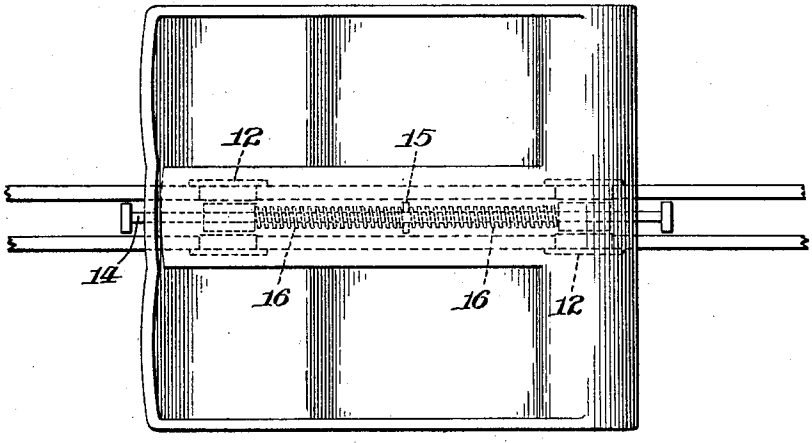


Fig. 5.

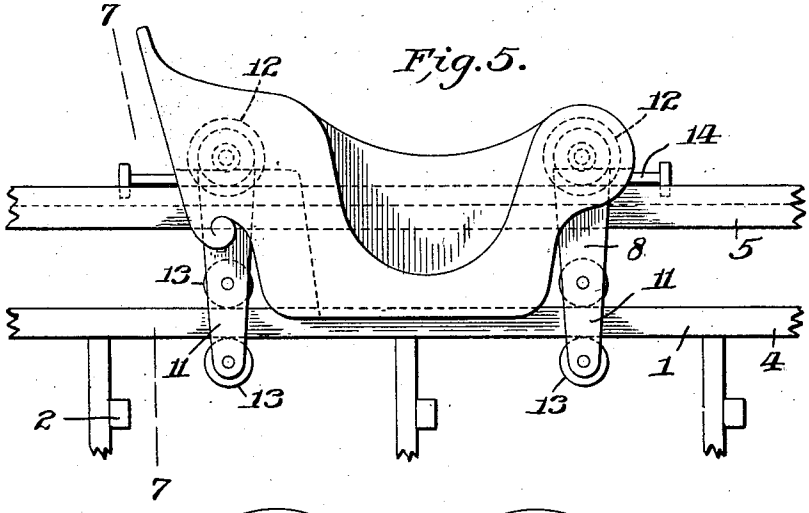
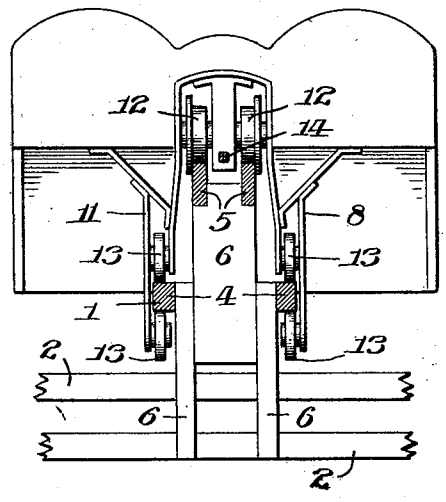


Fig. 7.



WITNESSES:

W. H. Canby

R. H. Gamble.

INVENTOR

Byron B. Floyd

BY

A. V. Groupe

ATTORNEY.

No. 749,130. PATENTED JAN. 5, 1904.

B. B. FLOYD.

TOBOGGAN SLIDE.

APPLICATION FILED MAY 10, 1902.

NO MODEL. 4 SHEETS—SHEET 4.

Fig. 8.

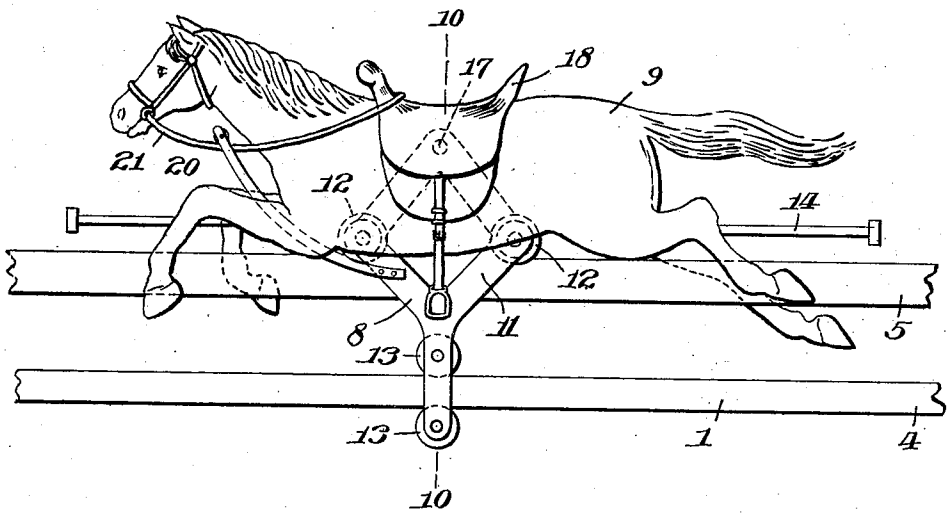


Fig. 9.

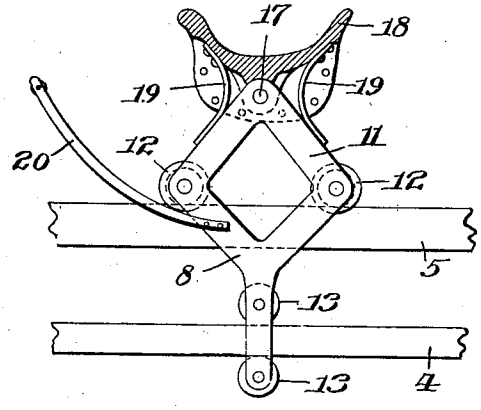
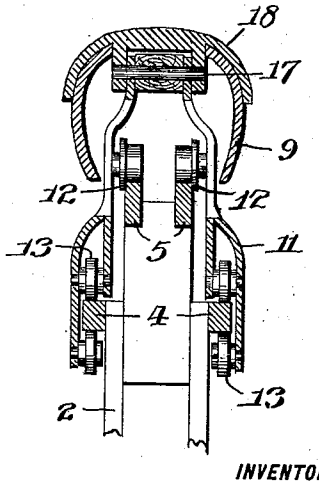


Fig. 10.



WITNESSES:

W. H. Leauby.

R. H. Gamble

INVENTOR

Byron B. Floyd

BY

A. V. Groupe

ATTORNEY.

No. 749,130. Patented January 5, 1904.

UNITED STATES PATENT OFFICE.

BYRON B. FLOYD, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO PHILADELPHIA AMUSEMENT COMPANY, A CORPORATION OF NEW JERSEY.

TOBOGGAN-SLIDE.

SPECIFICATION forming part of Letters Patent No. 749,130, dated January 5, 1904.

Application filed May 10, 1902. Serial No. 106,686. (No model.)

To all whom it may concern:

Be it known that I, BYRON B. FLOYD, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Toboggan-Slides, of which the following is a specification.

This invention relates to toboggan-slides, and has for its object to provide, first, a novel construction and configuration of track; second, a simple and efficient construction of carriage adapted to run on said track, and, third, a novel construction of switch for transferring the carriages successively from a double-line track to a single-line track.

The invention consists in the novel construction and combinations of parts, as will be hereinafter fully described and claimed.

In the drawings, Figure 1 is a side elevation of my improved track. Fig. 2 is a plan view of the switch and adjuncts. Fig. 3 is a transverse section thereof as on the line 3 3 of Fig. 2. Fig. 4 is a diagram showing the configuration of the track, the full lines showing the upper section thereof and the dotted lines showing the lower section thereof. Fig. 5 is a side elevation of a portion of the track and one of the carriages mounted thereon. Fig. 6 is a plan view thereof. Fig. 7 is a transverse section as on the line 7 7 of Fig. 5. Fig. 8 is a view similar to Fig. 5, having the representation of a horse mounted on the carriage. Fig. 9 is a detail of the mounting for the horse. Fig. 10 is transverse section as on the line 10 10 of Fig. 8.

Numeral 1 designates my improved track supported by the framework 2. The track in its preferred form comprises two pairs of rails 4 and 5, which are supported one above the other, on standards 6, rising from the framework 2. Mounted on the trackway are the carriages 8, which may be designed to receive any suitable conveyance, such as the coach illustrated in Figs. 5, 6, and 7 or the representation of a horse 9. (Illustrated in Figs. 8, 9, and 10.) Each carriage in its preferred form comprises a frame 11, provided with flanged wheels 12, which run upon the upper rails 5. This frame projects downwardly on the respective sides of the track and is provided with wheels 13, which take against the upper and lower faces of the rails 4, thereby avoiding any liability of the carriage leaving the track. Projecting beyond the ends of each car is a centrally-arranged bar 14, which is slidingly fitted to openings in the ends of the frame and provided about midway of its ends with a projecting pin 15. Encircling this rod on each side of the pin are springs 16, which bear against said pin and the respective ends of the frame, so that as two carriages come together and the ends of the rods 14 meet a cushioning action is effected by the compression of one of the springs 16 on each rod.

The carriage illustrated in Figs. 8, 9, and 10 is provided with a pivot-stud 17, to which is fitted a saddle 18, adapted to receive and carry the representation of an animal, such as the horse 9, above referred to. The saddle and horse are held normally in the upright position shown by the action of suitable springs 19, secured to the under side of the saddle and bearing against the frame 11 on the respective sides of the pivot-studs 17. This construction permits the horse to be rocked on the stud 17 against the action of the springs 19 and given the effect of galloping. In order that the rocking action of the horse may be effected by the rider, I provide the frame 11 with an extension 20 in the form of a martingale, through which passes the rein 21, so that as the rein is raised and lowered by the rider the rocking action is effected.

I preferably employ a double-line track 22 23 along the ground level 24 and elevating-incline 25 and a single-line track along the downwardly-inclined or gravity portion of the track, there being employed a suitable switch 26 for transferring the carriages from the single track to the double track 22 23 and a switch 27, arranged at the top of the elevating-incline 25, for transferring the carriages therefrom to the single track.

Arranged between the rails 5 of the incline 25 are sprocket-chains 28, which pass around wheels 29 30 at the top and bottom of the incline, respectively. The wheels 29 are mounted on a shaft 31, which is journaled in bearings on the framework and provided on

its respective ends with sprocket-wheels 32 33. The shaft 31 and, perforce, the chains 28, are driven by a chain 34, leading from any suitable source of power and passing around the sprocket-wheel 33. The chains 28 are provided at intervals apart with projections 35, which are adapted to take against the rods 14 of the carriages 8, and thereby carry said carriages up the incline 25 to the switch 27. The series of projections 35 on one of the chains 28 are arranged in advance of the series of projections on the other chain 28, so that the carriages are delivered to the switch 27 from the tracks 22 23 in alternate succession.

The switch 27 comprises a downwardly-inclined section of the single track 2, pivoted at 36 to the framework and extending so as to register with the respective terminals of the double-line elevating-tracks 22 23. I preferably omit the lower rails 4 of the track at the switch, as shown in Figs. 2 and 3. The free end of the switch 27 is supported by a post 37, resting in the groove 38 of a cam 39, which is mounted on a shaft 40, fitted to bearings on the framework. The contour of the cam-groove 38 is such that the free end of the switch 27 is brought alternately to register with the terminals of the tracks 22 23 by the diagonal portions 41 of said groove and held adjacent each terminal long enough to receive a carriage therefrom by the straight portions 42 of said groove. The cam 39 is actuated by a chain 39^a, passing around sprocket-wheels 31^a and 40^a, secured to the shafts 31 and 40, respectively. By the above-described construction it will be seen that the free end of the switch meets the projections 35 on the chains 28 at the terminals of the tracks 22 23 in alternate succession and receives and transfers the carriages 8 delivered at said terminals to the single-line track, on which the carriages run by gravity until they meet the switch 26 below.

In an apparatus of the character to which my invention relates it is desirable to secure the maximum length of track for the minimum amount of space occupied and to reverse the curvature of the track as often as possible. With this end in view I employ in the configuration of the track a series of reverse or ogee-like curves.

The track 2 inclines downwardly from the switch 27 to the switch 26. Starting from the switch 27 the track 2 makes a complete circle 44 at one end of the structure, thence down a straight course 45 to the opposite end of the structure, where a partial circle 46 is made. Within this partial circle 46 the track makes a full reverse or ogee-like curve 47, thereby securing a considerable length of track within a limited space and also the desired reverse curves. The track now makes a second complete circle 48 below the circle 44 and continuing to the opposite end of the structure makes a second partial circle 49 and ogee-like curve 50 below the partial circle 46 and curve 47 and terminates at the switch 26. Obviously the ogee-like curves may be employed at both ends of the structure.

I claim—

1. A toboggan-slide comprising two ascending tracks, a descending track, and a switch connecting the ascending tracks with the descending track, in combination with a plurality of carriages adapted to run on said tracks, means for moving said carriages up the ascending tracks in alternate succession, means for bringing said switch to register with the terminals of the ascending tracks in alternate succession, and gearing between the first and second named means whereby the carriages are alternately transferred from the two ascending tracks to the single descending track.

2. A toboggan-slide comprising two ascending tracks, a descending track, a switch connected to the descending track and adapted to register with the respective terminals of the ascending tracks, in combination with a plurality of carriages adapted to run on said tracks, means for moving said carriages up the ascending tracks in alternate succession, a cam connected to said switch and adapted to shift the latter to register with the terminals of the ascending tracks in alternate succession, and gearing between said means and cam whereby the carriages are alternately transferred from each of the two ascending tracks to the single descending track.

3. A toboggan-slide track comprising a framework and upper and lower rails supported thereby, in combination with a carriage provided with wheels adapted to run on said upper rails, said carriage being also provided with wheels adapted to take against the upper and lower surfaces of said lower rails.

4. A carriage comprising a framework, and supporting wheels therefor, in combination with a saddle pivoted to said framework, the representation of an animal secured to said saddle, and springs arranged between said saddle and framework.

5. A carriage comprising a framework and supporting wheels therefor, in combination with a saddle pivoted to said framework, the representation of an animal secured to said saddle, springs arranged between said saddle and framework, an extension on said framework, and a rein attached to said animal and passing through said extension.

In testimony whereof I affix my signature in presence of two witnesses.

BYRON B. FLOYD.

Witnesses:

ANDREW V. GROUPE,

RALPH H. GAMBLE.