

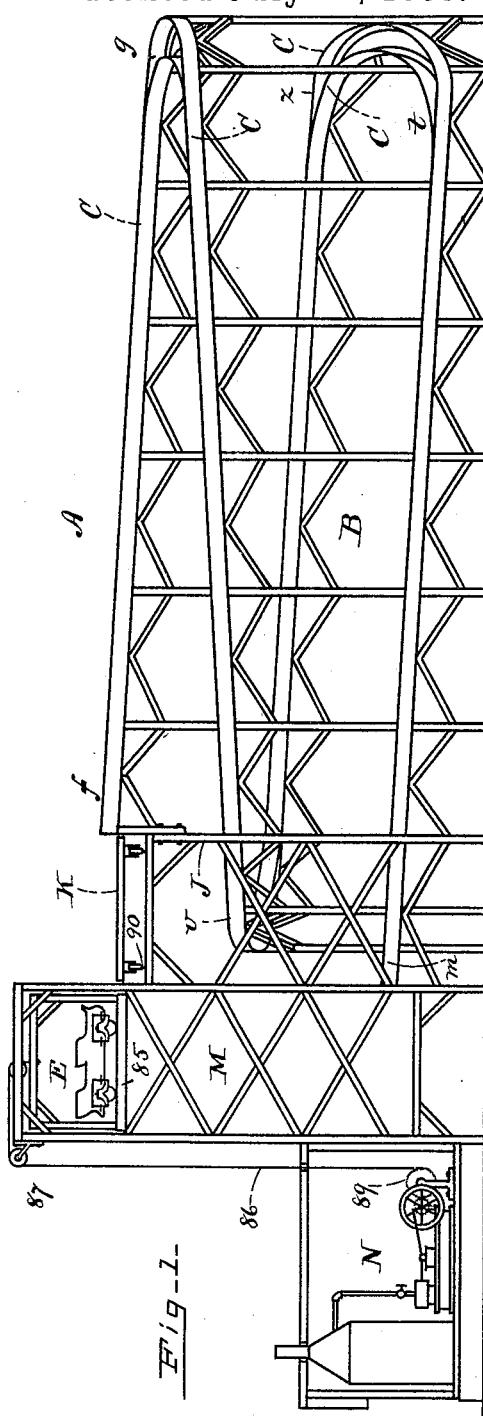
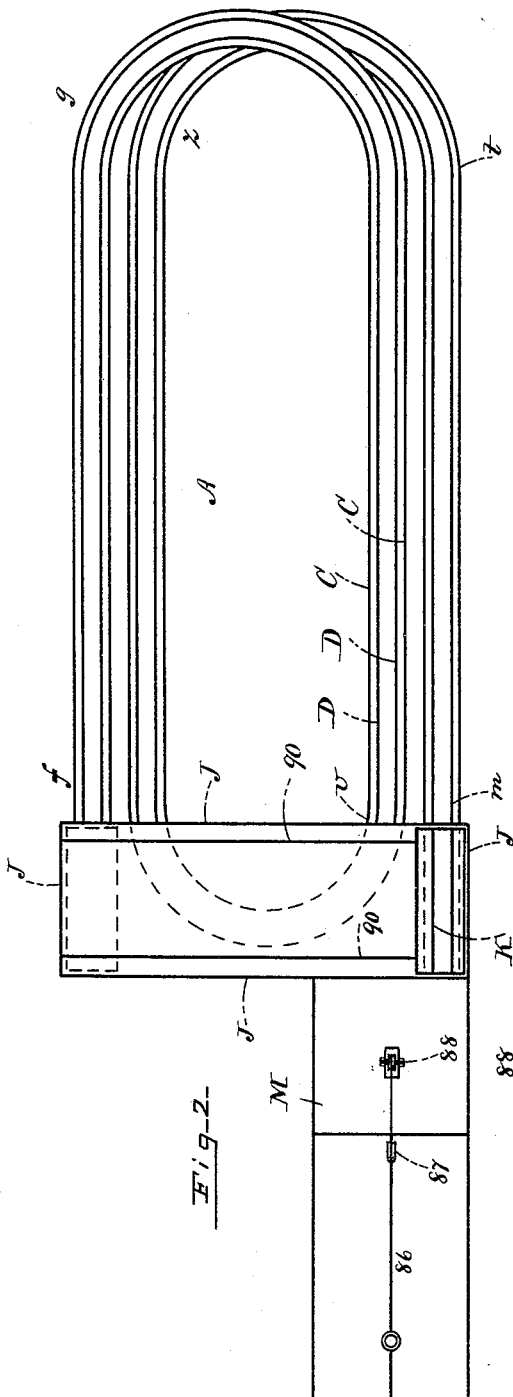
(No Model.)

2 Sheets—Sheet 1.

C. N. GRANT.
TOBOGGAN SLIDE.

No. 386,123.

Patented July 17, 1888.



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(No Model.)

2 Sheets—Sheet 2.

C. N. GRANT.
TOBOGGAN SLIDE.

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Patented July 17, 1888.

Fig-4-

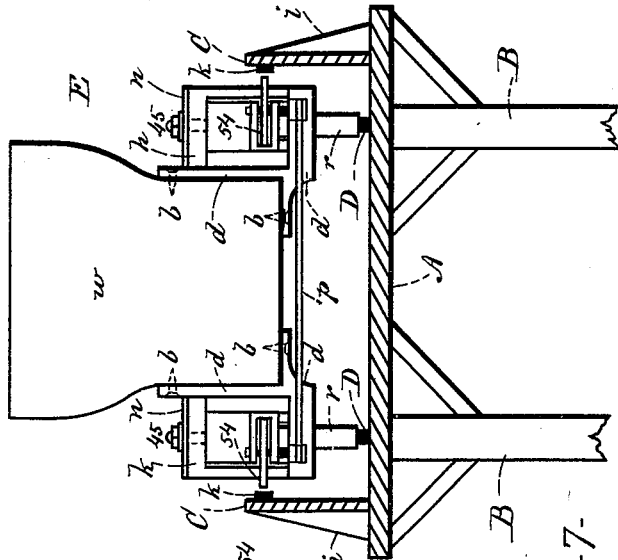


Fig-3-

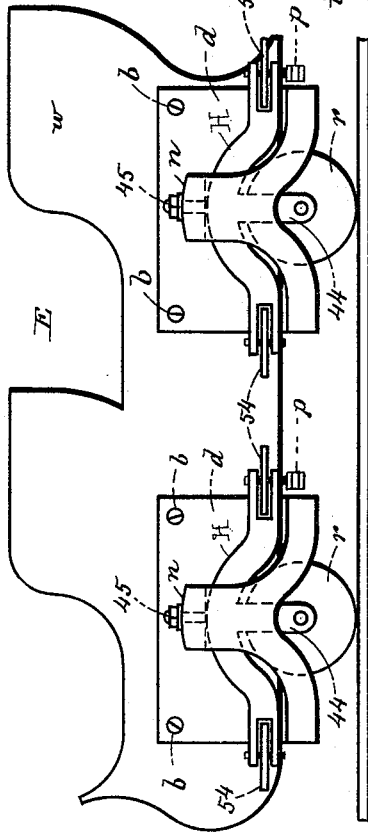


Fig-7-

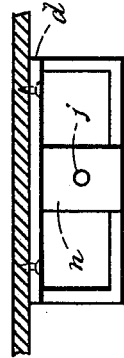


Fig-9-

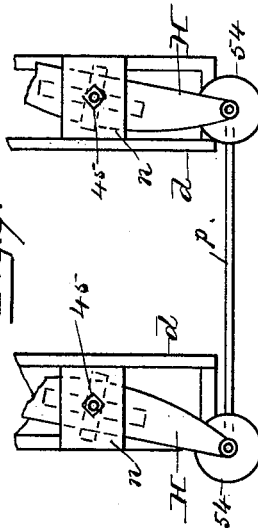


Fig-B-

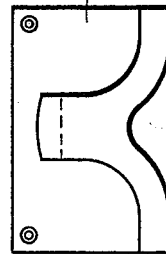


Fig-5-

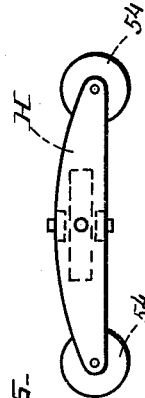
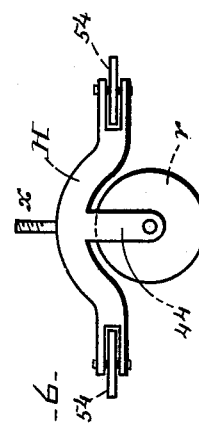


Fig-6-



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UNITED STATES PATENT OFFICE.

CHARLES N. GRANT, OF HAVERHILL, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND ORLANDO BROWN, OF SAME PLACE.

TOBOGGAN-SLIDE.

SPECIFICATION forming part of Letters Patent No. 386,123, dated July 17, 1888.

Application filed April 25, 1888. Serial No. 271,804. (No model.)

To all whom it may concern:

Be it known that I, CHARLES N. GRANT, of Haverhill, in the county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Toboggan Slides, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved toboggan-slide; Fig. 2, a top plan view of the same, the trestle-work not being shown; Fig. 3, an enlarged side elevation of the toboggan; Fig. 4, an enlarged vertical transverse section of the slide, the toboggan being shown in rear elevation; and Figs. 5, 6, 7, 8, and 9, enlarged views showing certain details of construction.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of toboggan-slides in which the toboggan or vehicle for passengers is provided with wheels or trucks, being designed especially for summer use, in contradistinction to those which are used only in winter when snow and ice are available; and it consists in certain novel features, as hereinafter fully set forth and claimed, the object being to produce a more effective and otherwise desirable device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the track, which is supported by a suitable trestle-work, B, in the usual manner. The track is laid in serpentine form, starting at the highest point, *f*, from which it descends gradually to *g*, where it is curved and gradually descends to *v*, at which point it is again curved and descends gradually to *z*. At *z* it is again curved, and then rises gradually from its lowest point, *t*, to the end of the track at *m*, the grade of the curved portion between *t* and *z* being much steeper than at any other point, to enable the

toboggan to acquire sufficient momentum to carry it up the incline from *t* to *m*.

A vertically-arranged guard board, C, is rigidly secured at each side of the track A and strengthened with braces *i*, said guards being each provided with a wear-rail, *k*, on its inner face, near the top, although said rails may be omitted, if desired. Rails D, arranged in parallelism with each other and with the guard-boards C, are laid on the track A for the toboggan E.

The body *w* of the toboggan may be made of any suitable size or capacity and provided with any desired number of supporting-trucks *r*, in the present instance a two-seated body being shown provided with four supporting-trucks.

The body is provided with two brackets, *d*, at each side, which may be secured thereto by screws *b*, or in any other suitable manner. A horizontally-arranged bar, H, (see Figs. 5 and 6,) curved upwardly at its center and provided on its under side with a vertically-arranged screw-threaded stub-shaft, *x*, is mounted in each of said brackets, the stub shaft being inserted in a hole, *j*, in the top *n* of the bracket, and provided with a nut, 45, by which it is prevented from escaping from said hole, said shaft forming a pivotal support, on which the bar oscillates freely in a horizontal plane.

Projecting downwardly from the center of each of the bars H there are two arms, 44, in which one of the trucks *r* is journaled, and connecting the rear ends of each pair of said bars there is a rigid rod, *p*, the object of which is to cause them to oscillate in unison. The bars H are also provided at each end with an anti-friction truck, 54, which is journaled horizontally therein and adapted to engage the wear-rails *k*, (or guard-boards C when said rails are not employed,) and thereby keep the supporting-trucks *r* on the rails D.

The trucks 54 are of such size as to permit the bars H to swing quite freely on their shafts *x*, but not to such an extent as to enable the trucks *r* to escape from the rails D, thereby enabling the toboggan to readily pass the sharpest curves in the track without cramping. As the bars H project both to the front and rear of their pivotal supports *x* and work in connection with the guard-boards C, it will

be obvious that when brought into contact with said boards they will turn the trucks *r* to the right or left, as the case may be, or in accordance with the curvature of the track and rails D, and thereby automatically steer the toboggan. A frame-work, J, is erected at and partially over one end of the track A, said frame-work being provided on its top with tracks 90, which are arranged at right angles to the tracks D, (see Figs. 2 and 3,) and mounted on the top of which stands in the same horizontal plane as the higher end, *f*, of the track A. An elevator, M, is erected contiguous to the frame-work J and provided with a carriage, 85, which is adapted to work vertically therein. A rope, 86, passes over pulleys 87 and 88 on the top of the elevator M, one end of the rope being connected with the carriage 85 and the other with a drum, 89, operated by an ordinary engine, N, to raise and lower the carriage 85 in the usual manner. The higher end, *f*, of the track A terminates at the upper side of one end of the frame-work J and its lower end, *m*, at the lower side of the opposite end of said frame-work, the terminal ends of the track A being thus widely separated laterally, instead of being one above the other, as in some slides of this character.

In the use of my improvement the toboggan E is raised by the engine N and elevator M into the position shown in Fig. 1, and is then run from the carriage 85 onto the platform-car K, by which it is transported on the rails 90 to that end of the frame-work J which is opposite the higher end, *f*, of the track A, where it is pushed forward from the car onto said track and makes the descent to the point *m* in a manner that will be readily understood by all conversant with such matters without a more explicit description. When the toboggan arrives at the lower end, *m*, of the track A, the carriage 85 of the elevator M is in readiness to receive it, and it is then run onto said carriage preparatory to being raised again to repeat the voyage.

It will be understood that the passengers may get into the toboggan and be raised with it by the elevator M; or they may ascend by means of the elevator and get into the toboggan before it is pushed from the car K, as preferred.

It will also be understood that the length of the track A and its gradients may be varied as desired or according to circumstances.

Having thus explained my invention, what I claim is—

1. In a toboggan slide, the serpentine track A, provided with the guard-boards C and rails D, in combination with the toboggan E, supported on trucks *r*, resting on said rails, said trucks being journaled on bars H, provided with wheels 54, connected by cross-rods, as *p*, and adapted to swing laterally and engage said boards, whereby the trucks are kept in the line of the rails and prevented from cramping, and the toboggan is automatically steered, substantially as described.

2. The bars H, provided with the pintles *x*, arms 44, and journaled trucks *r*, in combination with a toboggan body, as *w*, each pair of said bars being connected by cross-rods *p*, substantially as set forth.

3. The toboggan-body *w*, provided with the brackets *d*, in combination with the horizontally-arranged bars H, provided with wheels 54, respectively journaled to swing laterally in said brackets, and provided with the journaled supporting-trucks *r*, and the track A, provided with the guard-boards C, substantially as described.

4. The bracket *d*, having the horizontal top *n*, provided with the hole *j*, in combination with the bar H, having the pintle *x* inserted in said hole and provided with the nut 45, the truck *r*, journaled in arms 44 on said bar, and the body *w*, substantially as set forth.

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Witnesses:

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IRA A. ABBOTT.