No. 857,924. PATENTED JUNE 25, 1907.

B. C. & S. CRANDALL.

CONVEYING APPARATUS.

APPLICATION FILED MAY 7, 1906.

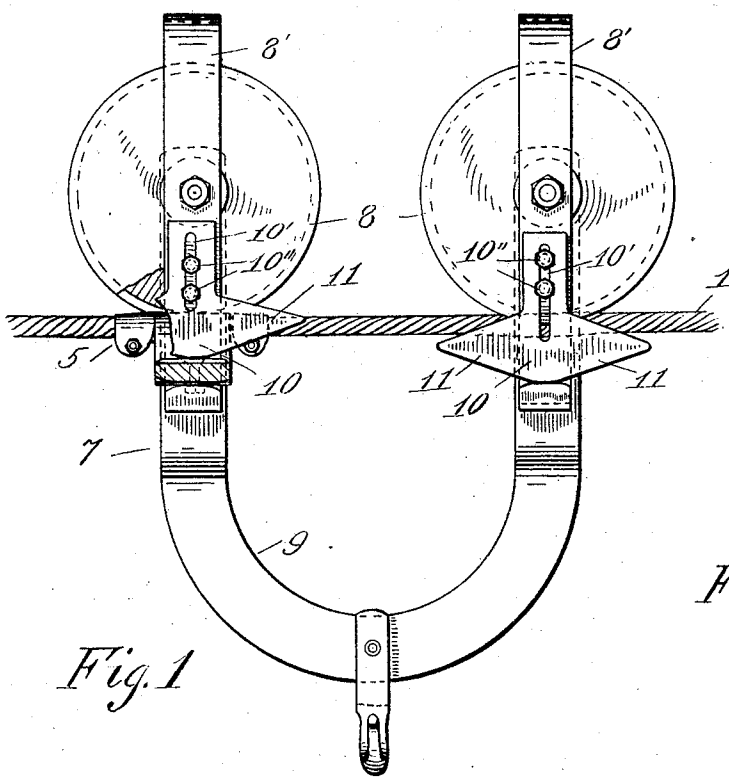


Fig. 1

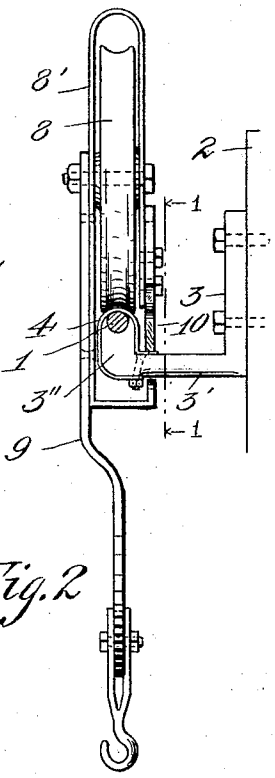


Fig. 2

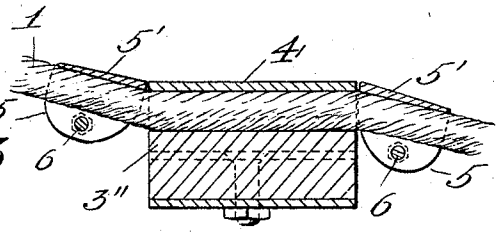


Fig. 3

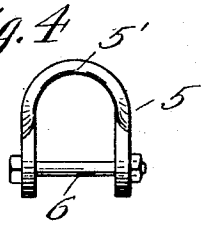


Fig. 4

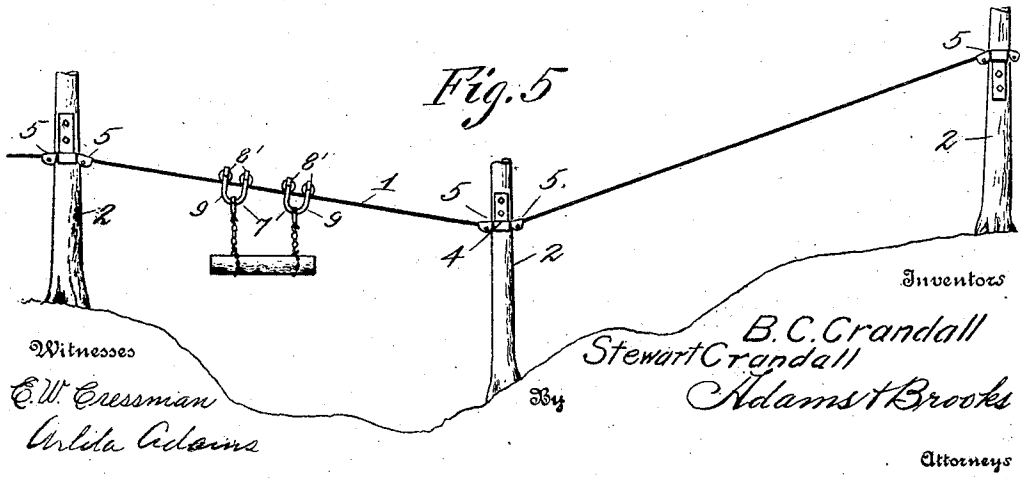


Fig. 5

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

BERT C. CRANDALL AND STEWART CRANDALL, OF SEATTLE, WASHINGTON.

CONVEYING APPARATUS.

No. 857,924. Specification of Letters Patent. Patented June 25, 1907.

Application filed May 7, 1906. Serial No. 315,704.

To all whom it may concern:

Be it known that we, BERT C. CRANDALL and STEWART CRANDALL, citizens of the United States of America, residents of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Conveying Apparatus, of which the following is a specification.

The primary object of our invention is the production of a conveying apparatus which will be comparatively inexpensive to manufacture and embodies essential features of adaptability, utility and general efficiency which insures a more perfect travel of the carriage.

The above mentioned and other desirable objects, to be referred to in the following description, are attained by the construction and combinations of parts hereinafter described and succinctly pointed out in the appended claims.

In the accompanying drawing, in which like numerals of reference indicate like parts throughout the several views: Figure 1 is a section taken on line 1—1 of Fig. 2 with parts broken away. Fig. 2 is an end view of the carriage. Fig. 3 is a fragmentary view partly in section showing the track, the support therefor and the approaches. Fig. 4 is a detail view of one of the approaches, and Fig. 5 is a diagrammatical view on reduced scale.

The invention includes an elevated track, preferably consisting of a cable 1 which is secured to suitable posts or the like, as 2, by supports 3, the latter having shanks 3′ which extend a suitable distance from said posts and have their free end portions turned up, as at 3″, and formed with a concave seat in which the track is seated, and a cap 4 extends over the tread of the track to prevent raising of the track from its seat, and is removably secured to the shank of support 3, as by a bolt, clearly shown in Fig. 2.

To prevent the wheels of the carriage, to be herein described, striking the ends of cap 4, which form abrupt rises from the tread of the track, I provide approaches 5 at the opposite ends of said cap. These approaches, as now considered, are in the form of clamps, being secured to the track by bolts 6, and are provided with treads 5′ which slope upwardly from their outer ends, at sufficient inclination to insure of the inner end portions of said treads being approximately flush with the top surface of the cap.

By having the approaches free of the cap and secured to the track as specified, said approaches can be properly positioned relatively to the cap of the track-support even when there are bends of a considerable angle in the track adjacent the support, (see Figs. 3 and 5), and further the approaches cannot be accidentally shifted from their positions on the track.

The carriage consists of a frame 7 provided with wheels 8 mounted to roll on the track. Frame 7 consists of uprights 8′ forming wheel supporting frames, arranged one in advance of the other and consisting of spaced apart side pieces in which the axles of respective wheels are journaled, and a depending U-shaped connecting bar 9, the upper ends of which are rigidly secured, as by rivets (see Fig. 2), one to each upright. The uprights 8′ are formed in their inner side pieces or those closest to posts 2, with openings arranged to receive the shanks 3′ and thereby allow the carriage to pass the supports 3. These openings are normally closed by gates 10.

Gates 10, as now considered, are mounted for vertical sliding on the uprights, the same being provided with slots 10′ in which headed studs 10″, fixed on said uprights are received, and each gate is provided with opposite projections 11, having cam or inclined lower edges for engagement with suitable abutments arranged alongside of the track, whereby the gates can be opened automatically, when the carrier is traveling in either direction, for reception of the shanks of the track supports, and in the present embodiment, the abutments consist of the shank 3′ of the track supports. The gates close by gravity when moved from engagement with a shank 3′.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is:—

1. In a conveying apparatus, a track consisting of a cable, a support for the track passing over the tread thereof, an approach arranged at one end of said support and being unsecured thereto, and means securing said approach to said track, for the purpose specified.

2. In a conveying apparatus, a track hav-

ing portions extending at an angle, a support for the track passing over the tread thereof at the point of angle, and approaches arranged over the track at each end of said support, and being movable independently of said support.

3. In a conveying apparatus, in combination with an elevated track, and the supports therefor projecting from one side of the track, a carriage having a wheel engaged on said track, said carriage being open at one side, and sliding means for normally closing the open side of said carriage provided with cam portions engaged by abutment means arranged adjacent the track, whereby opening of said sliding means is effected, for the purpose specified.

4. In a conveying apparatus, a carriage comprising a frame consisting of uprights arranged one in advance of the other, said uprights consisting of spaced side pieces, wheels journaled in said uprights, and a bar having one of its ends rigidly connected to one of said uprights and its other end secured to the other upright, that portion of the bar intermediate its ends being bent to extend below the track.

5. In a conveying apparatus, a carriage provided with a frame formed in one of its sides with an opening, a wheel journaled in said frame above the opening thereof, and a gate for normally closing said opening of the frame, said gate being provided with forwardly and rearwardly disposed cam parts, in combination with a track on which said wheel rolls, and means arranged alongside of said track for engagement with the cam parts of said gate, for the purpose specified.

Signed at Seattle, Washington, this 30th day of April, 1906.

BERT C. CRANDALL.
STEWART CRANDALL.

Witnesses:
WM. J. BOYNTON,
FRANK E. ADAMS.