(No Model.)

J. WILDE.

CABLE RAILWAY.

No. 393,530. Patented Nov. 27, 1888.

Fig. 1.

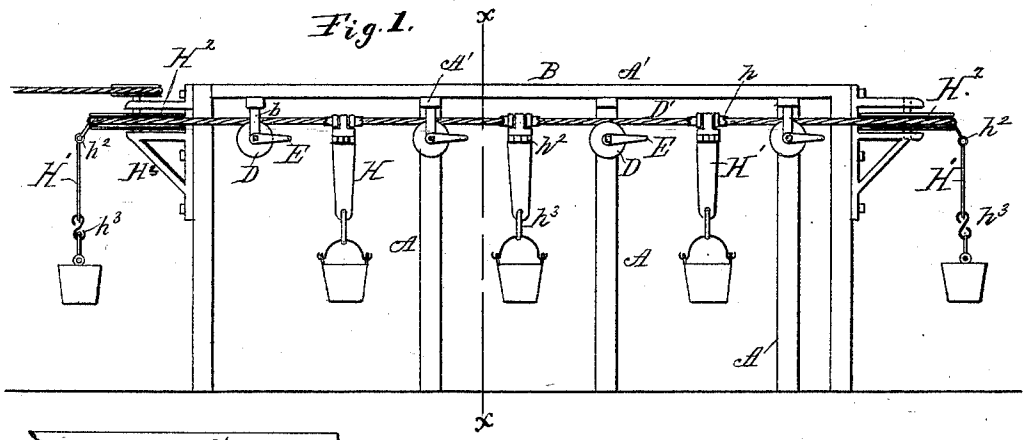


Fig. 3.

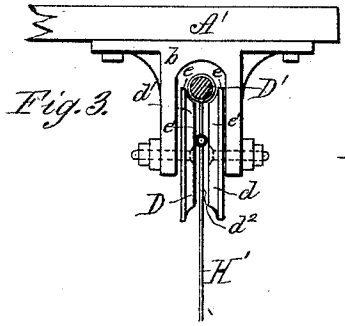


Fig. 2.

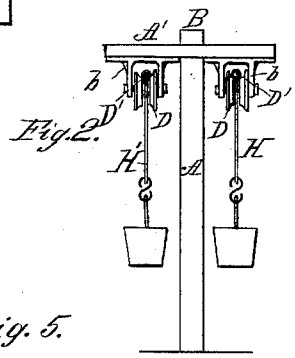


Fig. 4.

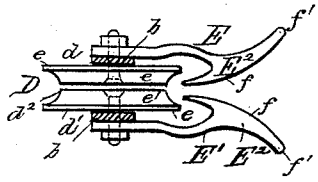


Fig. 5.

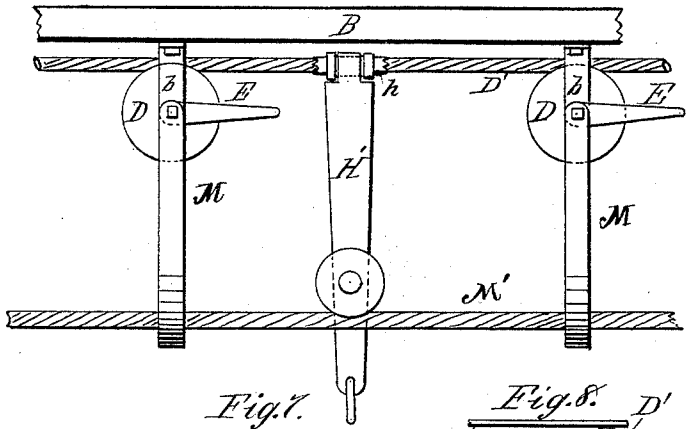


Fig. 6.

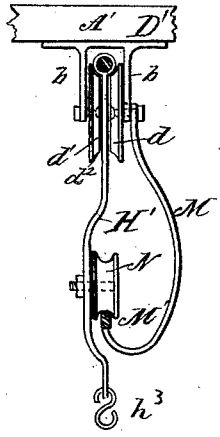


Fig. 7.

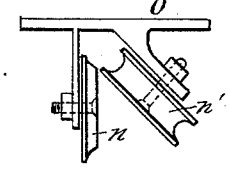
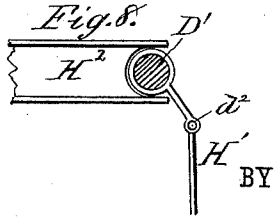


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOHN WILDE, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO HIMSELF AND ROBERT B. BANISTER, OF SAME PLACE.

CABLE RAILWAY.

SPECIFICATION forming part of Letters Patent No. 393,530, dated November 27, 1888.

Application filed June 12, 1888. Serial No. 276,798. (No model.)

To all whom it may concern:

Be it known that I, JOHN WILDE, of Providence, in the county of Providence and State of Rhode Island, have invented new and useful Improvements in Cable Railways, of which the following is a full, clear, and exact description.

My invention relates to an improvement in cable railways, and has for its object to provide a railway of simple, cheap, and durable construction, adapted for use as a conveyer for coal, stone, gravel, and similar articles, and also for conveying work, merchandise, or change from one room to another in the same building, or from one building to another, and wherein the railway may be used for pleasure; also as, for instance, a means of propulsion for dobby-horses, real or miniature boats, and similar articles.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a section of railway, and Fig. 2 is a section on line *x x* of Fig. 1. Fig. 3 is an enlarged view of one of the conducting or cable pulleys attached to the frame, the cable being in section; and Fig. 4 is a plan view of one of the said conductors. Fig. 5 is a partial side elevation of a frame having a modified form of carrier, and Fig. 6 is an end view of the same. Fig. 7 is a side elevation of a form of cable-pulley adapted for use in turning corners, and Fig. 8 is a partial side elevation of another style of corner cable-pulley.

In carrying out the invention the frame of the railway, as set forth in the accompanying drawings, consists of a series of perpendicular posts or standards, A, arranged at suitable distances apart along a given route, provided with transverse cap-beams A′, projecting outward at each side, the various posts and cap-beams being usually stayed and strengthened by the attachment of a tie, B, to the posts and transverse beams, which tie is adapted to extend parallel with the route immediately above the upper ends of the posts.

Near the extremity and upon the under side of each arm formed by the transverse beams a substantially U-shaped hanger, *b*, is secured, and in said hangers the sections *d d′* of a split pulley or cable-conductor, D, are independently journaled. Between the opposing faces of the sections *d d′*, which are smooth, an intervening space, d^2, is provided, which space is so determined that the cable D′ may travel readily and smoothly over the periphery of the pulley and have a bearing upon each section, as shown in Figs. 2 and 3.

The periphery of each section of the conducting-pulleys D is provided with an annular flange upon the outer side, and the surface intervening the inner edges and the flange is slightly curved, as shown at *e′*, Fig. 4, the extent of the curve being such that when the inner faces of the sections *d* and *d′* oppose one another the combined curves will constitute a semicircle and readily accommodate a cable.

Fingers E E′ are secured to the members of the U-shaped hangers near their lower ends, which fingers project outward at right angles to the hangers beyond the periphery of the conducting or cable pulley, being provided at their outer extremities with opposing hook-shaped heads E^2. The inner ends of the heads E^2 terminate near the periphery of the pulley-sections *d* and *d′* at their inner faces, and the said inner and opposing faces of the heads are curved, as shown at *f* in Fig. 4, from a point in horizontal alignment with the inner faces of the respective sections outward, terminating in an extension, *f′*. The purpose of the fingers E and E′ is to act in the capacity of guides to direct carriers H, suspended from the cable, into the space intervening the contiguous faces of the cable-pulleys.

At intervals a series of carriers H is suspended from the cable D′, to which the article to be propelled or receptacle adapted to receive material to be conveyed is attached. The carrier consists usually of a collar, *h*, which is secured upon the rope, and a flat metal plate, H′, adapted to turn freely upon said collar, and provided near the upper or connected end with a hinged joint, h^2, and at the lower or free end

with a hook, h^3, or equivalent device, for ready and handy attachment.

The carriers are hung with their edges facing the conducting-pulleys D, and in operation, wherever a corner is to be turned, a solid pulley, H^2, is journaled horizontally in suitable brackets, H^3, around which pulley a cable is made to pass. As the cable revolves, the hangers are guided by the fingers E and E′ between the sections of the divided pulleys D, as shown in Fig. 3, and when the carriers pass around the end or corner pulley the hinge h^2 permits the lower section of the said carriers to retain a perpendicular position, as shown in Fig. 1. Thus the cable may be revolved without stoppage, if desired, and convey uninterruptedly any device or receptacle secured to the carrying-arms.

In some instances it may prove advantageous and desirable to give additional continued support to the lower end of the carriers. In this event a bracket, M, is attached to one member of each hanger, projected downward in an outwardly-curved line, and upwardly beneath the divided or sectional pulley a distance therefrom, the lower ends of the brackets being adapted to support a track, M′, as shown in Fig. 6.

When a track is employed, the carriers are offset away from the bracket near their lower ends, and a grooved wheel, N, is pivoted upon the carrier in the depression thus formed, which wheel is adapted to travel upon the track M′, as also illustrated in Fig. 6.

With this style of carrier, which consists of one continuous piece of metal, a corner pulley constructed as illustrated in Fig. 7 is employed, in which a sectional pulley, n, is vertically journaled in a suitable hanger, O, and a full pulley, n', is journaled at an angle to the aforesaid sectional pulley, a space being intervened for the passage of the carrier. The cable is adapted to travel partially upon both the pulleys n and n'.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a cable railway, the combination, with a cable and hinged carriers suspended from the same, of sectional pulleys having a space intervening the contiguous faces of the sections to form a passage for the carriers, and fingers curving in front of said sectional pulleys provided with convex and outwardly-extending opposing faces, substantially as and for the purpose herein set forth.

2. The combination, with a frame, transverse arms projecting from said frame, hangers secured to said arms, and divided pulleys having each section independently journaled in said hangers and provided with an intervening space, of a cable adapted to run over said pulleys, collars secured to said cables, and hinged carriers pivoted upon said collars and suspended from the cable, substantially as and for the purpose herein set forth.

3. The combination, with a cable and its supporting-pulleys, of hinged carriers suspended from the cable and adapted to turn thereon, substantially as shown and described.

4. The combination, with a cable and hangers carrying divided pulleys, of offset carriers suspended from said cable provided with a pulley at said offset, and a track suspended from said hangers, on which said pulleys run, substantially as shown and described.

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Witnesses:
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GEO. C. FRANKLIN.