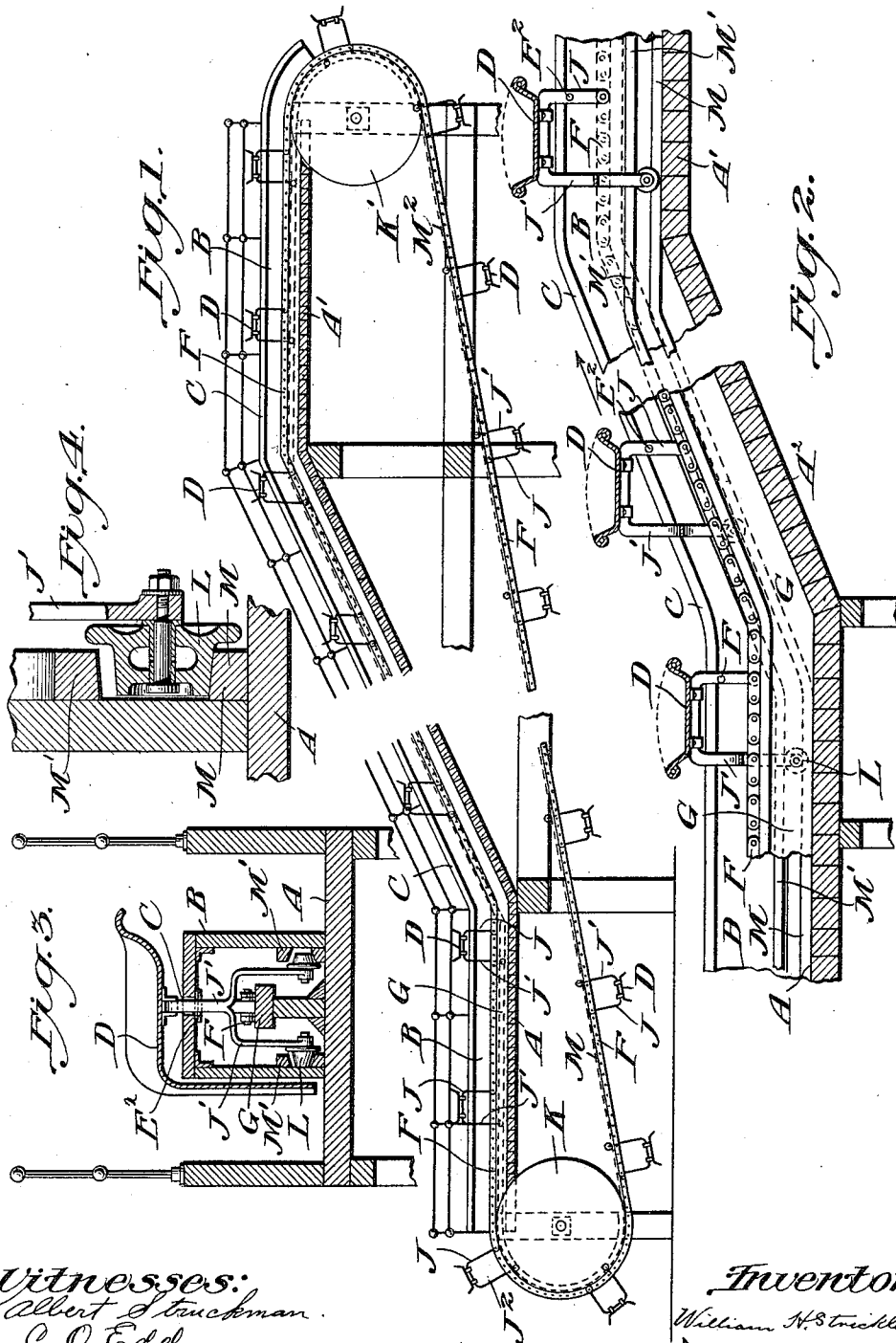


W. H. STRICKLER.
TRANSPORTING AND ELEVATING DEVICE.
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1,017,117.

Patented Feb. 13, 1912.



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UNITED STATES PATENT OFFICE.

WILLIAM HOMER STRICKLER, OF CHICAGO, ILLINOIS.

TRANSPORTING AND ELEVATING DEVICE.

1,017,117.

Specification of Letters Patent.

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Application filed April 25, 1910. Serial No. 557,599.

To all whom it may concern:

Be it known that I, WILLIAM HOMER STRICKLER, a citizen of the Republic of the United States of America, and a resident of Chicago, in the State of Illinois, have invented new and useful Improvements in Transporting and Elevating Devices, of which the following is a specification.

The present invention relates to that class of devices for transporting and elevating persons or articles from place to place located at different levels or elevations by means of a series of cars having seats, platforms or their equivalents which are propelled by suitable mechanism along tracks having horizontal and inclined or otherwise graded parts, the cars, during their transit, being maintained in horizontal or other normal position by suitable means.

Broadly considered, such devices are not new and the object of the present invention is to provide such a device of simplified and improved construction.

Other objects of the invention will appear hereinafter.

The invention consists in the features of novelty that are hereafter described with reference to the accompanying drawing, which is made a part of this specification and in which:

Figure 1 is a diagrammatic vertical longitudinal section of an elevating and transporting device embodying the invention. Fig. 2 is a similar view of some of the parts thereof on a larger scale. Fig. 3 is a vertical transverse section thereof in a plane cutting a horizontal portion of the device. Fig. 4 is a view on a larger scale, showing some of the details of the seat support and one of its bearings.

As shown in Figs. 1 and 2 the improved transporting and elevating device has horizontal portions, A and A', located at different levels or elevations and an inclined or graded portion A² of any desired length or degree of inclination extending from one to the other of said horizontal portions. The passengers take or leave their seats, or the cars are otherwise loaded or unloaded while traversing the horizontal portions of the device, and throughout their upward travel along the inclined portion the cars are maintained in normal positions—with their seats or equivalent portions horizontal.

B is a casing within which the running

gear is inclosed, while the cars D, D are in carrying positions, the top of this casing being closed excepting for a continuous longitudinal slot, C, through which the standards, J and J', of the seat supports pass. This slot is the result of forming the top of the casing in two longitudinal half sections, the contiguous edges of which are separated to a suitable distance to provide the slot and these half sections form parallel longitudinal bearing guides for sustaining the standards as against any considerable lateral displacement. When the cars are used for passenger service they are provided with seats arranged sidewise and the casing is partly for the purpose of preventing the clothing of the passengers from being caught by any part of the running gear or propelling mechanism.

The seat or its equivalent is directly secured to the upper end of the two standards, J and J', arranged one in front of the other, and these standards pass easily through the slot, C. The bearings of the seat-support of whatever character said bearings may be, are at the lower ends of these standards. The lower extremity of the standard, J, is, in and of itself, the front bearing for the seat-support and rests directly upon a rail or beam, G, which constitutes the track for said front bearing and determines the elevations, levels or grades through which said bearing travels. The rear bearings of the seat-support consist of anti-friction wheels or rollers, L, and rest upon tracks, M, which are located on opposite sides of the track, G, and determine the elevations, levels or grades through which the rear bearings travel. All of the tracks are continuous throughout their entire length and are located, parallel with each other, one upon each side of another. At the points of the inclined or graded portions of the tracks upon which the front and rear bearings for the time being rest, the tracks occupy different elevations, the difference or distance between the elevations being proportional to the gradient, whereby the car is maintained in normal position at all points throughout its travel.

In the embodiment of the invention shown in the drawings the front standards are shorter than the rear standards and the track for the front standard is, throughout its length, at a higher elevation than the tracks for the rear standards and the difference is such that throughout their lengths

the track for the front bearing is at a higher elevation than the tracks for the rear bearings, but this is not essential and if desired the front and rear standards may be of equal length. In this instance the horizontal portions of the tracks for all of the bearings may be located at the same elevation, it being simply necessary to place them at different elevations throughout their graded portions. In this instance the graded portions of the tracks for the rear bearings would necessarily be at a lower elevation than the track for the front bearing, considered with relation to the points at which the bearings are for the time being resting upon their respective tracks when either or both of them is resting upon a graded portion of its track. With the middle track elevated as shown in the drawing the rear standard J' is bifurcated at its lower part so as to straddle the middle track and provide space for an endless driving chain F, which is attached to the front standard J and rests upon the track G, whereby it is supported. The driving chain passes around sprocket-wheels K and K' and may be driven in either direction so that the cars may be moved either up or down along the inclined portions of the conveyer so that either side of the car may be the "front", according to the direction of travel and hence the terms "front" and "rear" as used in this specification are convertible.

To prevent undue vertical motion of the cars, guard rails M' are placed over the track M—M so as to engage the wheels L and prevent them from leaving the tracks M and these guard rails, or continuations, M², of them may be extended in semi-circular courses concentric with the axis of the sprocket-wheels and from one sprocket-wheel to the other for the purpose of supporting the cars through the medium of the rear standards, J', as the cars are being returned to their starting points.

It will be observed that the strains upon the sprocket-chain will tend to raise it out of contact with the track, G, especially in the vicinity of the point at which the course of the track changes from horizontal to inclined and this raising of the chain will have a tendency to lift the front side of the car. In order to prevent this a stop-pin, E², is secured transversely to the front standard, J, in such position that it will cross the slot, C, and engage the under side of the guarding braces which are formed by the contiguous edges of the two half sections of the top, C, of the casing.

It will be seen that by providing for each of the several bearings of the car-support a separate and wholly independent continuous track, said tracks being located side by side and with one upon each side of the other, the car may travel through any graduations

and be maintained in normal position (whatever that position may be) without the necessity for causing any of the bearings of the car-support to pass from one to the other of two tracks if arranged vertically one above the other, necessitating the use of switches. In the example given in the drawing the bearings are triangularly arranged and the front bearing comprises only a single point for engaging its track.

What I claim is new and desire to secure by Letters Patent is:

1. In a transporting and elevating device, the combination of a car having a seat, a seat-support comprising a pair of standards, located one in front of the other, extending downward from the car body, and bearings carried by said standards, a plurality of parallel tracks, arranged one upon each side of another, a driving chain connected to the lower end of the front standard and resting upon the middle track, the lower portion of the rear standard being bifurcated so as to straddle the middle track and bear upon the outer tracks.

2. In a transporting and elevating device, the combination of a car having a seat, a seat-support, said support having standards extending downward from the seat and having a plurality of bearings, a plurality of tracks upon which said bearings rest, respectively, and a closed casing having through its top a longitudinal slot through which the standards pass.

3. A transporting and elevating device having, in combination, a casing for the running gear closed in except for an upper longitudinal slot, a seat or platform, a seat-support having standards extending from the seat downward through said slot, said standards having three bearings triangularly arranged, tracks on which said bearings rest and the necessary running and driving gear.

4. A transporting and elevating device having, in combination, a car having a seat, a seat-support having standards, a casing for the running gear closed in except for an upper longitudinal slot through which the standards of the seat-support pass, an endless chain connected to the seat support, a support on which said chain runs and which supports the front standard, the rear standard being bifurcated within the casing, and tracks on which the bifurcated rear standard bears.

5. A transporting and elevating device having, in combination, a car having a seat, a seat-support having standards extending downward therefrom, said standards being connected to the front and rear ends of the seat, respectively, an endless chain engaging the front standard, a track on which said chain runs and which supports the front standard, the rear standard being bifurcated

within the casing, wheels journaled to the
bifurcated lower ends of said rear standard
tracks on which said wheels run, means for
preventing the lifting of the car from said
5 tracks, and driving gear for driving the
chain.

In witness whereof I have hereunto set

my hand in the presence of two subscribing
witnesses.

WILLIAM HOMER STRICKLER.

Witnesses:

WILLIAM GEO. HUSS,

JOHN O'CONNELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
