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P. M. HASSLER

ELEVATED CONVEYER

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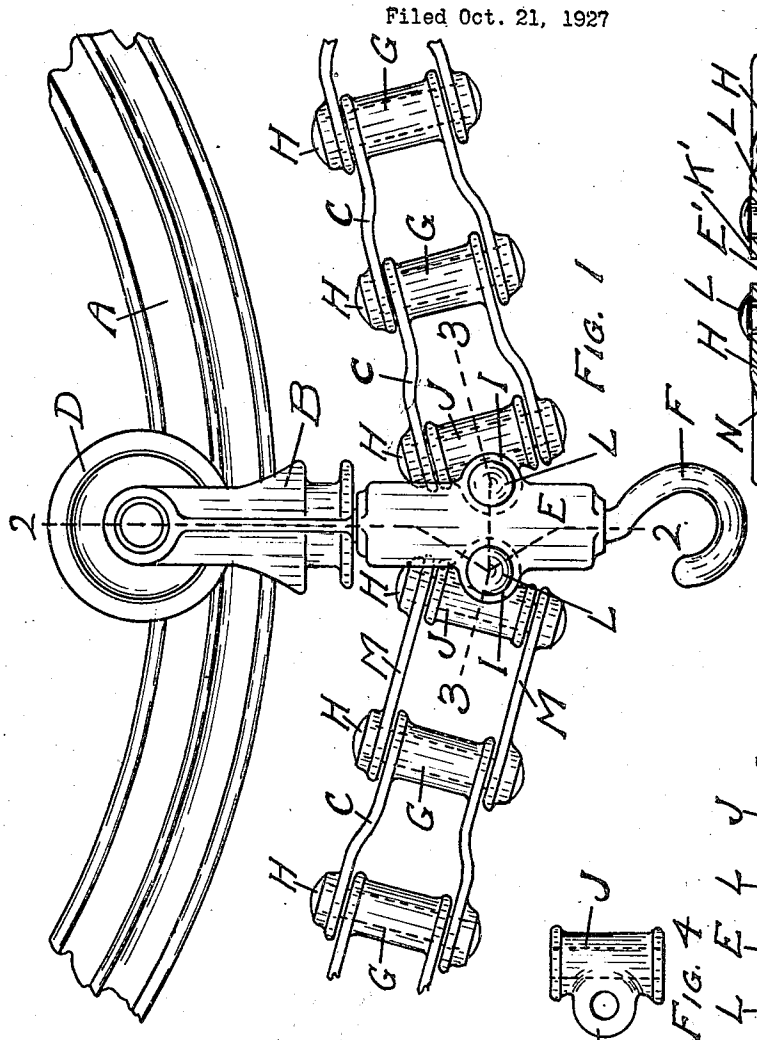


FIG. 1



FIG. 5

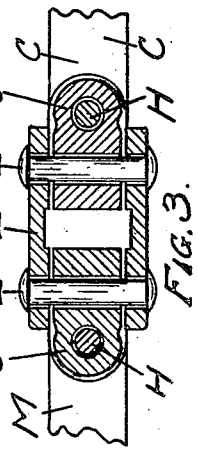


FIG. 3.

FIG. 4

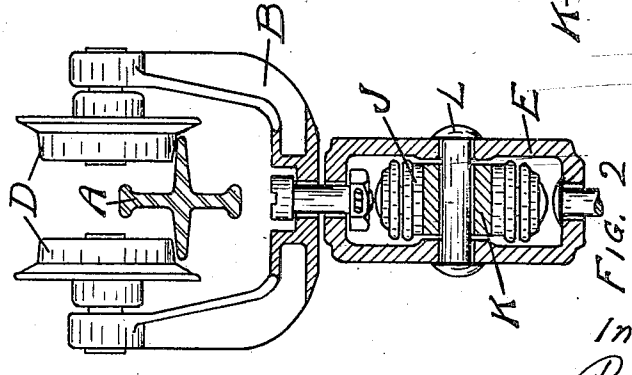


FIG. 2

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ELEVATED CONVEYER.

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My invention relates to that class of elevated conveyers which has a series of trolleys adapted to run on an elevated trackway for the purpose of carrying a load or loads; said trolleys being connected together by operated conveying means, such as chains or other similar operated conveying devices, and it consists of an improvement in the connection of the chains or other conveying devices to the trolleys whereby the trolley frames will be maintained in a more substantially vertical position, which will not be affected by any upward or downward variations in the trackway nor by the resulting upward or downward variations of the conveying mechanism. Also, of other improved features which will be hereafter described and set forth in the claims.

In the accompanying drawings which form part of this specification, Fig. 1 is a side elevation of a trolley mounted on a section of a trackway and having chain conveyers connected thereto in accordance with my invention. Fig. 2 is a transverse section on the approximately vertical line 2—2 of Fig. 1. Fig. 3 is the same on the approximately horizontal line 3—3 of Fig. 1. Fig. 4 is a detail view. Fig. 5 is horizontal section of a modified form of my invention which will be hereafter explained.

Referring to the drawings, A represents the trackway which may be connected to an overhead support by hangers in the usual manner, or in any other manner that may be desired, to hold the trackway in an elevated position, but neither the hangers nor the support for the track is shown in the drawings. As shown most plainly in Fig. 2, a cross shaped monorail is used for the trackway, but any other desired form of trackway may be used, whether of a monorail type or composed of a number of sections connected together.

The trackway is shown centrally depressed as might be necessary in passing under a beam, but portions of it may be otherwise depressed or upwardly extended as may be necessary to accommodate contingencies. A portion of the trackway may be horizontally mounted and other portions may be depressed or upwardly extended as required but to get the full benefit of my invention there should be a difference at one or more points in the elevation of the portions of the trackway upon which the trolleys run.

As stated heretofore, the style of elevated conveyers to which my invention relates requires a series of trolleys, the upper portions of which may be like that represented by B in the drawings, with conveying means connecting their lower portions together, such as that shown by the chains C; but as my invention consists essentially of an improvement in the connections of the conveying means to the trolleys, which will be all substantially alike, it has not been considered necessary to show more than one of the trolleys having the conveying means connected thereto.

The trolley B is provided with wheels D adapted to run on opposite edges of the trackway A but this may be modified to suit requirements. It is however preferable that the lower parts E of the trolley frames be made open so the ends of the adjacent links of the chains C may enter and be pivoted therein. The trolleys should also be provided with hooks F or other means for connecting a load or loads, or a container or containers for the same. Outside of these mentioned requirements the trolleys may be constructed in any manner to suit contingencies.

The conveying chains C are preferably constructed of a series of links connected together by vertically disposed pivot parts G, which are preferably made tubular, through which, and also through holes in the open ends of the adjoining links, pivot pins H are passed to pivotally connect the links together. Usually motion is communicated to the conveying chains, to cause the trolleys to run on the trackway, by passing the chains around sprocket wheels, the sprockets of which are adapted to engage the vertically disposed portions G of the links of the chains.

To connect the chains to the trolleys I form laterally extended portions I on opposite edges of the part E of the trolley, and place holes in said extended portions substantially level with each other and at substantially equal distances from the vertical center of

the part E. I also provide tubular parts J, similar to the vertical pivot portions G of the links of the chains. On one side of these tubular parts J, I form extended portions K each having a hole therein set at substantially right angles to the hole in the tubular part.

I then insert the extended portions K into the open space in the part E, one on each side, until the holes therein and in the extended portions will coincide with each other. A coupling pin L is then placed in each of the coinciding sets of holes which will stand in a horizontal position, so the parts J can be tilted upward or downward to a certain extent. The open ends of the adjacent link on the right hand side, (as shown in Fig. 1) if not already connected to the part J may then be connected by one of the pivot pins H the same as the other open ends of the links are connected to the part G.

On the other side, owing to the way the links stand, it is advisable to use a pair of straight connecting pieces M, which being connected at one end to the part G of the adjacent link, can have their other ends connected to the part J on that side by another of the pins H. If the links of the chain on the left hand side of the part E were set in the opposite direction the pieces M would not be needed, but it is generally preferable to use these pieces rather than to reverse the position of the links. Then again, if this was done the pieces M or their equivalents would have to be used on the right hand side of the adjacent trolley instead of the left hand side of the trolley shown in the drawing.

The load which is carried by the hook F or its substitute will naturally hold the trolley in a substantially vertical position, and the conveying chains being connected to the trolley as shown and described, will be free to tilt upward or downward according to the location of the trackway without affecting the vertical position of the trolley frame. The portions of the part E where the connecting pins L pass through being extended out laterally add to its strength and there being two connecting pins, each an equal distance from the vertical center of the part E, tend to balance it better than if there was a single connecting pin passing through the vertical center of the part E.

The modified form shown by Fig. 5 is intended to be a horizontal section of this modified form on the same line as that of Fig. 3. In this form the part E is made solid or without any central opening and is lettered E′. The part J of Fig. 1 is designated J′ and has a modified extension K′ which has a recess in its center so its extended sides can pass on each side of the part E′ to receive the connecting pin L. On the other side is a clip N, the open ends of which lap on the sides of the part E′ to receive the connecting pin L, while its central portion is passed around the pivot pin H, and in this way the clip N takes the place of the coupling part J which is used on this side of the part E in Fig. 1.

The portions of E′ in Fig. 5 through which the coupling pins L pass are extended out laterally the same as they are in the part E in Fig. 1, the only material difference being that the part E is widened out and made open in its center while the part E′ is made solid. My invention is extremely simple and easily constructed. It is effective in operation and overcomes defects in similar devices of the prior art. In Figs. 1 and 2 the trolley frame is shown with a swivel between its upper and lower parts, which is a common construction for trolleys, but when this type of trolley is used, it is preferable that this swivel be locked so the upper and lower parts of the trolley will be held rigidly together.

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

1. In elevated conveyers, a series of trolleys adapted to run on an elevated trackway, each trolley having a load supporting frame depending therefrom and laterally extended portions formed on the opposite edges of said frame below the trackway and in a substantially parallel line therewith, and conveying means horizontally pivoted to said extended portions of the trolley frame at substantially equal distances from the vertical center of the trolley frame.

2. In elevated conveyers, a series of trolleys adapted to run on an elevated trackway, each trolley having a load supporting frame depending therefrom and laterally extended portions formed on the opposite edges of said frame below the trackway and in a substantially parallel line therewith and conveying chains having links vertically pivoted together and their adjacent ends horizontally pivoted to the extended portions of the trolley frame at substantially equal distances from the vertical center of the trolley frames.

3. In elevated conveyers, a series of trolleys adapted to run on an elevated trackway, each trolley having a load supporting frame depending therefrom, with an opening in its lower portion, in line with the trackway, and laterally extended portions formed on the opposite edges of said lower portion of the frame, and conveying means horizontally pivoted to said extended portions of the trolley frame at substantially equal distances from the vertical centers of the trolley frame.

4. In elevated conveyers, a series of trolleys adapted to run on an elevated trackway, each trolley having a load supporting frame depending therefrom and laterally extended portions formed on the opposite edges of said frame below the trackway and in a substantially parallel line therewith and having hori-

zontally disposed holes therein located in a substantial level with each other and at an equal distance from the vertical center of the trolley frame, conveying means on opposite sides of the trolley frame having holes adapted to coincide with the holes in the extended portions of the trolley frame, and horizontally disposed coupling pins placed in said coinciding holes, whereby the extended portions of the trolley frame and the adjoining ends of the conveying means will be pivotally coupled together.

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