

H. W. FARLEY.
Elevated Ways.

No. 145,638.

Patented Dec. 16, 1873.

Fig. 1.

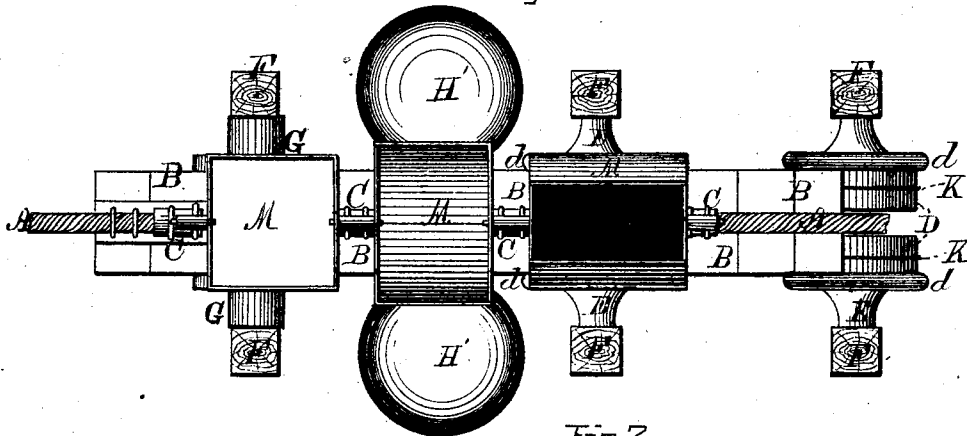


Fig. 2.

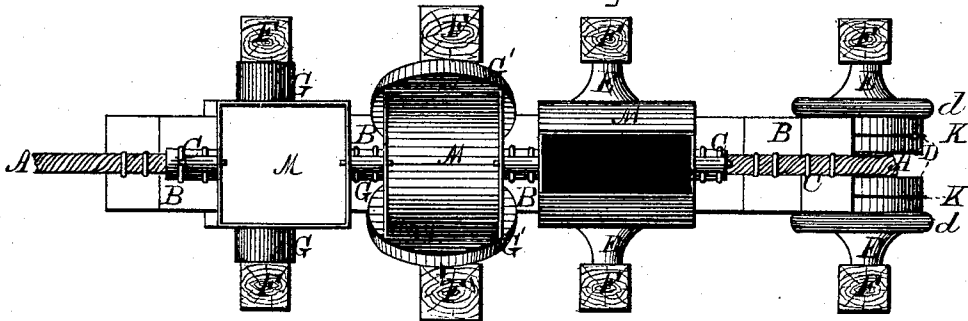
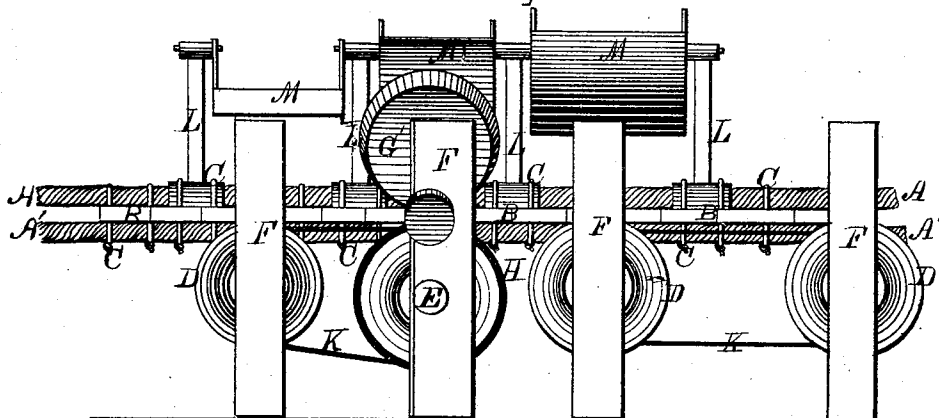


Fig. 3.



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Fig. 4.

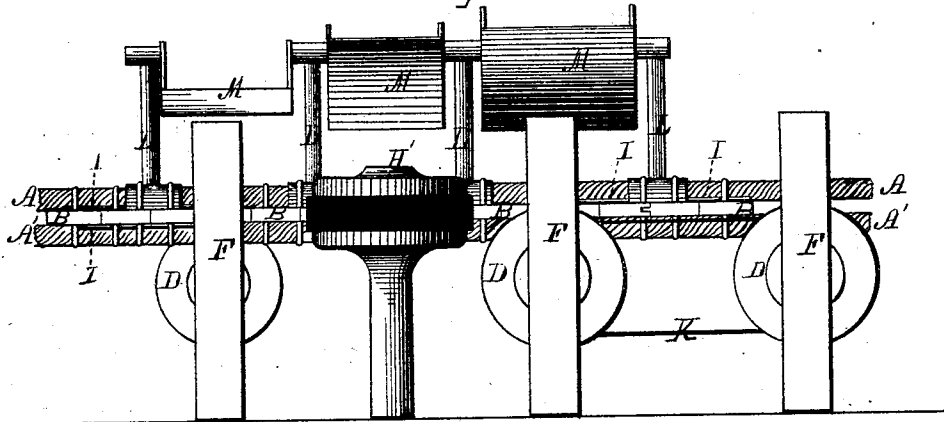
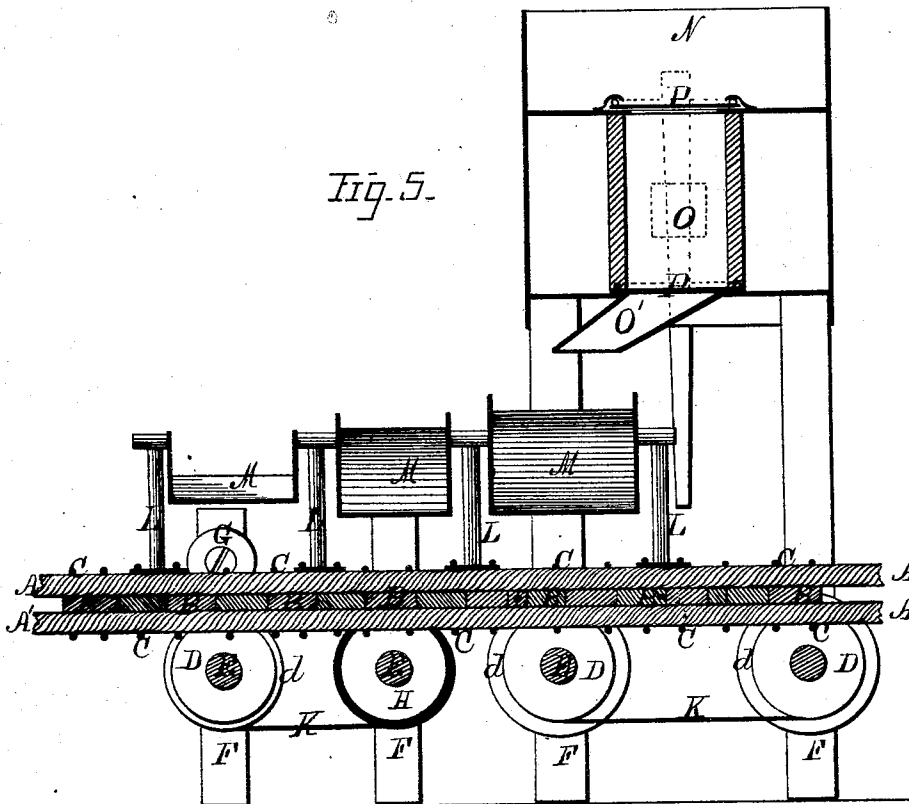


Fig. 5.



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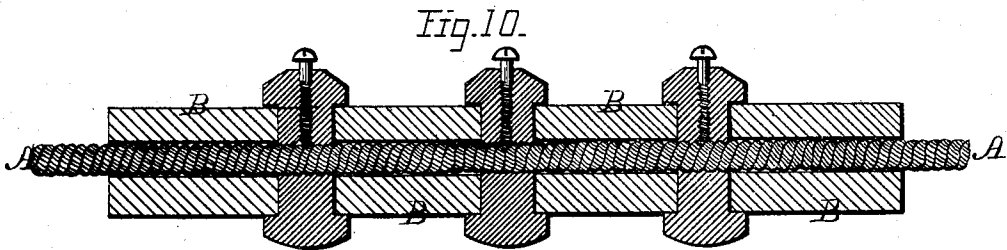
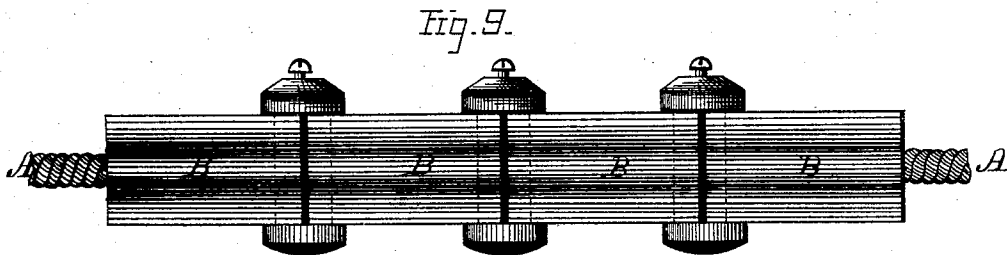
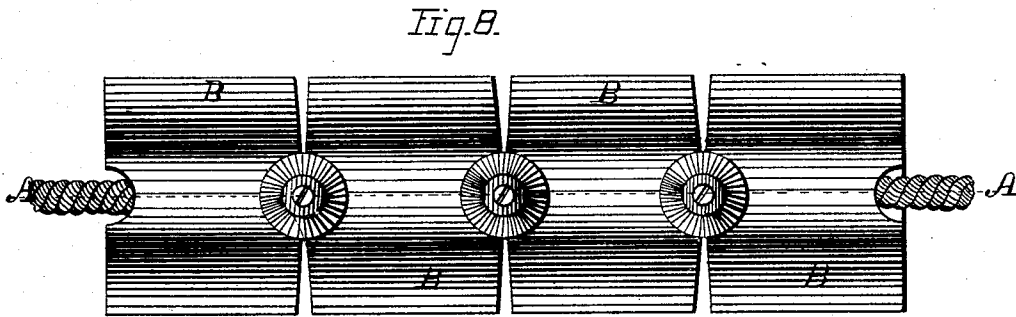
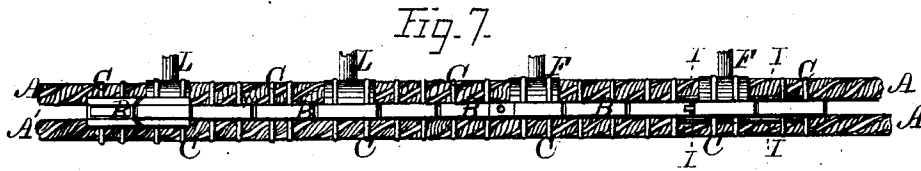
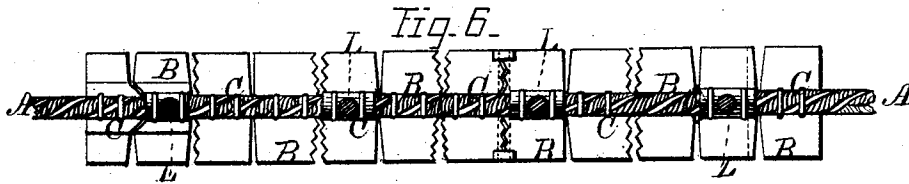
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UNITED STATES PATENT OFFICE.

HENRY W. FARLEY, OF OSWEGO, ILLINOIS.

IMPROVEMENT IN ELEVATED WAYS.

Specification forming part of Letters Patent No. **145,638**, dated December 16, 1873; application filed November 18, 1873.

To all whom it may concern:

Be it known that I, HENRY W. FARLEY, of Oswego, in the county of Kendall and in the State of Illinois, have invented certain new useful Improvements in Elevated Ways; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a plan view of the upper side of my improved elevated way. Fig. 2 is a like view of the same, showing a different arrangement of the driving mechanism. Fig. 3 is a side elevation of said elevated way, as shown in Fig. 2. Fig. 4 is a like view of the same, as shown in Fig. 1. Fig. 5 is a vertical longitudinal section of the carrier and of the mechanism employed for loading the cars attached thereto. Fig. 6 is a plan view of the carrier separated from its cars and supporting mechanism. Fig. 7 is a vertical longitudinal section of the same upon a central line. Figs. 8 and 9 are, respectively, a plan view and a side elevation of a carrier constructed to operate with a single rope; and Fig. 10 is a vertical longitudinal section of the same upon a central line.

Letters of like name and kind refer to like parts in each of the figures.

My invention is an improvement upon an elevated way, for which Letters Patent No. 137,667 were issued to me upon the 8th day of April, 1873; and it consists, principally, in a carrier composed of two or more cables placed upon opposite sides of bearing-plates, (having interlocking or plane edges,) and combined with each other and with said plates in the manner and for the purpose substantially as is hereinafter specified. It consists, further, in combining with the carrier suitable receptacles for containing freight, which receptacles are placed above and supported by said carrier, substantially as and for the purpose hereinafter shown. It consists, further, in the means employed for moving the carrier, consisting of friction-wheels revolving in a horizontal plane and engaging with the ends of the bearing-plates, substantially as and for the purpose hereinafter shown and described. It consists, further, in combining the driving and bearing wheels by means of belts, substantially

as and for the purpose hereinafter specified. It consists, finally, in combining with the continuous carrier and its elevated freight-receptacles a grain-bin provided with a discharge-chute, which is arranged to discharge the grain in the direction in which said carrier is moving, substantially as and for the purpose hereinafter shown.

In the annexed drawings, A and A' represent two cables or ropes constructed of or from wire, and arranged upon the upper and lower sides and at the longitudinal centers of a series of horizontal plates, B and B, and connected together and with said plates by means of wires or rods C and C that pass through the latter and around said cables, as shown. The abutting or contiguous edges of the bearing-plates B and B are cut away from near the longitudinal center to the outer end of each, so as to permit of a certain degree of lateral flexibility to said cable, and each of said edges is provided with suitable spurs and depressions (or their equivalent) which engage with the like features of the contiguous plates, and insure the relative lateral or longitudinal positions of the same. The cables thus combined possess great rigidity vertically, and are enabled to sustain a much greater weight without deflection than would be possible were the same quantity of wire formed into one cable.

The carrier, constructed as shown, is supported at suitable intervals by means of rollers D, which are each attached to or upon a horizontal shaft, E, that is journaled within a post, F, or other equivalent support, such arrangement enabling said carrier to be moved longitudinally. The lateral position of the carrier may be insured by flanges d, formed upon the peripheries and at the outer sides of the rollers D, so as to engage with the ends of the plates B, or said rollers may extend inward until the space between the adjacent ends of each pair is sufficient, only, to permit the lower cable A' to be contained within and pass freely through the same. Vertically the position of the carrier is insured by means of rollers G, which are placed above and bear upon the upper side and just within the ends of each plate B. Motion may be imparted to the carrier by means of one or more wheels, H, that are placed beneath the same, and at their

peripheries engage with the lower sides of the bearing-plates B and B, as shown in Figs. 3 and 5, which latter are held in contact therewith by means of upper bearing-rollers G', or the driving-wheels H' may be placed upon vertical shafts and have their peripheries engage with the ends of said bearing-plates, as shown in Figs. 1 and 4, in which last-named case contact between said wheels and bearing-plates can be maintained by placing pairs of the former upon opposite sides of the carrier and rendering their driving-shafts adjustable toward each other. In order that the bearing-plates may be maintained in relative vertical positions, it may prove advantageous to place metal rods I upon each side of the same, next to the cables each of which rods, being held in place by means of the fastening-rods C, and extending transversely across the face of several plates, prevents each of the latter from changing position, vertically, except as it moves with the others. The bearing wheels or rollers D and D are connected with each other and with the driving-wheels by means of wire-rope belts K, which extend around and between each pair, and not only render their motion uniform and positive, but also furnish between said rollers bearings for and upon which the carrier may rest, such arrangement adding materially to the efficiency of the apparatus and rendering it more easy of operation.

For the carriage of freight the following provisions are made: Upon the upper cable A, at suitable intervals, are placed standards L and L, which are securely fastened at their bases and extend vertically upward to the required distance. Between the standards L and L are placed boxes M and M, which have any desired shape, are open at their upper sides, and are pivoted or otherwise attached to or upon the upper ends of said standards, the arrangement being such as to cause said boxes to be sustained entirely above the carrier and its supporting and operating mechanism.

As it is intended that the movement of the carrier shall be constant, it is necessary that the freight boxes or receptacles shall be loaded while in motion. To effect such a result, a bin, N, is placed across and above the way, and provided with a discharge-opening, O, that terminates in a chute or spout, O', which latter has an inclination downward and in the direction of the movement of said carrier, and at its lower open end is directly over the transverse center of the same. Suitable slides P are arranged within the bottom of the bin and connected with operating mechanism, so as to enable the required charge or load of grain for each car to be discharged at the

precise instant when one of the latter passes beneath the end of the spout O, while the inclination of the latter is adjusted so as to cause said grain to be delivered at the same or a greater velocity than that of the carrier, the result being that the motion of the latter is not retarded, and may be increased by placing loads within its cars.

The apparatus, thus constructed, furnishes means whereby grain and other like freight may be transported for any required distance at but a fraction of the expense required to perform the same service with the means now available to the public.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. The hereinbefore-described carrier, consisting of the cables A and A', placed upon opposite sides of the horizontal bearing-plates B and B, having interlocking or plane edges, and connected together and with said plates by means of wires or rods C and C, substantially as and for the purpose specified.

2. In combination with the carrier A, B, and C, the freight boxes or receptacles M, placed above and supported by the same, substantially as and for the purpose shown.

3. In combination with the carrier A, B, and C, and with the freight-boxes M and M, the standards L and L, attached to and extending upward from said carrier, and furnishing supports for said boxes, substantially as and for the purpose set forth.

4. In combination with the carrier A, B, and C, resting upon and supported by suitable rollers D, the friction driving-wheels H', moving in a horizontal plane and engaging with the ends of said bearing-plates, substantially as for the purpose shown.

5. The bearing and driving wheels D and H', respectively, for sustaining and moving the carrier, arranged as shown and combined by means of the belts K, substantially as and for the purpose set forth.

6. In combination with a continuous carrier having a constant movement in one direction and provided with elevated freight boxes or receptacles, a grain-bin provided with a chute or spout arranged to discharge grain in the direction in which said carrier is moved, substantially as and for the purpose shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of November, 1873.

HENRY W. FARLEY.

Witnesses:

GEO. S. PRINDLE,
WILLIAM FITCH.