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W. LOUDEN.

ELEVATED CARRIER.

APPLICATION FILED SEPT. 1, 1903.

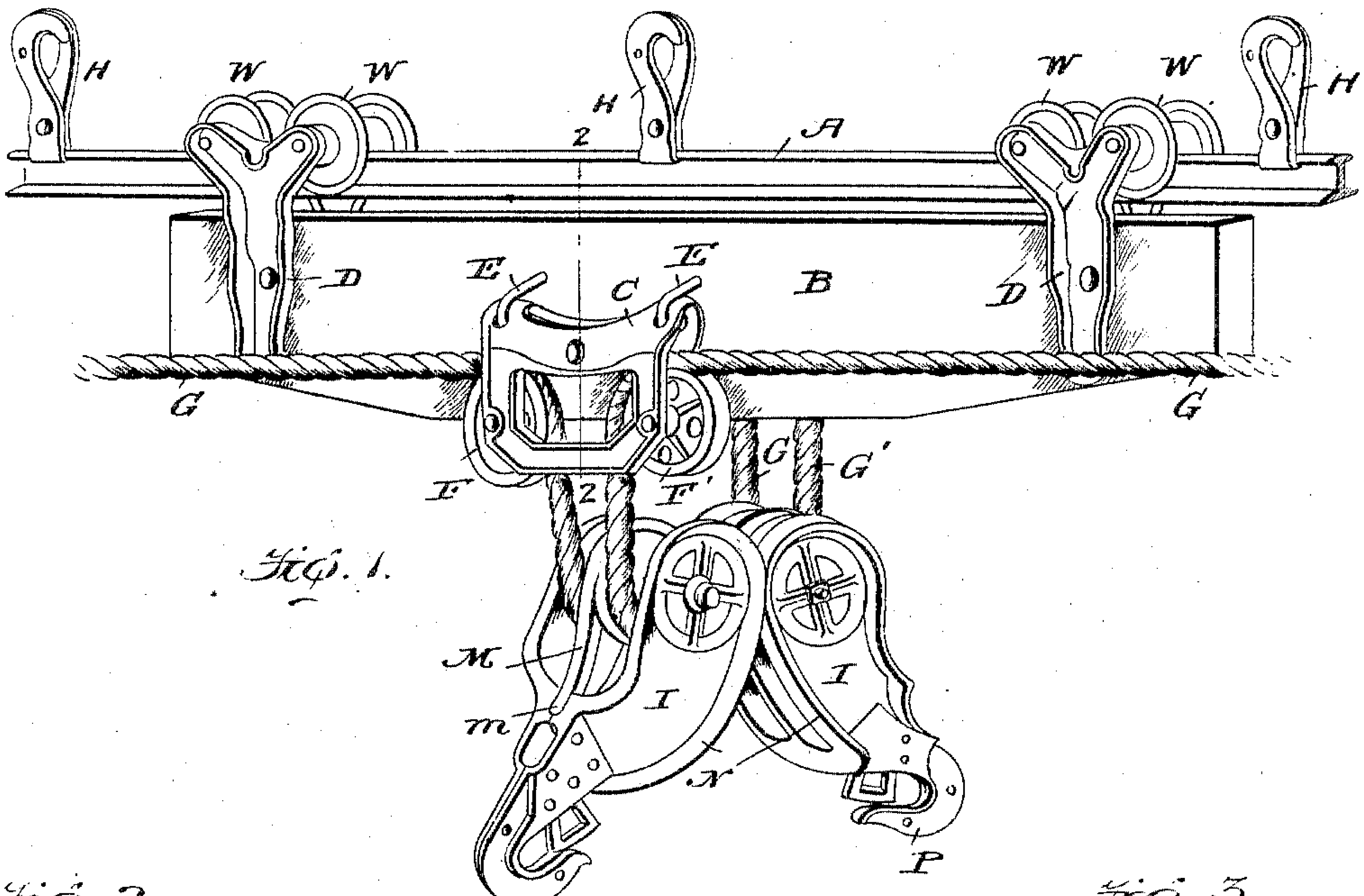


Fig. 1.

Fig. 2.

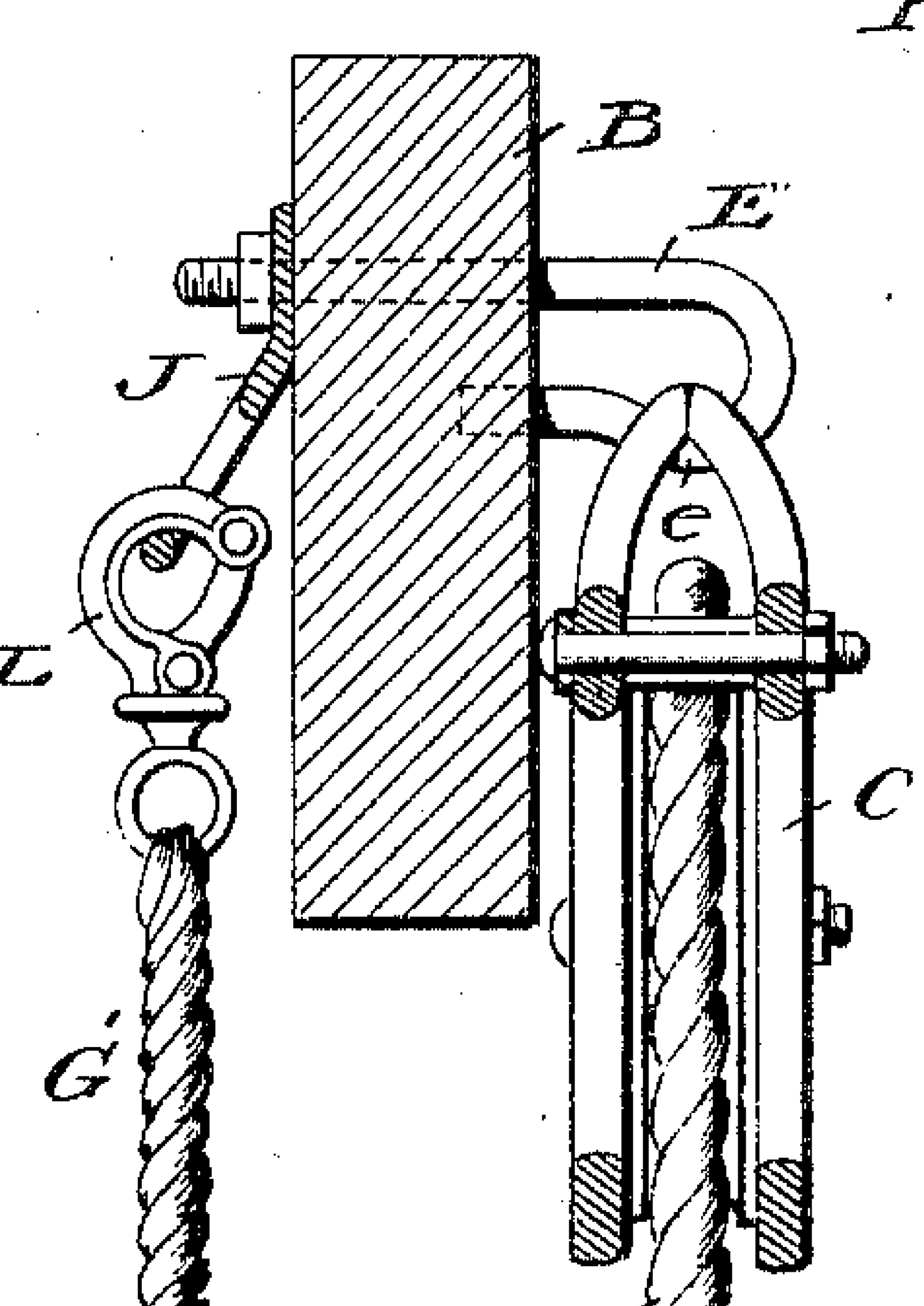


Fig. 6.

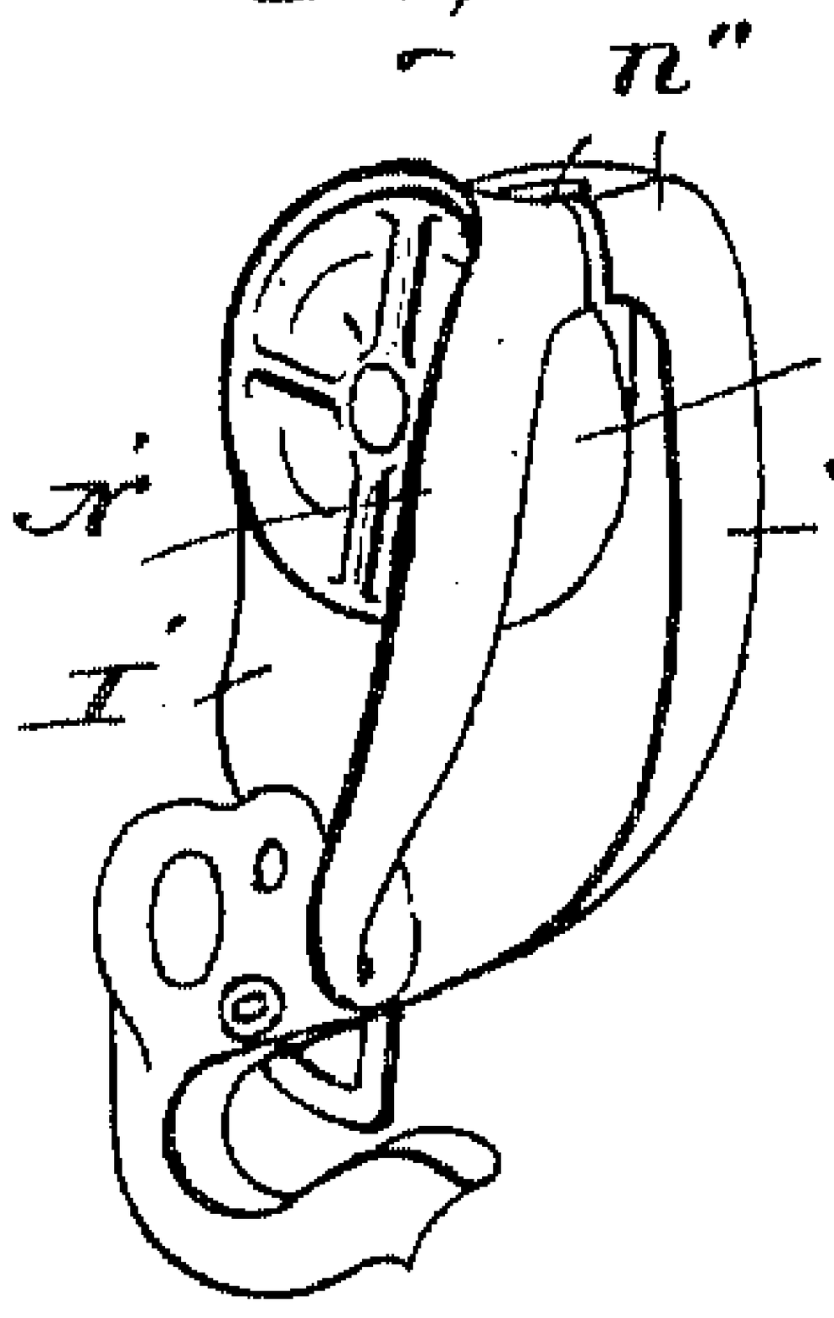


Fig. 3.

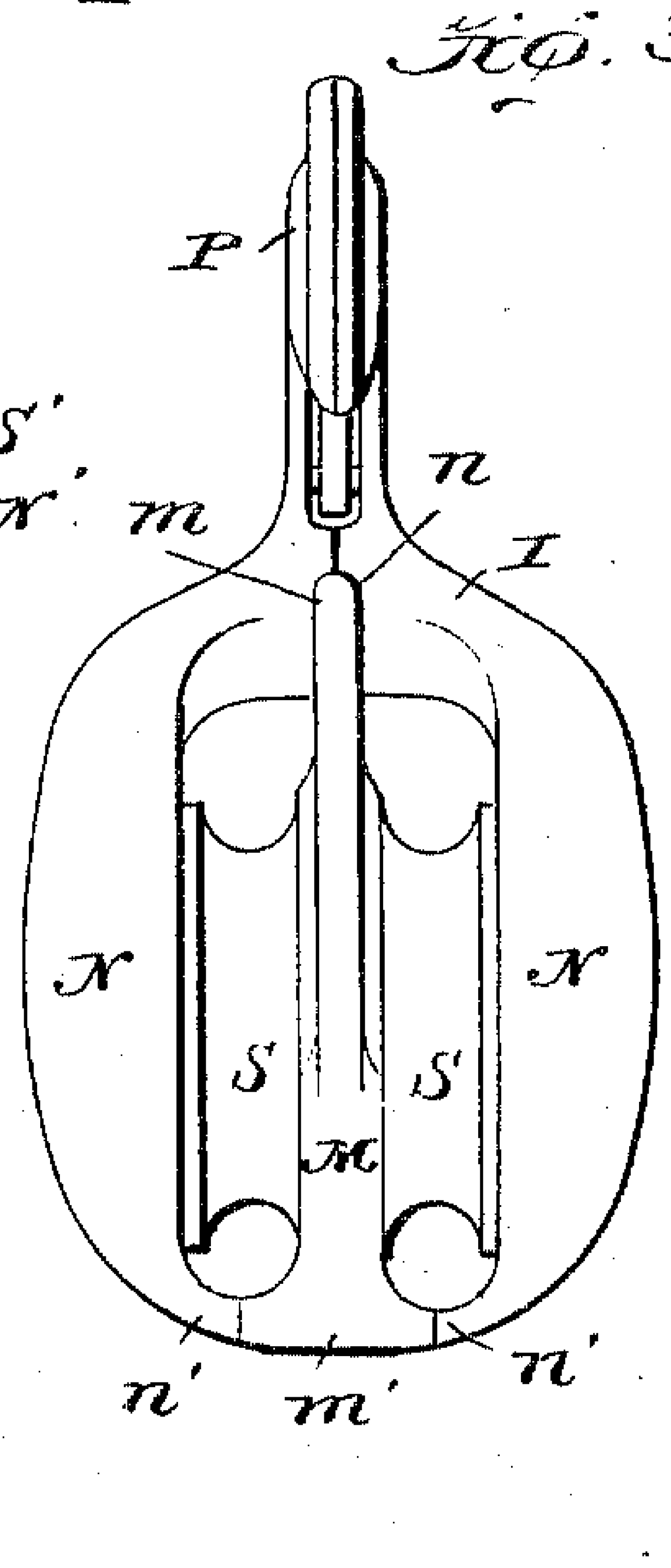


Fig. 4.

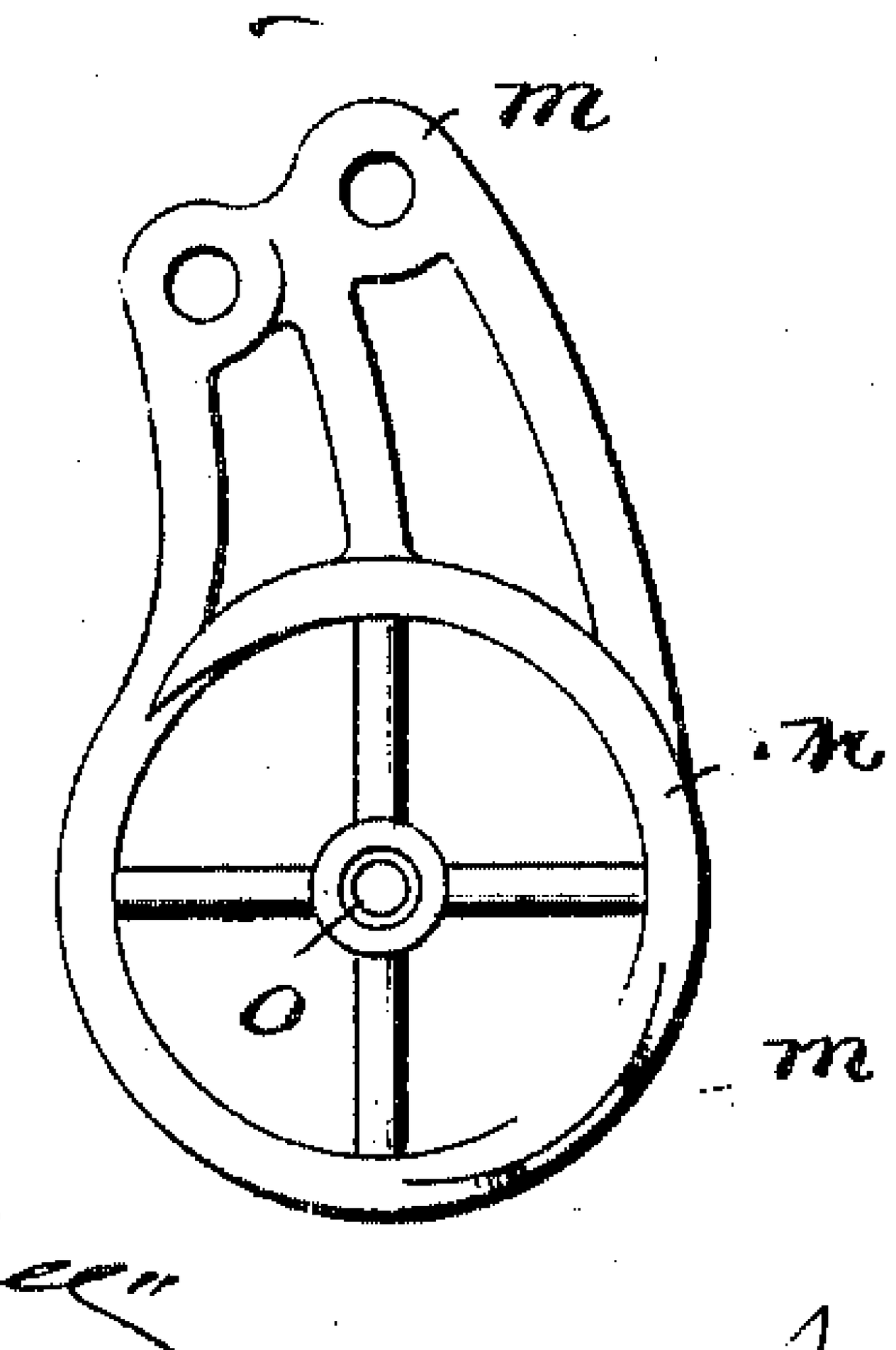
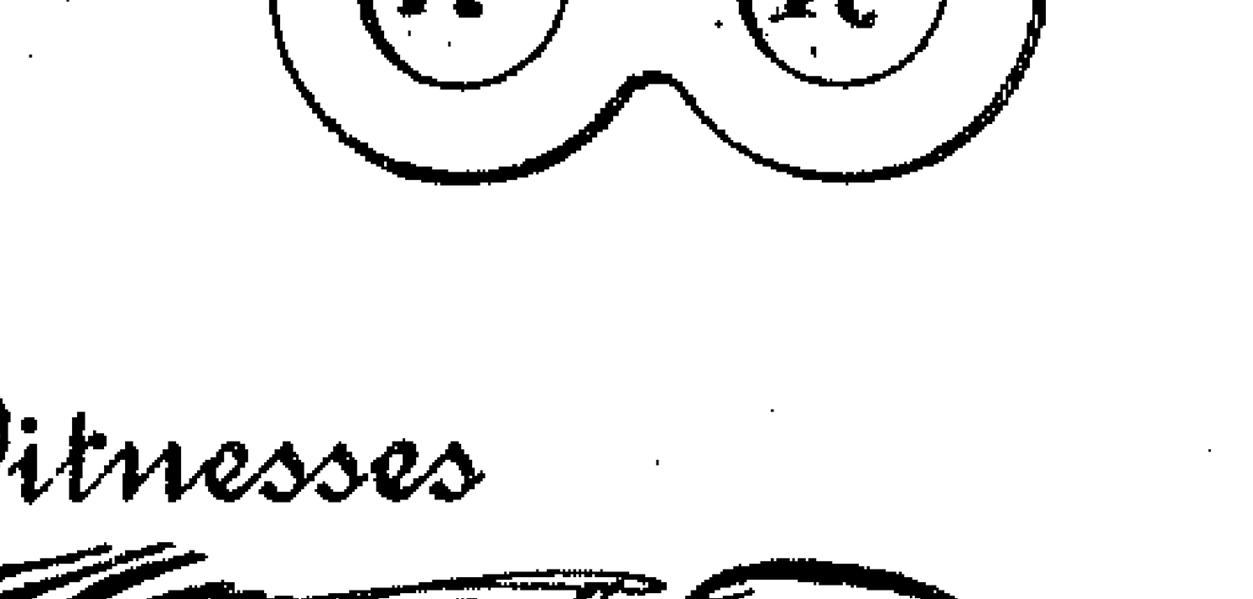


Fig. 5.



Witnesses

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No. 784,167 Patented March 7, 1905.

UNITED STATES PATENT OFFICE.

WILLIAM LOUDEN, OF FAIRFIELD, IOWA.

ELEVATED CARRIER.

SPECIFICATION forming part of Letters Patent No. 784,167, dated March 7, 1905.

Application filed September 1, 1903. Serial No. 171,512.

To all whom it may concern:

Be it known that I, WILLIAM LOUDEN, a citizen of the United States, residing at Fairfield, in the county of Jefferson and State of Iowa, have invented a new and useful Improvement in Elevated Carriers, of which the following is a specification.

My invention relates to elevated carriers known as "draft-sustaining," wherein two hoisting-ropes are used, each rope being passed from the carrier in opposite directions along the track upon which the carrier runs; and it consists of an improvement in the arrangement and construction of the parts whereby the load will be more evenly held and more perfectly elevated and carried along the track to the point of deposit, as will be hereinafter described.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective of a carrier embodying my invention. Fig. 2 is a vertical section on the line 2 2 of Fig. 1. Figs. 3, 4, and 5 are detail views. Fig. 6 is a view of a modified form of pulley-frame.

In the drawings, A represents the track-rail upon which the carrier runs, and H the track-hangers.

B is a horizontally-disposed bar upon which are mounted arms D, carrying track-wheels W.

E represents two hook-shaped bolts, which are passed through the central portion of the bar B, so that the hooked ends of the bolts will be on one side of the bar and the threaded ends with nuts on the other side.

C is a carrier-frame having eyes in its upper corners, into which the hooked ends of the bolts E are inserted, also having rope-wheels F and F′, over which the ropes G and G′ are passed. The ropes G and G′ are then passed through pulleys I and up to a plate J, secured by the bolts E to the opposite side of the bar B, and having eyes K, to which the ends of the ropes G and G′ are connected, a rope-hook L being preferably used for this purpose. The pulleys I are each provided with two sheaves S, which are mounted side by side in the pulley-frame and are separated from each other by an intermediate plate M, the rope G being passed under the sheaves in one side and the rope G′ under the sheaves in the other side of said pulleys. The sides which compose the pulley-frames are each provided with laterally-projecting flanges N on their meeting edges, so as to increase the width of the edge faces thereof, and on their inner faces where they are joined together they are fitted with recesses *n*, into which the end *m* of the plate M is inserted and secured. The opposite end of the plate M is fitted with a T-shaped part *m′*, which is arranged to abut inwardly-projecting extensions *n′* of the flanges N, and thus to support in proper position the outer ends of the pulley sides I, as well as to form a continuation of the faces formed by the flanges N, so that the meeting edges of the pulleys will not slip past each other in operation. The axles on which the sheaves S run are passed through holes in the pulley sides I and also through the hole O in the plate M.

In passing the bolts E through the bar B the points of the hooked ends are turned downward and arranged to enter recesses in the side of the bar, so as to brace the same against a downward strain. The hooks are also formed with a downward bend *e*, in which the eyes in the upper corners of the carrier sides C are adapted to rest. By this means the carrier C will not be liable to crowd against the side of the bar B, but will hang freely in a vertical position, while at the same time it will be free to swing away from the lower edge of the bar B, so as to accommodate itself to any outward strain of the rope G.

The lower portions of the plate J containing the eyes K are extended out from the side of the bar B to a distance approximating that of the downward bends in the hook-bolts E, so that the support for the ends of the ropes will be approximately the same distance from the center of the bar as that for the carrier sides C, and thus the load will be evenly balanced on the bar B, which in turn will evenly balance the load on the track-rail A. The pulleys I are provided with hooks P at their lower ends for the attachment of slings or other load-holding devices having two points of attachment, and in operation they will stand practically at right angles to the track-rail A.

The ropes G and G′ after passing along the track-rail in opposite directions from the carrier, as heretofore described, are passed through suitable guiding-pulleys, and their ends are then joined together and connected to a suitable draft-sustaining device in the manner shown in Patent No. 527,530; but as this construction is well known in the art and the improvement herein described does not relate specifically to the draft-sustaining feature I do not deem it necessary to further describe it.

In case it should be desirable to use only a single sheave in each of the pulleys I and a single rope G to run only in one direction the intermediate piece M can be omitted and the extensions *n′* of the flanges N will be continued until they abut each other, thus forming a continuation around the ends of the pulley of the faces formed by the flanges N, as shown in Fig. 6. Other changes may also be made in the construction and arrangement of parts without departing from the spirit of my invention.

What I claim is—

1. In elevated carriers, the combination with a horizontally-disposed bar having upwardly-projecting arms near each of its ends and said arms carrying wheels adapted to run on an overhead track, of a carrier-frame secured to one side of the bar near its center, said carrier-frame having two sheaves adapted to guide a hoisting-rope in opposite directions therefrom.

2. In elevated carriers, the combination with a horizontally-disposed bar having upwardly-projecting arms near each of its ends and said arms carrying wheels adapted to run on an overhead track, of a carrier-frame secured at each of its upper corners to one side of the bar and near its center, said carrier-frame having two sheaves adapted to guide a hoisting-rope in opposite directions therefrom.

3. In elevated carriers, the combination of a horizontally-disposed bar, upwardly-projecting arms secured at each end to the sides of said bar, track-wheels mounted upon the upper ends of said arms, hooked bolts passed horizontally through the central portion of said bar, a carrier hung at one side of the bar in the eye of said hooks, a plate secured to the opposite side of the bar, ropes passed through said carrier and their ends secured to said plate and a pulley hung in the loop of said ropes.

4. In a device of the character described, the combination of a horizontally-disposed bar adapted to be mounted upon an overhead track, hooked bolts passed horizontally through said bar, the hooked ends of said bolts being turned downward and inserted in recesses in the side of the bar, a carrier hung in the eyes formed by said hooks, ropes passed through said carrier, and means to support the ends of the ropes on the opposite side of the bar.

5. In a device of the character described, the combination of a horizontally-disposed bar adapted to be mounted upon an overhead track, hooked bolts passed horizontally through said bar, the hooked ends of said bolts being turned downward and inserted in recesses in the side of the bar, a carrier hung in the eyes formed by said hooks, ropes passed through said carrier, a plate with eyes secured to the opposite side of the bar and the ends of the ropes secured to said eyes.

6. In a device of the character described, the combination of a horizontally-disposed bar adapted to be mounted upon an overhead track, hooked bolts passed horizontally through said bar, a downward bend in said hook at a distance from the side of the bar, a carrier hung therein, ropes passed through said carrier, a plate secured by said bolts to the opposite side of the bar and having eyes set at approximately the same distance therefrom as the bends in the hooks, ropes passed through said carrier and the ends of the ropes secured to said eyes.

7. In hay-carriers, a pair of pulleys adapted to be brought together by a rope drawn through them, and having flanges on the meeting edges of the frames thereof, and said flanges being continued around the upper ends of said frames so as to form abutting edges between the sides of the frames.

8. In hay-carriers, a pair of pulleys adapted to be drawn together, the frames of said pulleys being made with flanges on their meeting edges so as to widen the faces thereof and said flanges being extended around the upper ends of said frames so as to form abutting edges between the sides of the frames.

9. In hay-carriers, a pair of pulleys adapted to be drawn together, the frames of said pulleys being made with a recess, an intermediate plate having its end inserted and secured in said recess, and sheaves mounted in said frames between the sides of the plate and sides of the frames thereof, the meeting edges of said frame having flanges to widen the faces thereon.

10. In hay-carriers a pair of pulleys adapted to be drawn together, the frames of said pulleys having two separate sides, an intermediate plate inserted and secured between said sides, and sheaves mounted between the sides and the intermediate plate, the meeting edges of said sides having flanges thereon, and the upper end of said intermediate plate being T-shaped so as to form a continuation of the flanges around the upper end of the pulley.

11. In elevated carriers, the combination with a horizontally-disposed bar provided with upwardly-projecting arms near its ends and said arms carrying wheels adapted to run on an overhead track, of a carrier-frame flexibly secured at each of its upper corners to one side of the bar and near its center, said carrier-frame having a sheave in each of its ends,

adapted to guide a hoisting-rope in opposite directions therefrom.

12. In elevated carriers, the combination with a horizontally-disposed bar provided with upwardly-projecting arms near its ends and said arms carrying wheels adapted to run on an overhead track, of a carrier-frame flexibly secured at each of its upper corners to one side of the bar and near its center, said carrier-frame having a sheave in each of its ends, and hoisting-ropes passed over said sheaves from opposite directions and passed under the bar and their ends secured to the opposite side thereof, and a pulley or pulleys hung in the loops of said ropes.

In testimony whereof I have subscribed my name in the presence of two witnesses.

WILLIAM LOUDEN.

Witnesses:
H. M. MILLER,
CORA E. WEBBER.