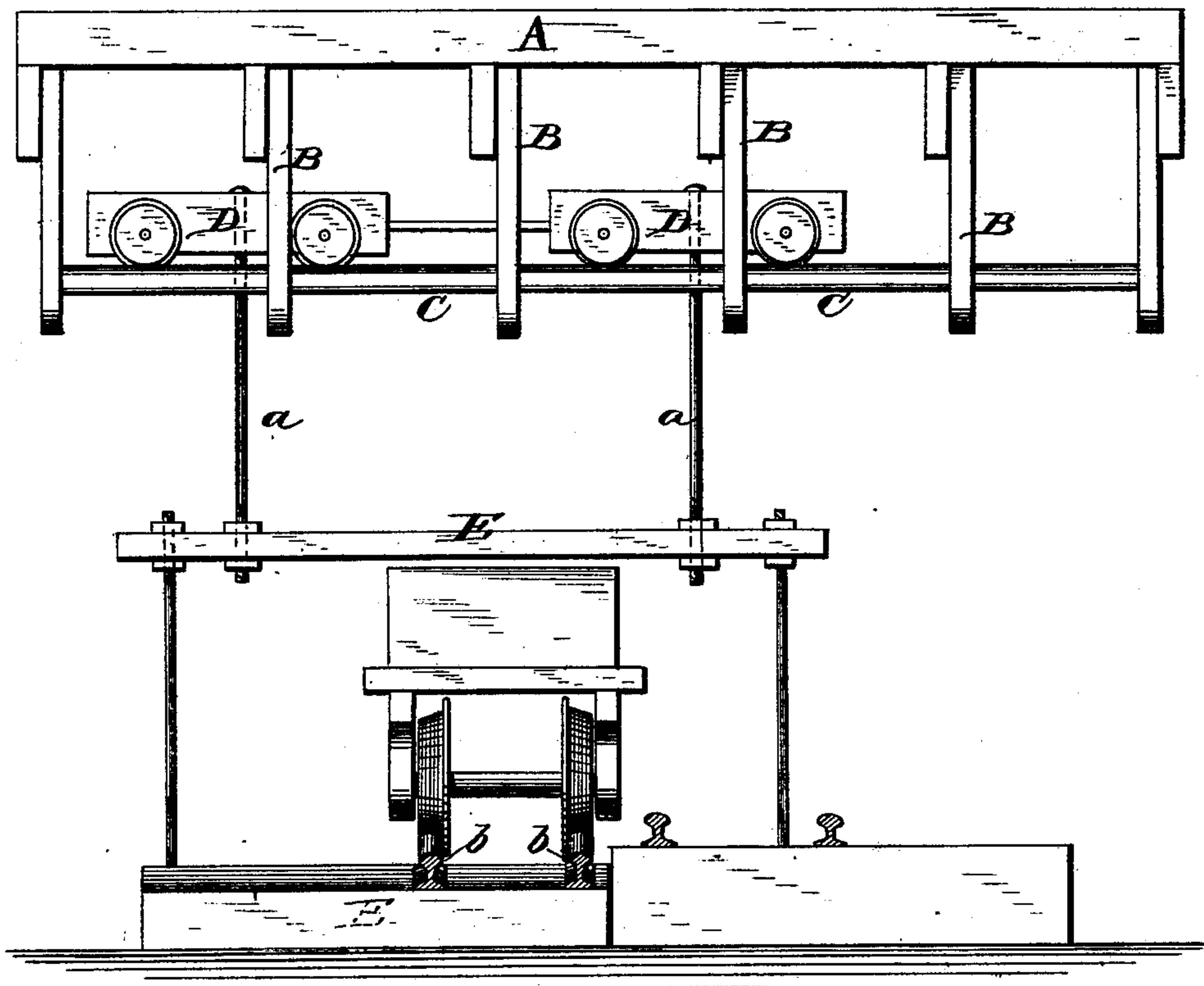


M. D. HAYS.
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Fig. 1.



WITNESSES

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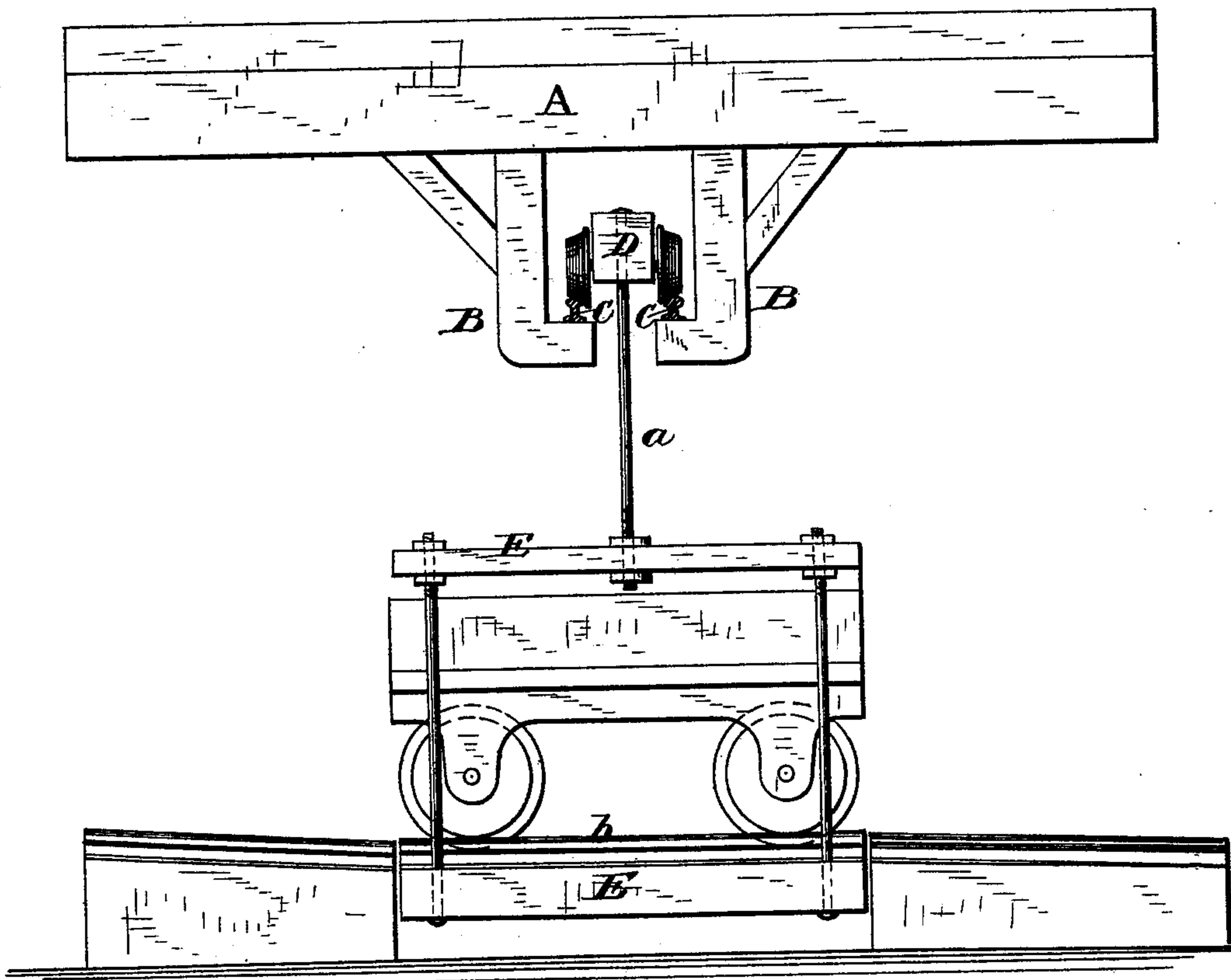
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Fig. 2.



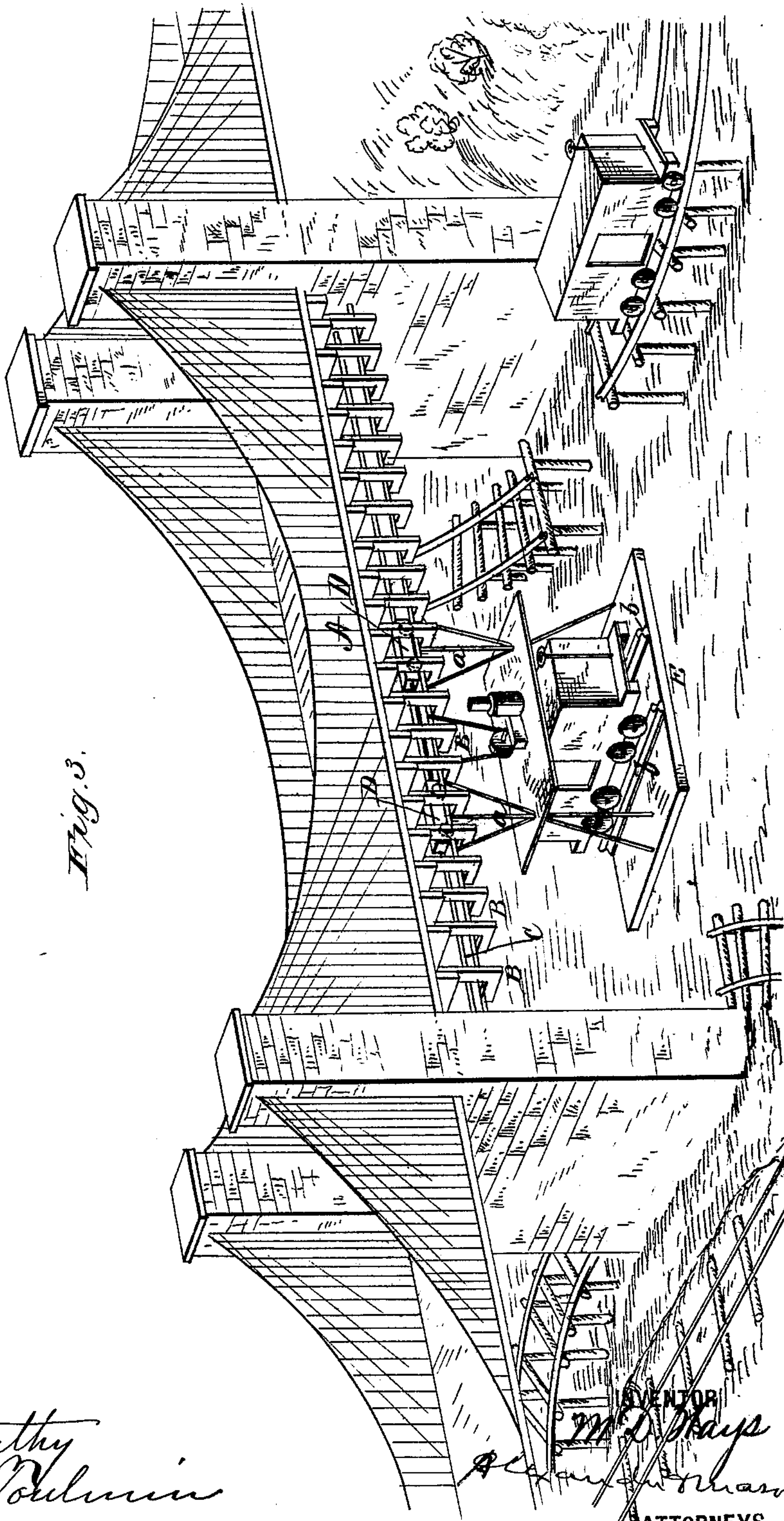
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UNITED STATES PATENT OFFICE.

MILTON D. HAYS, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN TRANSFERRING AND MOVING CARS.

Specification forming part of Letters Patent No. 222,274, dated December 2, 1879; application filed October 2, 1879.

To all whom it may concern:

Be it known that I, MILTON D. HAYS, of Pittsburg, in the county of Allegheny, and in the State of Pennsylvania, have invented certain new and useful Improvements in Devices for Transferring and Moving Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a device for transferring railroad-cars from one side of a stream to the other, or from one track to another, and for other purposes, as will be hereinafter more fully set forth.

In the annexed drawings, Figure 1 is an end elevation of my device. Fig. 2 is a side view of the same. Fig. 3 is a perspective view, showing a bridge with my invention applied thereto.

A represents the floor of a bridge, constructed in any suitable manner. From this bridge-floor depend two parallel series of hangers, B B, upon which are supported the rails C C. These hangers and rails are so arranged that a continuous open space will be left between the rails.

Upon the rails C C are placed one or more trucks, D D, from which depend rods *a a*, and these rods connect with and suspend an open cage, E.

The connections or rods *a a* from the cage E to the trucks D D should be such that the cage will be suspended in proper position, and of such strength as to sustain any amount of weight that may be placed on the cage. On the floor of the cage E are laid rails *b b* to receive the car or cars to be transferred.

By a suitable arrangement of rails at one side of the stream or river one or more cars are run upon the rails *b* in the cage, and by means of the trucks D the cage, with the car or cars thereon, is transferred under the bridge across the river, where, by a similar arrangement of rails, the car or cars are run off onto the track on that side.

In Fig. 3 I have shown a suspension-bridge, supported upon a pier on each side of the stream.

It will be noticed that a continuous track is laid on the outside of each pier, each track having, however, an opening into which the cage E is to fit.

The rails leading to and from the cage are on an incline or grade, so that, in transferring cars across from one track to the other, by simply releasing the brakes on one car said car will move of itself onto the cage, where it is stopped by applying the brakes. The cage with the car thereon is then moved side-wise across to the other side, where the cage fits into the track, and then by releasing the brakes and starting the car it will move from the cage onto the continuous track.

This device may also be used in railroad-depots or other places for transferring cars from one track to another; and it may also be used for moving cars from one point to another by means of an endless cable or chain kept in motion by an engine and suitable grappling devices connected to the trucks in such a manner as to take hold of said endless cable or chain when the cars are to be moved, and to be let loose from the same when the cars are to stop.

I am aware that cars have been transferred across a chasm or stream by being suspended from trucks moving upon an elevated track. Hence I do not claim such idea, broadly, as my invention.

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

1. The combination, with an elevated track, of a truck or trucks traveling thereon, a cage suspended from said trucks and provided with rails, said cage forming a movable section of a permanent railway arranged beneath each end of the elevated track and transversely thereto, and having an open space to receive said cage and register therewith, all substantially as set forth.

2. In a system of transferring cars across a stream, an elevated track crossing said stream,

a continuous track laid on each side thereof and transversely to the elevated track, a cage forming part of said transverse tracks and suspended from one or more trucks movable upon the elevated track and joining with either of the continuous tracks, the rails of said continuous tracks being arranged on an incline, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 2d day of October, 1879.

M. D. HAYS.

Witnesses:

H. AUBREY TOULMIN,
W. D. ALEXANDER.