J. R. MORAN.

HAY-ELEVATOR AND CONVEYOR.

No. 189,053. Patented April 3, 1877.

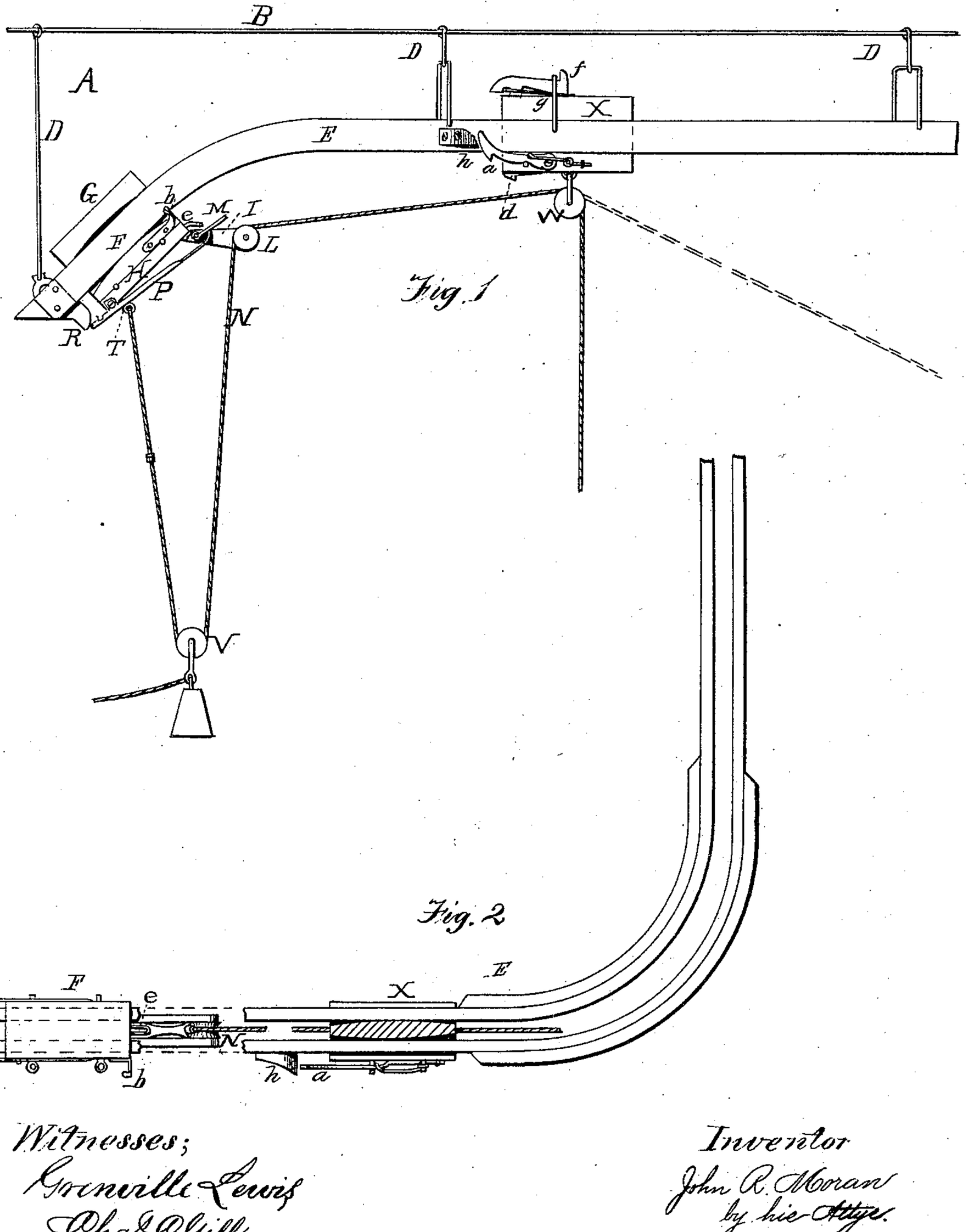

Fig. 1

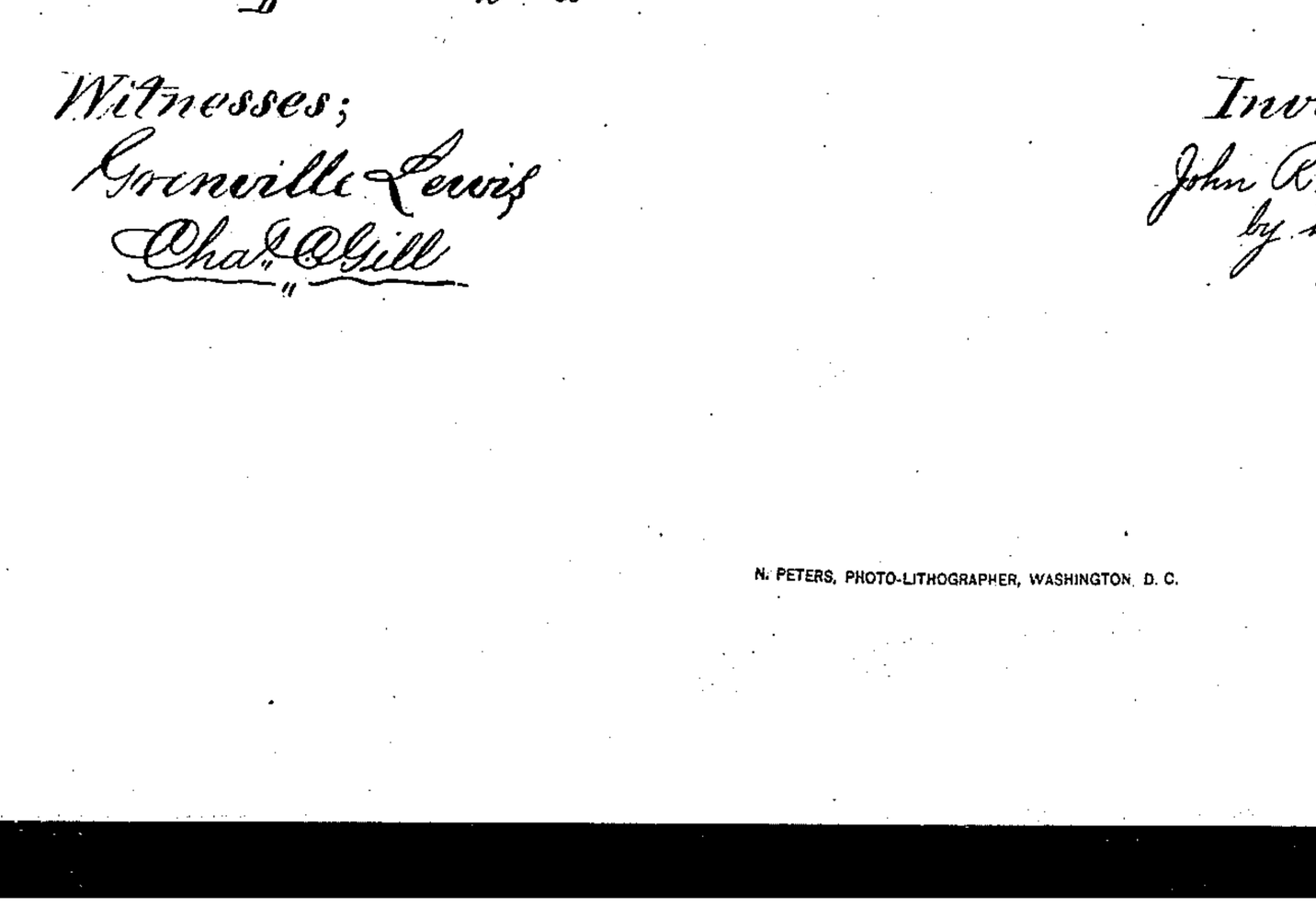

Fig. 2

Witnesses;
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Inventor
John R. Moran
by his Attys.
Cox & Cop

UNITED STATES PATENT OFFICE.

JOHN R. MORAN, OF SCHOHARIE, NEW YORK, ASSIGNOR TO WILLIAM B. MURPHY, OF SAME PLACE.

IMPROVEMENT IN HAY ELEVATORS AND CONVEYERS.

Specification forming part of Letters Patent No. **189,053**, dated April 3, 1877; application filed February 14, 1877.

To all whom it may concern:

Be it known that I, JOHN R. MORAN, of Schoharie, in the county of Schoharie and State of New York, have invented a new and useful Improvement in Hay Elevators and Conveyers, of which the following is a specification, reference being had to the accompanying drawings.

The invention relates to an improvement in hay elevators and conveyers; and consists in the mechanism hereinafter specifically designated, the object being to furnish an implement which will rapidly and properly elevate and deliver hay, straw, and other analogous material.

Figure 1 is a side elevation of a track curving upward, with the elevating and conveying appliances attached. Fig. 2 is a top view, showing a track curved so as to turn a corner, also having the above mechanism in position.

In the accompanying drawings, A represents the frame or upper part of the barn, in which is secured the rod B, extending entirely across it, or otherwise, as required. The hangers D are movably mounted upon the rod B, and are employed to retain the tracks E in their elevated position, at the same time permitting them to have lateral play. It is obvious that other means may be employed for securing the carrier, and that, if desired, the hangers could be secured to the beams of the roof. The tracks E are composed of two rails of any suitable material, and may be of different forms, as shown—one track, in the present instance, being curved downward, so as to elevate hay, and the other constructed in such manner that the hay may be carried around a corner. The carrier F is mounted upon the track E, its central part being reduced and placed between the rails thereof. The width of the upper part or head G of the carrier is about equal to that of the track, immediately above which, on each side of the central part of the carrier and on its under surface, the head G is concave in form, beneath which concavity the upper part of the lower portion of the carrier is made concave, so that it can readily and easily pass over the curves of the tracks. To the lower part of the carrier F is rigidly secured the plate H, the rear end of which is provided with the inclined hangers I, having at their lower end the pulley-wheel L, and at the opposite end the loosely-pivoted check M, which is furnished on its free end with a notch, and extends downward, said free end falling in immediate proximity to the periphery of the wheel L, for the purpose of preventing the rope N from being drawn over the wheel at the wrong time. Upon the under side of the plate H is pivoted the double-acting lever or plate P, the rear end of which is cut away, and extends to a point just beneath the check M, the front end being provided with a flange, which catches behind the boss or stud R, projecting from the under surface of the track near its front end, thereby retaining the carrier in position until the load is attached and the flange disengaged from the boss. The central part of the plate or lever P is removed to permit the passage and operation of the swivel T, the upper end of which is secured in the plate H, and its lower end provided with an eye, in which one end of the rope N is fastened. Upon this rope, between the swivel T and wheel L, is placed the pulley V, to the hook on the lower end of which the load to be elevated or conveyed is attached. At a proper distance from the pulley V the rope N is provided with a band or enlargement, which, in conjunction with the check M, prevents the load from drawing the rope over the wheel L in the wrong direction, and acts automatically in retaining the load. The free end of the rope extends from the wheel L rearward, and passes over the pulley W, secured to the under side of the dummy X, which is mounted upon the track E, and is somewhat similar in construction to the carrier F. The dummy X is provided on its side with the spring-catch *a*, which engages the projection *b* when the carrier is drawn up the incline and is being unloaded, thereby retaining it in position. There is also a spring-catch, *d*, provided on the dummy, and it is employed to engage the staple *e*, secured to the carrier, and thereby assist the catch *a* in the operation above. The catch *d* extends upward through the dummy, and is secured thereon in any convenient and proper manner,

the rear end of the upper portion of the catch being furnished with the boss or stud *f*, which, when the dummy is drawn forward, strikes the bar *g*, secured to the track, thereby disengaging the catch *d;* at the same time the catch *a* rides up the stud *h*, loosening itself from the projection *b*, and by this operation the carrier is detached from the dummy and permitted to be returned to its former position for another load.

It is to be observed that when the carrier is drawn to its normal position, the flange end of the lever P strikes the projection or stud R and tilts the check M upward, thereby allowing the enlargement or band on the rope N to pass over the wheel L, so that the weight of the pulley V, or other weight that may be attached, will draw the rope over the wheel L, and permit the pulley V to descend a proper distance and be reloaded. When the rope is again drawn by the operator, the band on it will open the check M and pass over the wheel; but immediately after such passage the check will again fall to place and prevent the return of the rope.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a hay elevator and conveyer, the track E, so curved as to turn a corner, in combination with the carrier F, suitably conformed to pass between the rails of same, substantially as set forth.

2. In a hay elevator and conveyer, the carrier F, having concave and convex surfaces, substantially as described.

3. The inclined or curved track E, in combination with the carrier F, having concave and convex surfaces, substantially as set forth.

4. In a hay elevator and conveyer, the carrier F, having concave and convex surfaces, and provided with the plate P, check M, wheel L, and swivel T, substantially as set forth.

5. The dummy X, provided with spring-catches *a d*, in combination with the carrier F and curved track E, substantially as shown and described.

6. The carrier F, having concave and convex surfaces, and provided with the projection *b* and staple *e*, in combination with the dummy X, furnished with the spring-catches *a d*, substantially as specified.

In testimony that I claim the foregoing improvement in hay elevators and conveyers, as above described, I have hereunto set my hand this 15th day of January, 1877.

JOHN R. MORAN.

Witnesses:
HENRY B. BAGLEY,
J. E. MANN.