2 Sheets—Sheet 1.

G. A. DICKSON.

HAY-ELEVATOR.

No. 187,968. *Fig. 1.* Patented March 6, 1877.

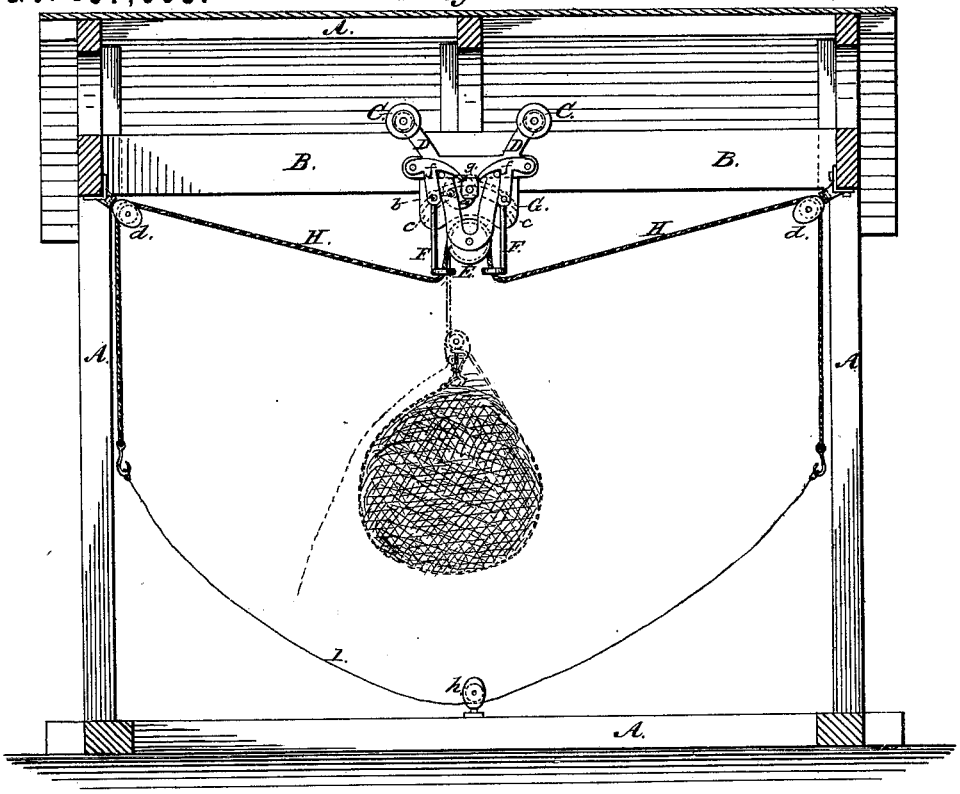
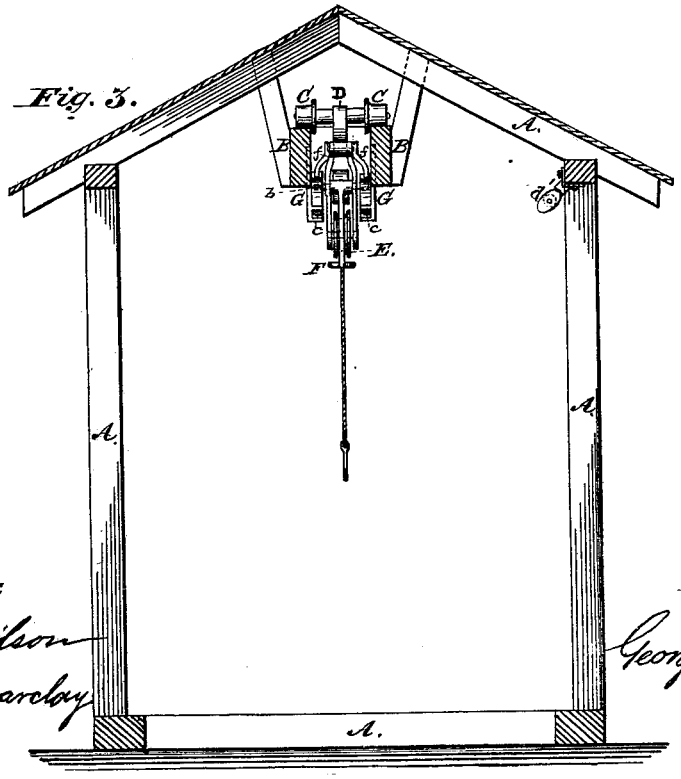


Fig. 3.



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2 Sheets—Sheet 2.

G. A. DICKSON.

HAY-ELEVATOR.

No. 187,968. Patented March 6, 1877.

Fig. 2.

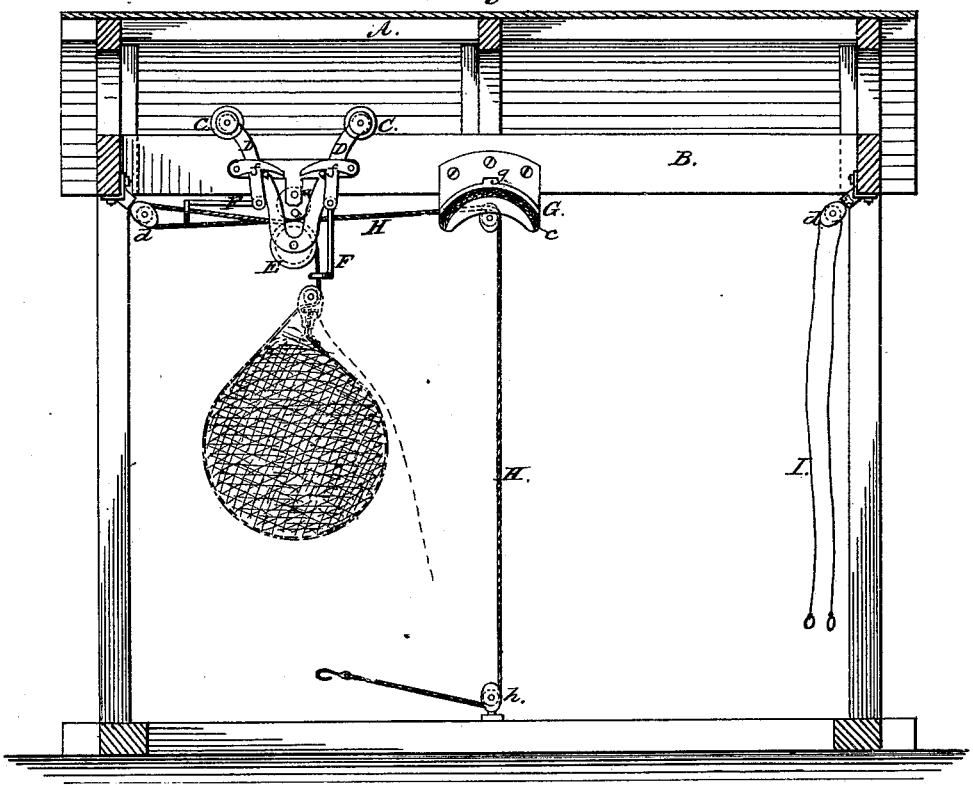


Fig. 4.

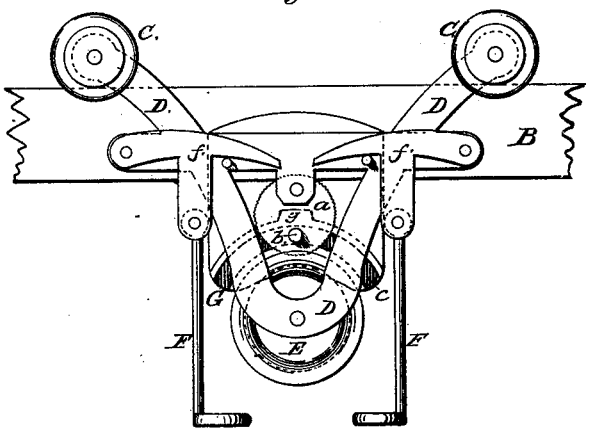
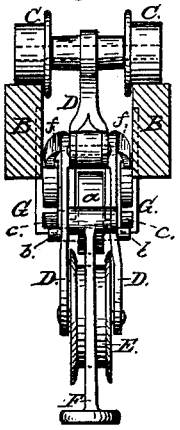


Fig. 5.



Witnesses:

A. A. Wilson

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Inventor:

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UNITED STATES PATENT OFFICE.

GEORGE A. DICKSON, OF SHORTSVILLE, NEW YORK.

IMPROVEMENT IN HAY-ELEVATORS.

Specification forming part of Letters Patent No. **187,968**, dated March 6, 1877; application filed November 29, 1876.

To all whom it may concern:

Be it known that I, GEORGE A. DICKSON, of Shortsville, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Hay-Elevating Car and Track; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to the method of elevating hay, straw, or other material from any definite place and distributing the same at different points within convenient distances; and consists in an elevating apparatus attached to a traveling-car and railway, and leading-pulleys arranged at convenient points for the transportation of the material, and subsequent depositing of the same, all of which will be more fully described hereinafter, and set forth in the claims.

In the accompanying drawing, Figure 1 is a longitudinal section of the building, with the car in a central position. Fig. 2 is a longitudinal section of the same, with the car on one side, to deposit the load. Fig. 3 is a cross-section of the same. Fig. 4 is an enlarged side view of the car. Fig. 5 is an end detail view of the car.

In the drawing, A represents a building, to the rafters of which an elevated track, B, is secured, which may be arranged in a level or inclined manner. Upon this track B the car C travels, and has a frame, D, attached to its axles, which depends down between the track. In the lower part of the frame is journaled a sheave, E, over which passes the elevating-rope H, having the sling or binding apparatus attached to it by any of the ordinary means employed—as, for instance, a simple "loop-string," whereby the sling-rope will be firmly held when the weight of the load is borne by the elevating-rope. I prefer to use a sling or binding apparatus having a snap-hook or pulley-block, for which application is made at the same time with this application, although any other kind of binding apparatus may be used. On each end of the frame D is pivoted a tripping-lever, F, having an eye at its lower end, through which the elevating-rope passes. To the upper end of the lever F is attached double pawls *f*, one arranged on each side of the frame, which engage with curved guide-pieces G, secured to each inner side of the central part of the track, and having a central stop-piece, *g*, which prevents the car from passing to either side or end of the building until the pawls are raised above the stop-piece *g* by the load striking against one of the tripping-levers attached to said pawls, and thereby lifting it up. In the center of the frame D is pivoted a griping-cam or eccentric, *a*, having a projecting pin, *b*, on each side, which engages with a curved slot, *c*, in the lower part of the guide-piece G. This cam firmly holds the elevating-rope H while moving the car to either end of the building desired, and until the car is brought back to its central position, when the cam releases the rope H as the pins *b* engage with the curved slots *c* in the guide-pieces G, and by pulling down the sling-rope the sling is brought down ready for the next load. On each end of the track B is arranged a swiveled pulley-block, *d*, around which the draft-rope H passes, and from there one end is carried to the pulley-block *d'*, which is secured to the rafter of the building, and finally passes around a pulley-block, *h*, secured to the door-post, sill, or other suitable place, so that the car can be operated from the floor or ground in either direction of the building at which it is desired to deposit the load of hay, &c., being moved to either end by the small rope which has been connected to the draft-rope.

The operation of the apparatus is as follows: The sling or binding apparatus is first placed around the hay, straw, or other material, and secured to the elevating-rope by a hook, or in any other suitable manner. When it is raised to its proper height it strikes against one or the other of the trip-levers F, which raises the pawl on that side opposite to which it is intended to carry the load. When the pawl is disengaged, the cam *a*, with its eccentric part, firmly gripes the elevating-rope, and holds the load as it is drawn until it reaches its place of destination, when the load is released and deposited in its place.

The car is then brought back over the central or other part of the building and track, to which the guide-pieces G are secured. The elevating-rope, with the binding devices, is then released, as the pins of the cam or eccentric are engaged with the curved slot, and allow it to descend to the floor for a fresh load. If it is desired to carry the car to the opposite end of the building a small rope, I, passing over the pulley on the side desired, is attached to the ends of the elevating-rope, thus forming an endless rope, and it can be then drawn to that end. The opposite trip-lever is always supported on the elevating-rope, opposite to the side upon which the load is elevated, and the whole operation can be accomplished from the ground or floor.

The advantages of my elevating and distributing device are, that it is very simple in its construction; not liable to get out of order; it can be manipulated from the floor or ground without the trouble and danger of ascending to the upper part of the building; it can be easily moved and operated from either side or end of the building or place of deposit; it can be used in connection with any sling; it is reliable in its operation, and it can be furnished at a very small cost.

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

1. An elevating and distributing car provided with the pendent frame, having a sheave-pulley, E, tripping-levers and pawls, and a cam, *a*, constructed as and for the purpose described.

2. The combination of the elevating and distributing car, having pendent frame carrying the sheave, tripping-levers and pawls, and the eccentric *a*, with the centrally-curved guide-pieces G.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

GEORGE A. DICKSON.

Witnesses:

A. A. WILSON,

H. C. BARCLAY.