JOSEPH R. BENEDICT.

Improvement in Hoisting Apparatus.

No. 115,810. Patented June 13, 1871.

Fig. 1

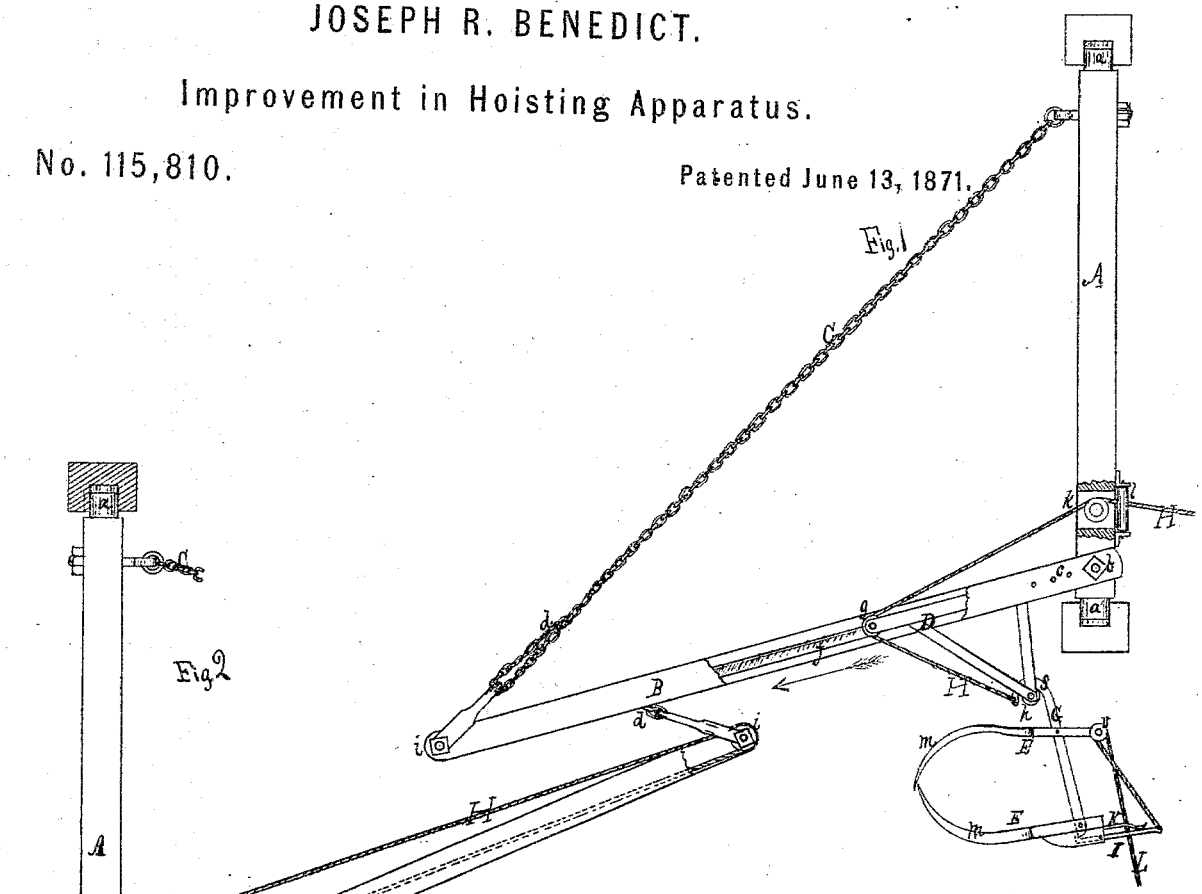



Fig. 2

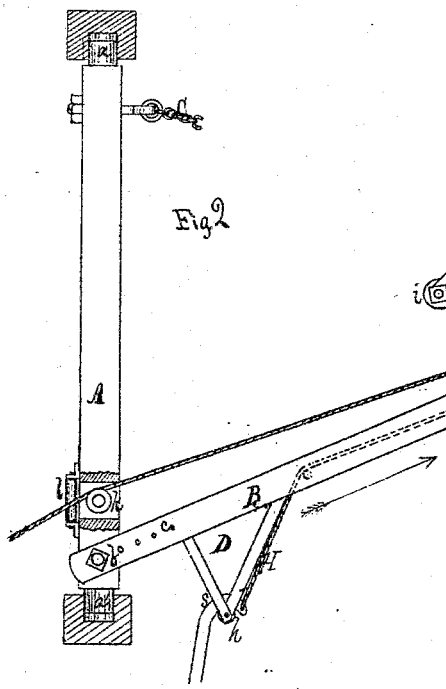
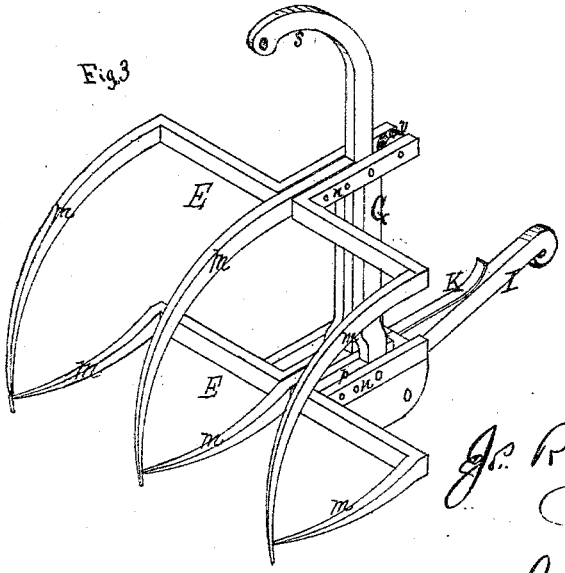



Fig. 3




Witnesses.

K. Dale

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# UNITED STATES PATENT OFFICE.

JOSEPH R. BENEDICT, OF WILLIAMSON, NEW YORK.

## IMPROVEMENT IN HOISTING APPARATUS.

Specification forming part of Letters Patent No. 115,810, dated June 13, 1871.

*To all whom it may concern:*

Be it known that I, JOSEPH R. BENEDICT, of Williamson, in the county of Wayne and State of New York, have invented a certain new and useful Improvement in Hay-Elevators and Conveyers, of which the following is a specification:

### *Nature of the Invention.*

This invention consists in the construction of the way or track in the form of a crane, and making it adjustable to either an upward or downward incline, to adapt the same to the position in which the hay is to be deposited.

### *General Description.*

In the drawing, Figure 1 is an elevation, showing the downward incline of the way or track; Fig. 2, a similar view, showing the upward incline; Fig. 3, a perspective view of the fork.

A represents the upright or crane portion, and B the track portion of the elevator. The former has journals *a a* at the ends, so as to turn easily in its bearings. The standard is located at any desired position in the timbers of the barn over the mow, and is changeable at pleasure. The track B is hung to the lower end of standard A by a pivot, *b*, which allows it to turn up or down at any desired angle. A set of holes, *c c*, allows the pivot to be changed so that the track will project more or less, as circumstances may require. The upper end of the standard and outer end of the track are connected by a chain or rope, C, which is looped through the attachment at one end and hitched up, as shown at *d*, or otherwise arranged so as to change the angle of the track by taking up or letting out. The sides of the track are provided with suitable grooves or ways *f f*, on which run the rollers of the car D. This car may be of ordinary construction, but has pulleys *g h* at its outer and lower ends. The outer end of the track and the lower end of the standards also have pulleys *i k*, and the standard has side rollers *l l*. These pulleys and rollers are for the purpose of receiving the cord or chain that elevates the fork, as will presently be described.

The pulley *h* rests in a crotch or opening of the car-frame, for the reception of the shank of the fork. The fork consists of two claws, E E, which close together, each made up of tines *m m*, as shown. Each tine is preferably made in a single piece, and the shanks simply bolted together, as shown at *n n*. The shank of the lower claw has blanks or washers *p p* between the tine-bars for filling the extra space. The shanks of both claws are pivoted to a bar, G, at some distance apart, the upper end of which is curved, as shown at *s*, and has the hoisting rope or chain H attached thereto. A pawl, I, acted upon by spring K, catches the lower end of the bar G when the claws are closed, and holds the latter in place. A cord, L, attached to the outer end of the pawl, and passing thence over pulley *v* of the upper claw to the hands of the operator, serves to open the fork and discharge the hay.

When the track B rests at a downward angle, as in Fig. 1, the hoisting-rope H passes up over the pulley *h;* thence up over the pulley *g;* thence back over pulley *k*, and through rollers *l l* to the power. In this case, when the load is elevated and suspended to the car, the hoisting-rope is slacked up or relaxed, and the car runs down the incline of its own gravity. But when the track rests at an upward incline, as in Fig. 2, the hoisting-rope, after having passed over the pulleys of the car, extends forward around pulley *i* before passing pulley *k*. In this case, when the power is applied, it first elevates the load to the car, and then draws the car up over the inclined way. The relaxation of the power in this case only allows the empty car to run back to the place of starting again.

I am aware that it is common to run a car on a track for unloading hay; but in all the devices with which I am acquainted the track is fixed and stationary. The great objection to such devices is that the hay has to be dumped in the line of the track, and cannot be distributed.

One principal feature of novelty in my case is the arranging of the track in the form of a crane, which allows the car to be turned in any position to dump its load, by which the dis-

tribution is equal; also, in arranging the track so that it may be turned to an upward or downward incline, by which the hay may be moved into corners and angles, and above or below timbers or other obstructions. This is of much importance in making the apparatus effective in use.

*Claims.*

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

1. The combination of the standard A, track B, and adjusting chain or rope C, the said track being provided with ways *f f* for the reception of car D, the whole arranged as described, and operating in the manner and for the purpose specified.

2. The standard A, track B, adjusting-chain C, and the crook or bend *s* of any hay-fork, the several parts being constructed and arranged to operate substantially as herein shown and described.

In witness whereof I have hereunto set my hand this 7th day of December, 1870.

JOSEPH R. BENEDICT.

Witnesses:

JOHN H. GORDON,

H. H. POUND.