J. C. ARMSTRONG.

Hay-Elevator.

No. 216,130. Patented June 3, 1879.

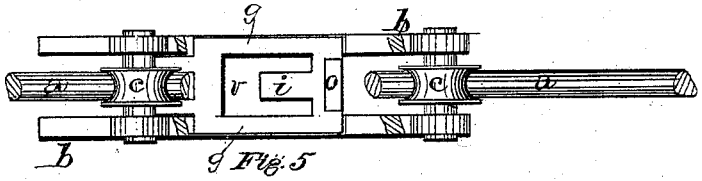

Fig. 5

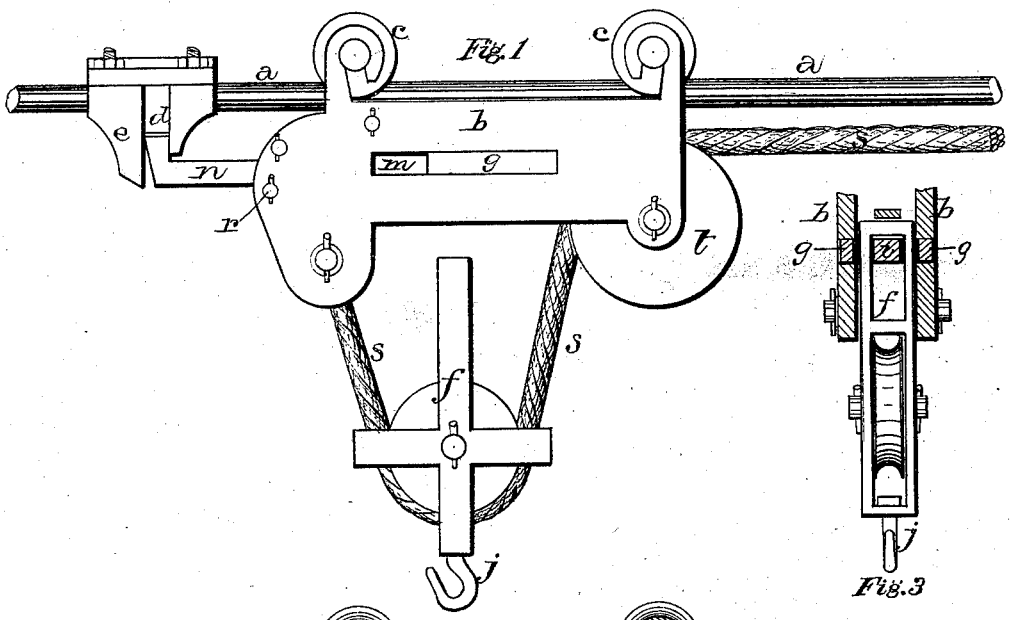

Fig. 1

Fig. 3

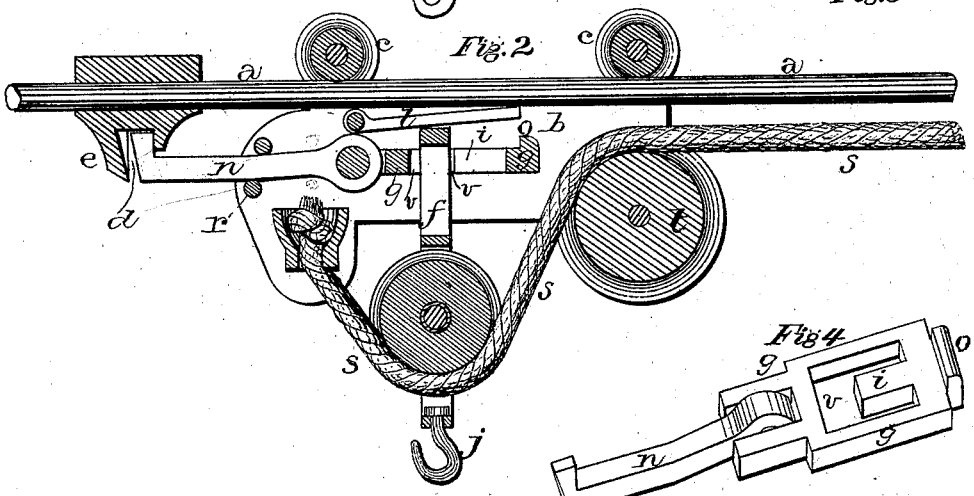

Fig. 2

Fig 4

Witnesses

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JOHN C. ARMSTRONG, OF SHARON, PENNSYLVANIA.

IMPROVEMENT IN HAY-ELEVATORS.

Specification forming part of Letters Patent No. **216,130**, dated June 3, 1879; application filed April 29, 1879.

To all whom it may concern:

Be it known that I, JOHN C. ARMSTRONG, of Sharon, in the county of Mercer and State of Pennsylvania, have invented certain new and useful Improvements in Hay-Elevators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in hay-elevators; and it consists in the arrangement and combination of parts that will be more fully described hereinafter, whereby a cheap, simple, and effective elevator is produced.

The accompanying drawings represent my invention, in which Figure 1 represents a side view, Fig. 2 a cross-section, and Figs. 3, 4, and 5 details, of the elevator.

a represents the rod, rope, or other equivalent device, upon which the carriage *b* is supported by means of the grooved pulleys *c*. This rod has a stop secured to it at one end, and this stop has the recess *d* formed in its under side, and just beyond this notch or recess is formed the hanging projection *e*.

Moving back and forth in suitable grooves or guides in the carriage is a slide, *g*, which slide has a hole through its center, and is provided with a projection, *i*, for catching in an eye formed in the top of the pulley-block *f*, to which the hay-fork is attached by means of a swivel, *j*.

Upon the outer end of this slide is formed a flange or stop, *o*, behind which one end of the latch *l* catches for the purpose of preventing the slide from being moved backward.

The slide is prevented from moving forward by means of the end of the slot *m* in the sides of the carriage, and as the slide can neither move back nor forth it will be held rigidly in position with the projection *i* just over the edge of the opening up through which the head of the fork-pulley passes as the load is raised upward by the horse.

Pivoted or otherwise movably secured to the rear end of the slide is the catch or rod *n*, which is supported at or near its center upon the rod *r*. Upon the rear end of this rod is formed a suitable catch, so as to catch in the notch *d* and to strike against the projection *e*. The under side of the catch is so shaped that as the carriage moves forward the outer end of the catch sinks downward out of the recess, so as to leave the carriage free to move along, and when the carriage returns for another load the movement forward of the slide causes the catch to rise upward into the recess again, so as to lock the carriage in position until the fork gets its load. The hay-fork having been loaded with hay, the horse, hitched to the outer end of the elevating-rope *s*, is started forward, and the fork loaded with hay is thus drawn upward toward the carriage. As the rope passes over the pulley *t* in the carriage, and as the upper end of the pulley-block *f* projects some distance above the rope, the upper end, having the eye formed upon it, is forced upward into the socket *v* made in the lower part of the carriage *b* to receive it. Until the upper end of this block is passed up into the socket and through the hole in the slide, and strikes against the under side of the catch, so as to raise it upward, the carriage does not move. As soon, however, as the upper end of this block raises the catch upward from behind the notch on the slide, the carriage starts forward, and as the rear end of the rod *n* is held in the recess *d* on the under side of the bar *a*, the rod *n* and slide connected thereto remain stationary. While the carriage moves forward, the rear end of the rod moves downward, owing to the peculiar shape of its under side. By the time the carriage is moved sufficiently far to draw backward the slide, the rear end of the rod will have been lowered sufficiently far to release it from the notch *d*, when the carriage will move freely forward without any further obstruction. As the rod *n* is being moved backward out of the carriage the slide moves with it, and the projection *i* is drawn through the eye in the top of the pulley-block, and thus the load of hay is held supported, so that should the horse stop at any time the fork will not drop downward until desired. When the carriage runs back to its loading-place the rear end of the rod *n* strikes against the projection *e*, which pushes the slide forward again,

so that the projection *i* is moved out of the eye at the top of the pulley-block, and then the fork descends to receive another load.

Having thus described my invention, I claim—

1. The combination of the slide, the rod *n*, hinged or pivoted thereto, a supporting-rod, *r*, and a recessed stop on the inner side of the rod *a*, substantially as shown.

2. The combination of the slide having the flange *o* with the catch-rod *n*, rod *r*, recess *d*, and projection *e*, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of May, 1878.

JOHN C. ARMSTRONG.

Witnesses:

WM. C. HAUS,

C. BOWDEN.