M. M. SHELLABERGER.

HAY-ELEVATOR.

No. 177,166. Patented May 9, 1876.

Fig. 1.

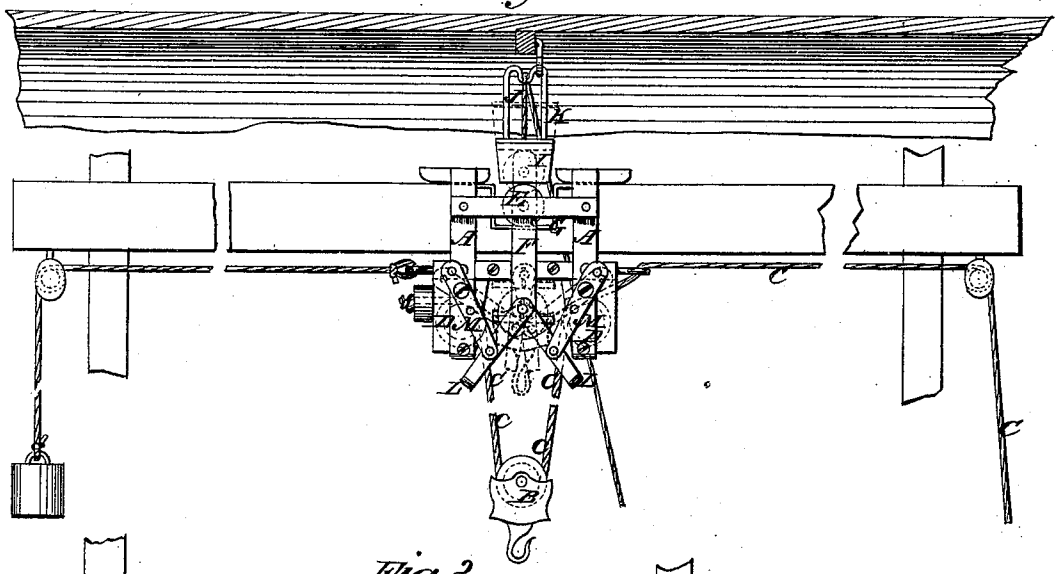


Fig. 2.

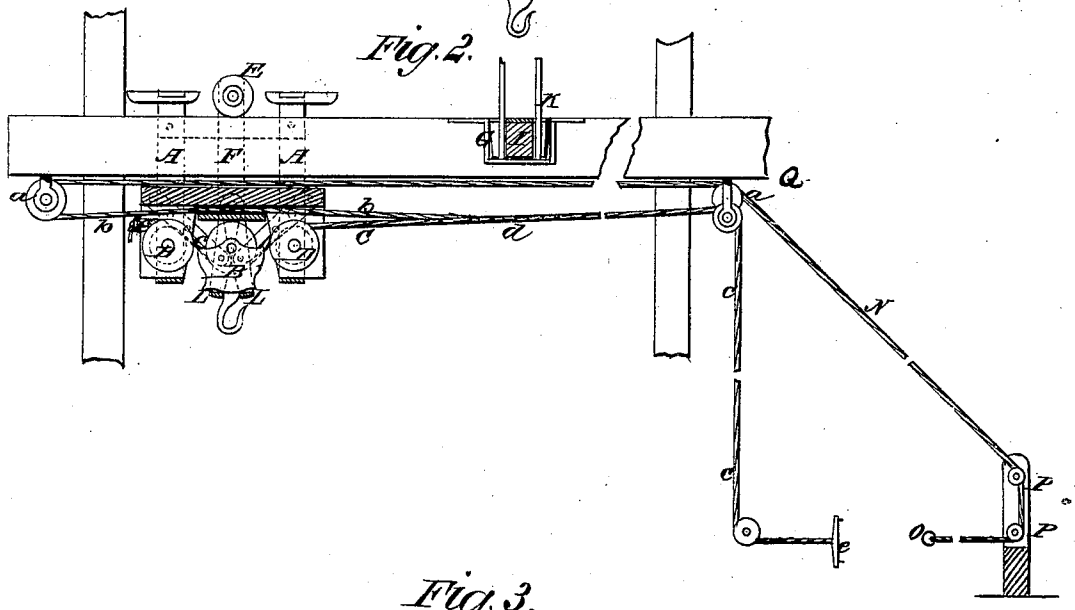
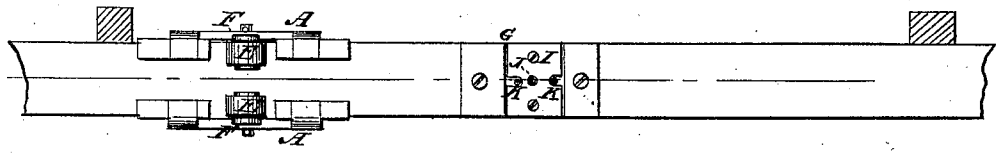


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

MICHAEL M. SHELLABERGER, OF HAMILTON, MISSOURI.

IMPROVEMENT IN HAY-ELEVATORS.

Specification forming part of Letters Patent No. **177,166**, dated May 9, 1876; application filed March 25, 1876.

To all whom it may concern:

Be it known that I, MICHAEL M. SHELLABERGER, of Hamilton, in the county of Caldwell and State of Missouri, have invented a new and Improved Hay-Elevator, of which the following is a specification:

In this improved hay-elevator the rollers on which the carriage runs back and forth along the beams between the place of hoisting and the discharging-place are mounted on a little frame so that they drop into a notch in the bearing which constitutes the check to hold the carriage while the hoisting is going on. When the block from which the fork is suspended rises near to the beam it strikes this dropping-roller frame and lifts the rollers out of the check to allow the carriage to be drawn along to the place of discharging by the hoisting-rope. At the same time the frame closes the retaining-jaws under the hoisting-block, and holds it from falling until it drops into the check again. Over the check-notch is a block running up and down on vertical guides, being raised and let fall by a rope to be dropped into the notch so that the carriage will, when required, pass on to another check by rolling over the block.

My invention also comprises a contrivance of a return-cord for drawing the carriage back by the horse or other power, so that its connection with the carriage is by a gripe of the hoisting-block with the check-frame when the block comes up to it, which connection ceases when the block drops, leaving the return-cord free to run back as long as the hoisting cord does, and the horse moves back, by which the slack of the return-cord, which is necessary when it is permanently connected to the carriage, is avoided.

Figure 1 is a side elevation of my improved hoisting apparatus. Fig. 2 is a sectional elevation, showing a modified arrangement of the operating ropes. Fig. 3 is a top view of the beam along which the carriage runs.

Similar letters of reference indicate corresponding parts.

A represents the carriage from which the hoisting-block B is suspended by the hoisting-rope C, working on the pulleys D. E represents the rollers on which the carriage runs, and F the frame in which they are mounted, said frame being capable of rising and falling a little relative to the carriage. G is the check-notch on the upper side of the beam H, I the block for filling it, K guides on which it slides up and down, and J the cord for raising the block I. When the carriage runs back along the beam the rollers E drop into the check-notch and stop the carriage at the place for hoisting. The dropping of the rollers and their frame F opens the retaining-jaws L, by the levers M, which lets the hoisting-block fall to get the load. When the hoisting-block rises again with its load it lifts the rollers out of the check-notch and closes the retaining-jaws under it, which hold it from falling when the draft on the hoisting-rope slacks, and keep it up until the rollers drop into the notch again. By letting the block I down into the check-notch the carriage will pass along to another notch. This is used to change the hoisting from one place to another.

In Fig. 2 the rope N is shown attached to the horse at O, passing thence over guide-pulleys P, thence along the under side of the beam on which the carriage travels, and, returning, passes between the bottom plate of the roller-frame and the top plate *b* of the carriage, to where it is spliced to the hoisting-rope, or along with the hoisting-rope to the whiffletree *e*. Thus the return-cord is allowed to run in unison with the hoisting-rope without any slack, which it cannot do when attached to the carriage, because the hoisting-rope has to continue running back after the carriage has stopped, and it starts forward again before the carriage starts, so that the return-cord cannot run in unison with it when hitched to the carriage without as much slack as the excess of the movement of the hoisting-rope over the movement of the carriage, which allows it to kink and otherwise interfere with working properly.

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

1. The combination of the dropping roller-

frame F, and rollers E, with the hoisting-block B, carriage A, and the check-notch G, substantially as specified.

2. The block I, in combination with the check-notch G, substantially as specified.

3. The retaining-jaws L, and links M, in combination with the dropping-frame F, and the hoisting-block B, substantially as specified.

4. The return-cord having temporary connection with the carriage by the gripe of the hoisting-block, substantially as specified.

MICHAEL M. SHELLABERGER.

Witnesses:
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