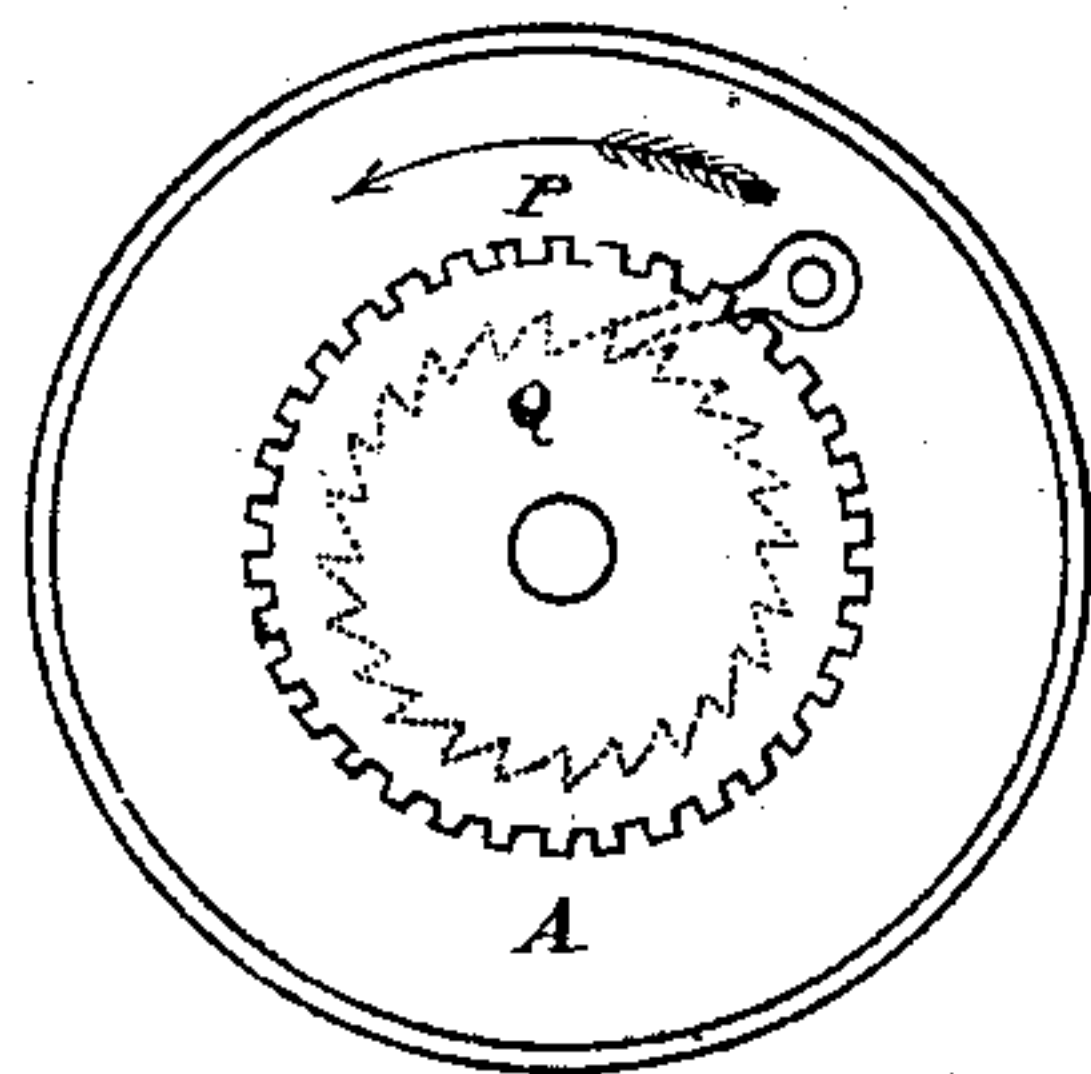
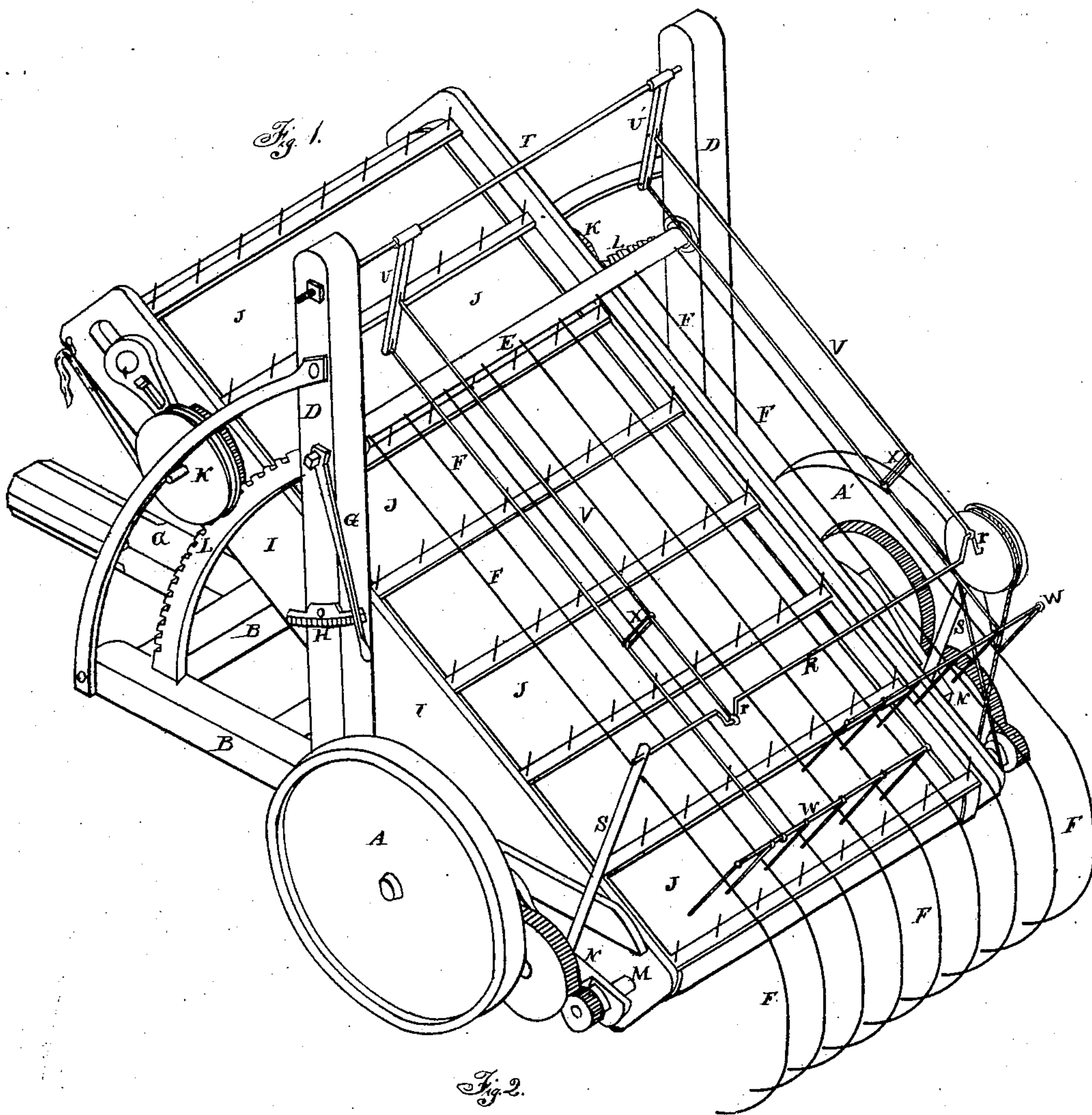


C. B. GARLINGHOUSE & J. DICKASON.  
HAY LOADER.

No. 39,264.

Patented July 14, 1863.



*Witnesses*  
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# UNITED STATES PATENT OFFICE.

CYRUS B. GARLINGHOUSE AND JOHN DICKASON, OF ALLENSVILLE,  
INDIANA.

## IMPROVEMENT IN HAY-LOADERS.

Specification forming part of Letters Patent No. 39,264, dated July 14, 1863.

*To all whom it may concern:*

Be it known that we, CYRUS B. GARLINGHOUSE and JOHN DICKASON, both of Allensville, Switzerland county, Indiana, have invented a new and useful Machine for Raking and Loading Hay; and we hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

Our invention relates to the class of machines adapted for attachment to the tail of a hay-wagon, and to rake and pitch the hay into the wagon as the latter is drawn over the ground.

A A' are the ground-wheels. B is the frame, and C the tongue, of a cart similar to the hind gear of a wagon. From the frame B there rise two posts or standards, D D', for the support and attachment of various parts of the operative mechanism to be presently described.

Pivoted horizontally in the posts D D' is a beam, E, from which project a number of curved and elastic fingers, F, which may be made to bear with any desired stress upon the ground by means of the limber lever G, which takes into a segmental rack, H, or its equivalent.

I is a floating frame for an endless carrier, J. The upper end of the carrier-frame I is supported at any height by means of pinions K K', resting in racks L L'. The lower end of the carrier-frame rests upon the windrow. The shaft M of the lower stretcher-roller of the carrier traverses the lower ends of the floating arms N N', which journal upon the gudgeons of the ground-wheels, so as to vibrate in a circle concentric with said gudgeons. A series of suitable gearing, P, Figure 2, having a ratchet attachment, Q, enables the forward motion of either ground-wheel to be transmitted with slightly-increasing velocity to the endless carrier, but enables the machine to be backed or turned without reversing the carrier. The ratchet attachment may be made to throw out of gear to enable the machine to be moved about without working the elevating mechanism, and may be applied to either cog-wheel of the series.

In order to insure the ascent of the hay into the carrier, we provide the following device:

R is a crank-shaft supported by two posts,

S S', from the floating arms N N'. T is a rock-shaft journaled in the tops of the posts D D', and having two arms, U U', connected by pitmen V V' with the cranks r r'.

W W' are two rakes, hinged at their butts to the lower ends of their arms U U', and having their heads supported by sliding links X X' from the pitmen V V'.

The gearing may be replaced by bands and pulleys.

Operation: The hay-wagon, with its attendant raker and pitcher, being drawn forward over the field, the yielding and adjustable fingers F act to gather up the windrow, whence the endless carrier J, with the assistance of the rakes W W', catches it up and carries it forward onto the bed of the hay-wagon. In commencing to load, the head of the carrier J is depressed by slackening the pinions K K' in the racks L L', and, as the loading proceeds, is again elevated by winding up the pinions K K'. In passing around curves the wheel on the inner circle simply rotates backward on its ratchet and ceases to act, thus throwing the entire labor on the outer wheel. In backing the machine both ground-wheels revolve on their ratchets, and cease to act on the carrier J.

It will be seen that the arrangement of the endless carrier J in the floating frame I permits the elevating mechanism to rise or fall and to adjust itself to the inequalities of the ground, while, this self-adjustment taking place around the center of the ground-wheel and concentric therewith, the connections for driving the carrier, whether by belt or gearing, are not affected by any change in the relative position or altitude of the lower end of said floating frame.

The embodiment of our invention, selected in the above illustration, is obviously susceptible of various modifications without departing materially from the main design. For example, the upper end of the carrier may be elevated bodily by one standing in the wagon, and may retain any height given to it by a pawl and rack. The crank-shaft R may be hung or journaled in brackets projecting from the posts D D'. The ascent of the floating arms N N' may be limited by a yielding or other projection from the main frame. Beveled gearing may replace the band and pulleys by which the crank-shaft R is driven.

We claim—

1. The floating hay-carrier I J, constructed, supported, and operating in the manner and for the purposes specified.

2. Connecting the floating or self-adjusting carrier of a hay-loading machine with the main frame by means of vibrating arms N N', journaled in line with the axes of the lower stretcher and the ground-wheels, by which the lower end of the carrier is permitted to adapt itself to inequalities of the ground without affecting its connections with the driver, substantially as specified.

3. The combination, with the self-adjusting or floating hay-carrier, of fingers F, variable

in their pressure upon the ground, substantially as described.

4. In the described combination, with carrier I J and fingers F, or their equivalents, the provision of reciprocating rakes W W', adapted and operating substantially as set forth.

In testimony of which invention we hereunto set our hands.

CYRUS B. GARLINGHOUSE.  
JOHN DICKASON.

Witnesses:

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ROBERT HEMINGRAY.