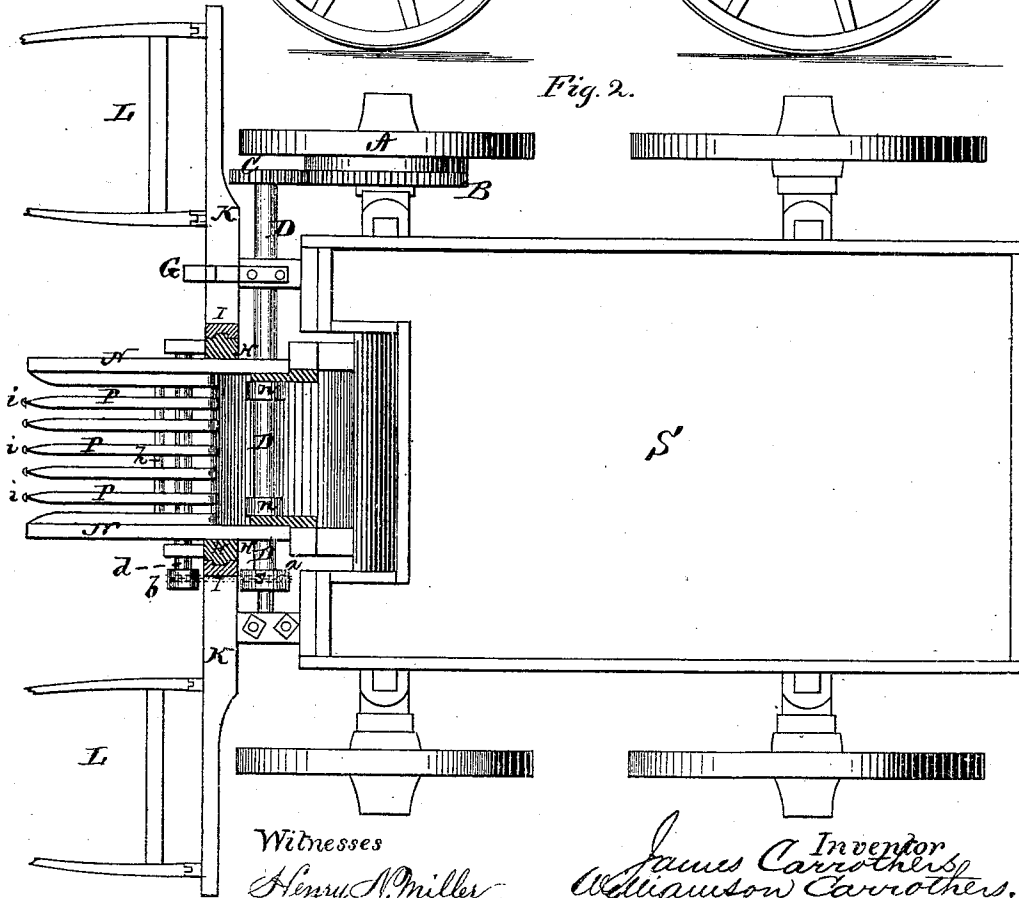
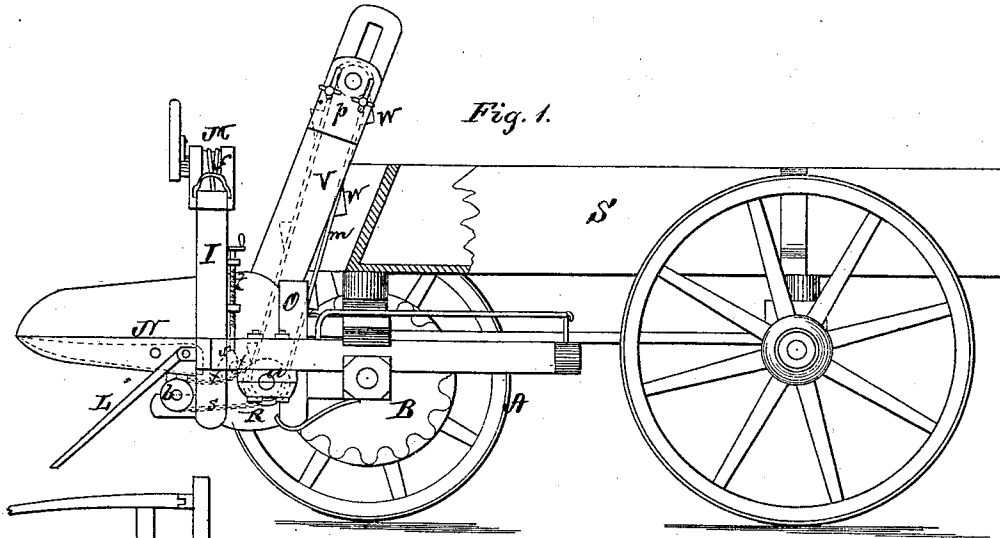


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Corn-Harvesters.

No. 134,251.

Patented Dec. 24, 1872.



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Fig. 3.

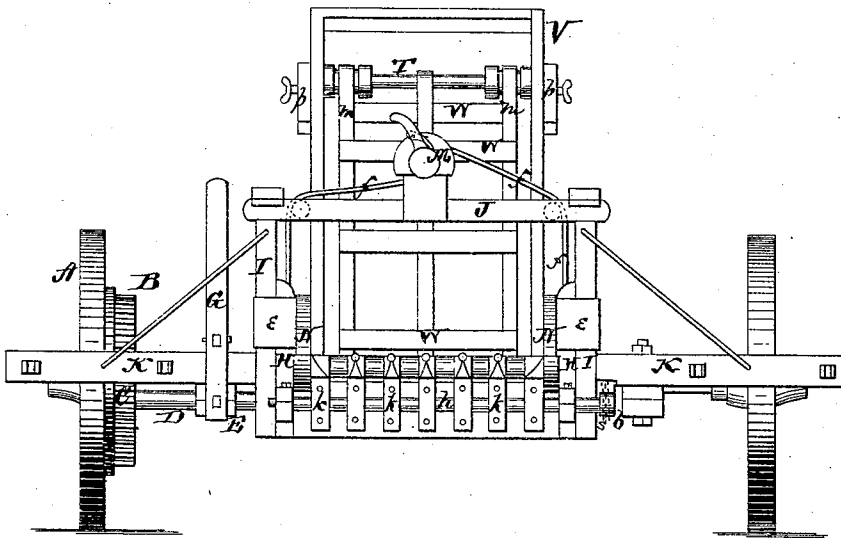


Fig. 4.

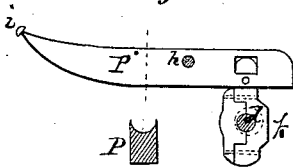
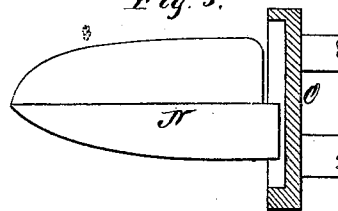


Fig. 5.



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UNITED STATES PATENT OFFICE.

JAMES CARROTHERS AND WILLIAMSON CARROTHERS, OF NEWTON, IOWA.

IMPROVEMENT IN CORN-HARVESTERS.

Specification forming part of Letters Patent No. 134,251, dated December 24, 1872.

To all whom it may concern:

Be it known that we, JAMES CARROTHERS and WILLIAMSON CARROTHERS, of Newton, in the county of Jasper and in the State of Iowa, have invented certain new and useful Improvements in Corn-Gatherers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of our invention consists in the construction and arrangement of a corn-gatherer, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation; Fig. 2, a plan view; Fig. 3, a front view of our machine; and Figs. 4 and 5 are views of detached parts of the same.

The running-gear of our machine is substantially the same as that of any ordinary wagon, and therefore needs no description. To the inner side of one of the front wheels A is attached a cog-wheel, B, which gears with a pinion, C, on a shaft, D, running in front of and parallel with the front axle. The end of the shaft D upon which the pinion C is placed rests in a sliding box, E, operated by a lever, G, whereby this end of said shaft is moved back and forth, so as to throw the pinion C in and out of gear with the cog-wheel B. On the other end of the shaft D is a pulley, a, from which a belt or chain connects with a pulley, b, on a shaft, d, which has its bearings in boxes attached to the front sides of upright sliding bars H H. These bars are placed in grooves on the inner sides of upright standards I I, the upper ends of which are connected by a cross-bar, J, and which standards are firmly secured to the inner ends of horizontal beams K K running parallel with the front axle, and attached to the front ends of the front bounds, as shown. To each of the beams K is attached a pair of shafts, L, thus giving one horse in front of each wheel, with the gathering attachment between them. A metal band or socket, e, is attached to each sliding bar H, and passes around the grooved standard I

to hold the bar to the same. The sliding bars H H are raised and lowered at will, and held at any desired height by means of a belt or chain, f, which is wound around a windlass, M, on the center of the cross-bar J, and the ends of which pass over pulleys in the ends of said cross-bar, and are attached to the sliding bars. On the inner side of each bar H is attached a shoe or divider, N, the inner or rear end of which fits and moves in a grooved post, O, of the frame, as shown in Fig. 5, when the sliding bars H H are moved up or down. Through the dividers N N in front of the shaft d passes a shaft, h, upon which are pivoted a series of knives or gatherers, P P, held a suitable distance apart by washers on the shaft. The knives or gatherers P P are constructed in the form substantially as shown in Fig. 4, their front ends being curved upward and running to a point, and in the point is inserted a round-headed pin, i, so as to prevent the point from running into the corn-stalks. The upper side of each knife or gatherer P is hollowed so as to form a sharp cutting-edge on each side of the same. The rear end of each knife is attached to a box, k, placed on an eccentric portion of the shaft d, as shown in Fig. 4, by which means the knives receive a vibrating movement on their pivot or shaft h as the machine moves forward.

When the machine is in motion, the corn-stalks pass between the knives P P, and as the stalks are drawn under the machine said knives by their vibrating motion cut off the ears, which pass into a receptacle, R, at the rear end of the knives, from whence the ears are carried up by an elevator and dropped into the wagon-box S. The elevator consists simply of endless belts m m placed around pulleys n n on the main shaft D, and passing around pulleys on a shaft, T, in or near the upper end of an inclined frame, V, and to said belts are secured buckets W, which carry the ears up, and as they turn over the upper shaft T the ears drop into the box S. The upper shaft T is placed in adjustable journal-boxes p p, which are secured at any desired height on the sides of the frame V by set-screws, so that the belts m m may be tightened when necessary. The height at which the knives P P are to work is regulated by the raising and lowering of the sliding bars

H H, as above described, and to keep the chain or belt *s*, which connects the pulleys *a* and *b*, at all times in proper working order, we use a tightener, as shown in Fig. 1. This tightener consists of a screw-rod, *t*, passing through suitable projections on the standard I, and its lower end working as a swivel in an angular bar *v*, having a friction-roller, *f*, at each end bearing on the belt.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the knives P P, shafts *h d*, boxes *k k*, dividers N N, and bars H H, all constructed and arranged as described, and moved up and down in the grooved standards I I by means of the belt *f* and windlass

M, substantially as and for the purposes herein set forth.

2. In combination with the gathering mechanism herein described, the elevator consisting of the main shaft D with pulleys *n n*, endless belts *m m* with buckets W W, and the shaft T resting in adjustable bearings *p p* on the frame V, substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 10th day of August, 1872.

JAMES CARROTHERS.

WILLIAMSON CARROTHERS.

Witnesses:

ALMON HALL,
J. C. COOK.