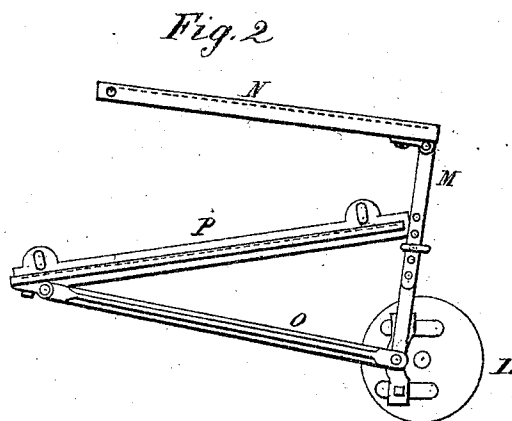
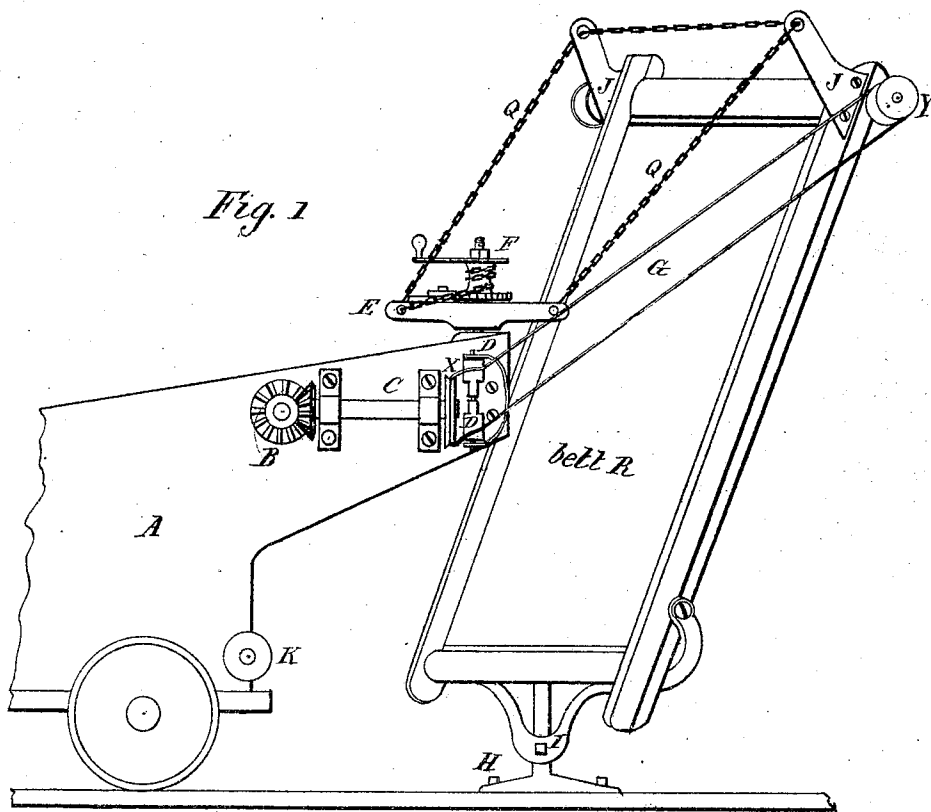


RICHARD BRYAN.
Grain Thresher and Straw Carrier.

No. 117,736.

Patented August 8, 1871.



Witnesses

John L. Lewis
Charles Keetchum

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UNITED STATES PATENT OFFICE.

RICHARD BRYAN, OF PENN YAN, NEW YORK.

IMPROVEMENT IN GRAIN-THRASHERS AND STRAW-CARRIERS.

Specification forming part of Letters Patent No. 117,736, dated August 8, 1871.

To all whom it may concern:

Be it known that I, RICHARD BRYAN, of Penn Yan, in the county of Yates and State of New York, have invented certain Improvements in Grain-Thrashers and Straw-Carriers, of which the following is a specification:

The nature and object of my invention consist in making a grain-thrasher that will clean grain fit for market with less sieves, and they in less space than heretofore used, and actuating the sieves, one upward and downward for chaffing, others inclined with a reciprocating motion; and arranging and supporting a straw-carrier by the thrasher, so that it may be turned around to either side or in any direction, and be driven by the same mechanism; and it is supported by a rope in any required position.

Figure 1 is a side elevation of that part of a thrasher embodying my invention. Fig. 2 is a longitudinal vertical section showing the sieves and mechanism that actuate them.

A is the rear end of a grain-thrasher, (the other parts being of ordinary construction are left off.) The exterior is represented in Fig. 1. The interior must be made to receive the sieves, as many as required, and the ordinary fan and conveyers, together with the means to actuate them. It is represented as mounted on wheels for transportation, and it is generally used upon them; therefore, the whole is represented as standing upon a barn-floor. B is a shaft that is put through the thrasher and is supported by journal-boxes at the sides of the thrasher. The ends extend out from the thrasher to receive a miter or bevel-wheel and a driving-pulley at each end, so that the driving-pulley may be put on either end, as may be most convenient with respect to the other parts of the thrasher that drives it. C is a horizontal shaft, placed by the side of the thrasher and held by journal-boxes, as shown in Fig. 1. There is a corresponding shaft upon the opposite side of the thrasher. There is a miter-wheel at one end of each, that is driven by the miter-wheels on the shaft B. At the other end of each is a pulley, made to carry a rope or chain that drives the straw-carrier. D is a pair of directing-rollers, both being supported on the same axis and by the same support, which may be made adjustable and attached to the side of the thrasher, as represented in Fig. 1. There is a corresponding pair of rollers at the opposite side

of the thrasher. Their use is to change the direction of the rope or chain that drives the straw-carrier in any direction at either side of the thrasher. E is a piece of timber that is supported by a pivot that passes up through the middle of it, so that it may turn as the straw-carrier is turned. At each end is a hole for a rope to pass through to support the straw-carrier. A pulley may be put in one end when desired. F is a windlass. It is made as represented in Fig. 1, and placed upon the pivot above the part E. It is provided with a winch at the upper end, and at the lower end a ratchet and pawl to hold it in any position. Its use is to wind up the rope that holds up the straw-carrier. The pivot that supports it is attached to the upper side and rear end of the thrasher, as represented in Fig. 1. G is the straw-carrier. It is of ordinary construction, and may have slatted belt or apron to move the straw. The shaft at the upward end that carries the roller must extend out at each side to carry a pulley for the rope or chain to drive it. H is a pivot that supports the straw-carrier. It is made with a base that has holes through it so that it may be bolted to the barn-floor, or any other place, as represented in Fig. 1. I are the arms that support the straw-carrier. They may be made of iron. They extend from their union at the pivot H to each side of the straw-carrier, and are there fastened by a pin or bolt that will allow the straw-carrier to be raised or lowered at the outer end. The arms must be so shaped that they may be folded to the under side of the carrier for transportation. They have a piece connecting them underneath the carrier, and this piece has a hole for the upper end of the pivot H to go through to hold the arms in a vertical position. At the hole where the arms are united is a set-screw to hold the arms and prevent them turning when in use, thus holding the straw-carrier in any required position. J and J are posts fastened to each side of the upward end of the carrier. They have a hole in the upward end for a rope to pass through, and they must be long enough for the straw to pass under the rope between them. K is a pulley that is fastened at the other end of the shaft that the crank-wheel L is fastened to. It is driven by any convenient part of the thrasher, and may be placed at either side of the thrasher that is most convenient to actuate the sieves or be driven. Its use is to

actuate the sieves by turning the crank-wheel L. L is a crank-wheel that actuates the sieves. It is made any size required. It has through it two parallel mortises for bolts, situated in the chord of the circle of the wheel, and extends so far across the wheel that the crank-pin may be placed at the center or outward radially to give any required motion to the sieves. It is also provided with a crank-pin that has arms with holes through them, so that it may be bolted in any position to the wheel. The crank-pin must be long enough to hold two connections of proper size. M is a connection from the crank-wheel to the sieve N. It must be made in two parts, with a series of holes to bolt them together, so that the length of the connection may be changed to give the required inclination to the sieve for the various kinds and conditions of grain. N is the upper or chaffing-sieve, made in any ordinary manner. One end is held by pivots at each side of the thrasher, and the other by the connection M, as shown in Fig. 2. O is a connection from the crank-wheel to the screen or lower sieve, as represented in Fig. 2. P is the screen. It is supported in ways that are fastened to the inner sides of the thrasher, and is actuated by the con-

nection O, as shown in the figure. There may be more than one, and they must be made with meshes of different sizes to suit the kind of grain being thrashed. The ways for the sieve P may be made adjustable, when required, by making a series of bolt-holes for their bolts.

I claim as my invention—

1. The straw-carrier G supported upon the pivoted standard H I, arranged to operate in connection with the thrasher A provided with the cross-piece E, windlass F, and rope Q, when said parts are constructed and arranged as and for the purpose set forth.

2. The arrangement of the shafts B and C with their bevel-gearing, pulley X, guide-rollers D D, belt R, and pulley Y, as and for the purpose herein described.

3. The combination, in the thrashing-machine A, of the crank-wheel L, adjustable connecting-rod M and O, with the hinged screens N and P, all constructed and arranged as herein shown and described, for the purpose set forth.

RICHARD BRYAN.

Witnesses:

JOHN L. LEWIS,
CHARLES KETCHUM.