

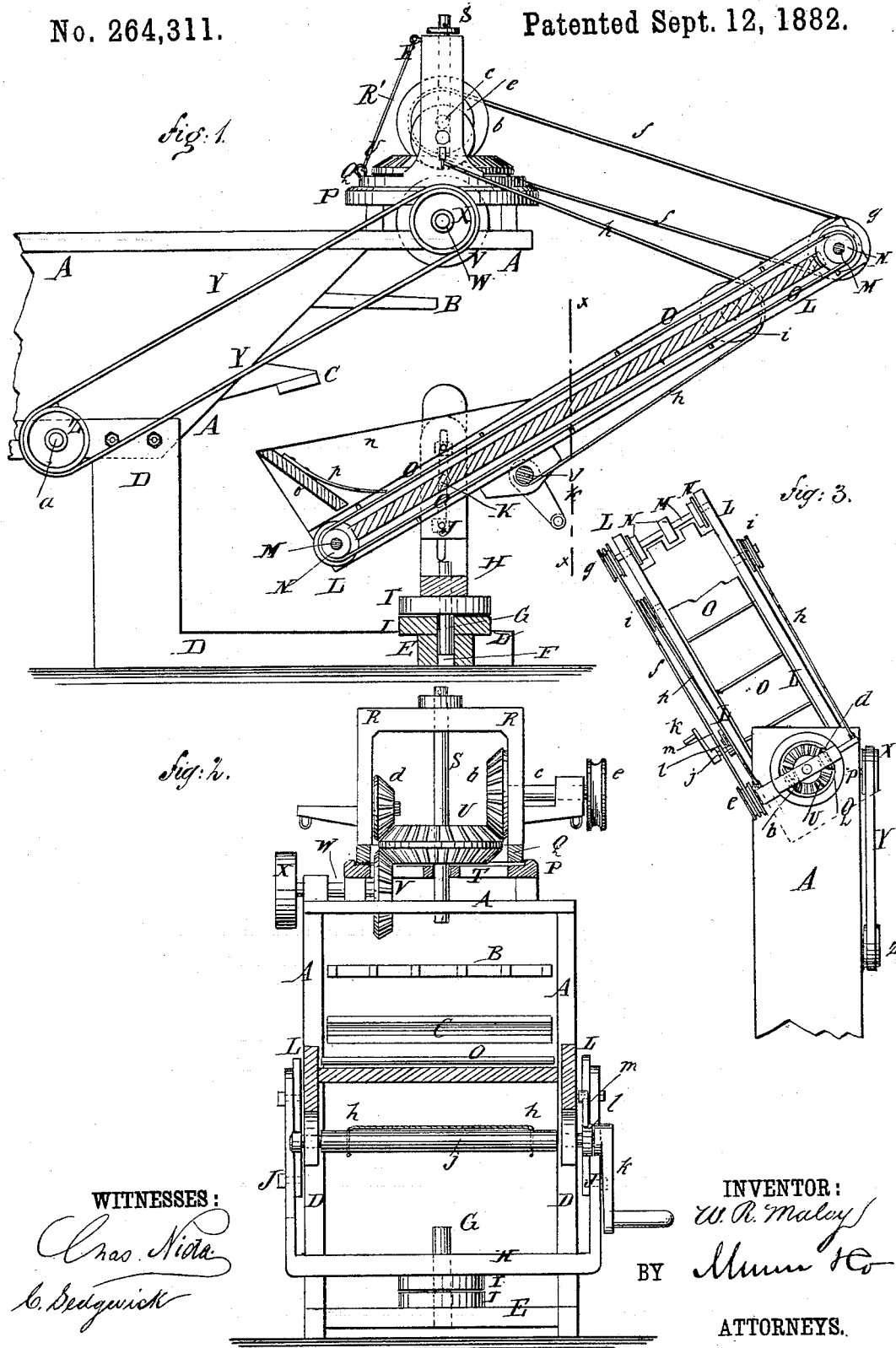
(No Model.)

W. R. MALOY.

ADJUSTABLE STRAW STACKER.

No. 264,311.

Patented Sept. 12, 1882.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM R. MALOY, OF WAYLAND, MISSOURI.

## ADJUSTABLE STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 264,311, dated September 12, 1882.

Application filed April 20, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM READMAN MALOY, of Wayland, in the county of Clarke and State of Missouri, have invented a new and useful Improvement in Adjustable Straw-Stackers, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which the same letters of reference indicate the same or corresponding parts in all the figures.

Figure 1 is a sectional side elevation of my improvement shown as applied to a grain-separator. Fig. 2 is a sectional end elevation of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a plan view of the same, part being broken away.

The object of this invention is to facilitate the stacking of straw as it comes from a thrasher and separator; and it consists in a peculiar construction and arrangement of parts, as hereinafter fully set forth.

A represents a separator, B are the straw-delivering fingers, and C is the shoe of the separator, about the construction of which parts there is nothing new.

To the sills of the separator A are bolted the upper ends of the knees D, the lower ends of which are connected by a cross-bar, E. In the center of the cross-bar E is formed a socket or step, F, to receive the pivot G, attached to the center of the bolster H. Washers or wear-plates I are interposed between the cross-bar E and the bolster H to lessen the friction.

To the ends of the bolster H are attached uprights J, in the upper ends of which are formed holes to serve as bearings for the pivots K, attached to the lower parts of the side bars of the carrier-frame L. The uprights J are each made in two parts, which overlap each other, and are secured together by bolts, which pass through holes in the one part and slots in the other part, so that the said uprights can be lengthened and shortened to adjust the stacker-frame L higher or lower, as may be required. The carrier-frame L is made with a close bottom, and to the upper and lower ends of its side bars are journaled shafts M, to which are attached pulleys or rollers N to receive the endless apron O of the carrier. The apron

O should be provided with points to prevent the straw from slipping back while being carried up the incline of the carrier by the said apron.

To supports attached to the top of the separator A is attached an annular plate, P, the inner edge of which is rabbeted to form a seat for the upper ring, Q, and prevent the said ring Q from having any lateral movement, while allowing it to rotate freely. To the upper side of the upper ring, Q, is attached an upright frame, R, which is strengthened in position by a brace, R', attached to its top bar and to the ring Q.

To the center of the top bar of the frame R is attached the upper end of the vertical shaft S, which passes down through the center of the rings Q P, and is attached at its lower end to a frame, T, attached to the lower ring, P, or to the top of the separator A.

Upon the shaft S is placed a loose wheel, U, which has beveled-gear teeth formed upon both its upper and lower sides. The teeth upon the lower side of the double-gear wheel U mesh into the teeth of a small beveled-gear wheel, V, attached to the inner end of a short horizontal shaft, W, which revolves in bearings attached to the lower side of the ring P.

To the outer end of the shaft W is attached a pulley, X, to receive a belt, Y, which also passes around a pulley, Z, attached to the end of a fan-shaft, *a*, of the separator A, so that the double-gear wheel U will be revolved from the said fan-shaft *a*. The teeth upon the upper side of the double-gear wheel U mesh into the teeth of the beveled-gear wheel *b*, attached to the inner end of a short shaft, *c*, which revolves in bearings in a side bar of the frame R and in an arm attached to the said side bar. To the other side bar of the frame R is pivoted a beveled-gear wheel, *d*, to serve as a traveler to balance the double-gear wheel U.

To the outer end of the shaft *c* is attached a pulley, *e*, around which passes a belt, *f*. The belt *f* also passes around a pulley, *g*, attached to the upper carrier-shaft, M, so that the carrier will be driven from the double-gear wheel U.

To the side bars of the frame R, or to arms attached to the said side bars, are secured the ends of two cords or chains, *h*, which pass around pulleys *i*, pivoted to the upper parts of

the side bars of the carrier-frame L. The other ends of the cords or chains *h* are attached to a shaft, *j*, which works in bearings attached to the lower side of the side bars of the carrier-frame L, so that the upper end of the carrier can be raised and lowered by winding the cords or chains *h* upon and unwinding them from the said shaft *j*.

To one end of the shaft *j* is attached a crank, *k*, for convenience in operating it. To the shaft *j* is also attached a ratchet-wheel, *l*, with which engages a pawl, *m*, pivoted to the side bar of the carrier-frame L, to prevent the shaft *j* from being turned back by the strain of the cords or chains *h*, and thus fasten the upper end of the carrier in any position into which it may be adjusted. With this construction a man upon the ground, by operating the crank-shaft *j*, can readily raise the outer end of the carrier as the stack increases in height without stopping the machine, and the man upon the stack can readily turn the carrier upon its pivot to cause the said carrier to deliver the straw upon any desired part of the stack.

To the lower parts of the side bars of the carrier-frame L are attached triangular boards *n*, to the lower parts of which are attached the ends of an inclined cross-board, *o*. The cross-board *o* is arranged in such a position that the endless belt O can pass beneath its lower edge freely.

To the upper part of the cross-board *o* is attached the upper part of a flexible plate, *p*, of leather or other suitable material. The plate *p* is made of such a width that its lower edge will rest upon the endless apron O, so that the

said plate will serve as a valve to prevent straw from slipping off the lower end of the carrier, while allowing the endless apron O to pass up without being obstructed.

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

1. In a straw-stacker, the combination, with the knees D, cross-bar E, socket F, pivot G, washers I, cross-bar H, and uprights J, of the carrier L and vertically-adjustable plates on the uprights J, as shown and described.

2. The combination, with separator A, pivoted frame G H, carrier L, and its driving-gear, of the device supporting the driving-gear, consisting of the rabbeted annular plate P, secured to the separator A centrally over the pivot G, and the frame Q R, revolving in the rabbet in plate P, as shown and described.

3. The combination, with the separator A, pivoted frame G H, carrier L, frame J, annular rabbeted plate P, and frame Q R, arranged centrally above the pivot G, of the double beveled-gear wheel U, journaled in the frame R above and in the frame T below, the driver-gear V, the driven gear *b* and pulley *e*, and the balance-gear *d*, as shown and described.

4. The combination, with the frame R, the swiveled ring Q, and the carrier-frame L, of the cords or chains *h*, the pulleys *i*, and the crank-shaft *j k*, mounted on the carrier-frame, as shown and described.

WILLIAM R. MALOY.

Witnesses:

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JAMES FULTON.