

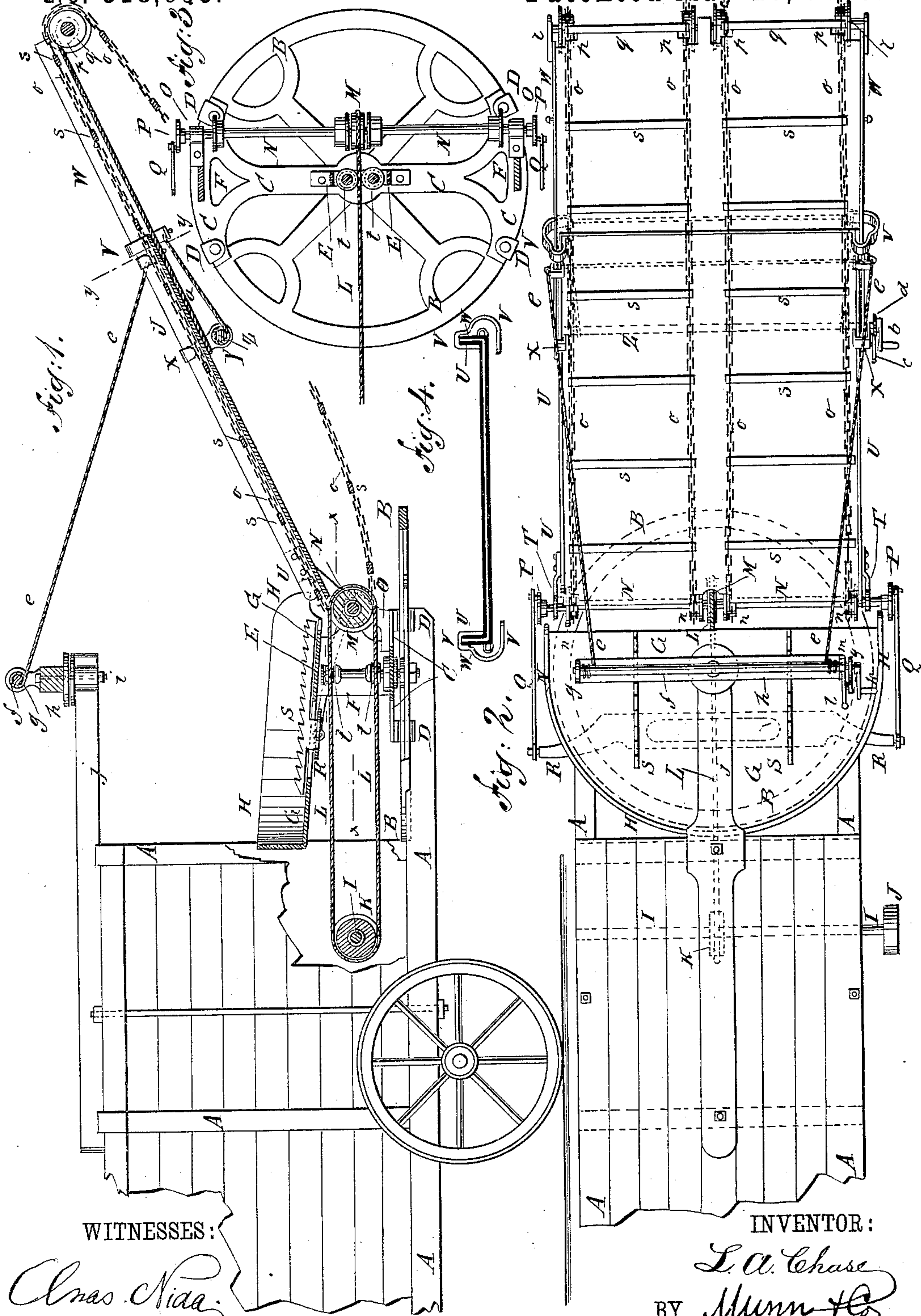
(No Model.)

L. A. CHASE.

STRAW STACKER FOR GRAIN SEPARATORS.

No. 318,695.

Patented May 26, 1885.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

LUCIEN A. CHASE, OF ELSIE, MICHIGAN.

## STRAW-STACKER FOR GRAIN-SEPARATORS.

SPECIFICATION forming part of Letters Patent No. 318,695, dated May 26, 1885.

Application filed February 25, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, LUCIEN A. CHASE, of Elsie, in the county of Clinton and State of Michigan, have invented certain new and useful Improvements in Straw-Stackers for Grain-Separators, of which the following is a full, clear, and exact description.

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

Figure 1 is a side elevation of one of my improved straw-stackers shown as applied to a grain-separator, parts of the grain-separator being broken away. Fig. 2 is a plan view of the same. Fig. 3 is a sectional plan view of a part of the same, taken through the broken line *x x*, Fig. 1. Fig. 4 is a sectional end elevation of the carrier, taken through the line *y y*, Fig. 1.

The invention consists of the combinations of parts and their construction, substantially as hereinafter fully set forth, and pointed out in the claims.

A represents a grain-separator, to the lower rear part of the frame of which is attached a circular plate or frame, B.

To the center of the circular frame B is pivoted the center of the cross-bar C, the ends of which rest and slide upon the upper side of the rim of the said circular frame B, and are kept from rising from the said rim by clamps D, attached to the said ends, and which pass around the said rim and underlap its lower side.

To the middle part of the pivoted cross-bar C is attached a small vertical frame, E, to the upper end of which and to the upper ends of standards F, attached to the end parts of the said cross-bar, is secured the table G, that receives the straw from the separator and delivers it to the carrier. The table G is made with a straight forward edge, and with a curved rear edge, and has an upwardly-projecting flange, H, secured to the said curved edge.

To the rear part of the frame of the grain-separator A is journaled a shaft, I, to one end of which is attached a pulley, J, to receive a driving-belt, so that the said shaft I can be driven from any convenient part of the driving mechanism of the separator A.

To the central part of the shaft I is attached

a grooved pulley, K, around which passes a round belt, L. The belt L also passes around a grooved pulley, M, attached to the center of the shaft N, which is journaled to supports O, attached to the forward parts of the ends of the cross-bar C.

To short shafts or other supports attached to the top and bottom bars of the frame E are pivoted two pairs of guide-pulleys, *t*, in such positions that when the carrier is swung to either side the upper and lower parts of the belt L will be drawn against the said pulleys, and will thus be kept taut.

To the ends of the shaft N are attached small cranks or crank-wheels P, to the crank-pins of which are pivoted the ends of connecting-rods Q, the other ends of which are pivoted to the ends of a cross-bar, R, placed against the lower side of the table G, and connected by bolts or rivets with bars S. The bars S project through slots in the table G, and upon their upper edges are formed teeth, with their rear sides inclined so that the said bars in their rearward movement will readily pass beneath the straw upon the said table G; but in their forward movement will carry the said straw with them, and thus feed the straw to the carrier.

The shaft N serves as a support to the forked arms T, attached to the lower corners of the lower section, U, of the extensible carrier-frame. To the upper corner of the lower section, U, of the carrier-frame are attached guides V, which pass around the side bars of the upper section, W, of the said carrier-frame.

To the lower corners of the upper section, W, of the carrier-frame are attached guides X, which pass over the side bars of the lower section, U, of the said frame, so that the said sections will move squarely upon each other as the said frame is extended and contracted.

To supports Y, attached to the lower corners of the upper section, W, of the carrier-frame is journaled a shaft, Z, to which are attached the ends of ropes or chains *a*, which are attached to the guides V or other supports attached to the upper corners of the lower section, U, of the carrier-frame, so that the said carrier-frame can be extended by turning the shaft Z to wind the ropes or chains *a* upon it. The carrier-frame is contracted by releasing



the shaft Z and allowing the upper section, W, of the said frame to slide down by its own weight. The shaft Z is operated by means of a small crank, *b*, attached to one of its ends, and is held in any position into which it may be turned by a pawl, *c*, attached to the bearing of the said shaft, and which engages with a ratchet-wheel, *d*, attached to the said shaft.

To supports attached to the upper corners of the lower section, U, of the carrier-frame are attached ropes or chains *e*, which are also attached to a shaft, *f*, journaled in bearings *g*, attached to the ends of a cross-bar, *h*. The cross-bar *h* is pivoted at its center, by a bolt, *i*, or other suitable means, to a bar, *j*, forming a part of or attached to the top of the separator A. The shaft *f* is turned to wind up or unwind the ropes or chains *e*, and thus raise or lower the outer end of the carrier by means of a crank, *k*, attached to one of its ends, and the said shaft *f* is held in any position into which it may be turned, and is made to hold the said carrier at the desired elevation by a pawl, *l*, pivoted to one of the bearings *g*, and which engages with a ratchet-wheel, *m*, attached to the said shaft *f*.

With this construction the carrier can be readily swung into any desired position within a half-circle, and its outer end can be conveniently raised and lowered, even when the stacker is in use.

To the shaft N are attached two pairs of chain-wheels, *n*, around which pass endless chains *o*. The endless chains *o* also pass

around two pairs of chain-wheels, *p*, attached to the shaft *q*, which is journaled in bearings *r*, attached to the upper end of the upper section, W, of the carrier-frame. The chains *o* of each pair are connected by cross-bars *s*, to carry the straw up the inclined carrier and allow it to fall upon the stack.

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

1. In a straw-stacker, the combination, with the pivoted cross-bar C, the standards F, carrying the receiving-table G, and the shafts I N, of cranks P, connecting-rods Q, sliding cross-bar R, sliding toothed bar S, the center pulleys and band, K L M, the pairs of guide-pulleys *t*, and the chain-wheels and endless chains of the carrier, substantially as herein shown and described, whereby the operation of the mechanism will be unaffected by the lateral adjustment of the carrier, as set forth.

2. In a straw-stacker, the combination, with the pivoted cross-bar C, the standards F, the receiving-table G, and the shaft N, of the cranks P, the connecting-rods Q, the sliding cross-bar R, and the sliding toothed bars S, substantially as herein shown and described, whereby the straw will be fed from the said table, as set forth.

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Witnesses:

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