(No Model.) 2 Sheets—Sheet 1.

D. D. & P. J. SPRAGUE.

STRAW ELEVATOR FOR THRASHING MACHINES.

No. 330,268. Patented Nov. 10, 1885.

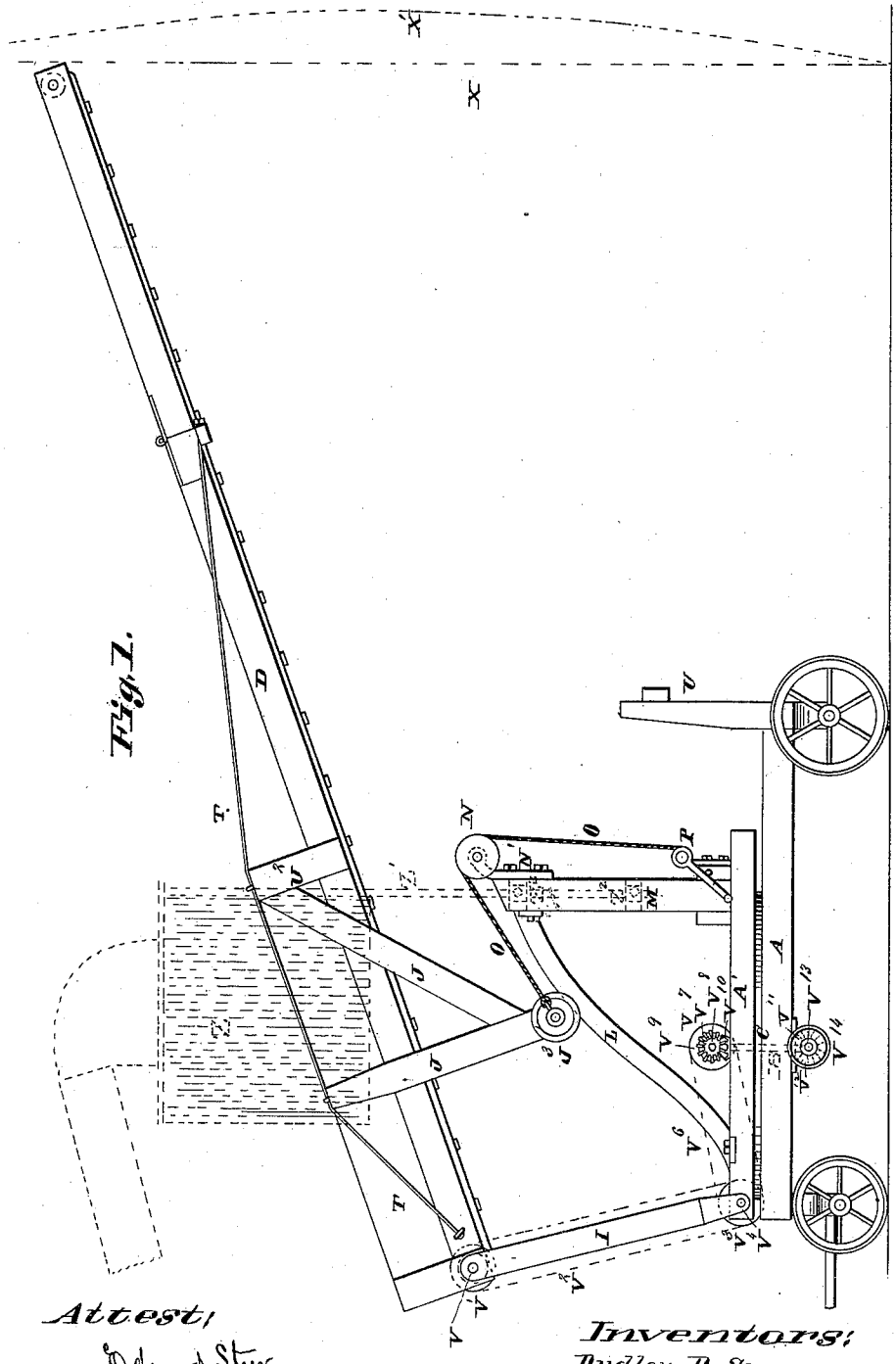


Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

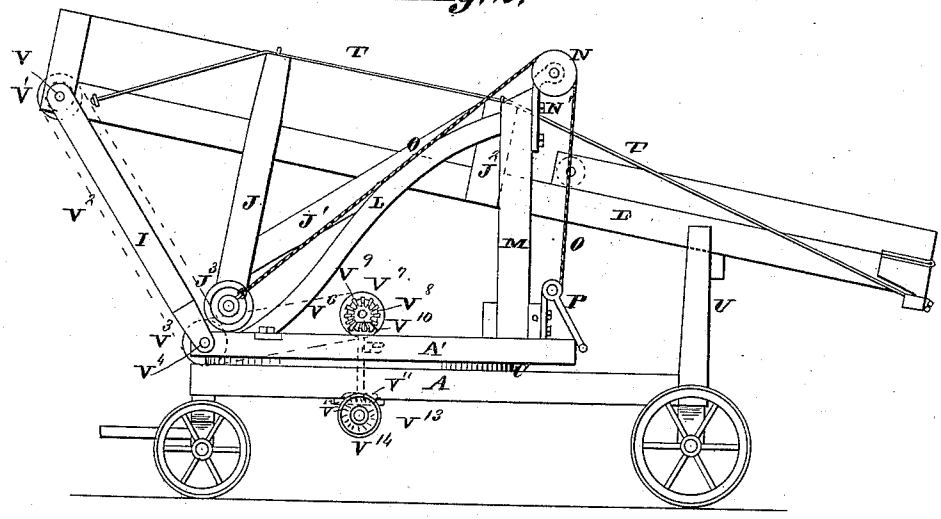
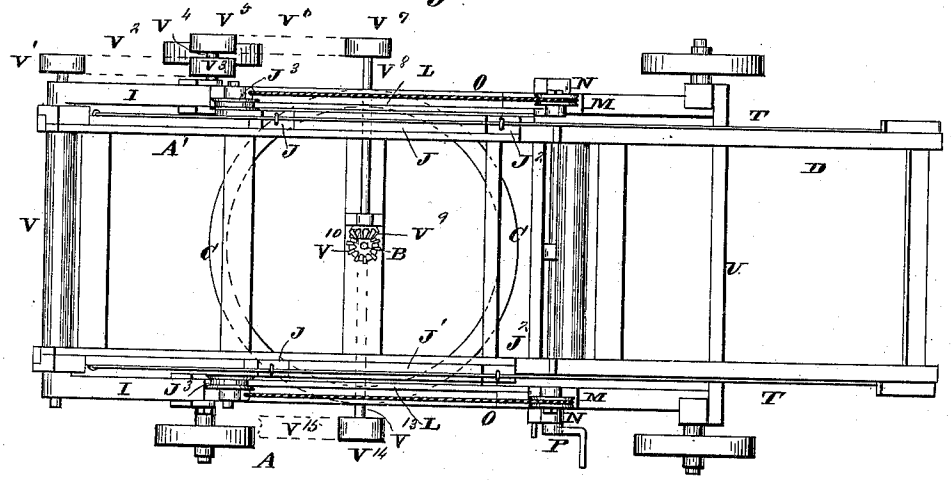


Fig. 3.



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UNITED STATES PATENT OFFICE.

DUDLEY D. SPRAGUE, OF CALIFORNIA, AND PEARLEY J. SPRAGUE, OF HIGBEE, MISSOURI; SAID DUDLEY D. SPRAGUE ASSIGNOR TO SAID PEARLEY J. SPRAGUE.

STRAW-ELEVATOR FOR THRASHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 330,268, dated November 10, 1885.

Application filed March 23, 1885. Serial No. 159,827. (No model.)

To all whom it may concern:

Be it known that we, DUDLEY D. SPRAGUE, of California, Moniteau county, Missouri, and PEARLEY J. SPRAGUE, of Higbee, Randolph county, Missouri, have invented a certain new and useful Improvement in Straw-Elevators for Thrashing-Machines, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is an elevation or side view of our improved apparatus, showing it in using position. Fig. 2 is a similar view showing it in traveling position, and Fig. 3 is a top view with the raddle removed.

Our invention relates to improvements in that class of elevators that are mounted on an independent base or truck frame, whereon it is pivotally supported, and adjustable in vertical, lateral, and longitudinal planes.

The objects of our invention are, to dispense with the cumbersome derricks, braces, guy-ropes, counter-balances, and leveling devices heretofore thought necessary and used; also, to provide novel means for supporting, hoisting, and lowering the elevator, whereby its discharge end is kept on a line vertically over the center of the stack at all heights of elevation; also, to facilitate its transportation by compactly folding it low down on its carrying base or truck, whereon its weight is well balanced; also, to provide an improved form of hood located on the turn-table at the receiving end of the elevator. We accomplish these desirable results by, and our invention consists in, features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, A represents a base or truck, to which is pivoted a turn-table or frame, A′ by a vertical shaft, B, and between the truck and turn-table we prefer to locate a circular track, C, for the table to turn on.

D represents a carrier-frame, connected at its receiving end to the turn-table or frame by arms I, pivotally secured to both the elevator-frame and turn-table, so as to permit the movement of the frame hereinafter described.

J J′ J^2 represent frames secured to the elevator-frame, one on each side, and which extend above and below the elevator-frame, and are provided with rollers or wheels J^3 at their lower ends, that travel on an inclined track, L, secured to and supported by the turn-table, and preferably consisting of two rails or ways, one at each side of the table, as shown, supported at their upper ends by posts M, extending upward from the table, at the tops of which are pulleys N, journaled in suitable brackets, N′, and over which pass ropes or chains O, connected to the frames J J′ J^2, and to a windlass, P, journaled in suitable boxes secured to the table. By turning the windlass the wheels or rollers J^3 are made to travel up the inclined track, which causes the carrier-frame to be raised from the position shown in Fig. 2, and at the same time moved in a longitudinal plane for the purpose of keeping its delivery end over the center of the stack.

We prefer to arch the track, as well as incline it, for by so doing the delivery end of the frame will be made to move in an exact vertical plane, as indicated by dotted line X, Fig. 1, instead of an arc of a circle, as indicated by dotted line X′, Fig. 1. This arc of a circle, however, is so large in a full-size machine that the delivery end of the carrier would virtually be over the center of the stack even if the track were not arched. The carrier-frame is strengthened and supported by truss-rods T, connected or secured to it and passing over the upper end of the frame J J′ J^2. When in its traveling position, the carrier-frame rests at its outer part on a support, U, extending upward from the truck or base. The shaft V of the raddle of the carrier has a driving-pulley, V′, connected by a belt, V^2, running parallel with the arms I to a pulley, V^3, on a shaft, V^4, at the inner end of the table, and this shaft carries another pulley, V^5, connected by a belt, V^6, to a pulley, V^7, on the outer end of a shaft, V^8, which is also secured to the turn-table, and which has on its inner end a miter or bevel wheel, V^9, that meshes into a similar wheel, V^{10}, on the upper end of the vertical shaft B, that pivots the turn-table to the base or truck, and on the lower end of this shaft is a bevel-wheel, V^{11}, that meshes into a similar

wheel, V^{12}, on the inner end of a horizontal shaft, V^{13}, that is secured to the base or truck, and provided at its outer end with a pulley, V^{14}, that is connected by a belt, V^{15}, to a thrashing-machine or other motive power. The carrier-frame can thus be moved laterally, (by turning the table,) vertically, and longitudinally without interfering with the operation of the raddle.

Z represents a hood or curtain arranged on the turn-table and adapted to turn therewith. We have shown it in dotted lines, Fig. 1, and secured to the upper end of rods Z′, sliding or capable of moving in brackets Z^2, secured to the posts M. The curtain is open at top and bottom, and its office is to receive the straw from the separator-carrier and guide it into the elevator. The separator-carrier is preferably provided with a hood, as shown, that reaches down a short distance into the curtain. By securing the curtain to the turn-table as we have shown and described it can be slid up and down, and will not interfere with the longitudinal and vertical movement of the carrier-frame D.

Our improved elevator is intended more particularly for use in connection with thrashing-machines, but may be used with corn-shellers, excavators, &c.

We claim as our invention—

1. In an elevator, in combination with a base or truck and turn-table, the inclined track secured to the turn-table, the carrier-frame, suitable arms connecting the frame and table, and bearings which move on the inclined track, whereby the carrier-frame is moved vertically and longitudinally.

2. In an elevator, in combination with a base or truck and turn-table, the arched inclined track secured to the turn-table, and the carrier-frame connected to the table by suitable arms and provided with bearings that move on the arched inclined track, whereby it is moved vertically and longitudinally.

3. In an elevator, in combination with a table and an inclined track secured to the table, the carrier-frame pivoted to the table and provided with bearings that move on the inclined track to cause the carrier-frame to move in vertical and longitudinal planes.

4. In an elevator, in combination with a truck and a turn-table pivoted to the truck, the inclined track secured to the table, the carrier-frame connected to the table by suitable arms, a frame secured to the carrier-frame, and wheels or rollers on said frame which move upon the inclined track as the carrier-frame is raised and lowered to cause it to move vertically and longitudinally.

5. In an elevator, in combination with the truck and a turn-table pivoted to the truck, the inclined track secured to the table, the carrier-frame pivoted to the table by suitable arms, frames secured to and extending above and below the carrier-frame, truss-rods connecting said frames to the carrier-frame, and rollers or wheels on the lower ends of said frames that bear upon said inclined track to cause the carrier-frame to move vertically and longitudinally.

6. In an elevator, the combination of the truck, the turn-table pivoted to the truck, the inclined track secured to the table, posts to which the track is made fast at its upper end, the carrier-frame, arms connecting the carrier-frame to the table, the frames secured to the carrier-frame, wheels or rollers on the lower ends of said frames which bear upon the incline track, pulleys journaled to the upper parts of said posts, windlass located at the foot of said posts, and ropes connecting the said frames to the windlass, the whole being so arranged that the carrier-frame is moved laterally, vertically, and longitudinally, as specified.

7. In an elevator, the combination of the truck, the turn-table pivoted to the truck, an inclined track secured to the table, the carrier-frame, arms pivoted to the table and to the carrier-frame, the raddle-shaft, a pulley and a belt running parallel with said arms, a shaft journaled on the turn-table, a horizontal second shaft journaled on the turn-table, a bevel-wheel at the inner end of said shaft, a vertical shaft pivoting the turn-table to the truck, bevel-wheels on the upper and lower ends of said shaft, and a horizontal driving-shaft journaled to the truck and provided with a bevel gear-wheel at its inner end, the whole so arranged that the carrier-frame can be moved vertically, horizontally, and longitudinally without interfering with the operation of the raddle, as set forth.

8. In an elevator, the combination of carrier-frame A′, truss-rod T, frame J J′ J^2, rollers J^3, and inclined track L, substantially as shown and described.

9. In an elevator, the combination of carrier-frame A, truss-rods T, frames J J′ J^2, rollers J^3, incline track L, arms M, pulleys N, windlass P, and ropes O, arranged and operating substantially as described.

10. In an elevator, the combination of truck A, turn-table A′, carrier-frame D, truss-rods T, frame J J′ J^2, rollers J^3, arms I, inclined track L, posts M, pulleys N, windlass P, and ropes O, all arranged and operating substantially as and for the purpose set forth.

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J. H. SAXTEN.
Witnesses:
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