

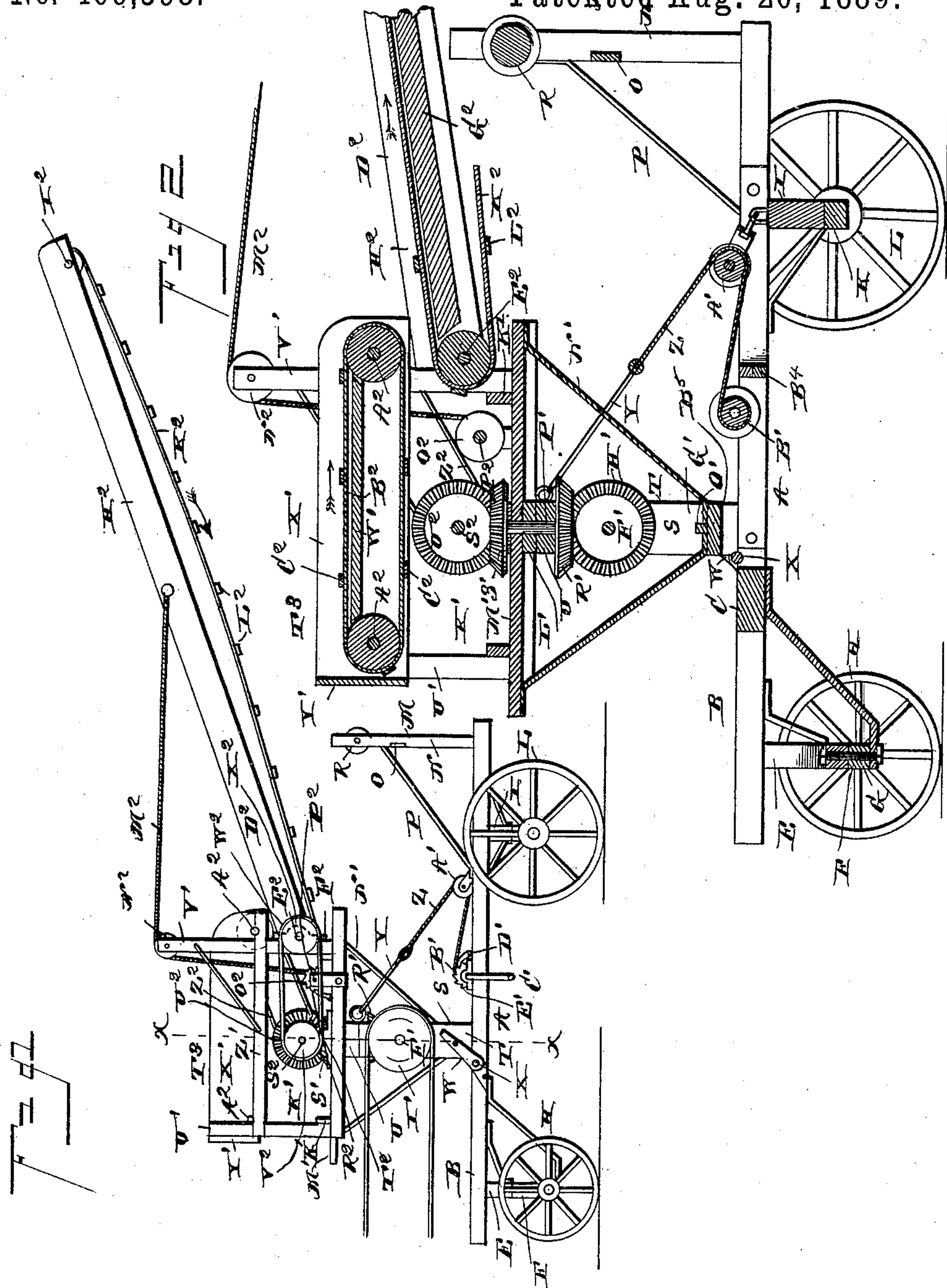
(No Model.)

2 Sheets—Sheet 1.

J. F. GAUMER.
STRAW STACKER.

No. 409,398.

Patented Aug. 20, 1889.



Witnesses
John Marie
Wm. Bagger

Inventor
Jeremiah F. Gaumer

By his Attorneys
C. Snow & Co

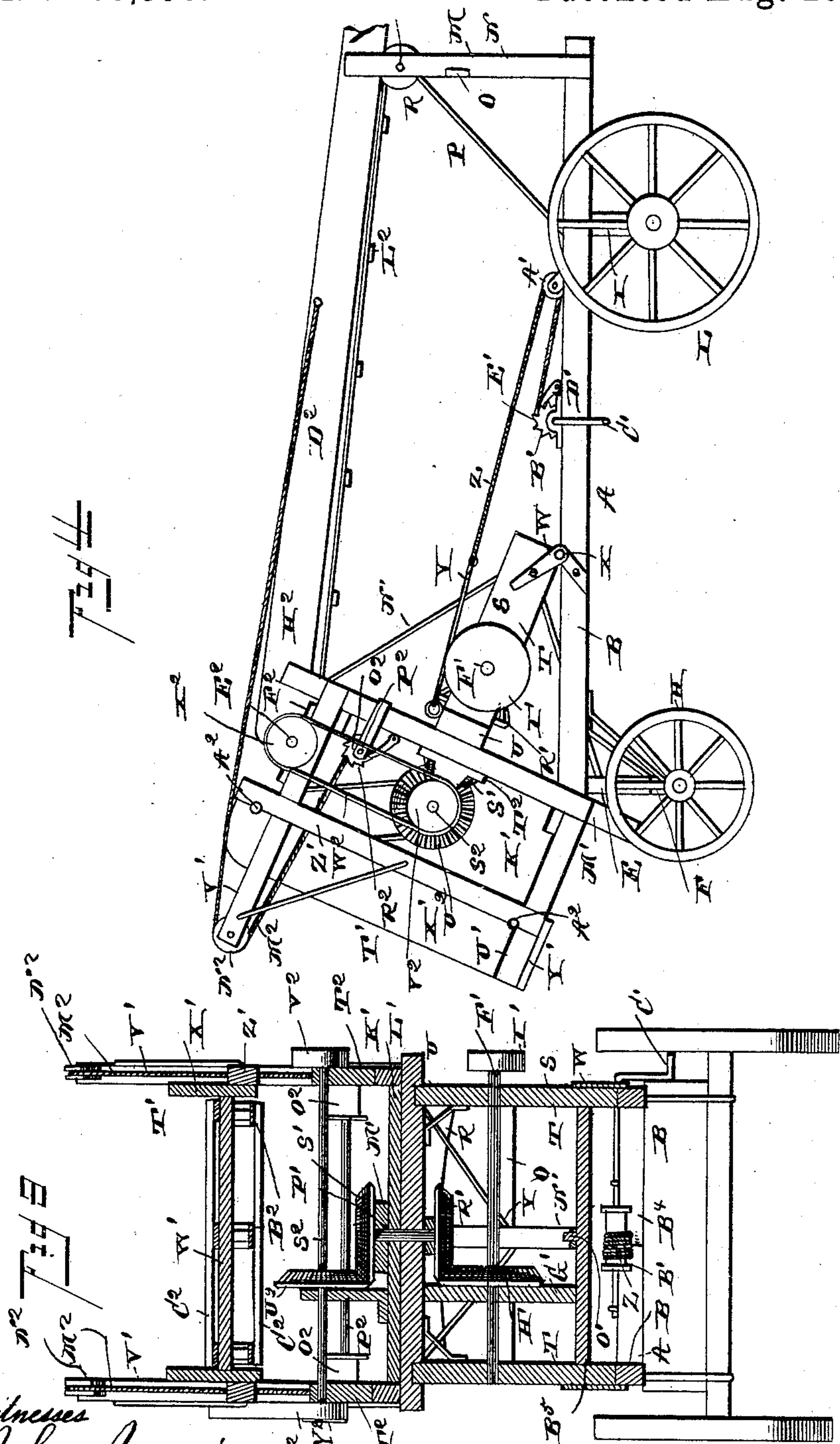
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UNITED STATES PATENT OFFICE.

JEREMIAH FRANKLIN GAUMER, OF DOW, INDIANA.

STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 409,398, dated August 20, 1889.

Application filed March 27, 1889. Serial No. 304,967. (No model.)

To all whom it may concern:

Be it known that I, JEREMIAH FRANKLIN GAUMER, a citizen of the United States, residing at Dow, in the county of Cass and State of Indiana, have invented a new and useful Straw-Stacker, of which the following is a specification.

My invention relates to an improvement in portable straw-stackers, adapted to be used in connection with thrashing-machines; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a straw-stacker embodying my improvements, showing the same arranged in position for operation. Fig. 2 is a longitudinal sectional view of the same, but with the conveyer broken off. Fig. 3 is a vertical transverse sectional view taken on the line *x x* of Fig. 1. Fig. 4 is a side elevation showing the machine arranged for transportation.

The main frame A comprises a pair of longitudinal beams B, the transverse beam C, which connects them at a suitable distance from their front ends, and a pair of crossed beams B⁴, which connect them near their rear ends.

Arranged transversely under the front ends of the beams B and bolted thereto is a bolster E, which has centrally pivoted to it the front axle F by a king-bolt G. Mounted on the spindles of the front axle are wheels H. A bolster I is bolted transversely under the beams B near their rear ends, and secured under the said bolster is the rear axle K, on the spindles of which are mounted the wheels L.

A supporting-frame M rises from the rear end of the frame A, and comprises a pair of vertical standards N and a cross-bar O. Inclined braces P are attached to the beams B and to the standards M, and serve to strengthen the latter, and between the said standards, at a suitable distance from their upper ends, is journaled a roller R, the face of which is slightly dished or concaved, as shown.

A rectangular frame S, which comprises a pair of knees or standards T, a plate U, which

connects their outer ends, and a beam B⁵, which connects them near their inner ends, is arranged transversely on the main frame just in rear of the cross-beam C, and is pivoted on the main frame by means of two pairs of hinge-leaves W and a pintle-rod X. The hinge-leaves extend diagonally across the lower front corners of the knees or standards, and thereby adapt the frame S to be folded forward upon the front portion of the main frame, or to be raised to a vertical position thereon. A bail Y is pivotally connected to the rear side of the frame S, and an elevating-cord Z is attached to the said bail, is passed around a guiding-sheave A', and is attached to a winch B', which is mounted transversely on the main frame, and is provided with a crank C', whereby it may be operated. A pawl D' is pivoted on one of the crossed bars B⁴, and engages ratchet-teeth E' on one of the heads of the barrel of the winch. The function of the said pawl is to prevent retrograde rotation of the winch, and the function of the latter and of the bail, rope, or chain and guiding-sheave is to elevate the frame S to a vertical position and to lower the said frame, as will be readily understood.

A shaft F' is arranged transversely and journaled in bearings in the knees or standards T and in an intermediate vertical bar G'. To the said shaft is keyed a miter gear-wheel H', and to one end of the said shaft is keyed a pulley I', which is adapted to be driven by an endless belt connected also to a driving-pulley on a thrashing-machine. (Not shown.)

A rectangular turn-table K' is composed of a pair of crossed beams L' M', which are arranged at right angles to each other. From the ends of the beam M' depends a truss-yoke N', the lower side of which is pivoted on a stud O', which rises from the center of the beam B⁵, and the turn-table is pivoted on a vertical shaft P', which shaft is journaled in a central opening in the plate U, and has a miter gear-wheel R' keyed to its lower end, which engages the gear-wheel H', and to the upper end of the said shaft is keyed a miter gear-wheel S'.

A rectangular frame T³ is bolted on the crossed bars of the turn-table, and from the said frame, near its corners, rise two pairs of

vertical standards $U' V'$, the former being shorter than the latter. A platform W' is secured to a pair of side boards X' , which side boards are secured on the inner sides of the standards $U' V'$. A board Y' connects the standards U' and is arranged at right angles to the side boards, and the front ends of the latter are rounded, as shown. A pair of horizontal beams Z' connect the standards $U' V'$ and are arranged just below the side boards, and in bearings near the ends of said beams are journaled a pair of roller-shafts A^2 , which are connected together by a series of three or more endless belts B^2 , the said belts being connected together by a series of transverse flights C^2 , arranged at suitable distances apart. The rollers, the belts, and the flights constitute an endless conveyer, which operates over the platform.

A frame D^2 has its inner end pivoted on a roller-shaft E^2 , which is journaled in bearings F^2 , attached to the standards V' . The said frame consists of a bottom board G^2 and a pair of side boards or flanges H^2 at the edges thereof. In the outer end of the pivoted frame is journaled a roller-shaft I^2 . A series of three or more endless belts K^2 connect the roller-shafts E^2 and I^2 and pass over and under the bottom board, and said belts are connected by a series of transverse flights L^2 and constitute an endless conveyer.

A pair of elevating ropes or chains M^2 are attached to the sides of the pivoted frame, pass over guiding-sheaves N^2 , journaled in the upper ends of standards V' , and have their inner ends secured to and adapted to be wound upon winches or drums O^2 , which are secured on a crank-shaft P^2 , the said crank-shaft being journaled in bearings on the turn-table K' . One of the said winches or drums is provided with ratchet-teeth engaged by a pivoted pawl R^2 . The function of the drums or winches and of the elevating-cords is to raise and lower the outer end of the pivoted frame and thereby adjust the same to any desired inclination and cause the straw carried by its conveyer to be deposited on the top of the stack.

A shaft S^2 is journaled in a pair of bearings T^2 , arranged on the centers of the turn-table K' , and to the said shaft is keyed a miter gear-wheel U^2 , which engages the wheel S' . To one end of the said shaft S^2 is keyed a pulley V^2 , which is connected by means of an endless belt W^2 to a pulley X^2 , which is keyed to the shaft E^2 . A pulley Y^2 on the shaft S^2 is connected by a belt Z^2 to a pulley on the rear shaft A^2 .

The operation of my invention is as follows:

The straw-stacker is arranged near a thrashing-machine and is connected thereto by an endless belt, which passes over a pulley I' , as before stated, and thereby the shaft F' is rotated. The gearing hereinbefore described communicates rotary motion to the shaft S^2 , and the pulleys and endless belts, which connect said shaft to the endless conveyers, cause

the said conveyers to operate in the direction indicated by the arrows. The straw is delivered from the thrashing-machine onto the platform W' , is carried by the platform-conveyer and dropped upon the conveyer on the pivoted frame, and is carried by the latter to the top of the stack. Inasmuch as the turn-table which supports the frame that carries both conveyers is pivoted on the shaft P , the said turn-table and conveyers may be swung in any desired direction from the main frame, and thereby two stacks may be built, one on each side of the main frame, without moving the latter. When the machine is in operation, the pivoted frame is swung clear of the supporting-frame M . When the machine is arranged for transportation along the road, the frame S is folded down on the front end of the main frame and the pivoted frame having the conveyer is arranged in line with the main frame and is lowered between the standards N , and caused to bear on the roller R .

Having thus described my invention, I claim—

1. In a straw-stacker, the combination, with the main frame, of the frame S , hinged thereon, the turn-table pivoted on the frame S , the platform supported on said turn-table, the platform-conveyer, the frame D^2 , pivoted to the turn-table frame and having the endless conveyer, the lower end of which is below the platform, the driving-shaft journaled in the frame S , and gears and connections between said driving-shaft and the endless conveyers, whereby the latter are operated, substantially as described.

2. In a straw-stacking machine, the rectangular turn-table pivotally mounted on the main frame, composed of the crossed beams L' and M' , and provided with the rectangular frame K' , and the vertical standards U' and V' , rising therefrom and having the platform and the endless platform-conveyer, the pivoted conveyer-frame connected to the turn-table frame and having the endless conveyer, gears and connections, substantially as set forth, to operate the conveyers, the winch, and the elevating-ropes connected thereto and to the pivoted conveyer-frame to raise and lower the latter, substantially as described.

3. In a straw-stacker, the platform having the endless conveyer traveling horizontally over the same and the pivoted conveyer-frame D^2 , with its lower end below the level of the platform, and the endless conveyer traveling over said conveyer-frame, substantially as described.

4. In a straw-stacker, the combination of the main frame having the vertical frame S , the driving-shaft journaled in said vertical frame, the vertical shaft P' , journaled in frame S and geared to the driving-shaft, the turn-table pivoted on said vertical shaft, the frame supported on the turn-table and having the platform, the shaft S^2 , journaled in bearings on said frame and geared to the vertical shaft, the endless conveyer operating on

the platform, the conveyer-frame pivoted to the turn-table frame, the endless conveyer operating on the same, and the pulleys and belts connecting said conveyers to the shaft S², substantially as described.

5 5. The main frame mounted on wheels and having the supporting-frame at its rear end, the frame S, hinged on the main frame, comprising the standards T, the plate U, connecting their outer ends, and the beam B⁵, connecting the standards near their inner ends, the turn-table pivoted on the frame S and having the frame supporting the platform, the conveyer-frame pivoted to said turn-table
10 15 frame, and the endless conveyers on the platform and conveyer-frame, substantially as described.

20 6. In a straw-stacking machine, the main frame, the hinged frame S thereon, comprising the standards T, the plate U, and the beam B⁵, having the stud O' rising from the center thereof, and the turn-table pivoted on the frame S by the vertical shaft P' and carrying

the platform and pivoted conveyer-frame, said turn-table having the depending truss-yoke 25 centrally pivoted on the stud O' of the beam B⁵, substantially as described.

7. In a straw-stacker, the main frame, in combination with the frame S, hinged thereon, the turn-table pivoted on the frame S, and the 30 horizontally-arranged platform supported on the turn-table, as set forth.

8. In a straw-stacker, the main frame, in combination with the frame S, hinged thereon, the turn-table pivoted on the frame S, the 35 platform supported horizontally on the turn-table, and the conveyer-frame D², pivoted to the turn-table and having the endless conveyer, as set forth.

In testimony that I claim the foregoing as 40 my own I have hereto affixed my signature in presence of two witnesses.

JEREMIAH FRANKLIN GAUMER.

Witnesses:

GEORGE W. IMMEL,
RICHARD H. BARCAS.