

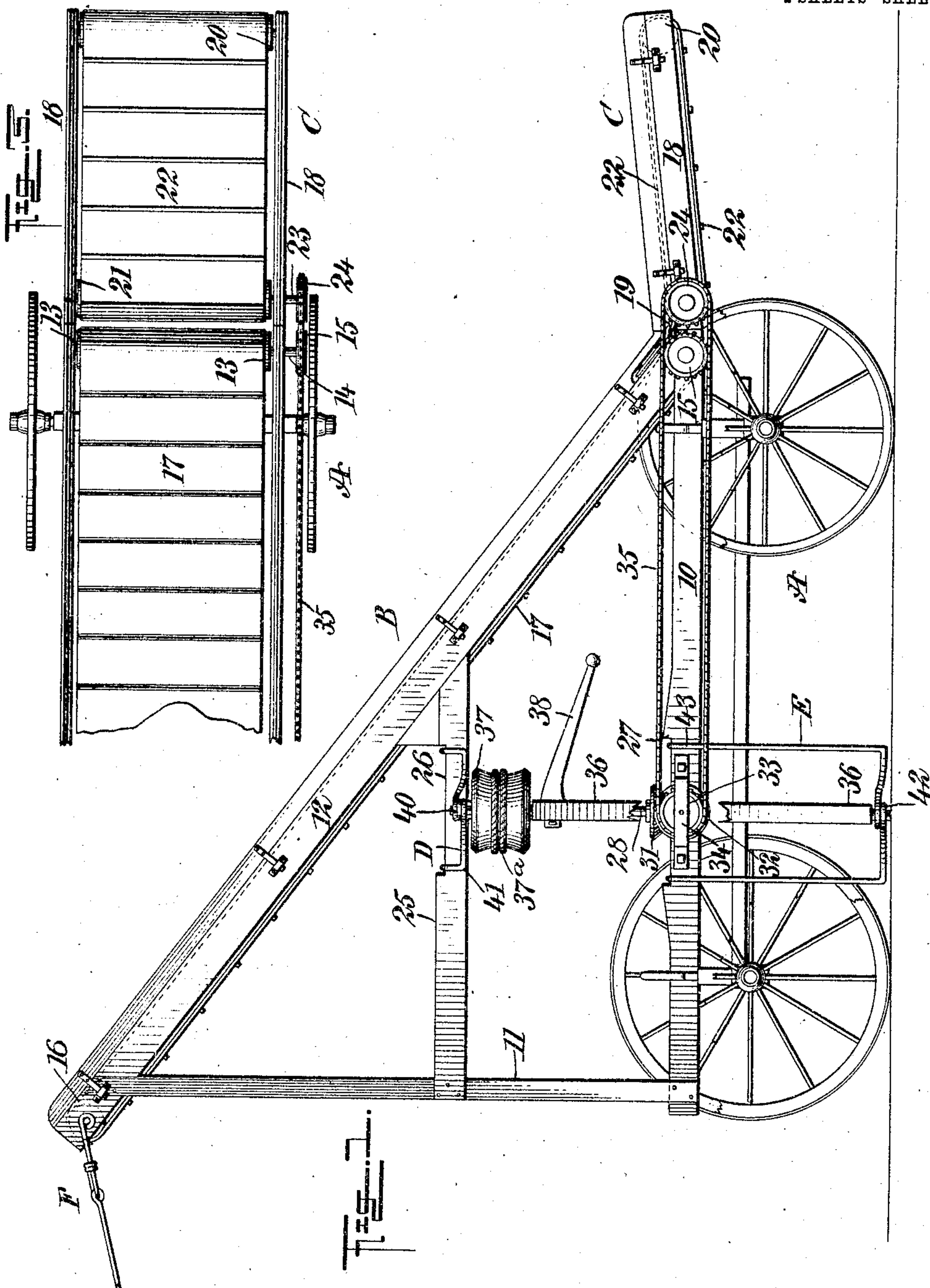
No. 785,471.

PATENTED MAR. 21, 1905.

P. BROUK.
STACKER.

APPLICATION FILED DEC. 1, 1904.

2 SHEETS—SHEET 1.



WITNESSES:

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INVENTOR

Peter Brouk

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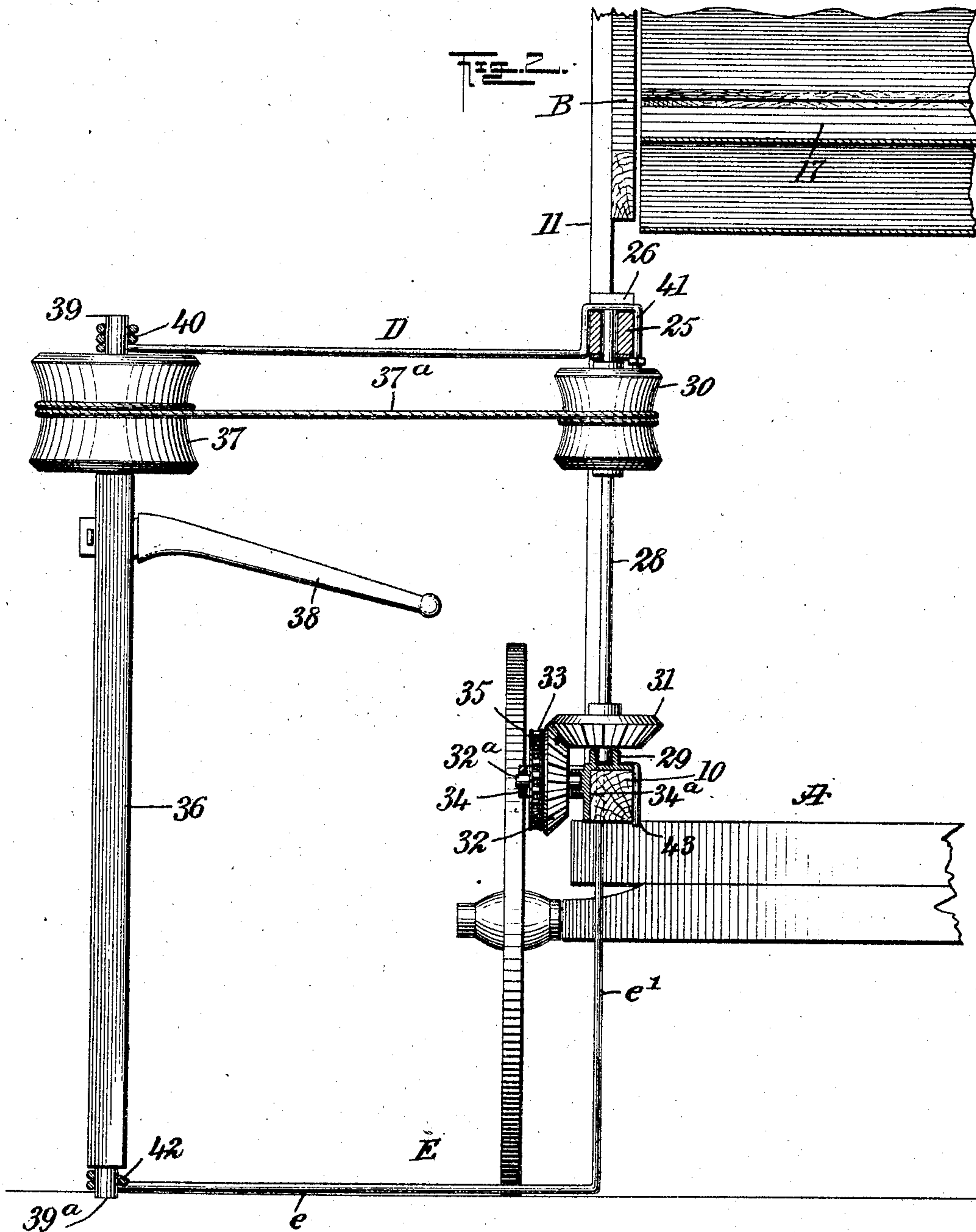
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UNITED STATES PATENT OFFICE.

PETER BROUK, OF WILSON, KANSAS.

STACKER.

SPECIFICATION forming part of Letters Patent No. 785,471, dated March 21, 1905.

Application filed December 1, 1904. Serial No. 235,040.

To all whom it may concern:

Be it known that I, PETER BROUK, a citizen of the United States, and a resident of Wilson, in the county of Ellsworth and State of Kansas, have invented a new and Improved Stacker, of which the following is a full, clear, and exact description.

My invention relates to hay-stackers of that class which is wheel-supported and operated by horse-power.

The purpose of the invention is to so construct the stacker that it may be readily mounted upon and as readily removed from the bed of an ordinary farm-wagon and which can be made very light yet durable and built quite high without being cumbersome and also to so construct the stacker that a folding conveyer is employed in connection with an elevator, and especially to provide a horse-power attachment for driving the elevator and conveyer aprons, which horse-power attachment can be quickly and conveniently connected with the framing of the machine or removed therefrom, as desired.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

Figure 1 is a side elevation of the improved stacker, parts being broken away. Fig 2 is a vertical section through the body of the machine and a partial front elevation and partial vertical section of the horse-power attachment, the view being drawn upon an enlarged scale; and Fig. 3 is a plan view of the conveyer and a portion of the elevator.

A represents an ordinary farm-wagon upon which the stacker is mounted and from which said stacker may be removed when not desired for use.

In the construction of the frame of the stacker two longitudinal sills 10 are employed, connected at the back by a hand-bar, and at the rear ends of the sills 10 standards 11 are secured. These standards 11 at their upper ends are attached to and serve to support the

upper end portions of side boards 12 of an elevator B, the lower ends of which side boards are secured in any suitable or approved manner to the forward end portions of the said sills 10. A drum 13 is located between the forward end portions of the sills 10, the shaft 14 of which drum extends through one side beam 10, as is shown in Figs. 1 and 3, and at the projecting end of the shaft 14 a sprocket-wheel 15 is secured. A second drum 16 is mounted to turn between the upper end portions of the side boards 12 of the elevator B. An endless apron 17 of any approved type is made to pass over the drums 13 and 16, as is indicated in Figs. 1 and 3.

In addition to the elevator B, I employ a conveyer C, which conveyer in operation occupies substantially a horizontal position and extends forwardly from the lower portion of the elevator B. The frame of the conveyer C consists of side boards 18, which at their rear ends are connected with the forward ends of the side boards of the elevator B through the medium of suitable hinges 19, as is shown in Fig. 1, so that when the conveyer C is not required it may be folded back out of the way upon the elevator. A drum 20 is mounted to turn between the side boards 18 of the conveyer at their forward ends, and a second drum 21 is mounted to turn between the rear end portions of the said side boards 18, as is shown in Fig. 3. The shaft 23, on which the drum 21 is mounted, extends out beyond the same sill 10 as does the shaft 14 of the lower drum of the elevator, and the shaft 23 of the conveyer-drum 21 at its extended end is provided with a sprocket-wheel 24 of the same dimensions as the sprocket-wheel 15. The construction of the conveyer C is completed by passing an endless apron 22 over the drums 20 and 21.

The machine is particularly adapted for stacking headed straw, and the straw is thrown upon the conveyer C and is taken up from the conveyer by the elevator and conducted to the rear end of the latter, where it is received upon distributing-fingers F of the usual type, adjustably mounted at the upper end of the elevator.

At that side of the frame beyond which the

shafts 13 and 23 extend a longitudinal brace-bar 25 is provided, extending from one of the standards 11 to the elevator B, as is shown in Figs. 1 and 2, and a depression or recess 26 is usually produced in the upper edge of this brace-bar or beam 25. A corresponding depression or recess 27 is produced in the sill 10 at the same side of the frame, as is clearly shown in Fig. 1. A shaft 28 is journaled at its upper end in the brace-bar or beam 25 at about the central portion of the recessed edge 26, and the lower end of the said shaft 28 is journaled in a bearing 29, secured to a sill 10, as is illustrated in Fig. 2. Near the upper end of the shaft 28 a pulley 30 is firmly attached to the shaft, and this pulley is peripherally grooved. Near the lower end of the shaft a beveled gear 31 is secured, and this beveled gear 31 meshes with a similar gear 32, secured upon a spud-shaft 32^a, journaled in suitable bearings 34 and 34^a, connected with the aforesaid sill 10, as is also shown in Fig. 2. A sprocket-wheel 33 is attached to the outer face of the beveled gear 32 in any approved manner or is fast on the spud-shaft 32^a. A chain belt 35 is passed over the sprocket-wheel 33 and over the sprocket-wheels 15 and 24, which are the drivers, respectively, for the elevator-apron and the conveyor-apron, the sprocket-wheel 33 being of greater diameter than the sprocket-wheels 15 and 24.

The horse-power attachment is constructed as follows: A shaft 36 is provided which is usually polygonal between its ends, the ends 39 and 39^a being cylindrical, and on the upper end of the shaft a pulley 37 is secured, preferably peripherally grooved. The pulley 37 is of a larger diameter than the pulley 30, and when the shaft 36 is in position one pulley is opposite or in front of the other, as is shown in Fig. 2, the two pulleys being suitably connected by a belt 37^a. The shaft 36 is provided with an attached arm 38, with which arm the whiffle-tree of the harness is connected. The shaft 36 is held in an upright position by means of an upper bracket-arm D and a lower bracket-arm E. The upper bracket-arm D is bifurcated, being practically V-shaped, and where its members connect an eye 40 is formed, in which eye the upper end 39 of the shaft 36 is mounted to turn. The ends of the members of the bracket-arm D are secured to the brace-bar 25 at the recessed portion 26 in any approved and removable manner—as, for example, the bracket-arm D is constructed of spring-wire or a spring-bar of suitable gage—and at the terminal portion of each member of the arm a clip member 41 is formed, as is shown in Fig. 2, the said clip members being adapted to be forced downward upon the brace-bar 25, as is shown in both Figs. 1 and 2.

The lower bracket-arm E is constructed of the same material as the upper bracket-arm

D. The lower bracket-arm is likewise constructed with two members, and where the members are brought together an eye 42 is formed, in which the lower end 39^a of the shaft 36 is mounted to turn. The horizontal or lower section of the lower bracket-arm E is adapted to rest upon the ground and is designated in the drawings as *e*, while the other or vertical section *e'* is made of sufficient length to extend upward from the ground to the sill 10, at which the driving mechanism is connected, and at the upper ends of the members of the said lower bracket-arm E clips or clamps 43 are formed, which are sprung over the said sill 10 in a downward direction at the recessed portion 27 of the said sill, as is shown in Figs. 1 and 2.

When an animal is harnessed to the arm 38, the animal is made to travel in a circle and in its circuit passes over the horizontal member of the lower bracket-arm E and under the upper bracket-arm D. When the machine is to be moved from one place to another, it is simply necessary to disconnect the bracket-arms D and E from the frame of the machine, and the said arms and shaft 36 may then be placed on the elevator resting upon the conveyor. If so desired, the power-arm 38, attached to the shaft 36, may be made in such manner as to be removable therefrom.

The device is susceptible of some modifications without departure from the principles and spirit of the invention, and for this reason I do not wish to be understood as limiting myself to the precise form of the parts set forth.

The attachment may be made to any form of stacker with equally good results, the essential elements consisting of the shaft 36, the pulley 37, the arm 38, connected with the shaft, a support, such as the part 25, and guides for the shaft 36, such as the parts D and E.

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

1. In stackers, a driving mechanism for the elevator, comprising a shaft, a driving-pulley on the shaft, and an arm carried by the shaft and adapted for connection with a draft-tree, and supports for the shaft, having bearings at one end and clamping mechanism at their opposite ends.

2. A stacker provided with an elevator, a driving mechanism for the elevator, a horse-power attachment for the said stacker, said attachment comprising a vertical shaft carrying a sweep, and a driving connection between the said shaft and the driving mechanism for said elevator.

3. A stacker, consisting of a frame, an elevator supported by the frame, a shaft mounted on the said frame, a gear-and-belt connection between the said shaft and a drum of the elevator, and a horse-power attachment comprising a shaft, upper and lower supports in which the ends of the said shaft revolve, said supports having means for attachment to the

frame in a removable manner, pulley and belt connections between the shaft on the frame and the shaft of the horse-power attachment, and an arm extending from the latter shaft and adapted for attachment to a harness.

4. A wagon, a frame removably mounted on the wagon, an elevator supported by the frame, a conveyer having hinged connection with the lower end of the elevator, a main shaft journaled in the frame, a driving-pulley on the main shaft, sprocket-wheels secured to the shafts of the adjacent drums of the elevator and the conveyer, a sprocket-wheel mounted to turn on the frame, a gear carried by the sprocket-wheel, and a gear meshing therewith and carried by the said shaft, a chain connection between all of the sprocket-wheels, and a horse-power attachment, comprising upper and lower bracket-arms, a shaft mounted to turn at its ends in the outer end portions of the said bracket-arms, clamps carried by the inner end portions of the bracket-arms and arranged for holding engagement with the said frame, a bar extending out from the shaft of the horse-power attachment, a pulley on the said shaft opposite that which is on the shaft carried by the frame, the pulley on the latter shaft being of less diameter than the pulley of the shaft of the horse-power attachment, and a belt connection between the two pulleys.

5. The combination with the elevating-sec-

tion of a stacker and the driving mechanism for the elevator, of a horse-power attachment, said attachment comprising a vertical shaft having a sweep, means for removably connecting the said shaft to the frame of the conveyer, and a driving connection between the shaft and the driving mechanism for the said elevator.

6. In stackers, a horse-power attachment for the same, comprising a shaft, a sweep carried by the shaft, supports in which the shaft is mounted, said supports having means for detachable engagement with the frame of the stacker, and a driving member on the shaft and from which the driving mechanism of the stacker is adapted to be operated.

7. In stackers, a horse-power attachment for the same, comprising brackets having clips at one end for engaging the frame of the stacker and bearings at the other end, one of the brackets having vertical and horizontal members, a vertical shaft mounted in the bearings of the brackets, an arm or sweep secured to the shaft, and a pulley on said shaft.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PETER BROUK.

Witnesses:

J. F. ZALOUDEK,
O. O. SPENCER.