No. 892,023. PATENTED JUNE 30, 1908.

D. BARNEY.

STACKER.

APPLICATION FILED JUNE 27, 1907.

3 SHEETS—SHEET 1.

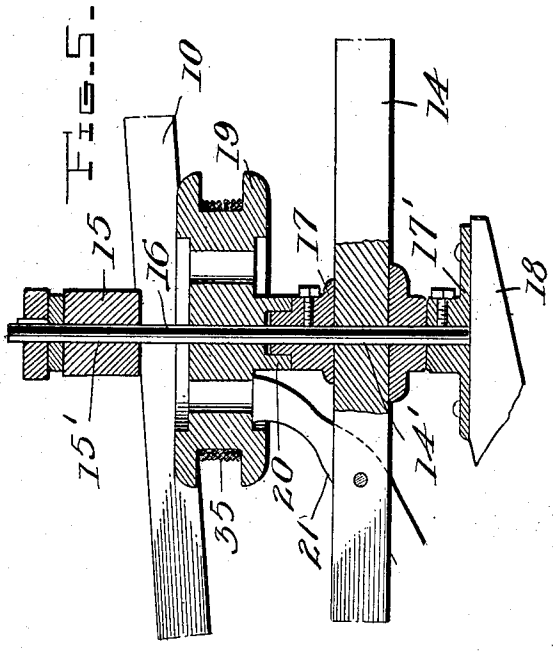

Fig. 5.

Fig. 1.

Witnesses

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3 SHEETS—SHEET 2.

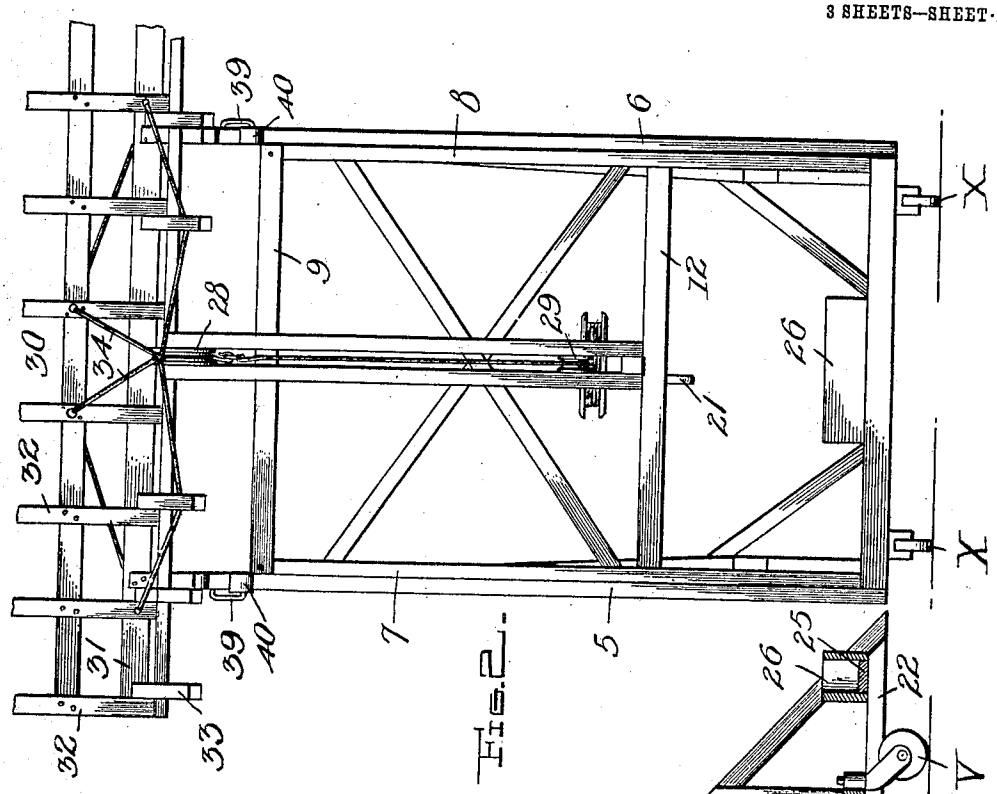

Fig. 2.

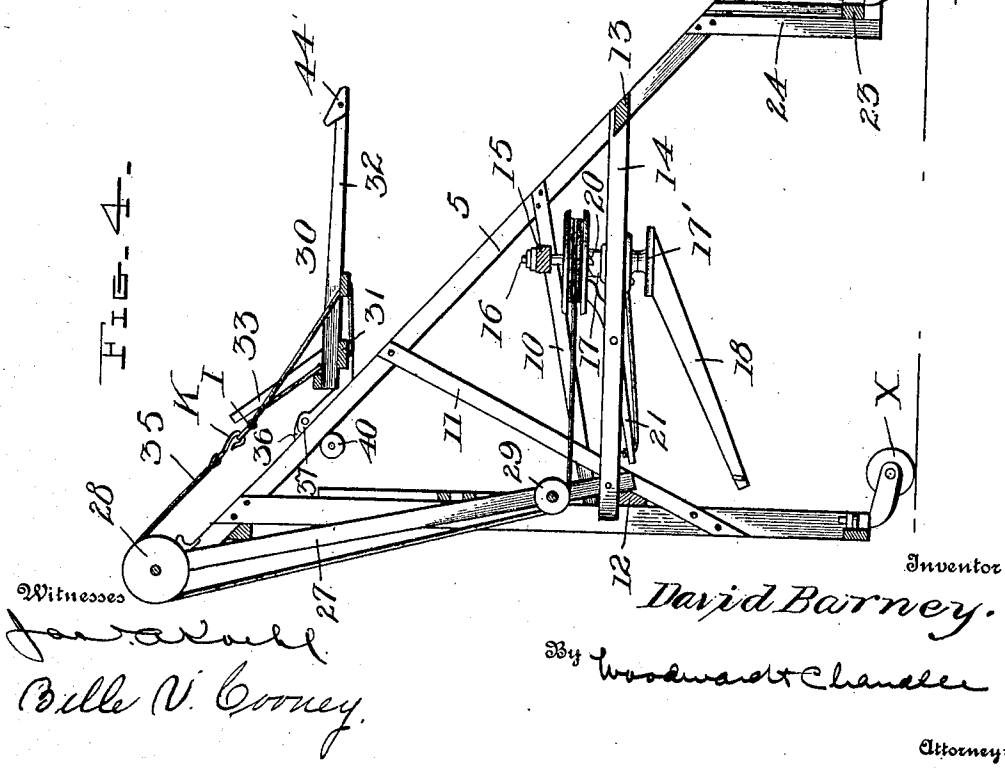

Fig. 4.

Witnesses

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3 SHEETS—SHEET 3.

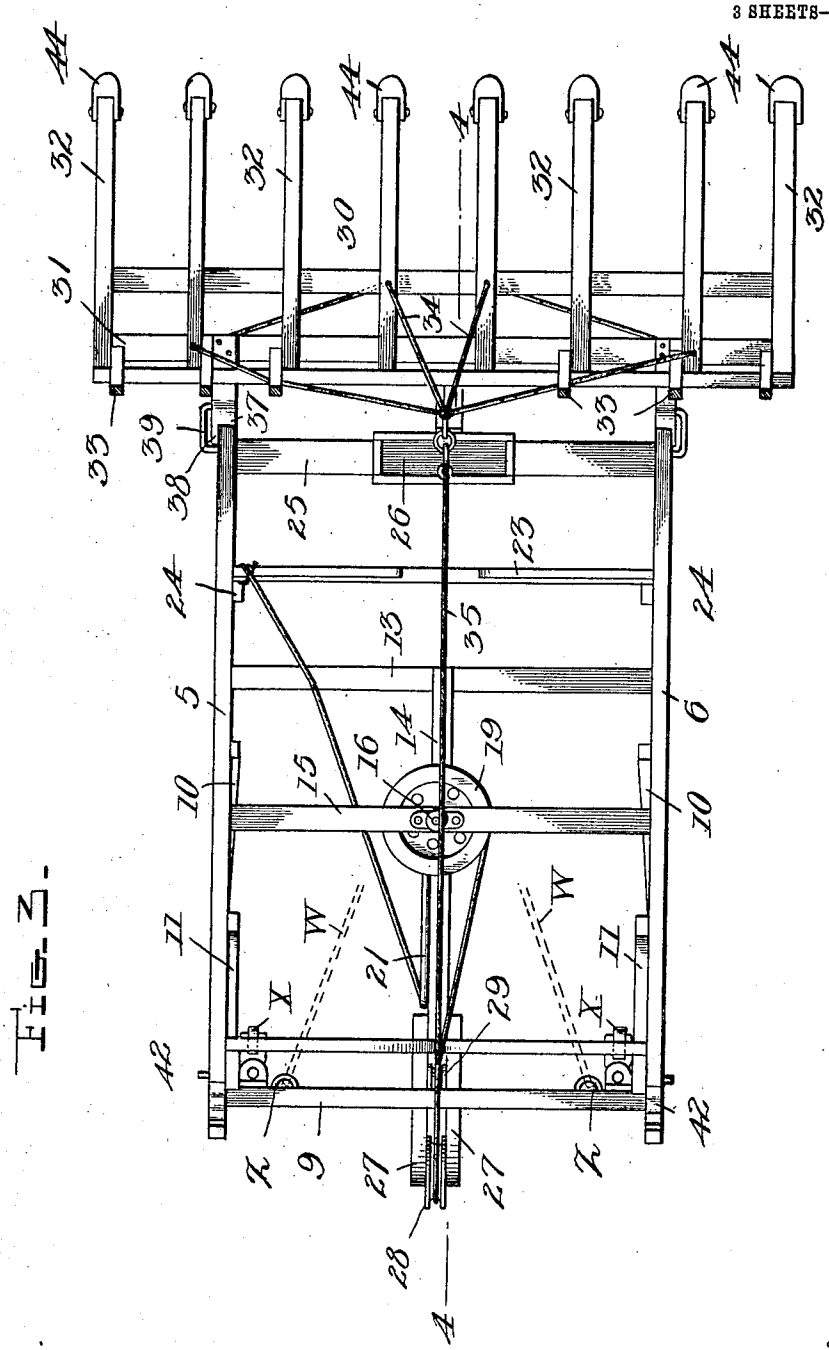

Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

DAVID BARNEY, OF GOLDEN, MONTANA.

STACKER.

No. 892,023. Specification of Letters Patent. Patented June 30, 1908.

Application filed June 27, 1907. Serial No. 381,133.

To all whom it may concern:

Be it known that I, DAVID BARNEY, a citizen of the United States, residing at Golden, in the State of Montana, have invented certain new and useful Improvements in Stackers, of which the following is a specification.

This invention relates to farm apparatus, and more particularly to stackers, and has for its object to provide an apparatus of this kind with which stacks may be easily and quickly built, and which will be operable by horsepower, the arrangement being such that backing of the animal will be unnecessary.

Another object is to provide a stacker which will be relatively simple in structure and arrangement, and which may thus be produced at a low figure.

Another object is to provide a rack for use in conveying hay and other matter to be stacked, to the stacker, and which will be specially adapted for use in connection with the stacker.

Other objects and advantages will be apparent from the following description, and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims, without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of references indicate similar parts in the several views, Figure 1 is a side elevation of the present stacker, with the elevator lowered. Fig. 2 is a rear elevation showing the elevator raised, Fig. 3 is a top plan, Fig. 4 is a central vertical section on line 4—4 of Fig. 3. Fig. 5 is an enlarged elevation of the vertical shaft and the clutch mechanism, the drum being shown in section.

Referring now to the drawings, the present invention comprises a pair of inclined tracks 5 and 6 disposed in parallel relation and supported at their upper ends by rearward uprights 7 and 8. The uprights 7 and 8 are connected at their upper ends by means of a horizontal member 9, and longitudinal brace rods 10 are secured at their forward ends to the inclined tracks and at their rearward ends to the corresponding rearward uprights. Diagonal braces 11 are also secured to the uprights and to the tracks, slanting forwardly and upwardly and a horizontal member 12 has its ends disposed in the angles of the diagonal braces 11 and the uprights 7 and 8, as shown.

A horizontal transverse member 13 is secured to the inclined tracks 5 and 6 in a plane with the member 12, and these two members have a longitudinally extending bar 14 secured at its ends thereto. A transverse bar 15 is secured to the braces 10 and the bars 14 and 15 have vertically alining openings 14′ and 15′ respectively, which receive a vertical shaft 16 carrying a clutch member 17 which rests upon the bar 14. The shaft 16 extends below the bar 14 and has a channeled casting 17 secured to its lower end which receives one end of an arm 18 in its channel, this arm extending laterally and downwardly, as shown.

A horizontally extending winding drum 19 is loosely mounted upon the shaft 16 above the clutch member 17 and this drum carries clutch elements 20 on its under face for coöperation with the clutch member 17 to hold the drum against movement upon the shaft and it will be observed that the drum is held by gravity in such position.

A horizontally extending lever 21 is pivoted upon the bar 14 for movement in a vertical plane and is disposed for engagement of one end against the under face of the drum 19 to raise the drum when the other end of the lever is moved downwardly and it will thus be apparent that the lever may be operated to bring the drum into position for free rotation upon the shaft.

Short rearwardly extending sills 22 are secured at their forward ends to the lower forward ends of the tracks 5 and 6, and are connected at their rearward portions by a transverse member 23, these sills 22 having uprights 24 secured to their rearward ends and to the inclined tracks. A horizontal board 25 is secured upon the sills 22 adjacent to their forward ends and has a feed box 26 mounted thereupon.

A pair of vertically extending parallel

members 27 are secured at their upper ends to the rearward face of the horizontal member 9 and at their lower ends to the forward face of the horizontal member 12, at opposite sides of the bar 14. These members 27 are thus disposed in spaced relation to receive upper and lower pulleys 28 and 29 respectively which are journaled therebetween, the former lying above the member 9.

A carrier 30 is movable over the tracks 5 and 6, and consists of a supporting member 31 extending transversely of the tracks and having a plurality of normally horizontal tines 32 secured thereto. A plurality of upwardly and rearwardly inclined retaining fingers 33 are secured to the member 31 in two groups adjacent to the ends of the member, the groups being thus in spaced relation, and a plurality of cables 34 are connected with the carrier and are mutually connected at a point between the groups of tines. At their meeting point, these cables are arranged for connection with a lifting cable 35 for movement of the carrier over the tracks 5 and 6, as will be later explained, and it will be observed that when the carrier is moved, the cables 34 will lie in position to prevent the passage of hay between the groups of fingers.

Upwardly and rearwardly inclined runners 36 are secured to the member 31 and include portions 37 resting upon the tracks 5 and 6 and having flanges 38 engaging the outer faces of these tracks. Hangers 39 are pivotally engaged in the upper ends of these runners 36 and include angular portions extending beneath the tracks and having rollers 40 revolubly mounted thereupon, these rollers thus acting to prevent disengagement of the runners from the tracks, as will be readily understood. The portions 37 of the runners are rounded at their upper ends for engagement in rounded recesses 41 formed in the forward faces of the stop blocks 42 located at the upper ends of the tracks 5 and 6.

The lifting cable 35 is secured at one end to the drum 19, from which it passes rearwardly to the pulley 29, from beneath which it passes upwardly and forwardly over the pulley 28, and thence downwardly for attachment to the cables 34.

It will thus be seen that a draft animal attached to the arm 18 may be driven in a circle beneath the tracks and other portions comprising the frame of the present stacker, to wind the cable 35 upon the drum and raise the carrier 30, until the rounded portions of the runners have engaged in the recesses 41 of the stop blocks 42, when further pull upon the cable will cause the carrier to tilt rearwardly and dump the load therefrom. As shown, the tines 32 are provided with metallic caps 44 at their forward ends.

When the carrier is to be allowed to descend into position to be re-loaded, the lever 21 is operated to raise the drum 19 into position for free rotation, when the carrier will descend of its own weight.

Staples Z are carried by a bottom member Y secured to the lower ends of the uprights 7 and 8 and this member has supporting casters X also secured thereto. The staples are arranged to receive the hooked ends of draft rods W to which a draft animal may be attached to transport the stacker from place to place, the forward portion of the stacker being supported by a caster V secured to the member 23. Staples U are secured to the uprights 24 for the reception of the draft rods, when the stacker is to be moved in the opposite direction.

It will be seen that the stacker may be operated in a contracted space, as the operating animal walks in a circle within the area covered by the stacker itself.

What is claimed is:

1. In a stacker, the combination with a frame having a space in its lower portion, a vertically extending shaft revolubly mounted in the frame, a lateral operating arm carried by the shaft, a clutch member carried by the shaft, a winding drum rotatably mounted upon the shaft and arranged for vertical movement thereon, said drum having clutch elements arranged for coöperation at times with the clutch member, a horizontally extending lever carried by the frame disposed for engagement of one end against the under face of the drum and arranged to disengage the clutch element of the drum with the clutch member, and a flexible connection connected with said lever for operation thereof.

2. In a stacker, the combination with a frame including inclined stacks disposed in parallel relation and supported at their upper ends by rearward uprights, vertically extending parallel members disposed between the uprights, upper and lower pulleys disposed between said members, of a shaft revolubly mounted in the frame and extending vertically, a lateral operating arm carried by the shaft, a clutch member carried by the shaft, a winding drum rotatably mounted upon the shaft and arranged for vertical movement thereupon, clutch elements carried by the drum arranged for coöperation with the clutch member when the drum is at the downward limit of its movement, a cable for the drum, said cable being passed over the pulleys carried by the vertically extending members, and a movable carrier arranged to slide upon the inclined tracks and connected with the cable.

3. A stacker comprising a frame having a

space in its lower portion, said frame including inclined tracks, stop blocks located at the upper ends of the tracks, a winding drum mounted above said space, an operating arm connected with the drum and arranged for attachment to a draft animal disposed in the space, a carrier movable upon the tracks, a lifting cable connected with the drum and with the carrier, and inclined runners connected with the carrier and arranged for engagement at times with the stop blocks.

In testimony whereof I affix my signature, in presence of two witnesses.

DAVID BARNEY.

Witnesses:
L. P. HYDE,
WM. JONES.