

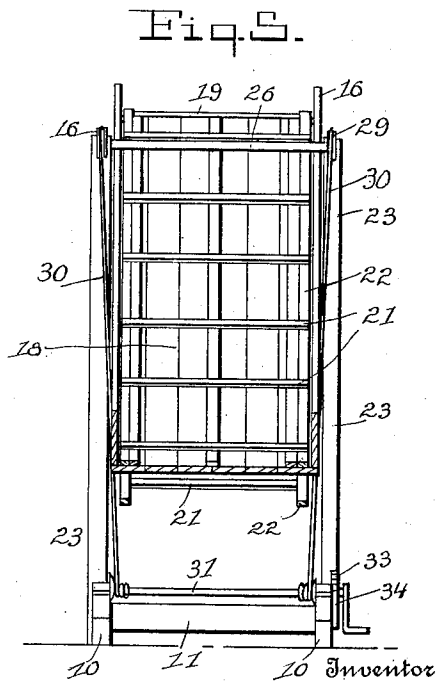
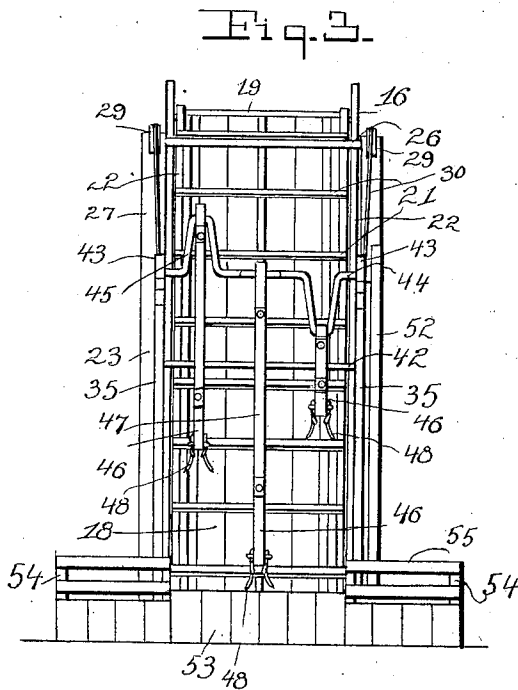
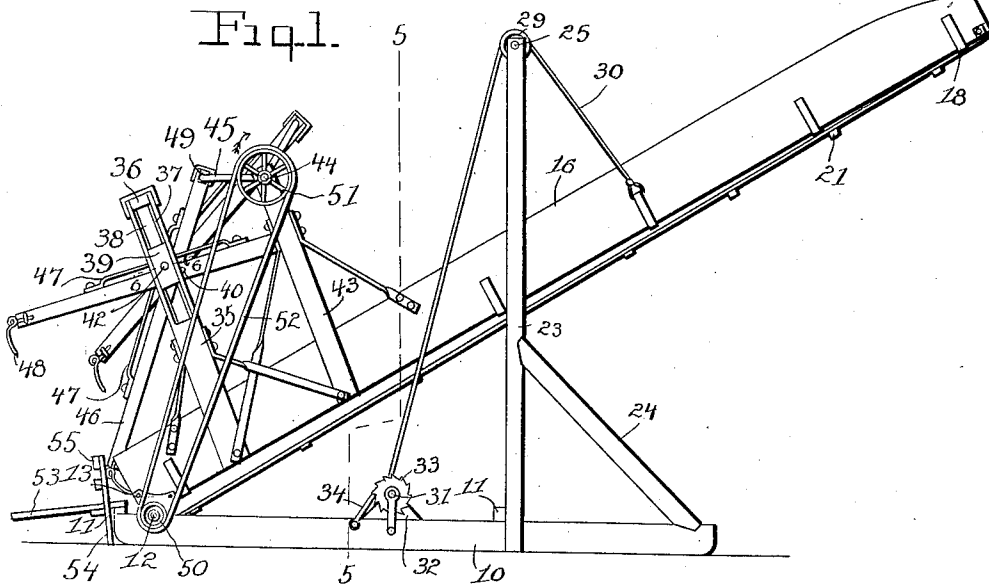
J. M. CROAN.
HAY STACKER.

APPLICATION FILED SEPT. 6, 1912.

1,057,040.

Patented Mar. 25, 1913.

2 SHEETS-SHEET 1.



J.M. Croan

Witnesses

R. H. Jones.

Francis Boyle

By

Charles Charles

Attorneys

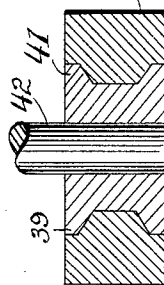
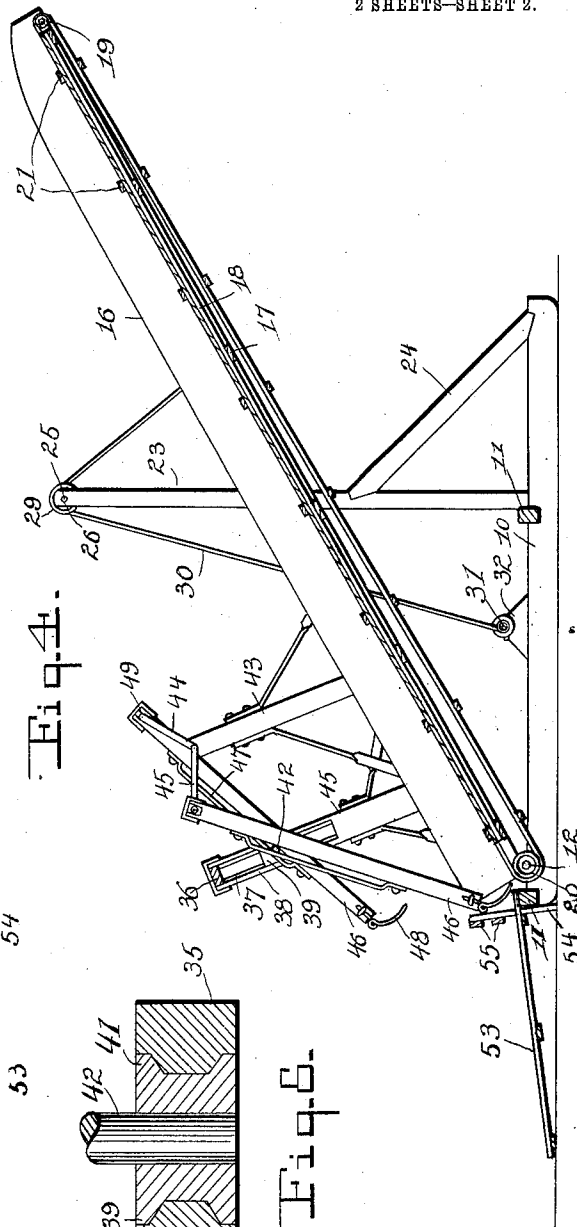
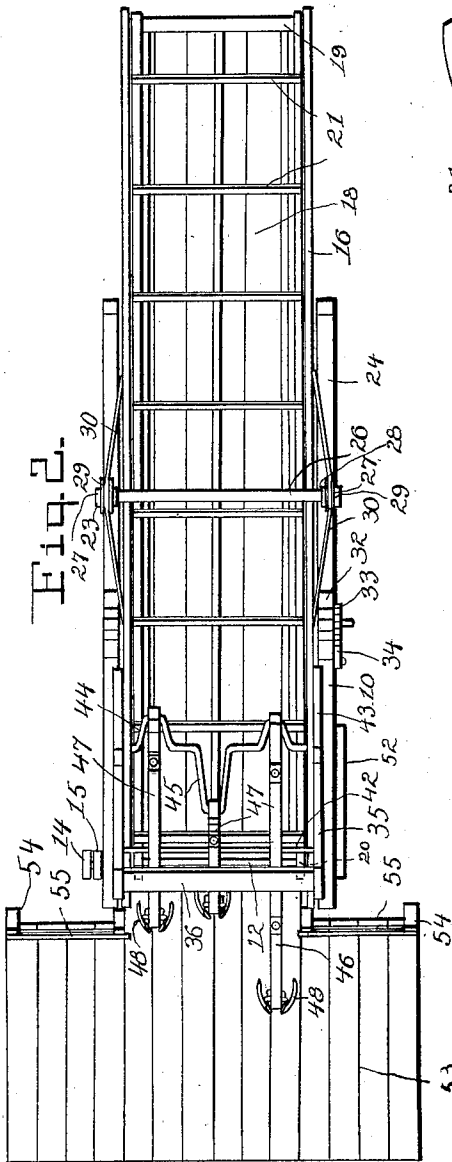
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Francis Boyle

Inventor

J. M. Croan

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Charles H. Croan

Attorneys

UNITED STATES PATENT OFFICE.

JESSE M. CROAN, OF BEATRICE, NEBRASKA.

HAY-STACKER.

1,057,040.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed September 6, 1912. Serial No. 718,954.

To all whom it may concern:

Be it known that I, JESSE M. CROAN, a citizen of the United States, residing at Beatrice, in the county of Gage, State of Nebraska, have invented certain new and useful Improvements in Hay-Stackers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to hay loaders and has for an object to provide a device of this character having a plurality of rakes mounted for simultaneous reciprocating and oscillating movement.

A further object of the invention is to provide a hay loader having an endless elevator which carries the rakes, a single driving shaft being employed to simultaneously actuate the rakes and endless carrier.

With the above objects in view the invention consists of certain novel details of construction and combination of parts herein after fully described and claimed, it being understood that various modifications may be made in the minor details of construction within the scope of the appended claim.

In the accompanying drawings forming part of this specification:—Figure 1 is a side elevation of the device. Fig. 2 is a plan view of the device. Fig. 3 is a rear end elevation of the device. Fig. 4 is a longitudinal sectional view through the device. Fig. 5 is a vertical sectional view taken on the line 5—5 Fig. 1. Fig. 6 is a cross sectional view taken on the line 6—6 Fig. 1.

Referring now to the drawings in which like characters of reference designate similar parts, 10 designates a pair of skids which are connected by cross bars 11. A shaft 12 is mounted for rotation in bearings 13 arranged on the top faces of the skids and is equipped at one end with a loose belt pulley 14 and a fixed driving pulley 15. An elevator is pivoted on the shaft and comprises side boards 16 which are connected by cross bars 17 upon which are secured a plurality of boards 18 that extend longitudinally of the side boards and form a bottom. A roller 19 is journaled at the upper end of the bottom in the side boards, and upon the shaft 12 is fixed a pair of spaced belt pulleys 20. A plurality of flights 21 are terminally connected at their ends by endless belts 22

which are trained over the roller 19 and belt pulleys 20, the endless carrier thus formed encircling the bottom of the elevator.

For raising and lowering the elevator, a pair of uprights 23 are secured to the skids and are braced by inclined braces 24. A shaft 25 is terminally journaled at the upper ends of the uprights and is equipped with a spacing sleeve 26 between the uprights. Each upright is formed of two timbers 27 and 28, and between these timbers a pulley 29 is fixed to the shaft 25. A pair of supporting cables 30 are trained over the pulleys 29 and are each terminally connected at one end to the side boards of the elevator, and are each connected at the opposite end to a shaft 31 which is journaled in bearings 32 fixed to the skids. The cables may be wound or unwound from this shaft to raise or lower the elevator, by rotating the shaft with a crank handle or otherwise. A ratchet wheel 33 is fixed to the shaft, and a gravity pawl 34 carried by one of the skids engages the ratchet wheel to lock the shaft stationary.

A pair of posts 35 are fixed to the side boards of the elevator near the lower or intake end of the latter and are connected at their upper ends by a cross bar 36. Each of the posts is provided at the upper end with a longitudinal slot 37 the edges of which are beveled as shown at 38. A bearing block 39 is removably mounted in each slot by means of pins 40 passed through the posts and into the block. Each bearing block is provided on the corners with guide flanges 41 which fit the beveled corners of the related slot and retain the block in position. A rod 42 is fixed at the ends in the bearing blocks 39 and forms a guide for the rakes which will now be described.

A pair of posts 43 are secured to the side boards of the elevator in advance of the posts 35, and a crank shaft 44 is journaled in the upper ends of these posts. The crank shaft is formed with a plurality of cranks 45 in the present instance three of such cranks being illustrated. Three rake bars 46 corresponding to the number of cranks are slidably fitted on the guide rod 42, each rake bar being equipped on the upper edge with an elongated strap bracket 47 which straddles the bar and slidably attaches the bar to the guide rod. Each rake bar is

equipped at the lower end with downturned rake teeth 48, and is pivotally connected at the upper end to the related crank of the crank shaft as shown at 49.

- 5 A belt pulley 50 is fixed to the driving shaft 12, and over this pulley and a belt pulley 51 fixed to the crank shaft 44 a belt 52 is trained. Upon actuation of the driving shaft 12, the endless carrier together
10 with the rake arms will be simultaneously actuated, the rake arms by virtue of being connected to the cranks of the crank shaft and slidably fitted upon the guide rod, will be simultaneously reciprocated and oscillated and during such movement will rake
15 straw or the like off from a feed board which will be presently described, on to the elevator which latter will carry the straw on to a stack, or loft as may be desired.
20 The feed board is arranged on the ground in rear of the device above described and comprises a floor 53 which is supported in inclined position by short posts 54 which are arranged at the rear edge of the floor and
25 project above the same, boards 55 being terminally connected to the posts above the

floor to retain the straw, hay or the like upon the floor.

What is claimed, is:—

In a hay stacker, parallel skids, a shaft 30 carried thereby, an elevator pivoted on said shaft, an endless carrier in said elevator actuated by said shaft, a pair of posts rising from said elevator, said posts being provided with slots near their tops, bearing 35 blocks removably secured in said slots, a guide rod having the ends secured in said blocks, a plurality of rake arms, strap brackets carried by said rake arms straddling said rod, a second pair of posts carried by said elevator, a crank shaft carried 40 by said posts having the cranks pivotally connected to the adjacent ends of said rake arms, and means connecting said crank shaft and the first named shaft for simultaneous rotation. 45

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

JESSE M. CROAN.

Witnesses:

BURTON E. OGG,
WALTER D. HILL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."