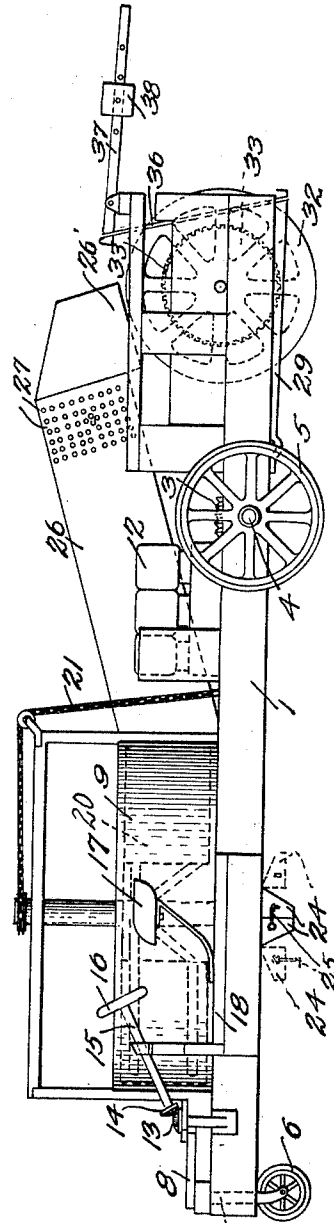
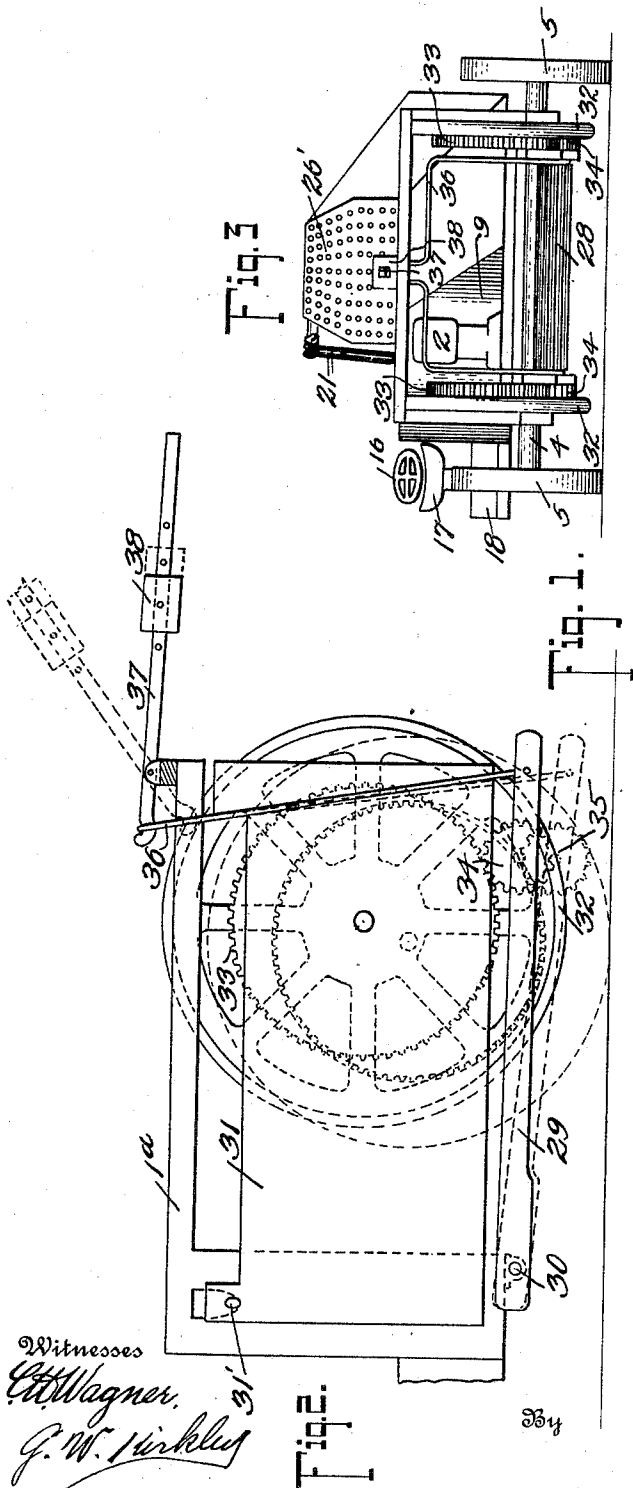


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HAY HARVESTING MACHINE.

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HAY-HARVESTING MACHINE.

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To all whom it may concern:

Be it known that I, CLARENCE A. SUMWALT, a citizen of the United States, residing at Sterling, in the county of Rice and State of Kansas, have invented certain new and useful Improvements in Hay-Harvesting Machines, of which the following is a specification.

The present invention comprises an improved machine for gathering hay, such as clover, alfalfa, or the like, and depositing the same on the field in piles or cocks.

A special feature of importance included in the invention is the provision of a peculiarly operating conveyer or carrier which receives the hay and is actuated automatically by the weight of the load deposited thereon to carry said load from the machine to the point of deposit on the field over which the machine travels.

The invention involves certain other general features of construction, the advantages of which will appear more fully upon reference to the following description and to the accompanying drawings, in which—

Figure 1 is a side elevation of a machine showing the preferred embodiment of the invention. Fig. 2 is an enlarged side view showing more particularly the mechanism by which hay is deposited upon the ground. Fig. 3 is a rear end view of the machine showing certain parts not clearly illustrated in the other figures.

Throughout the following detail description and on the several figures of the drawings, similar parts are referred to by like reference characters.

Describing the invention specifically and referring to the drawings, 1 denotes the frame of the machine which will be supplied with any suitable propelling means, that illustrated comprising a motor 2 of any conventional construction. The motor 2 is operatively connected by suitable gearing 3 with the rear axle 4, the latter being supplied with ground wheels 5. At its front portion, the frame 1 is supported by the caster wheels 6 mounted as usual upon rotative standards 7 at the upper ends of which are the rearwardly projecting arms 8. The arms 8 form part of conventional steering mechanism for the machine, the latter mechanism comprising gears 13 and 14 connecting said arms 8 with the steering shaft 15 which has a suitable steering wheel 16. A seat 17 on a platform 18 at one side

of the frame of the machine affords a convenient location for the operator to oversee the operation of the machine.

Near the front end of the machine is a suitable casing 9 which incloses a fan, the latter being driven by a power connection 21 leading to the engine or motor 2. Extending rearwardly from the casing 9 is a conduit 26, the rear end portion of which has openings 27, said rear end of the conduit 26 terminating just above a conveyer 28. The casing 9 has a receiving spout 24 made in sections, and each section being adapted to be held elevated by hooks 25 so that the spout may clear obstacles over which the machine passes. At the discharge end of the conduit 26 is a discharge spout 26'.

By reason of the arrangement of the receiving spout 24 of the casing 9, it will be apparent that while the machine is propelled over the field, the fan 20 may be driven at high speed to create sufficient suction at the spout 24 to draw into the casing the hay to be harvested. As the hay is drawn through the spout 24 into the casing 9, it is driven or forcibly ejected from the casing 9 by the fan 20 into the conduit or pipe 26 and the blast of air created by the fan 20 is sufficient to force the material swiftly to the discharge end of the conduit. From the discharge spout 26' of the conduit 26, the hay falls downwardly upon a conveyer 28 and the valves for the apertures of the spout 26' permit of escape of the air passing through the conduit 26 so that the hay may be discharged gently upon said conveyer.

The conveyer 28 is of special construction, as before premised and comprises a frame 29 pivoted at one end, as shown at 30, in Fig. 2, to the frame 1 of the machine. The rear end of the conveyer which is of the usual belt type, is adapted for slight swinging movement vertically, or toward and from the ground. A secondary swinging frame 31 is mounted at the rear end of the machine upon an upright frame 1^a carried by the frame 1 and said frame 31 comprises spaced sides, the rear ends of which are fulcrumed at 31' on the frame 1^a. The sides of the frame 31 have the normally inoperative drive wheels 32 journaled thereon, said drive wheels being formed each with a drive gear 33. The drive gears of the wheels 32 are normally in mesh with gears 34 carried by the frame 29 of the conveyer 28 and

mounted directly upon the conveyer shaft 35 around which the belt of the conveyer passes and by which said belt is driven. A bail of somewhat U-form, shown at 36, is connected at its lower ends with the rear extremities of the frame 29 of the conveyer, and said lower ends are also utilized to connect the frame 29 with the rear portions of the sides of the frame 31. In this manner, the frames 29 and 31 are caused to swing together in raising and lowering. At its upper end, the bail 36 is operatively connected with the inner end of a counterbalance beam 37, as is shown at 37', the other end of said beam supporting an adjustable weight 38.

It will be apparent from the foregoing, that by suitable adjustment of the weight 38, the frame of the conveyer 28 will be maintained in an upraised position normally. According to the adjustment of said weight, however, when the hay or material deposited upon the conveyer is of sufficient weight to overbalance the weight 38, the conveyer and associated frames 29 and 31 move downwardly toward the ground. Said downward movement will carry the drive wheels 32 into contact with the ground, whereupon they will begin immediately to rotate, transmitting their movement through the gears 33 and 34 to the conveyer shaft 35. When the shaft 35 begins to operate, the conveyer 28 is moved to carry the load now supported thereby rearwardly of the machine until said load is discharged upon the ground in the form of a pile or cock. As soon as the cock of hay has been deposited upon the ground, the conveyer 28 will be relieved of the weight of said hay and under the action of the counterbalance 38, said conveyer will be raised to its normal position, shown in full lines in Fig. 3 and remain in such position until another load of hay is deposited thereon and causes it to automatically operate in the manner hereinbefore described.

It is contemplated that certain of the minor features of construction of the invention may be modified in accordance with the broad spirit of the improvements, as hereinbefore presented and as permissible by reason of the scope of the appended claims.

Having thus described the invention, what is claimed as new is:

1. In a machine of the class described, the combination of a frame adapted to be propelled over a field, a conveyer mounted on said frame and adapted for bodily movement toward and from the ground, and means connected with the conveyer and operable by depression of the latter under the weight of a load to impart movement to said conveyer.

2. In a machine of the class described, the

combination of a frame adapted to be propelled over a field, a conveyer mounted on said frame and adapted for bodily movement toward and from the ground, means connected with the conveyer and operable by depression of the latter under the weight of a load to impart movement to said conveyer, and counterbalance means connected with the conveyer to maintain the last mentioned means normally inoperative.

3. In a machine of the class described, the combination of a support adapted to be propelled over the ground, a conveyer mounted on said support and comprising a frame adapted to swing toward and from the ground, counterbalance means normally holding said frame in a predetermined position, means for depositing material upon the conveyer, and means connected with the conveyer and operative when the load upon the conveyer depresses the latter to thereby impart movement to the conveyer.

4. In a machine of the class described, the combination of a support adapted to be propelled over the ground, a conveyer mounted on said support and comprising a frame adapted to swing toward and from the ground, counterbalance means normally holding said frame in a predetermined position, means for depositing material upon the conveyer, driving mechanism connected with the conveyer to impart movement to the same, and means permitting movement of said driving mechanism into operative contact with the ground to cause operation of said mechanism.

5. In a machine of the class described, the combination of a support adapted to be propelled over the ground, a conveyer mounted on said support and comprising a frame adapted to swing toward and from the ground, counterbalance means normally holding said frame in a predetermined position, means for depositing material upon the conveyer, and driving mechanism connected with the conveyer and adapted for swinging movement corresponding to that of the conveyer, said driving mechanism including driving wheels adapted upon contact with the ground to operate and impart movement to the conveyer.

6. In a machine of the class described, the combination of a support adapted to be propelled over the ground, a conveyer mounted thereon and normally inactive, means connecting the conveyer and support permitting downward swinging movement of the conveyer, a counterbalance normally holding the conveyer at the upper limit of its movement, means for depositing material upon the conveyer to depress the same, and wheels connected with the conveyer for movement therewith to contact with the ground and cause operation of the conveyer.

7. In a machine of the class described, the

combination of a support adapted to be advanced over the ground, a conveyer pivoted adjacent to one end to said support and adapted at its other end to swing toward
5 the ground, counterbalance means for normally supporting the conveyer above the ground and normally stationary wheels connected with the conveyer and movable therewith into contact with the ground to cause
10 operation of the conveyer.

8. In a machine of the class described, the combination of a support adapted to be advanced over the ground, a conveyer pivoted adjacent to one end to said support and
15 adapted at its other end to swing toward

the ground, counterbalance means for normally supporting the conveyer above the ground, normally stationary wheels, gearing connecting said wheels with the conveyer, and a frame supporting said wheels and
20 movable with the conveyer to carry the wheels into contact with the ground to cause operation of said conveyer.

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

CLARENCE A. SUMWALT.

Witnesses:

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