UNITED STATES PATENT OFFICE.

OLER P. VROOM, OF LINNEUS, MISSOURI, ASSIGNOR TO THE SUPERIOR HAY STACKER MFG. CO., OF LINNEUS, MISSOURI.

WAGON HAY-STACKER.


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To all whom it may concern:

Be it known that I, OLER P. VROOM, a citizen of the United States, residing at Linneus, in the county of Linn and State of Missouri, have invented a new and useful Wagon Hay-Stacker, of which the following is a specification.

This invention relates to wagon hay stackers.

In order to mount a hay stacker upon a wagon so as to render it portable, and at the same time cause the machine to be strong, practical and serviceable, it is necessary to provide means whereby the strain and weight incident to the stacking of the hay will be transferred to and taken up by the ground instead of falling upon the running gear which is used for moving the stacker from place to place when not in use. By providing means whereby the strains and weight of the stacking operation may be taken up by the ground in the same way as in a non-portable stacker, the necessity for providing running gear which is strong and stout enough to withstand the strain of stacking hay, and the necessity of providing means for locking said running gear in stationary position during the stacking operation, are both avoided.

In carrying out the present invention, the hay stacker, which may be of any suitable form and construction, is mounted upon the running gear in such manner that its rear end may be elevated from the ground when it is desired to transport the stacker from place to place and may be lowered onto the ground and firmly held in stationary position thereon when it is desired to stack the hay. The stacker is thus as firmly supported as a non-portable stacker when in use, and yet it is adapted to be readily elevated upon the running gear when necessary to move the same.

The invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawing forming a part of this specification, and in which like characters of reference indicate corresponding parts:—Figure 1 is a view in perspective of a wagon body, showing the same equipped with the stacker of the present invention, the stacker-head being in its elevated position. Fig. 2 is a view in vertical longitudinal section through the rear portion of the wagon, showing the stacker frame in its raised position, and the means for holding it thereupon. Fig. 3 is a view similar to Fig. 2, but showing the rear end of the stacker frame in its lowered position.

To avoid the inclusion in the specification of a description of parts that have no bearing on the actual invention, only those elements that co-operate to produce the object sought will be described fully, and other portions merely referred to by name.

Referring to the drawings, 1 designates a wagon body, of any preferred type, and provided with the usual front and rear wheels 2 and 3.

Supported by the body of the wagon for pivotal movement relative thereto is the usual lever L which works between the side bars S of the stacker frame, the lower ends of which are pivoted on the sides 4 of the wagon body, and their upper ends being led clamped together by one end of a strap S', the other end of which carries a pulley P that rides against the lever L. Suspended from the stacker frame by telescopic rods R is a stacker-head 5, which may be of any preferred construction, and is supported by the outer ends of a pair of frame bars 6, the inner ends of which are pivoted at 7 with the like ends of a pair of radius bars 8 the outer ends of which loosely depend from a cross-bar 9 secured to the under side of the wagon body. These radius bars are capable of swinging through an arc sufficient to permit the stacker-head to assume either of the positions shown in Fig. 2 or Fig. 3, the former displaying the parts in the position they occupy when the stacker-head is in its raised position, and the latter when in its lowered position. The radius bars are connected near their lower ends by a cross bar 10 to
which is secured one end of a cable C, which passes through a block B carried by the upper end of the lever, and thence downward and around a sheave S carried by the bar 10; this cable being provided, as usual, for the purpose of raising and lowering the lever.

The gist of the present invention resides in its novel means for holding the stacker head in either its elevated or depressed position, and consists, in part of two slide bars 11, that are arranged to rest upon the bolster B', and upon the cross bar 9; and are clamped against movement when desired, by cam levers 12 pivotally connected with the inner surface of the sides 4 of the wagon body, the cam surfaces of which are arranged to be in engagement with the upper edges of the slide bars as clearly shown in Figs. 2 and 3. Pivotally connected, intermediate of its ends, with the outer end of each slide bar is a link 13, the lower ends of the two links being pivoted between the ears of a pair of brackets 14 carried by the bar 10, and these links serve the double function of constituting the means for elevating the rear end of the stacker frame and for holding the latter rigidly, in its lowered position as shown in Fig. 3, and thus prevent lifting of the rear end of stacker-head frame.

When the stacker is to be moved from one place to another, the bars 11 are lifted by hand or otherwise. This brings the ends of the link 13 into parallelism with the slide bars, and finally into engagement with the bolster, thus positively to check their further movement. During this operation, the slide bars are gradually moved inward between the ears 12, and by the time the links have assumed a horizontal position, or that shown in Fig. 2, the slide bars will have moved inward their limit, and upon the cam levers being swung to the position shown in Fig. 2, the slide bars will be positively locked against movement, so that the ground frame will be in its raised position. To lower the rear end of the stacker-head frame, the reverse of the operation above described is observed.

It will be seen that the bars 11 and 13 are mortised or cut away, so that their overlapping portions are of the same cross sectional size as the remaining portion of the bars 11 and will thus slide readily under the ears 12 and be locked thereby.

It will be seen from the foregoing description, that in order to equip an ordinary wagon hay stacker with the improvements of the present invention, will necessitate merely the addition of the slide bars, links, radius bars and the link levers, and as these may readily be applied to position, and will not necessitate any change in the structural arrangement of the machine, the cost of equipping a stacker with the present devices will be but slight, while the advantage gained will be of the highest order.

What is claimed is:

1. In a wagon hay stacker, a wagon body provided with the usual running gear, a pair of slide bars arranged within the body and disposed to rest upon the rear bolster of the running gear, a stacker head frame, a cross bar rigid with the body, a pair of radius bars pivotally connected with the cross bar and with the rear portion of the frame bars, said stacker head frame being pivotally connected with said radius bars, links connecting the radius bars and the slide bars, and cam levers carried by the frame body to engage with the slide bars to lock the frame in the desired position.

2. In a wagon hay stacker, a wagon body including the usual running gear, a pair of slide bars combined with the body, and arranged to rest upon the rear bolster, a stacker head frame, a cross bar rigid with the body, a pair of radius bars pivotally connecting the cross bar with the rear portion of the stacker head frame, links connecting the radius bars and the slide bars, and arranged to contact with the rear bolster to limit the upward movement of the stacker head frame, and cam levers co-acting with the slide bars to lock the frame in the desired adjustment.

3. In a wagon hay stacker, running gear, a pair of radius bars pivotally connected with the rear portion of the running gear, a stacker head frame pivotally connected to the radius bars, a pair of slide bars on the running gear, a pair of links connecting the slide bars and the radius bars, and locking means coacting in the slide bars.

4. The combination with a wheeled body, of a stacker head frame having its rear portion arranged to be supported by the ground and to sustain the entire weight of the stacker head during the operation of the machine, the stacker head being capable of swinging from loading to unloading position without movement of the position of its pivot points.

5. The combination with a wheeled body, of a structure movably connected thereto and adapted to be lowered into contact with the ground and a stacker head frame pivotally connected to said structure, said structure being adapted to contact with the ground and transfer the weight of the load on the stacker head to the ground at all times during the loading and elevation of the stacker head, thus to relieve the running gear of the weight.

6. The combination with a wheeled body, of a stacker head adapted to bear flat upon the ground while being loaded, and a stacker head frame, of a structure pivotally connected to said structure, said structure being adapted to contact with the ground and transfer the weight of the load on the stacker head to the ground at all times during the loading and elevation of the stacker head, thus to relieve the running gear of the weight.
connected to the body and movable into contact with the ground preparatory to loading the stacker head, and pivotal connections between said structure and the frame, the said structure constituting means for transferring the weight of the load on the stacker head to the ground during the placing of the load upon the head and the elevation of the load with the head, thus to entirely relieve the running gear of the weight of the load.

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

OLER P. WOOD.

Witnesses:

M. B. FETTY,
CARLOS WESTERN.