

(No Model.)

J. W. McMASTER.

3 Sheets—Sheet 1.

WAGON RACK.

No. 378,703.

Patented Feb. 28, 1888.

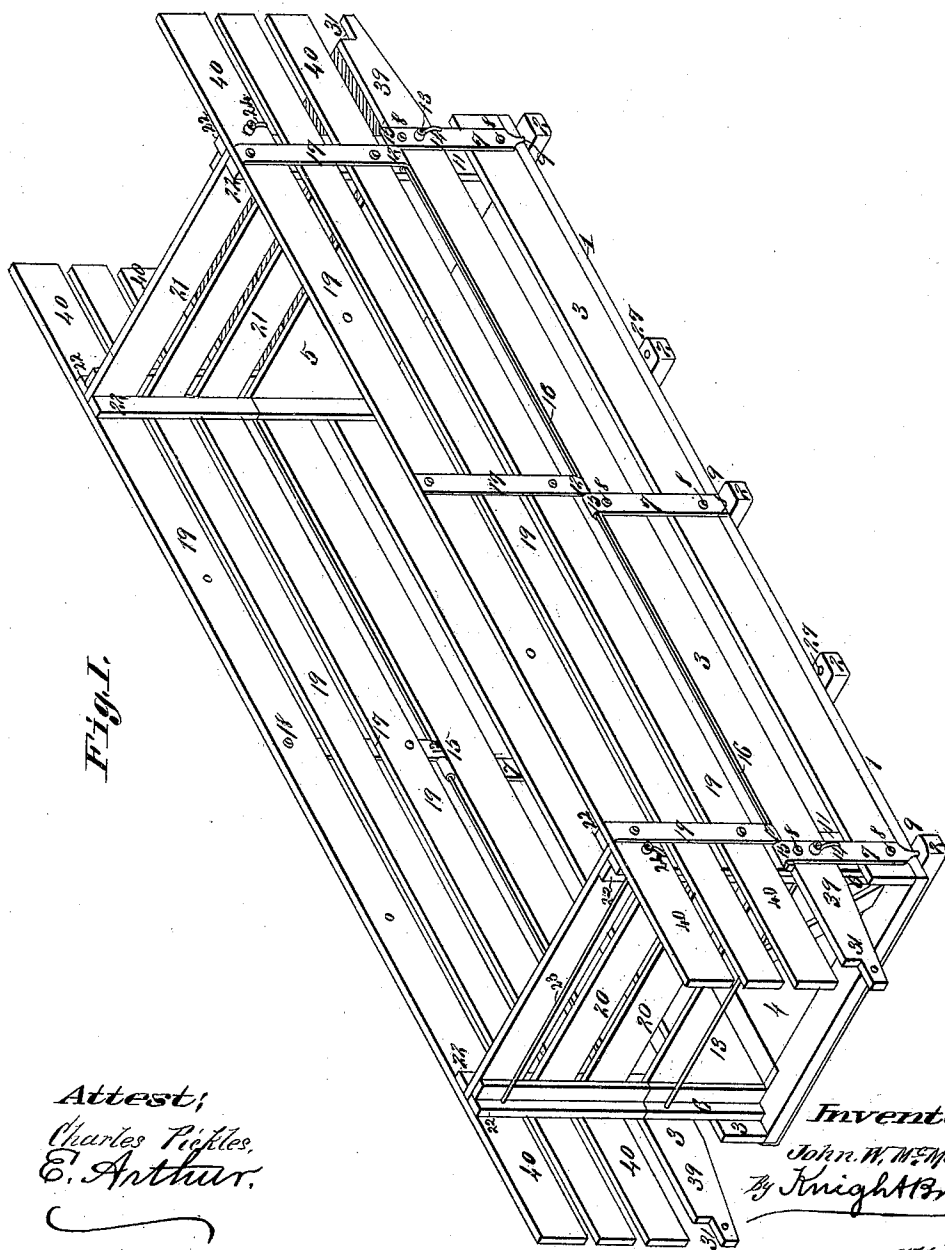


Fig. 1.

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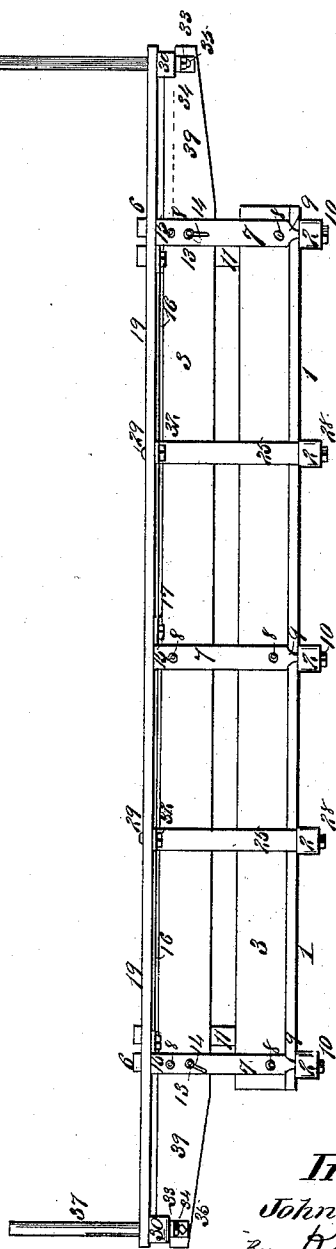
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Fig. II.



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Fig. III

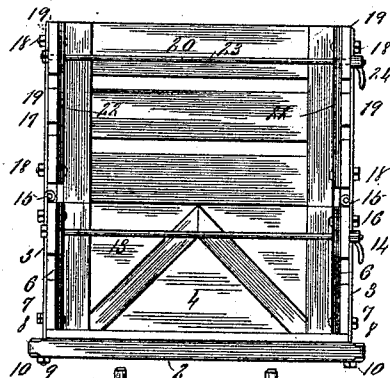


Fig. IV

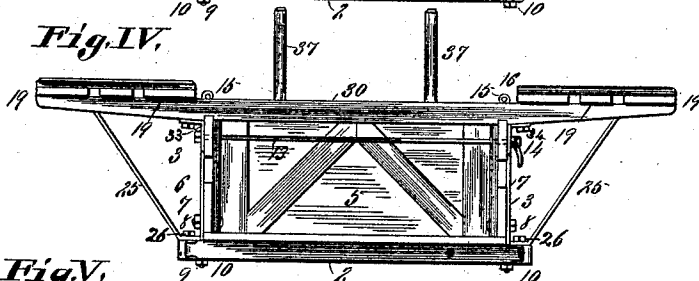


Fig. V

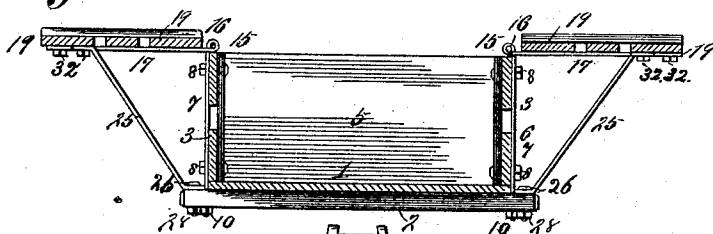
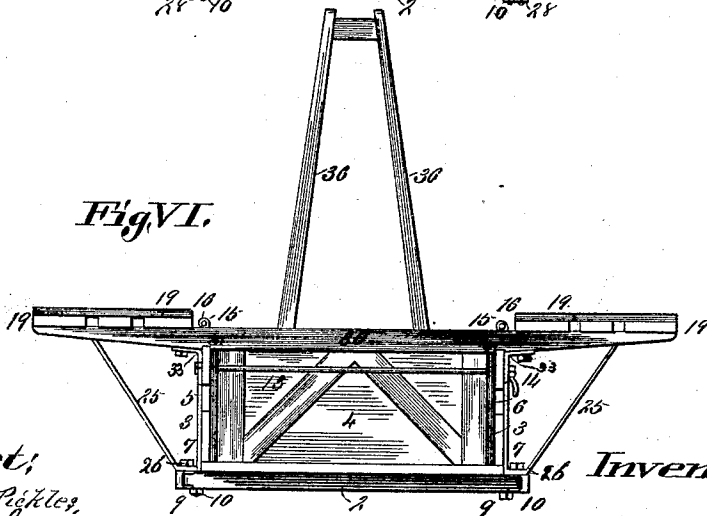


Fig. VI



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UNITED STATES PATENT OFFICE.

JOHN W. McMASTER, OF SPARTA, ILLINOIS.

WAGON-RACK.

SPECIFICATION forming part of Letters Patent No. 378,703, dated February 28, 1888.

Application filed July 9, 1887. Serial No. 243,879. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. McMASTER, of Sparta, in the county of Randolph and State of Illinois, have invented a certain new and useful Improvement in Combined Hay and Stock Racks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

10 Figure I is a perspective view of my wagon bed and rack, showing the raves or upper rack with the head and tail gates in position for drawing hogs or other stock. Fig. II is a longitudinal side view of the rack with the side raves folded back or outward and resting on the cross-bearers and bracket-supports. It also shows the ladder-stakes erected in front for attaching the binder and the pin-stakes behind, the whole being arranged in position for hauling hay, straw, &c. Fig. III is an end view showing the wagon-bed with the rack elevated, the head and tail gates inserted, and the cross-tie rods coupling the sides together in position for hauling stock. Fig. IV is a rear end view of a like figure to that shown in side view, Fig. II, showing the cross-bearers on which the raves are folded back and the angle-brackets that brace them. Fig. V is a vertical cross-section taken on line V V, Fig. II, showing the interior of the rack when in position for hauling hay, &c.; and Fig. VI is a front end view of a like figure to that shown in side view in Fig. II and rear end view in Fig. IV, showing the raves thrown back on the cross-bearer from which the ladder-stakes ascend.

My invention relates to devices to facilitate the hauling of stock, hay, straw, &c.; and the invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, in which similar figures of reference indicate like parts in all the views, 1 represents the bottom of the wagon bed or box.

2 are the cross-sills, to which the bottom is secured.

3 3 are the side-boards of the bottom bed.

4 is the head-gate, and 5 the tail-gate, which slide within the cleats 6 and 11.

7 are the iron corner and middle straps, which are secured by rivets 8 to the two side-

boards on each side of the bed. Screw-bolt terminals 9 from the bottom of said straps pass through the end and middle cross-sills, and are secured beneath the bed by nuts 10.

13 are the cross-tie rods that pass through perforations in the cleats 6, the side boards and straps of the lower bed or rack coupling the corresponding sides together; and 14 are thumb-nuts that secure the attachment of said coupling-ties.

The upper ends of the aforesaid corner and middle straps are curved round to form hinge-sockets 15, in which the elongated hinge-bolts engage, which also pass through the bent sockets 12 of the iron straps 17, thus unitedly forming strap-hinges that carry the side boards or raves of the upper rack. These elongated pins have a head at one end, and a screw-threaded at the other to engage in the internal screw of one of the end straps, and thus the strap-hinge bolt is secured in its seat. The said straps are riveted at 18 to the three side-boards 19 at the ends and middle of each side of the rack.

When used as a stock-rack, (for hauling the same,) the side boards or raves are elevated, as shown in Figs. I and III, the upper head-gate, 20, and tail-gate 21 are slid down within the cleats 22, and the upper cross-tie rods, 23, pass through perforations in the cleats and the upper side-boards, coupling the corresponding sides together; and 24 are thumb-nuts that secure the attachment of the coupling-ties, thus firmly bracing it in its elevated position as a rack for hauling stock.

When used as a hay or straw rack, (for hauling the same,) iron bracket-braces 25 are made to support the middle of the then recumbent raves. The feet of said braces are fastened by bolts 26, that pass through socket-holes 27 near the ends of the cross-sills, and are secured by nuts 28, and at top are fastened to the raves by screw-bolts 29 and their nuts 32. The ends of the raves at the same time are supported by cross-tree bearers 30, which, when adjusted in the hay-rack form, are firmly held in their recessed seats 31 at the ends of the upper side-boards of the lower bed by angle-irons 33, fastened by screw-nutted bolts in the cross-tree bearers and by the screw-nutted bolt 35 in the upper side-boards of the lower bed.

36 represents the ladder that ascends from

the forward cross-tree bearer, for holding the front end of the binding-pole and for retaining the end of the lines that guide the team when the loader or teamster is otherwise occupied; and 37 are pins that are inserted in the rear cross-tree bearer.

When the rack is used for hauling stock, and in consequence elevated, as shown in Figs. I and III, the cross-tree bearers and the said ladder and pins, with the braces 25 and angle-irons 33, are detached and dispensed with and the upper end-gates and tie-rods secured in position.

It will be seen that the upper boards of the lower wagon-bed have longitudinal extensions 39, to seat the cross-tree bearers that support the elongated raves of the hay-rack, and the rave-boards have longitudinal extensions 40, to extend the raves to the length required for a hay-rack. By this means I not only extend the width of the rack when changing from a stock-rack to a hay and straw rack, but increase its length also, and that above the height that said extension would incommode the action of the whiffletrees and the team.

Stockmen frequently experience great inconvenience from having often to change from the hay-rack to the stock-rack, and vice versa, having not only to keep separate racks for their different use and to provide room to harbor from the weather the racks not then in use, but also, as is well known by those who have had it to do, it is about the most laborious work that is required of the hands to change the heavy wagon beds and racks.

By the use of my combined stock and hay rack the necessity of lifting off and putting on different racks for their different employments is avoided, and by a mere change of position and a slight interchange of parts, without any heavy lifting, the transformation of the rack is effected for its different uses; also, there is a large saving of expense in the construction of the combined rack over the two racks, besides the convenience in handling and in effectiveness.

Besides its two uses in the different forms described relatively as stock and hay racks, the upper rack can easily be unshipped and laid aside, when the lower section will constitute a light skeleton wagon-bed for hauling corn, grain, sacks, &c. To remove the raves, and thus effect this change, all that is required is to unscrew and remove the two elongated bolts 6, that respectively connect the upper and lower sections of the strap-hinges on each side,

when, as seen in Fig. I, the raves can easily be lifted off.

I claim as my invention—

1. In a stock and hay rack, the combination of the cross-sills that carry the bottom 1 with the side-boards 3 and end-gates 4 5 and cross-tie rods 13 of the lower bed, the same being bound by straps 7, said straps, in conjunction with straps 17 and their connecting elongated bolts 16, forming strap-hinges, the upper straps of which carry the side boards or raves 19 of the upper rack, which, when elevated, in conjunction with the end-gates 20 and 21 and cross-tie rods 23, constitutes a stock-rack for hauling stock, &c., substantially as described, and for the purpose set forth.

2. In a stock and hay rack, the combination of the lower wagon-bed bound with straps 7, said straps, in conjunction with straps 17 and their connecting elongated bolts, forming strap-hinges, the upper straps of which carry the raves of the upper rack, which provides the means of unfolding the upper section of the vertical sides or raves and turning them down onto the cross-tree bearers 30, with their angle-irons 33, and the bracket-braces 25, arranged to widen out the rack for hauling hay, &c., and the ladder and vertical pins that ascend from the cross-tree bearers, all substantially as described, and for the purpose set forth.

3. In a stock and hay rack, the combination of the wagon-bed, the elongated pintle-bolts and strap-hinges, the raves that are secured by said bolts and hinges to the wagon-bed, whereby they are adapted to be swung up in a vertical position, the end-gates and cross-tie rods constituting therewith a stock-rack, the cross-tree bearers at the ends of the wagon-body, and bracket-braces onto which the raves are adapted to rest to constitute a hay-rack, or by removal of said raves and their attachments to constitute a grain-rack, substantially as set forth.

4. In a stock and hay rack, the combination of the skeleton wagon-bed, longitudinal extensions 39 to its upper side-boards, cross-tree bearers 30, seated on said extensions, and the longitudinal extensions 40, of rave-boards that rest on said bearers to increase the holding capacity of the rack when the raves are extended to form a hay-rack, substantially as described, and for the purpose set forth.

JOHN W. McMASTER.

In presence of—

BENJN. A. KNIGHT,
SAML. KNIGHT.