

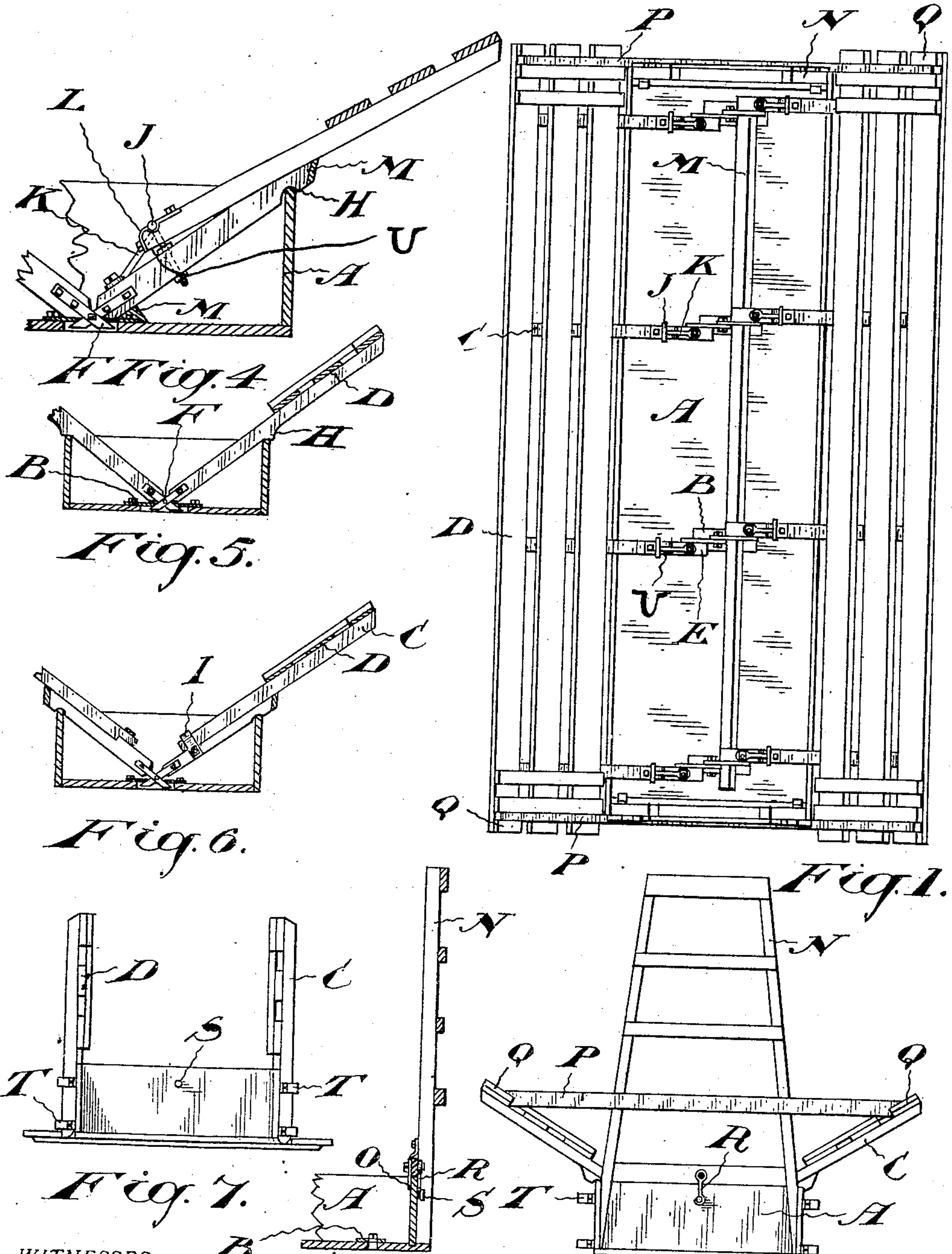
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PATENTED FEB. 25, 1908.

E. A. W. BEEMER.

HAY RACK.

APPLICATION FILED APR. 27, 1906.



WITNESSES:

A. M. Ball
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Fig. 3.

Fig. 2.

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ELIAS A. W. BEEMER, OF SCOTLAND, ONTARIO, CANADA.

HAY-RACK.

No. 880,118.

Specification of Letters Patent.

Patented Feb. 25, 1908.

Application filed April 27, 1906. Serial No. 314,091.

To all whom it may concern:

Be it known that I, ELIAS A. W. BEEMER, of the village of Scotland, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Hay-Racks, of which the following is a specification.

My invention relates to hay racks adapted to be attached to an ordinary box wagon, and my object is to devise a rack which will not spring the sides of the box, which will be simple in construction and easily set up, and parts of which may be utilized for a stock rack.

With this object in view my invention consists essentially in adapting the sides of the rack to hook into the box bottom and over the tops of the box sides, thus bracing the sides. Each rack side is also preferably formed in two parts detachably connected so that the outer parts may be used as sides for a stock rack, all substantially as hereinafter more specifically described, and then definitely claimed.

Figure 1 is a plan view showing my improved rack in position. Fig. 2 is an end view of the same. Fig. 3 is a vertical section of the end of the rack showing its engagement with the tail board of the wagon box. Fig. 4 is an enlarged section of part of the rack showing particularly its method of attachment to the box. Fig. 5 is a cross-section, partly broken away, on the same scale as Figs. 1 and 2 showing a modification of the invention. Fig. 6 is a similar view showing another modification. Fig. 7 is a view similar to Fig. 2 showing part of the sides of the hay rack used as a stock rack.

In the drawings like letters of reference indicate corresponding parts in the different figures.

A is the wagon box. To the bottom of this box inside are secured a plurality of metal plates B, each slotted transversely of the box.

The sides of the hay rack, as shown in Figs. 1, 4 and 6, comprise outer arms C connected by longitudinal slats D, and inner arms E to which the outer arms are preferably detachably connected, as hereinafter described. These inner arms are adapted to hook into the metal plates B in any suitable manner. I show in the drawings a preferred method of providing this hooked engagement. Each inner arm is provided with a metal tongue F, and the tongues of each pair of inner arms E

are pivoted together, as shown, the end of each tongue projecting past the pivot. From this construction it follows that when the inner arms are folded together on the pivots that the tongues become nearly parallel to one another and are easily inserted in the slots. The inner arms are then turned to the position they occupy in use, when the tongues cross one another, as shown in the drawings, and form hooks engaging the ends of the slots in the plates.

The outer ends of the inner arms are preferably notched or hooked to rest over the upper edges of the sides of the wagon box, as shown in Figs. 4 and 6, thus effectively bracing the sides of the wagon box against any outward strain. The weight of the load, however, may be supported without causing any outward strain if the engagement were formed as shown in Fig. 5, in which the hook H does not actually extend downward over the outer side of the wagon box but merely engages the same by means of a horizontal surface. In this figure also the outer arms are shown as forming part of the inner arms, and this arrangement is useful except in such cases as it is desired to use the outer parts of the sides of the rack for a stock rack, as hereinafter described, but in the preferred form the outer arms of the stock rack are detachable. One form of detachable connection is shown in Fig. 6. In this a metal strap I is secured to each inner arm to form a socket. The inner end of the outer arm may be slipped under this strap, as shown, and the two arms may be notched to engage one another, as shown at the left hand in Fig. 6, or the parts otherwise shaped to form a stop to limit the inward and downward movement of the outer arm.

In the preferred construction shown in Fig. 4 a headed bolt J is secured to each inner arm, and braced thereto by means of a diagonal brace K. The end of the outer arm is slotted at U to embrace this bolt, as shown, and also provided in its upper surface with a recess to receive the head of the bolt. The end of each outer arm is also preferably strapped with metal L to prevent wear. The upper surface of each inner arm is also preferably cut on two pitches, and the headed bolt J is preferably below the apex of the two pitches, as seen particularly in Fig. 4. Thus the inner ends of the outer arms of the rack may be slipped into engage-

ment with the bolt J, and when their outer ends are pressed downward to engage them with the upper and outer pitch of the inner arms their inner ends are thrown up to engage the heads of the bolts. The inner arms are preferably connected by one or more longitudinal slats M serving to hold them in proper relative position. The ends of the rack comprise uprights N, the lower ends of which, when the rack end is in position, extend down outside the end of the wagon box. A metal hook O is secured to each upright, and these hooks engage the end of the wagon box, as shown particularly in Fig. 3. A cross bar P is secured to each rack end, and this cross bar, at its ends, engages the rack sides, and thus holds them down in place. The ends fit between stop blocks Q secured to the rack sides so that the rack sides brace the rack ends against the outward strain of the load. A hook R pivoted on each end engages a headed pin or staple S on the end of the wagon box, and holds the rack end securely down in place. In order that the outer rack sides may be used as the side of a stock rack, I provide the sides of the wagon box with the sockets T with which the outer rack sides may be engaged, as shown in Fig. 7.

From the construction above described it will be seen that I have devised a very simple and convenient hay rack which may be readily attached to a wagon box and which entirely obviates any strain tending to spring the sides of the wagon box outward. Owing to its construction it may also be readily attached for use in forming a stock rack.

What I claim as my invention is:—

1. A wagon box in combination with hay rack sides provided with arms extending downwardly and inwardly to the bottom of the box and adapted to hook over the upper edges of the box sides; and detachable means securing the lower ends of the arms to the bottom of the box, to hold them rigid against outward movement in the direction of their length, substantially as described.

2. A wagon box in combination with hay rack sides provided with arms engaging the sides of the box and extending downwardly and inwardly to the bottom of the box where they are pivoted together in pairs; a metal tongue secured to each arm extending past the pivot; and a metal plate secured to the wagon bottom and having a slot formed therein adapted to receive the tongues when

parallel to one another, and to engage them when crossed, substantially as described.

3. A wagon box in combination with hay rack sides provided with arms extending downwardly and inwardly to the bottom of the box and adapted to hook into the bottom of the wagon box and over the sides of the box to brace the bottom and sides together, substantially as described.

4. A wagon box in combination with hay rack sides provided with inner arms detachably secured to the bottom of the box inside and hooked on to the upper edges of the box sides, and outer arms detachably secured to the inner arms, substantially as described.

5. A hay rack side provided with inner and outer arms, and a socket piece secured to each inner arm into engagement with which the outer arms may be slipped from an outward upper direction, substantially as described.

6. A hay rack side provided with inner and outer arms, the latter notched at their inner ends, and a headed bolt secured to each inner arm and adapted to engage the said notches, substantially as described.

7. In a hay rack side inner arms having their upper sides cut on two different pitches; a headed bolt secured to each inner arm at or below the apex of the two pitches; and outer arms, each slotted to engage the bolt and recessed to receive the head of the bolt, substantially as described.

8. A wagon box in combination with hay rack sides provided with inner arms suitably secured to the box, outer arms detachably secured at their inner ends to the inner arms and carrying longitudinal slats, rack ends provided with hooks to engage the upper edge of the box ends, a cross bar adapted to rest on the slats of the rack sides; and latches by means of which the racks may be locked to the box, substantially as described.

9. A wagon box in combination with hay rack sides provided with arms extending downwardly and inwardly to the bottom of the box and adapted to rest on the upper edges of the box sides; and detachable means securing the lower ends of the arms to the bottom of the box to hold them rigid against outward movement in the direction of their length, substantially as described.

Scotland, Ont., fourteenth April, 1906.

ELIAS A. W. BEEMER.

Signed in the presence of—

W. E. HOOKER,
ROY MITCHELL.