

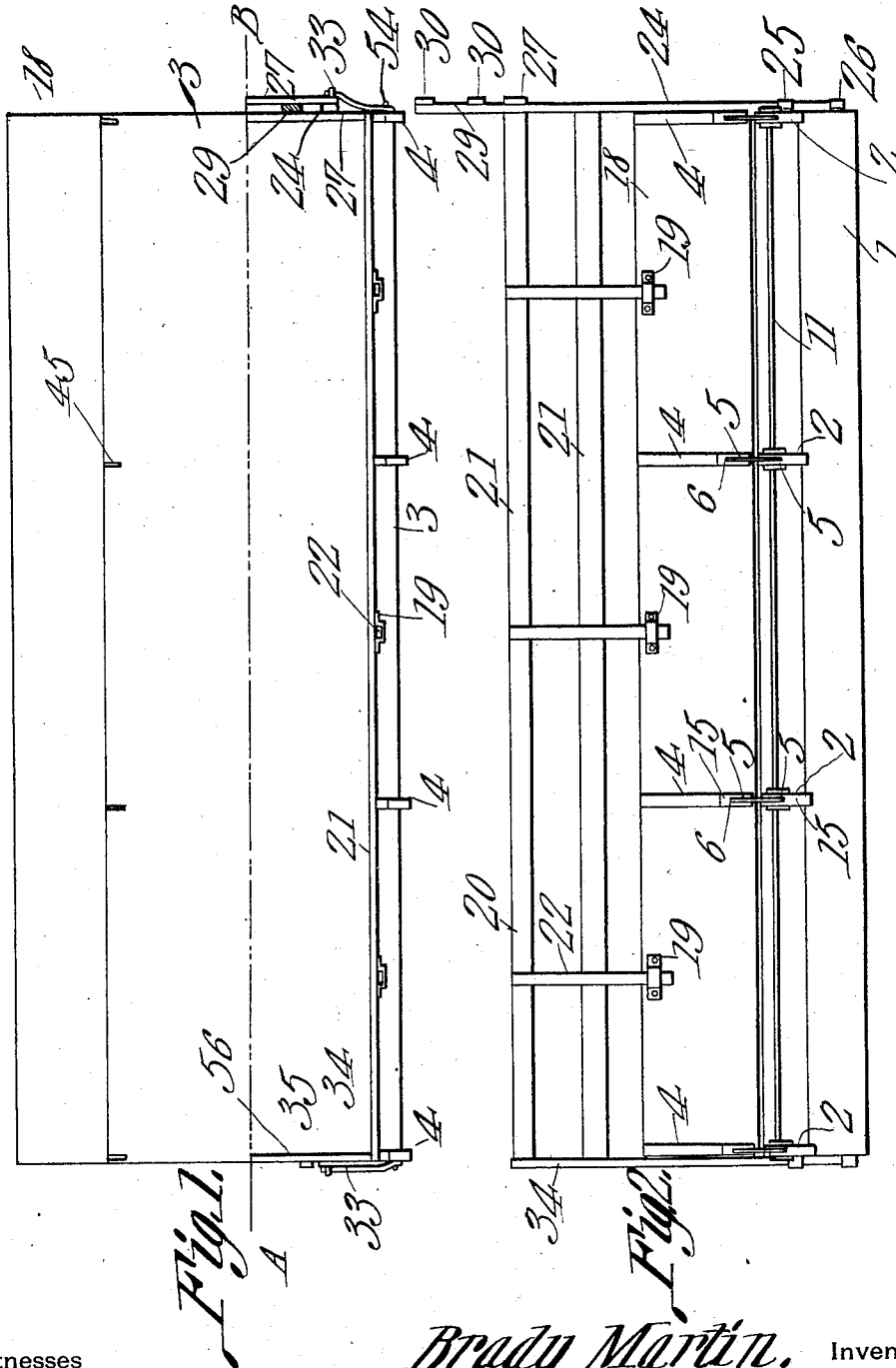
B. MARTIN.
HAY RACK.

APPLICATION FILED JUNE 8, 1910.

1,003,367.

Patented Sept. 12, 1911.

2 SHEETS—SHEET 1.



Witnesses

Mason B. Lawton

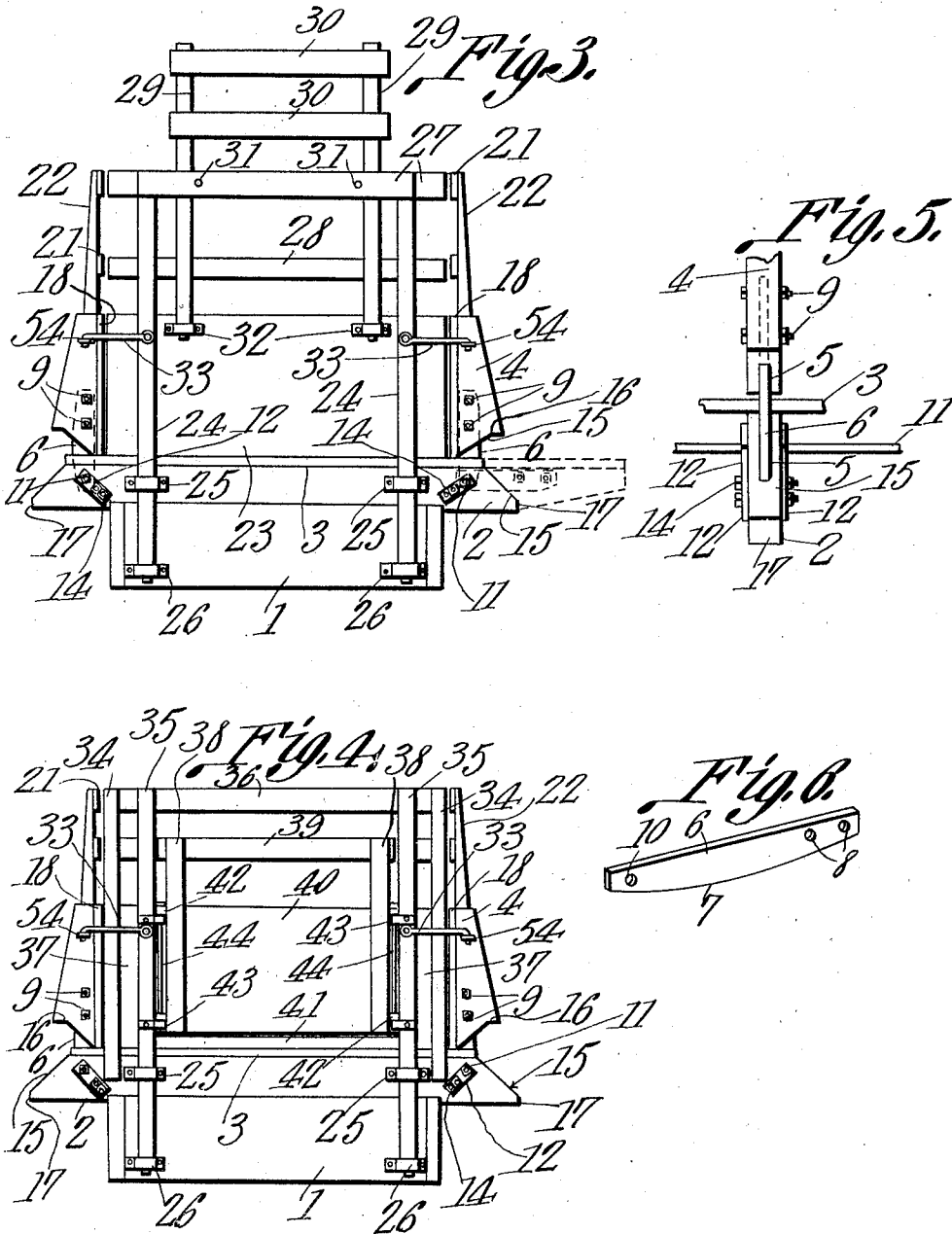
Brady Martin, Inventor
by *C. A. Snow & Co.* Attorneys

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UNITED STATES PATENT OFFICE.

BRADY MARTIN, OF LANSING, MICHIGAN.

HAY-RACK.

1,003,367.

Specification of Letters Patent.

Patented Sept. 12, 1911.

Application filed June 8, 1910. Serial No. 565,739.

To all whom it may concern:

Be it known that I, BRADY MARTIN, a citizen of the United States, residing at Lansing, in the county of Ingham and State of Michigan, have invented a new and useful Hay-Rack, of which the following is a specification.

It is the object of this invention to provide a platform for a vehicle, so constructed that, at the will of the operator, the same may be manipulated to form a rack, to house stock or the like.

Another object of the invention is to provide a hinge of novel and improved construction, whereby the side boards of the vehicle may be pivotally connected with the platform portion thereof, this hinge being united with the platform in such a manner that the side boards may readily be removed.

Another object of the invention is to provide an end gate of novel and improved construction.

Another object of the invention is to provide novel means for connecting and assembling the constituent elements of the structure, and to improve generally, the construction of devices of the class herein described.

In the drawings,—Figure 1 shows the invention in top plan, parts being broken away and sectioned; a side board being upwardly disposed upon one side of the line A—B, and turned down into alinement with the floor of the platform upon the other side of the line A—B; Fig. 2 is a side elevation; certain minor details being omitted in Figs. 2 and 1, owing to the small scale upon which said figures are drawn; Fig. 3 is an end elevation of the front end of the device; Fig. 4 is an elevation of the rear end of the device; Fig. 5 is a fragmental side elevation, designed to delineate with particularity, the manner in which the hinge whereby the side boards are connected with the platform, is constructed; and Fig. 6 is a detail perspective of one of the plates which enter into the hinged union between the side boards and the platform.

In the drawings, a wagon box 1 is shown. Upon this wagon box 1 the combined stock rack and platform of my invention is adapted to be rested. The platform portion of the device includes a plurality of transverse sills 2, to which the floor 3 is secured. To the ends of the sills 2, side stakes 4 are pivotally connected.

The manner of pivotally connecting the side stakes 4 with the sills 2 is as follows. By referring to the dotted line position of the side stakes 4 in Fig. 3, it will be seen that the said side stakes are adapted to be turned downwardly, into terminal abutment with the sills 2. Presupposing that the sills and the side stakes are in the positions delineated in dotted line in Fig. 3, the upper and adjacent end faces of the sills and the side stakes are grooved, as denoted by the numeral 5, seen to best advantage in Figs. 2 and 5 of the drawings. Into these grooves 5 of the side stakes 4 and the sills 2, plates 6, preferably of the form shown in Fig. 6, are inserted, the lower edges of the said plates being curved slightly, as denoted by the numeral 7 in Fig. 6, to facilitate the ready operation of the hinge, and to prevent the sills and the side stakes 4 from being cut away too great an extent, to accommodate the extremities of the plates 6. In one end of the plate 6 there are several openings 8. These openings 8 are adapted to receive securing elements such as bolts 9, which are mounted in the side stakes 4. Adjacent the other end of the plate 6 there is an opening 10.

As seen to best advantage in Fig. 2 of the drawings, a tie bolt 11 is adapted to be extended the entire length of the device, the tie bolt 11 being removably inserted through the sills 2, adjacent their ends. This tie bolt 11 is thrust through the openings 10 in all of the plates 6, and thus all of the side stakes 4 are pivoted upon a single element.

Straps 12 are secured diagonally to both sides of the sills 2, the straps 12 being held in place by bolts 14 or the like. These straps 12 serve primarily to prevent the splitting of the sills 2 when the sills and the side stakes 4 are alined as shown in Fig. 3. Near their ends, the straps 12 are provided with openings, in which the tie bolts 11 may be mounted; and thus, the straps 12 serve not only as reinforcing elements for the sills 2, but, as well, as bearings for the tie bolt 11, the tie bolt being prevented by the straps 12 from splitting or injuring the ends of the sills 2. The adjacent ends of the sills 2 and the side stakes 4 are beveled, as denoted by the numeral 15, and in the side stakes 4 there are shoulders 16, adapted to overlap and to abut against the ends 17 of the sills 2 when, as shown in dotted lines in Fig. 3, the side stakes 4 are swung downwardly into hori-

zontal alinement with the sills 2. It will be seen that the foregoing construction results in the formation of a protruding angle in the outer end face of each of the sills 2, this protruding angle adapted to be received within a reëntrant angle in the corresponding end face of each of the stakes 4, when the stakes and the sills are alined. The side boards 18 are secured to the side stakes 4.

By referring particularly to Fig. 2, it will be seen that spaced sockets 19 are mounted upon the side boards 18, adjacent the upper edges of the side boards. These sockets 19 are adapted to receive extension frames, denoted generally in Fig. 2 of the drawings by the numeral 20. These extension frames 20 comprise longitudinal bars 21, connected by cross bars 22, the lower ends of the cross bars 22 being adapted to be inserted into the sockets 19.

The gate whereby the forward end of the device is closed comprises, as seen to best advantage in Fig. 3, an end board 23, across which extend, transversely, standards 24, the lower ends of which are adapted to be inserted into sockets 25, secured to one of the end sills 2, and likewise inserted into sockets 26, mounted upon the wagon box 1. The standards 24 are united at their upper ends by spaced cross bars 27, and likewise by a single intermediate cross bar 28. An auxiliary frame is provided, the same including a pair of uprights 29, united, adjacent their upper ends by cross bars 30. The uprights 29 may, as outlined in Fig. 3, and as seen more clearly in Fig. 1, be thrust downwardly between the cross bars 27 into engagement with the sockets 32, secured to the end board 23 adjacent the upper edge thereof. Pins 31 unite the cross bars 27 between the uprights 29, and the pins serve to strengthen the mounting of the auxiliary frames. Hooks 33 are pivotally mounted upon the standards 24, the hooks 33 being adapted to engage eyes 54 inserted into the side stakes 4 which are located at the end of the rack.

Passing now to a description of the end gate which is mounted in the rear end of the rack, and referring particularly to Fig. 4, it will be seen that this end gate includes a frame, comprising upright side rails 34, and parallel uprights 35, located between the side rails 34. The upper ends of the side rails 34 and the uprights 35 are united by a top bar 36. The spaces existing between the lower portions of the side rails 34 and the uprights 35 are bridged by filling plates 37. Into the frame of the end gate, constructed as hereinbefore described, a swinging barrier is introduced, the same consisting of a pair of uprights 38, connected adjacent their upper ends by a cross bar 39. The lower ends of the uprights 38 are united by an end board 40, the barrier as thus constructed, being adapted to swing above a

sill 41 uniting the upright 35 at one side of the end gate frame with the upright 35 at the other side thereof. Secured in vertically spaced relation upon the remote edges of the barrier, and preferably mounted upon the uprights 38, are eyes 42. These eyes 42 coöperate with eyes 43 mounted upon the uprights 35 of the end gate frame. Through the eyes 42 and 43 upon one side of the device, a pin 44 may be removably thrust, a similar pin 44 being adapted to be mounted in a like manner, in those eyes 42 and 43 which are located upon the opposite side of the structure.

The end gate which is shown in Fig. 4, is held in place by the hook and eye connection 33, 54, the sockets 25, 26, described in connection with Fig. 3, being likewise employed in the form of end gates shown in Fig. 4.

When a broad platform is desired, the side stakes 4 together with the side boards 18 which they carry, may be turned downwardly into horizontal alinement with the sills 2, as shown in dotted lines in Fig. 3, and as depicted in the uppermost portion of Fig. 1. When, however, a stock rack is desired, the side stakes 4 and the side boards 18 may be turned upwardly, into the positions shown in Figs. 3 and 4, the floor 3 of the platform being notched, as denoted by the numeral 45 in Fig. 1, to accommodate the plates 6 whereby the side stakes 4 are hinged to the sills 2. The two end gates delineated in Figs. 3 and 4 may then be mounted in place, the hooks 33 being engaged in the eyes 54, to uphold the side boards 18. Thus the device in a simple manner, may be altered from a flat platform into a suitable stock rack, the auxiliary frames 20 being mounted in place in the sockets 19, as shown in Fig. 1. It will be seen that when the parts are positioned as shown in Figs. 2, 3 and 4, the lower portion of the device is securely housed in, so that an animal may be safely confined, there being no openings through which the animal may thrust a leg, the members 20 coöperating with the frame work structure of the end gates to define a barrier rising above the side boards 18. Should it be desired to remove the side boards 18 from the platform portion of the device, one person, standing at the end thereof, may readily withdraw the tie bolts 11, whereby in a single operation, each side board 18 may readily be removed.

Referring to the end gate which is shown in Fig. 4, it will be seen that either of the pins 44 is adapted to be removed, so that the remaining pin may serve as a pivotal mounting for the barrier portion of the end gate. Thus, at the will of the operator, either end of the barrier may be made the freely swinging end thereof.

Any of the common materials of construc-

tion may be employed in fashioning the device; the plates 6 being ordinarily of metal, the side stakes 4 being fashioned either from metal or from wood. The hinged construction which is secured by the coöperation between the plates 6, the sills 2 and the side stakes 4, permits the ready removal of the side boards 18, and likewise affords a construction in which a defective element may readily be replaced by a perfect one, at a trifling cost.

Having thus described the invention, what is claimed is:—

In a device of the class described, transverse, terminally slotted sills; side stakes; plates embedded at one end in the stakes and having their other ends removably mounted in the slots of the sills; securing devices extended through the stakes and the

plates; a rod removably inserted through all of the sills to serve as a pivotal mounting for the plates; straps secured transversely to the sides of the sills, to reinforce the same against splitting under the leverage of the stakes when the stakes and the sills are in alinement, the rod being inserted through all of the straps, each sill having a protruding angle in its end face, adapted to fit in a reëntrant angle in the corresponding end face of each stake, when the sills and the stakes are alined.

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

BRADY MARTIN.

Witnesses:

ROY MARTIN,
WM. C. BROWN.

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