No. 816,561. PATENTED APR. 3, 1906.

D. M. COX.

HAY AND STOCK RACK.

APPLICATION FILED OCT. 1, 1904.

3 SHEETS—SHEET 1.

Fig. 1.

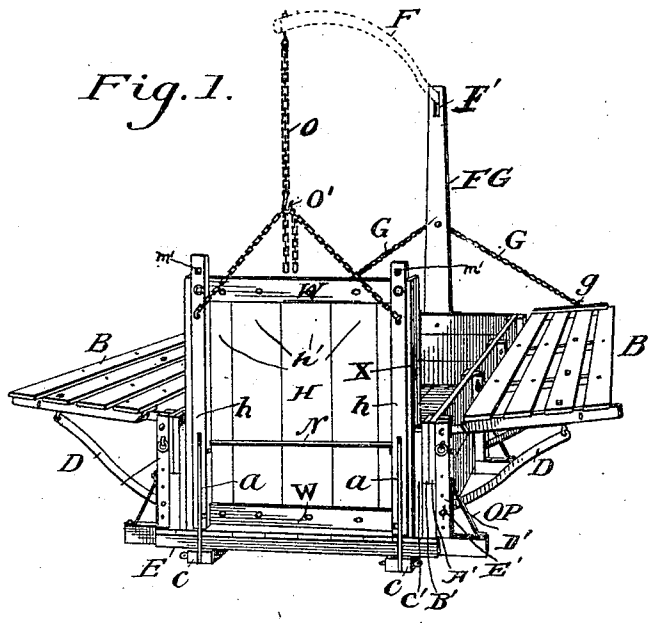
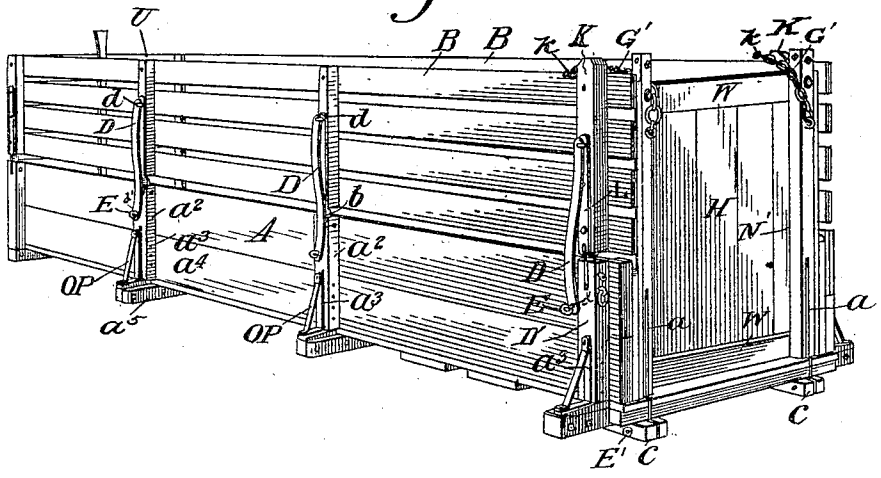


Fig. 2.



Witnesses:
L. L. Buckles.
C. D. Holder.

Inventor:
Daniel M. Cox.

No. 816,561. PATENTED APR. 3, 1906.

D. M. COX.

HAY AND STOCK RACK.

APPLICATION FILED OCT. 1, 1904.

3 SHEETS—SHEET 2.

Fig. 3.

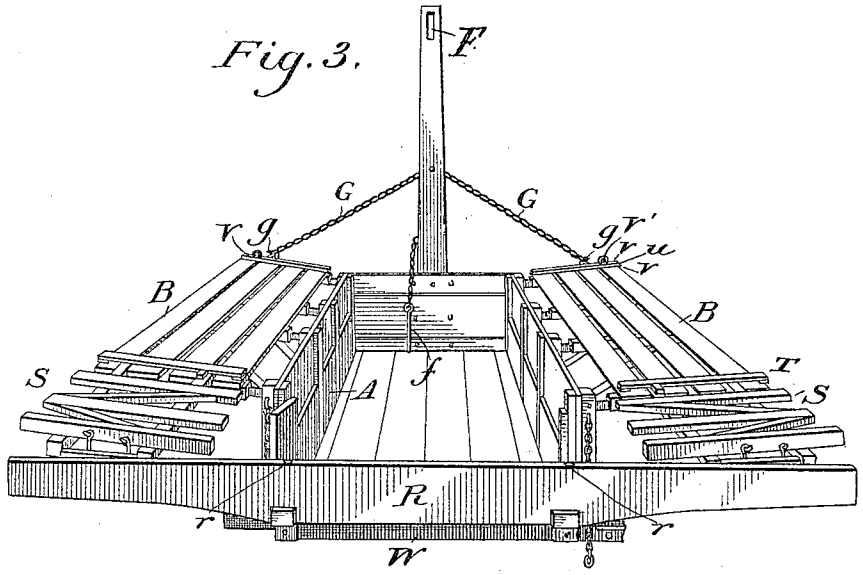


Fig. 13.

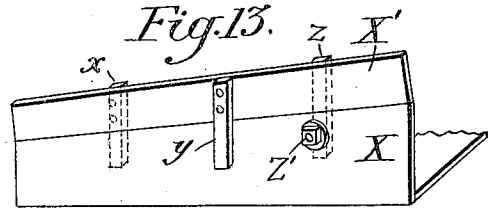
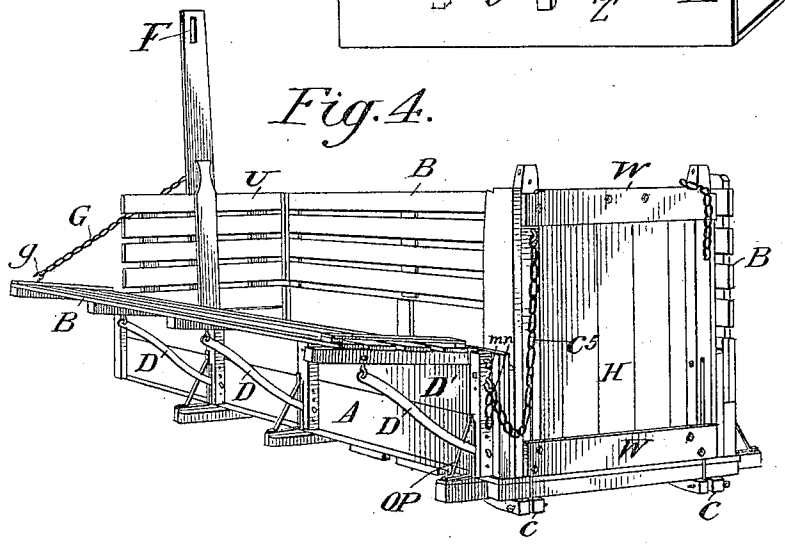


Fig. 4.



Witnesses:
L. B. Buckles
C. D. Holder

Inventor:
Daniel M. Cox

No. 816,561. PATENTED APR. 3, 1906.

D. M. COX.

HAY AND STOCK RACK.

APPLICATION FILED OCT. 1, 1904.

3 SHEETS—SHEET 3.

Fig. 5.

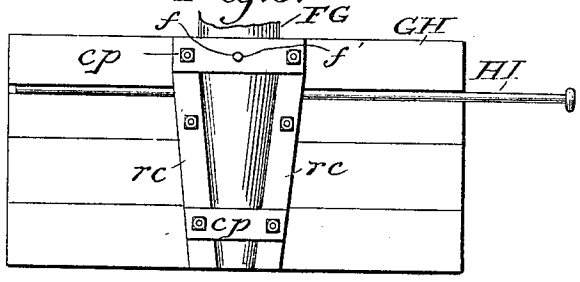


Fig. 6.

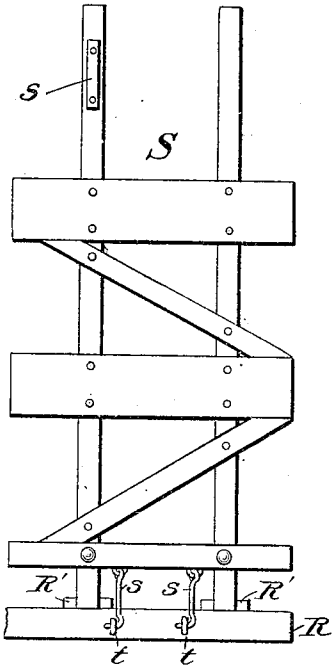


Fig. 8.

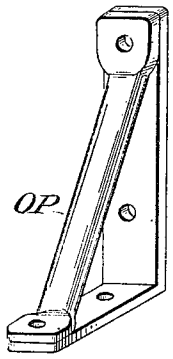


Fig. 7.

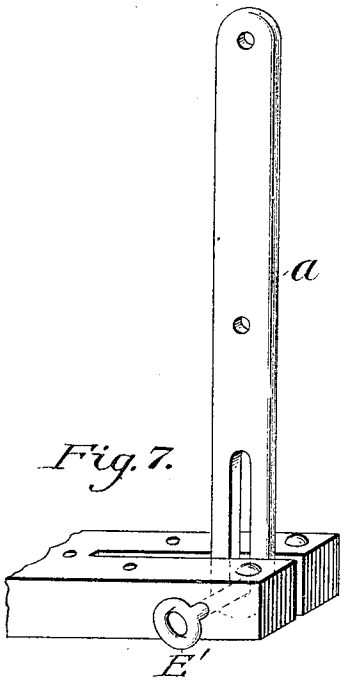


Fig. 9.

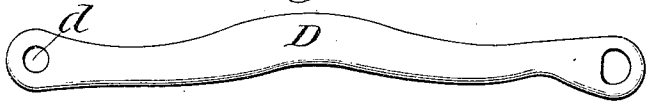
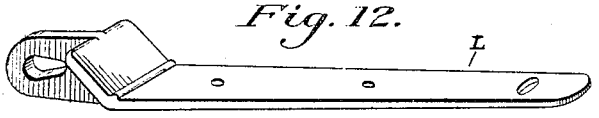


Fig. 10.

Fig. 11.

Fig. 12.



Witnesses:
L. B. Buckles
C. D. Holder

Inventor:
Daniel M. Cox

UNITED STATES PATENT OFFICE.

DANIEL M. COX, OF MOULTON, IOWA.

HAY AND STOCK RACK.

No. 816,561. Specification of Letters Patent. Patented April 3, 1906.

Application filed October 1, 1904. Serial No. 226,879.

To all whom it may concern:

Be it known that I, DANIEL M. COX, a citizen of the United States, residing at Moulton, in the county of Appanoose and State of Iowa, have invented certain new and useful Improvements in Hay and Stock Racks, of which the following is a complete specification, sufficient to enable one skilled in implement manufacture to construct and operate the same.

This invention embodies in its entirety a combination consisting of light bottom, side, and end members, constituting, by adjustment to various positions, a convenient wagon-box, corn-husking bed, hay-rack, or stock-rack, and has for its object both economy of construction and efficiency when in use.

It consists in the novel features hereinafter claimed and described, as shown in the accompanying drawings, in which—

Figure 1 is an end view of a rack adjusted as a hay-rack. Fig. 2 is a rack adjusted as a stock-rack. Fig. 3 is an end view of a rack embracing an extension attachment, while Fig. 4 is a rack adjusted as a corn-husking bed. Fig. 5 shows front end-gate and end-gate standard. Fig. 6 is extension attachment; Fig. 7, hasp or fastener on which is hinged the rear end-gate; Fig. 8, stationary brace for wagon-bed, also seen in Fig. 2; Fig. 9, a movable brace; Fig. 10, a fastening-pin used throughout the rack; Fig. 11, a bumper-plate; Fig. 12, a strengthening-strip, to which is attached the movable brace shown in Fig. 9; Fig. 13, the sides of scoop-board.

In Fig. 2, A represents the wagon-box, which is made of sufficient depth to enable the rack-wings to be properly braced. B B are the rack sides or wings, which are shown in Fig. 1 as lowered to form a hay-rack. They are hinged at *b b* to side cleats a^2 a^2 on the box A and are held when lowered to the desired adjusted position by the braces D D, Figs. 2 and 9, attached to strengthening-strips L, Figs. 2 and 12. These braces are fastened at *d d* to the rack-wings, and the lower ends fit into slots a^3 a^3 in the cleats a^2 a^2 and are held by pins adapted to pass through any one of a series of holes a^4 in said cleats and through the holes *d' d'* in the ends of said braces, Fig. 2. In order that the cleats a^2 a^2, Fig. 2, may be made to maintain a rigidly-upright position, braces O P, Fig. 8, are secured to said cleats and to base-cleats a^5 on the under side of bed.

In order that the rack-wings may be quickly and readily removed or the braces held in adjusted positions and yet all danger of unintentional disconnection be obviated, the fastening-pin E, Fig. 10, is provided with a lip *e* at the end thereof, and the hole therefor is properly slotted at the top, so that the pin may be inserted and turned over. The weight of the lip *e*, in conjunction with the weight of the opposite end on the same side of the pin, will hold it in place and prevent it from shaking backward and out. When the rack is adjusted as a hay-rack, Fig. 1, these pins pass through the movable braces D and side cleats D'. When the rack-wings are raised, forming a stock-rack, the pins are made to serve the function of holding the rack-wings rigidly upright, as shown in Fig. 2. This pin is identical with pin E', Fig. 1.

The end standard F G, Figs. 1 and 5, is beveled at the bottom to fit in suitable sockets formed by retaining-cleats r^c r^c on the front end-gate H I, as shown in Fig. 5, and is held in position by a pin *f*, Fig. 5, passing through cross-piece *c p* at *f'* and on through F G and end-gate G H. The rod H I passes through the middle of end-gate board, well back of F G. This standard is provided with an aperture F' at the top to receive the adjustable binding-pole F, Fig. 1. The front ends of the rack-wings are sustained by chains G, running from the standard to hooks *g* in the rack-wings, Fig. 1. The chains thus strengthen the standard and the rack-wings by bracing them under the weight of the load. They keep the rack-wings clear of the front wheels, indicate how far the load shall extend in front, and are handy in climbing on and off the same. When the wings are raised to form a stock-rack, the front end-gate U, Figs. 2 and 4, is placed in position. Cleats *v v*, Fig. 3, are about one inch apart, and thus form a groove *u* on both rack-wings, into which the end-gate fits. It is then hooked or otherwise fastened by any convenient hasps to staples *v' v'* in the front cleats.

Two unique features of this rack consist in the readiness with which the wings may be

adjusted to any desired angle or position, making it practical and convenient to haul a great variety of farm products—such as chaff, straw, fodder, beans in hull, baled or loose hay—and in the further fact that the rear end-gate H, Fig. 1, is also a scoop-board, which may in like manner be adjusted to any desired position or angle. This adjustment is attained by hooking any link in the chain c^5, Fig. 4, to detachable link n, which link is attached to cockeye-bolt m, secured to side cleat D′. The end-gate or scoop-board may then be lowered and held by the chain. The construction of scoop-board is shown in Fig. 1, in which the hasp a is inserted in the piece h, engaging the cleat C, being secured to same by means of fastening-pin E′. Cross members W W are bolted to vertical pieces h h, and the boards h' are screwed to the cross members W W. There thus remains a narrow open space between the pieces h h and the boards W W, being just the depth of the pieces WW, which hold h h away from the scoop-board, and when the scoop-board (or end-gate) is adjusted as a solid figure in an upright position, as in Fig. 1, a rod N passes through this interstice N′, Fig. 2, as also through cleat D′, side-board A′, cleats B′ and C′, and side of scoop-board X on both sides of the rack, binding all together. To secure the scoop-board in a vertical position, yet independent of the rod N, the chains G′ G′, attached to said scoop-board, may be looped up over the top thereof, Fig. 2, carried forward, and pinned by means of adjustable pins k k to the front side of side arms K K. The pins may be placed lower, if desired. When the end-gate is let down to form a scoop-board, Fig. 13, it shows the raised edge X, Fig. 1, on each side, which is a permanent part of it, deepens it, and prevents articles from spilling over the side. It can also have on each side an extra section X′, still further increasing the depth. This extra section X′ is attached to X by the cleats x y z. At the lower end of cleat z an ordinary bolt is inserted, a hole z' is provided to engage said bolt, and the tap thereon being screwed up the attachment is held securely. This attachment is especially designed for ear corn. If in hauling hay it is desired to lower the scoop-board and yet utilize the binding-pole, (see Fig. 1,) the chain O, with its hook O′, can be adjusted to any auxiliary chain or rope attached by cockeye-bolts at m' m' to the vertical pieces h h.

Another material feature of my invention is an extension attachment, Figs. 3 and 6, consisting of three members. Extension-wings S S slip in under the pieces T T, Fig. 3. The rear end-gate has been let down, so that its cross member W is horizontal. Cross-piece R is bolted at r r, the bolts passing through bolt-holes at m' m', Fig. 1. Extension-wings fit at the rear into notched boards R′ R′, Fig. 6, and the hooks s s engage staples t t in the cross-piece R. The piece s b is a stop-block.

Reference being had to Fig. 11, a detached member or part of the combination is a bumper-plate i, designed to be secured to the under side of the box over the hind axle and to protect said box.

In view of the fact that former combination hay-racks have been patented I do not claim such combination, broadly; neither do I limit myself to the exact construction and details herein shown; but

What I claim, and desire to secure by Letters Patent, is—

1. In a wagon-rack, having removable and adjustable hinged rack-wings, hinges for said wings, bolted to side arms of same, strengthening-strips secured to said wings, and adjustable braces secured to said strips, substantially as described.

2. In a wagon-rack, having hinged rack-wings adapted to be readily removed, braces to support said wings in adjusted position, end standard provided with a beveled end engaging with the box and end-gate, adjustable binding-pole adapted to engage with aperture in the top of said standard, and bracing-chains from said standard to hooks in the rack-wings; a chain adjusted to the rear end of the binding-pole, with a hook at the lower end of same to engage chains attached to scoop-board, substantially as described.

3. In a convertible wagon-rack, comprising the bed or box with hinged rack-wings removably secured to said bed, auxiliary end-gate adapted to fit above the box-gate by the use of staples in conjunction with the hasps for securing said gate, substantially as described.

4. In a wagon-rack, removable and adjustable scoop-board, hinged by hasps to cleat on the under side of box, chains secured to said scoop-board, the said chains serving the three-fold function of (1st) permitting the scoop-board to be adjusted at an angle convenient for scooping corn, or loading and unloading hogs, calves or sheep; (2d) holding the scoop-board in a vertical position, and (3d) holding the binding-pole in the center of the load, by virtue of the attachment of said chains to the chain suspended from the rear end of said binding-pole, substantially as described.

5. In a wagon-rack, the combination of a scoop-board capable of being held in a vertical position by means of rod passing through frame of said scoop-board with an extension attachment, substantially as set forth.

6. In a wagon-rack, the combination of a wagon-box with an extension attachment provided for said rack, being adapted to the lengthening of the rack-wings, substantially as set forth.

7. In a wagon-rack, the combination of a scoop-board, side sections therefor, being a constituent part thereof, with sections adjustable thereto, having respect to the deepening of the said scoop-board, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DANIEL M. COX.

Witnesses:
E. D. PARSLEY,
L. E. BUCKLES.