

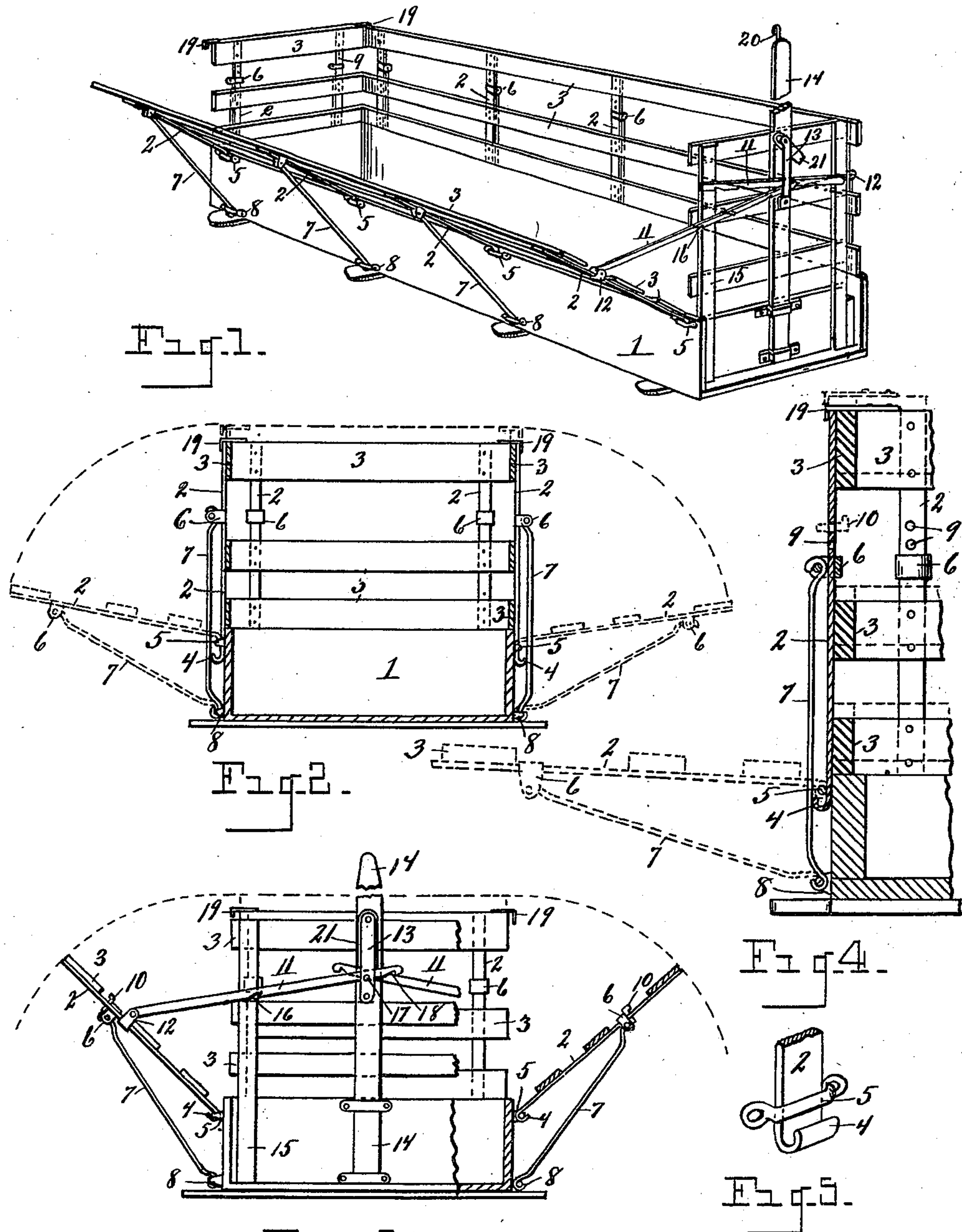
No. 684,109.

Patented Oct. 8, 1901.

D. SCHELL.
CONVERTIBLE WAGON RACK.

(Application filed Apr. 5, 1901.)

(No Model.)



WITNESSES.

O. P. Baenziger.
E. E. Joslin.

INVENTOR.

David Schell.
By R. B. Mulder.
Attorneys.

UNITED STATES PATENT OFFICE.

DAVID SCHELL, OF OXFORD, MICHIGAN.

CONVERTIBLE WAGON-RACK.

SPECIFICATION forming part of Letters Patent No. 684,109, dated October 8, 1901.

Application filed April 5, 1901. Serial No. 54,434. (No model.)

To all whom it may concern:

Be it known that I, DAVID SCHELL, a citizen of the Dominion of Canada, residing at Oxford, in the county of Oakland, State of Michigan, have invented certain new and useful Improvements in Convertible Wagon-Racks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to a convertible wagon-rack; and it consists in the construction and arrangement of parts hereinafter fully set forth, and pointed out particularly in the claims.

The object of the invention is to provide a convertible wagon-rack adapted to be attached to any wagon-box and in which the arrangement is such as to enable the sides and end of the rack to be extended for the purpose of carrying hay and like material; to provide for securely locking the movable parts of the rack when in their normal position, thereby rendering the rack strong and secure and adaptable for a stock-rack, the several parts being so constructed as to enable the rack to be converted from a hay-rack into a stock-rack, or vice versa, with but little trouble, and to enable the rack to be securely braced and firmly held in either position.

The above object is attained by the construction and association of parts illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a wagon-box provided with my improved rack. Fig. 2 is a transverse section through the rack. Fig. 3 is a front end elevation, some of the parts being broken away and others appearing in section. Fig. 4 is an enlarged detail in section, showing the means of locking the movable sides of the rack when in a vertical position. Fig. 5 is an enlarged detail in section, showing the adjustable hinge, through the medium of which the vertical standards of the rack are connected with a wagon-box.

Referring to the characters of reference, 1 designates a wagon-box of the ordinary con-

struction upon which the rack is adapted to be detachably mounted. The sides and rear end of the rack are composed of metallic standards or uprights 2, to which the longitudinal bars 3 of the rack are secured in any suitable manner. The lower ends of the standards 2 are provided with a hook 4 and are adapted to engage in and pass through the clips 5, secured to the sides and rear end of the box, near the upper edge thereof, forming a sliding hinge connection between the box and the sides and ends of the rack.

Mounted upon each of the standards 2 and adapted to slide thereon between the top and second bars of the sides and end of the rack are heads 6, in which are pivoted the upper ends of the braces 7, whose lower ends are hinged to the clips 8, secured to the box, near the lower edge thereof.

In the normal position of the rack the sides and ends stand vertically, and the lower ends of the standards 2, carrying the hook 4, extend downward through the confining-clip 5, so as to brace the sides and end of the rack and maintain them firmly in place, in which position of parts the rack serves as a stock-rack. When it is desired to convert the rack into a hay-rack, the sides and end are drawn upwardly, as shown by dotted lines in Fig. 4, so as to cause the hook 4 of the standards 2 to engage the clips 5, when the end and sides may be swung downwardly, as shown in Figs. 1 and 3 and by dotted lines in Figs. 2 and 4. As the sides swing downwardly, the heads 6 slide upward and outward upon the standards 2 and allow the sides and end to attain a horizontal position, when said heads will engage the upper bar of the rack and maintain said parts so extended, the brace 7 supporting said parts in their extended position. Should it be desired to arrest the movable parts of the rack before they attain a horizontal position, provision is made therefor by placing a number of apertures 9 in the standards 2, in which pins 10 may be inserted, so as to engage the sliding heads 6 and arrest them when the sides of the rack have attained any desired inclination, as shown in Fig. 3.

The extreme front ends of the sides of the rack cannot be supported by the braces 7, owing to the fact that when the sides are ex-

tended the front wheels in turning would come in contact with said braces. Therefore the front ends of the sides of the rack are supported by the rods 11, pivoted at 12 to the forward standard of the sides and passing through a keeper 13, attached to the vertical standard 14 of the end rack 15, through which said rods 11 are adapted to slide as the sides of the rack are swung upon their hinges. The bars 11 are provided with a notch 16 in their lower edges, adapted to engage a locking-pin 17 in said keeper when the sides of the rack are in a vertical position to maintain said sides in place, and with notches 18 in the outer ends thereof, adapted to engage the pin 17 when the sides of the rack are partially or wholly extended, thereby enabling the rods 11 to serve as a support for the forward ends of the sides of the rack.

When returning the sides and end of the rack to a vertical position in alinement with the clips 5, through which the standards of said parts are adapted to pass, said standards will slide downward through said clips and bear upon the face of the wagon-box, so as to lock the movable sections of the rack firmly in place, while the braces 7, being also brought into a vertical position, are engaged by the hooked ends 4 of the strands 2, as clearly shown in Fig. 4, and are thereby held from rattling. The rear end is swung upward into a vertical position after the sides have been so placed, and the upper bar of said end is provided with the overhanging hooks 19, which engage over the top bars of the sides of the rack and securely lock the sides and end together. Said parts are disengaged by simply raising the rear end section first and swinging it outwardly before moving the sides to a like position.

The front end section of the rack remains stationary, so that when loaded with hay the load will be prevented from extending onto the horses. The standard 14 may be made of such height as necessary and is provided at its upper end with a spring-hook 20 to receive the lines.

It will now be understood that this convertible rack may be readily applied to any wagon-box, that it will afford a strong and efficient stock-rack when desired for such use, and that it may be readily converted into a hay-rack and adjusted to accommodate any size of load. It will also be seen that the manner of attaching the sections of the rack to the wagon-box is such as to enable the rack to be entirely removed from the box when not desired for use. Pivoted within the keeper 13 is a block 21, which is adapted to swing downward and engage the rods 11 to securely lock them in place after adjustment, as shown in Fig. 3.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a convertible wagon-rack, the combination of the movable side sections hinged to

the wagon-box and having vertical standards which support the bars of said side sections, braces also hinged at their lower ends to the wagon-box, heads mounted to slide upon the standards of the hinged sides between said bars, said braces being pivoted at their upper ends to said sliding heads to allow said sides to swing downwardly and means for locking said sliding heads at a point between said bars to maintain said sides at different inclinations between the limit of their movement in both directions.

2. In a convertible wagon-rack, the combination with the wagon-box, of the movable sides of the rack detachably hinged to the box and having a vertical movement with respect thereto, means for locking the hinged sides when in a vertical position, means for unlocking the hinged sides actuated by an upward vertical movement thereof and braces for supporting said sides when extended, said braces being detachably hinged to said box at one end and the other end thereof being movably connected to said sides.

3. In a convertible wagon-rack, the combination with the wagon-box, or other suitable support, of the movable end and side sections hinged to the box, or support, and adapted to have vertical movement when in a vertical position independently of said hinge, means for locking said movable parts, when in a vertical position, hinged braces adapted to support said movable parts and having a sliding connection therewith and means for locking the sliding connection between the braces and the movable parts of the rack to support said movable parts in various positions.

4. In a convertible wagon-rack, the combination of the hinged sides, the hinged braces having a sliding engagement with said sides, the end bars pivoted to the sides, and having notches in their under edges, a keeper adapted to receive the inner ends of said bars having a pin adapted to receive the notches of said bars to lock them in said keeper.

5. In a convertible wagon-rack, the combination of the hinged sections, having vertical standards adapted to pass through confining-clips, the lower ends of said standards having a hook thereon adapted to engage the cross-bar of the clips to effect a hinge for said movable sections, the standards of said sections sliding downwardly through said clips, when the sections are moved to a vertical position, thereby effecting a lock for said movable sections, braces hinged to the box, or support, and having a sliding engagement with the movable sections, said braces when the sections are in a vertical position, being brought into contact with the projecting hooks of the standards and thereby held from rattling.

6. In a convertible wagon-rack, the combination of the hinged sections, vertical standards on said sections, confining-clips on the wagon-box through which said standards are adapted to pass, the lower end of said stand-

ards being provided with a hood adapted to engage the cross-bar of the clips to effect a hinge for said movable sections, the standards of said sections sliding downwardly through
5 said clips when the sections are moved to a vertical position thereby standing across the joint between the hinged sections and the top of the box and rigidly maintaining said sections in a vertical position, braces detachably

hinged to the box and having a sliding engagement with the movable sections.

In testimony whereof I sign this specification in the presence of two witnesses.

DAVID SCHELL.

Witnesses:

J. H. LEE,

J. G. KESSELL.