J. WEBER.

DETACHABLE RACK FOR WAGONS.

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957,586.

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Fig. 1.

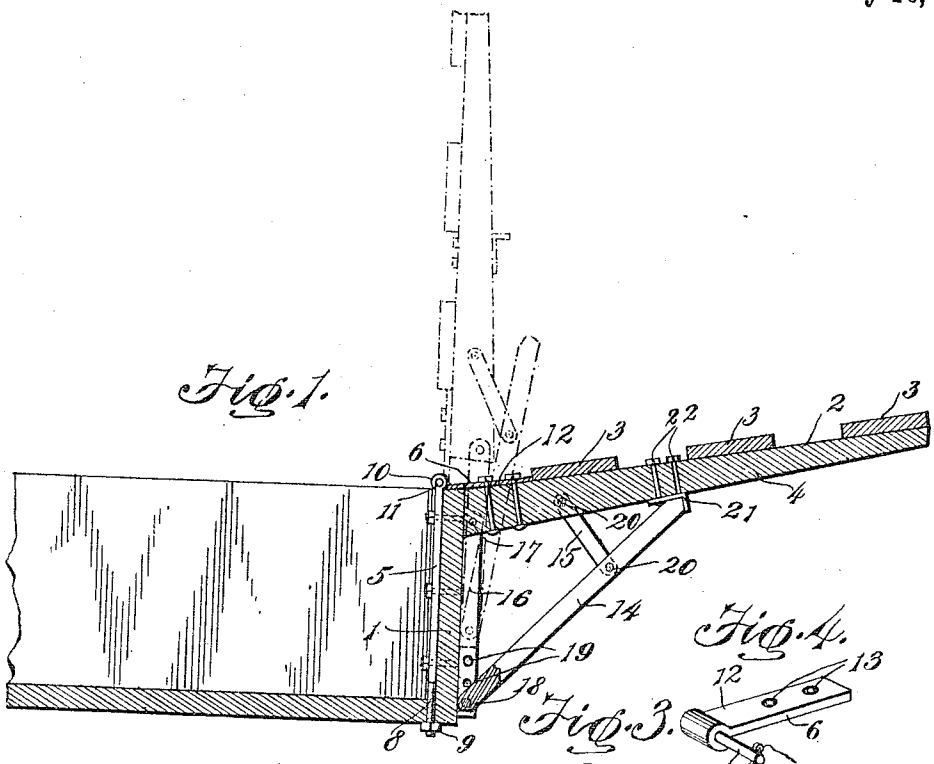


Fig. 4.

Fig. 3.

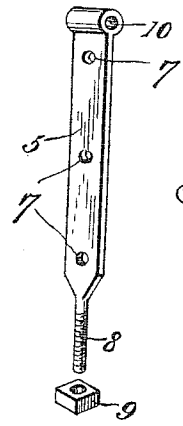


Fig. 6.

Fig. 2.

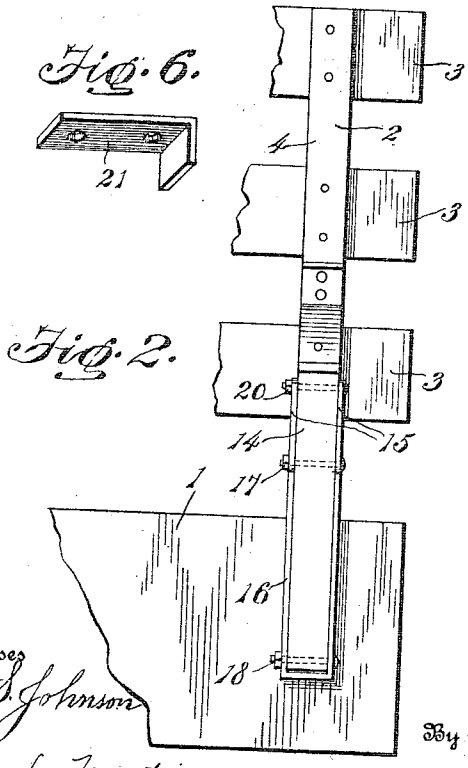
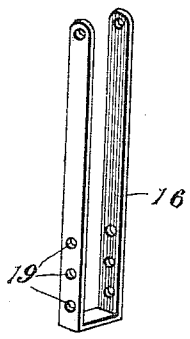


Fig. 5.



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UNITED STATES PATENT OFFICE.

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DETACHABLE RACK FOR WAGONS.

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To all whom it may concern:

Be it known that I, JOHN WEBER, a citizen of the United States, residing at Elba, in the county of Genesee and State of New York, have invented certain new and useful Improvements in Detachable Racks for Wagons, of which the following is a specification, reference being had to the accompanying drawings.

This invention is an improved rack which may be detachably mounted upon the body of a wagon or other vehicle and converted for use either as a hay rack or a stock rack.

The object of the invention is to improve and simplify the construction of devices of this character and thereby render them less expensive and more durable and to provide one which may be quickly and easily applied to or removed from the body and when removed from the body will leave no parts thereon liable to be in the way or interfere with the use of the wagon for other purposes.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view through a portion of a wagon body and the improved detachable and convertible rack showing the same in full lines in its lowered position for use as a hay rack and in dotted lines in its elevated position for use as a stock rack; Fig. 2 is a detail side elevation of the parts shown in Fig. 1, the rack being in its elevated position; Figs. 3 and 4 are perspective views of the detachable members of the hinge connection between the rack and body; Fig. 5 is a detail perspective of the brace hanger or stirrup; and Fig. 6 is a detail perspective of the angular stop plate for the brace.

In the drawings 1 denotes the side wall of the body of a wagon or other vehicle and 2 denotes my improved detachable and convertible hay and stock rack. This rack preferably consists of longitudinal bars 3 secured on cross bars or arms 4, which latter are preferably made of wood and have flat inner ends to bear against the outer face of the side wall 1 when the rack is used as a hay rack. The inner ends of the arms 4 have a detachable pivotal connection with the upper portion of the side wall 1, each of such pivotal or hinge connections consisting of separable members 5, 6. The member 5 is in the form of a strap bolt having a flat body portion arranged vertically on the inner face of the side wall 1 and secured thereto by screws or similar fastenings passed through apertures 7 formed in its intermediate portion. The lower extremity of the bolt or member 5 is reduced and screw threaded to provide a stem 8 which projects through an opening in the bottom of the wagon body and receives a nut 9. The upper extremity of the bolt or member 5 is formed with an integral eye 10 disposed at the inner edge of the top of the side wall 1, as shown in Fig. 1. The other hinge member 6 consists of a pintle 11 which projects laterally from the enlarged end of an apertured plate 12 secured by bolts or similar fastenings on the top of the inner portion of the arm 4. The hinge plate 12 projects beyond the straight inner end of the arm 4 so as to rest upon the top or upper edge of the side wall 1 when the device is used as a hay rack, thereby giving the inner portion of the rack a substantial support or bearing on the side wall 1. A split pin 11^a is preferably arranged in an aperture in the projecting end of the pintle 11 to retain the latter in the eye 10. The plate 12 is preferably made as broad as the arm 4 and has apertures 13 for the fastening bolts so that this plate will serve to strengthen and reinforce the inner end of the arm. It will also be noted that the strap bolt 5 serves to strengthen and reinforce the side wall 1 and that it is the only part of the invention which remains on the wagon when the rack is removed. Owing to the construction of the bolt or member 5, it will be seen that it will not be in the way and will not prevent the wagon from being used for other purposes when the rack is removed.

The arm 4 carries a foldable and adjustable supporting frame by means of which it is supported in an adjusted angular position with respect to the body for use as a hay or grain rack. This frame consists of a diagonal brace 14, a pair of parallel links 15 and a U-shaped stirrup or hanger 16. The latter is formed by bending a metal strap into U-form and has the ends of its parallel arms apertured to receive a transverse pivot 17, whereby said hanger will be pivotally suspended and will lie against the side wall 1 when the device is used as a hay rack. The lower end of the brace

14 is adjustably pivoted in the lower or closed portion of the hanger 16, and such mounting being effected by passing a removable pivot bolt or pin 18 through a transverse opening in the brace and through any one of a longitudinal series of alining openings 19 formed in the parallel side portions of the arms of the hanger. The upper or outer portion of the brace 14 is loosely connected to the intermediate portion of the arm 4 by means of the links 15, one of which is provided on each side of the arm and brace and pivoted to said parts by means of transverse bolts or pivots 20. The outer extremity of the brace 14 is angular in shape to adapt it to engage a stop formed by an angular metal plate 21 arranged on the intermediate portion of the bottom face of the arm 4 and secured thereto by bolts or similar fastenings 22. It will be seen that by adjusting the lower or inner end of the brace vertically in the hanger 16, the angular disposition of the arm 4 and consequently, the body of the rack with respect to the wagon, may be varied as desired; and that when the body of the rack is swung upwardly to a vertical position, shown in dotted lines in Fig. 1, the links 15 will swing the brace 14 inwardly close to the side of the wagon. Owing to the provision and the peculiar shape of the hanger 16, it will be noted that when the rack is lowered, as shown in full lines in Fig. 1, it will be effectively braced and supported.

In applying the rack to a wagon body it is only necessary to engage the pintles 11 on the two or more hinges which the body of the rack carries, with the eyes 10 on the body and to allow the hanger 16 to swing against the side of the body. The rack is as readily disconnected by removing the pintles from the eyes and when that is done, the entire rack and its supporting means becomes separated from the wagon body, nothing remaining upon the latter but the hinge members 5. By constructing the arms 4 and the braces 14 of wood and the other parts of wrought iron the device may be made at a small expense by any blacksmith and it will be strong and durable; and should any parts break away they may be easily replaced. This construction also renders the device light in weight and, consequently, easy to apply and remove and dispenses with the use of tools in its application or removal.

Having thus described the invention what is claimed is:

The combination with a side wall of a vehicle body, a strap bolt secured to the inner face of said wall and having at its upper end an integral eye disposed over the inner edge of the top of said side wall, of a rack bodily removable from the body and having a single point of connection therewith, said rack including an arm provided with a flat inner end to bear against the outer face of said side wall, a hinge plate secured to the upper face of said arm to reinforce the same and formed at its inner end with a laterally projecting integral pintle to enter said eye, said inner end of the hinge plate projecting beyond the flat inner end of the arm to rest upon the top of said side wall to assist in supporting the rack when the latter is lowered, means for retaining the pintle in said eye, an angle plate secured to the bottom face of the arm at a point intermediate its ends, a hanger formed from a metal strap bent into U-form and having the ends of its parallel arms pivoted to the opposite side faces of the inner end of the arm, said parallel arms of the U-shaped hanger being formed with vertical series of alining openings and being adapted to bear against the outer side face of said wall, to support the rack when lowered, a diagonal brace having an angular outer end to engage said angle plate, the lower or inner end of said brace being formed with a transverse opening to register with said alined openings in the hanger, a removable pivot bolt passed through said alining openings to adjustably pivot the brace in the lower portion of the hanger, and a pair of links pivoted to the opposite side faces of the intermediate portion of the brace and the inner portion of the arm, as shown and described.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JOHN WEBER.

Witnesses:

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