J. H. CRUISE.

CONVERTIBLE HAY RACK.

APPLICATION FILED MAR. 6, 1917.

1,281,145.

Patented Oct. 8, 1918.

2 SHEETS—SHEET 1.

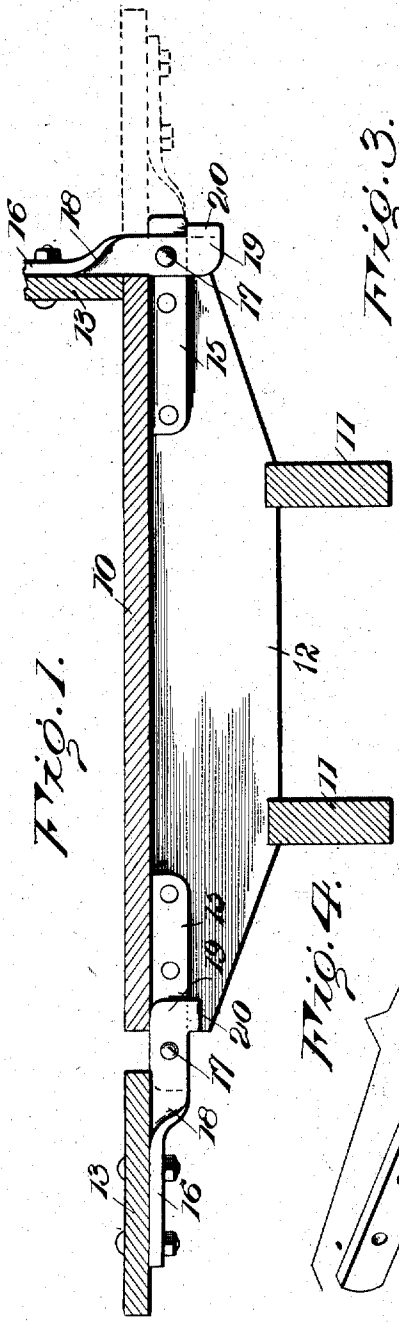


Fig. 1.

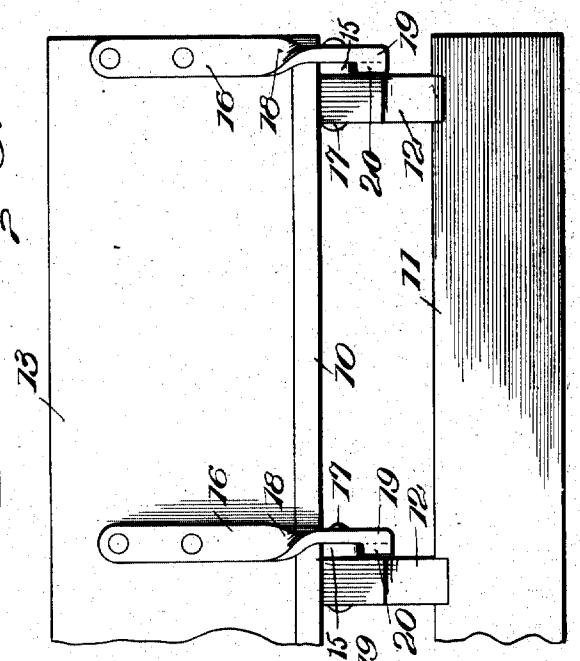


Fig. 3.

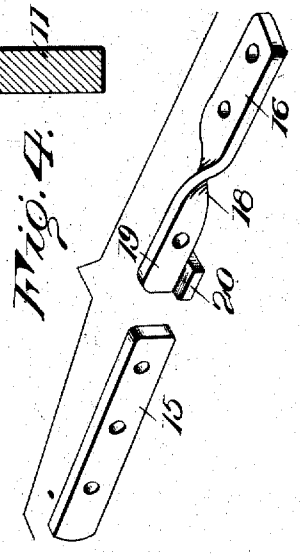


Fig. 4.

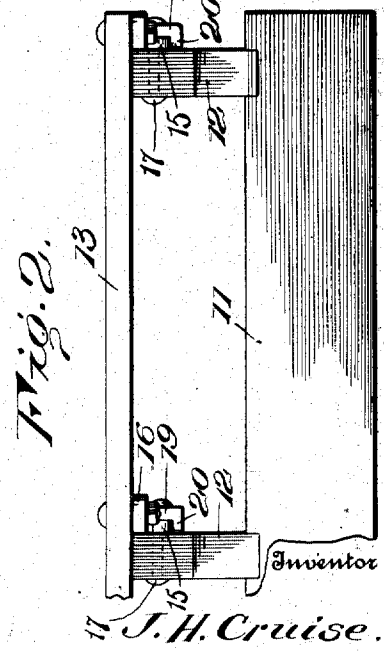


Fig. 2.

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2 SHEETS—SHEET 2.

Fig. 5.

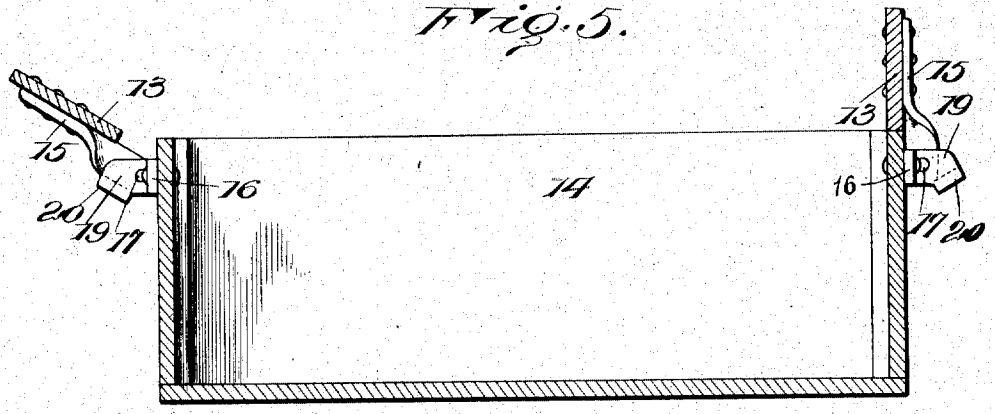


Fig. 6.

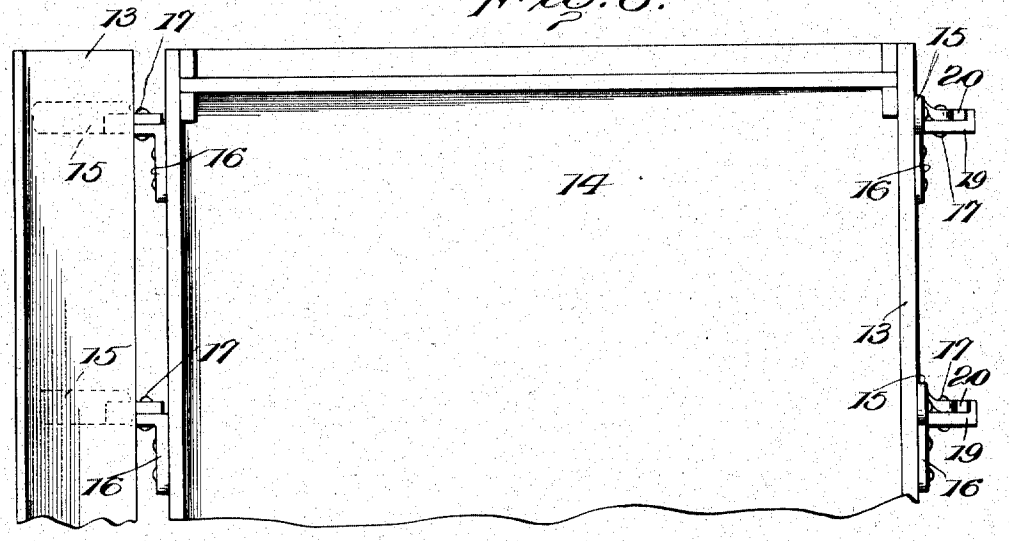
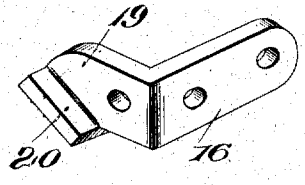


Fig. 7.



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UNITED STATES PATENT OFFICE.

JAMES H. CRUISE, OF EARLVILLE, ILLINOIS.

CONVERTIBLE HAY-RACK.

1,281,145. Specification of Letters Patent. Patented Oct. 8, 1918.

Application filed March 6, 1917. Serial No. 152,817.

To all whom it may concern:

Be it known that I, JAMES H. CRUISE, a citizen of the United States, residing at Earlville, in the county of La Salle and State of Illinois, have invented certain new and useful Improvements in Convertible Hay-Racks, of which the following is a specification.

This invention relates to improvements in vehicle bodies, more particularly to hay racks and the like, and has for one of its objects to produce a construction whereby the device may be arranged for employment as an ordinary hay or fodder rack or as a wagon body or box without detaching any of the parts.

Another object of the invention is to provide a device of this character having extension side members which may be disposed in horizontal alinement with the floor or deck portion of the vehicle body to increase the width of the body, or disposed at right angles to the floor or deck to form the side portions of a box or body.

Another object of the invention is to provide a device adapted to be attached to the frame work of the body of a vehicle below the deck, and also to an extension member, whereby the extension member may be disposed in transverse alinement with the floor or deck or disposed at right angles thereto, and locked from movement in one direction, either in its upper or lower position.

With these and other objects in view, the invention consists in certain novel features of construction, as hereinafter shown and described and then specifically pointed out in the claims; and in the drawings illustrative of the preferred embodiment of the invention—

Figure 1 is a transverse section of a rack device constructed in accordance with the invention, the extension member being shown in its lower position at one side, or in transverse alinement with the deck or platform, and in its elevated position at the opposite side, or with the extension member at right angles to the transverse plane of the deck or platform.

Fig. 2 is a side elevation of a portion of the improved device showing the extension member in its lower position.

Fig. 3 is a view similar to Fig. 2 showing the extension member in elevated position.

Fig. 4 represents the coupling members of the improved device disconected and in perspective.

Fig. 5 is a view similar to Fig. 1, showing the device applied to an ordinary wagon box, to support the extension members obliquely to the plane of the sides of the box or in vertical alinement therewith.

Fig. 6 is a plan view of the parts shown in Fig. 5.

Fig. 7 is an enlarged perspective view of one of the coupling members employed in the modified structure shown in Figs. 5 and 6.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

When applied to a hay rack or like structure, the vehicle body includes a platform or deck 10, longitudinally directed rails or supports 11, and transverse members or beams 12 as shown in Figs. 1, 2 and 3, the members 11 being adapted to be mounted upon the bolsters of the vehicle running gear, not shown.

The improved device may likewise be employed without material structural change, in connection with the box portion of an ordinary wagon to support combined vertical and horizontal extension members thereon, as shown in Figs. 5, 6 and 7.

The improved device comprises extension members 13, one at each side of the platform 10 or at each side of the wagon box 14 as the case may be, and so coupled to the members 12 or the box 14 that the members 13 may be disposed in longitudinal alinement with the platform 10 or obliquely to the box 14, as shown at the left in Figs. 1 and 5, or elevated into position at right angles to the platform, or in vertical alinement with the sides of the box as shown at the right in Figs. 1 and 5. The coupling means comprises coacting members 15—16 hingedly united at 17. Any required number of the

coupling devices may be employed, and it is not desired to limit the invention in this respect. A sufficient number will be employed to firmly support the members 13, and will generally be applied to each of the members 12, or to the sides of the box 14, as the case may be.

The coupling members are substantially alike except that they are preferably formed rights and lefts, and the description of one will suffice for all. When employed in connection with a hay rack the member 15 will be a flat bar, as shown at the left in Fig. 4, and when employed in connection with a wagon box the member 16 will be in the form shown in Fig. 7. Each of the members 15 is bolted or otherwise secured to the structure with which it is associated and projects beyond the same. When arranged for application to a hay rack the pivots 17 are spaced inwardly from the outer ends of the members 15, as shown in Figs. 1, 3 and 4. Each of the members 16 is bolted or otherwise secured to the extension member 13 and formed with a half twist, as indicated at 18, so that the portion in advance of the twisted part lies flatly against the contiguous portion of the member 15 and overlaps the same.

When applied to a wagon box, the relative positions of the parts will be reversed, the part 15 being attached to the member 13 and the part 16 to the box 14, but this change does not constitute a departure from the spirit of the invention as the results produced are the same.

The terminal 19 of each of the members 16 extends for a distance beyond the pivot 17 as shown in Figs. 1 and 5, and formed upon the portion 19 is a lateral lip 20 which extends past the contiguous edge of the member 15 when the member 13 is disposed in transverse alinement with the deck 10, or obliquely to the box 14, as shown at the left in Figs. 1 and 5, and engages at one end upon the projecting portion of the member 15 when the member 13 is disposed at right angles to the member 10, as shown at the right in Figs. 1 and 5. By this means the lip 20 serves the twofold purpose of means for preventing the deflection of the members 13—16 below a line in transverse alinement with the member 10, or obliquely to the box 14, when the member 13 is in its lower position, and locks the latter from inward movement beyond a vertical position when arranged as shown at the right in Figs. 1 and 5.

By this means the platform 10 or box 14 may be extended a distance equal to the width of both the members 13 when the latter are disposed in their lower position, or the members 13 disposed in vertical position and at right angles to the member 10 when the improved device is to be employed as a vehicle box, or to increase the width and height of the sides of the box 14.

Thus when transporting hay, loose fodder or the like the members 13 may be disposed in their lower position, and when the vehicle is to be employed for transporting loose corn or the like the members 13 can be disposed in vertical position.

The members 15—16 are constructed of metal, preferably steel, and of sufficient strength to withstand the severe strains to which they will be subjected when in use, and may be of any required size.

Having thus described the invention, what is claimed as new is—

1. A device of the class described including co-acting members having their inner ends overlapped and pivotally united, one of said members being provided at a point near the pivot with a laterally extending lip, the upper face of which is adapted to bear against the lower longitudinal edge of the other member when said members are in one position, one end of said lip being adapted to bear against said longitudinal edge when the members are moved to another position.

2. A device of the class described including co-acting flat longitudinal bars having their inner faces overlapped and pivotally united and their outer ends provided with means for attachment to a support, one of said bars being provided intermediate its length with a half twist and at a point adjacent the pivot with a laterally extending lip, the upper face of which is adapted to bear aaginst the lower longitudinal edge of the mating bar, when said bars are in longitudinal alinement with each other, one end of the lip being adapted to bear against said longitudinal edge when the bars are moved to a position at right angles to each other.

3. A device of the class described comprising flat longitudinal bars, a portion of one of the bars being disposed in a vertical plane and overlapped and pivotally connected to the adjacent end of the other bar, and the other portion of the first-mentioned bar being disposed in a horizontal plane, and a lip extending laterally from one of the bars adjacent the pivot and having its upper edge adapted to bear against the lower longitudinal edge of the other bar when said bars are in one position and to bear by the end of said lip against said longitudinal edge when the bars are moved to another position.

4. The combination with a vehicle body including a platform and movable sides, of a plurality of hinges each including coacting members having their outer ends rigidly secured to the platform and sides of the

vehicle body and their inner ends overlapped and pivotally united, one of the members of each hinge being provided at a point near the pivot with a laterally extending lip, the upper face of which is adapted to bear against the lower longitudinal edge of the mating member when the sides of the vehicle are moved to one position with respect to the platform, the end of said lip being adapted to bear against said longitudinal edge when the sides of the vehicle body are moved to another position with respect to the platform thereof.

In testimony whereof I affix my signature.

JAMES H. CRUISE. [L. S.]

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