J. W. HEDRICK AND C. S. HARPER.

ADJUSTABLE THROW BOARD AND RACK FOR WAGON BOXES AND OTHER VEHICLES.

APPLICATION FILED NOV. 15, 1919.

1,407,415.

Patented Feb. 21, 1922.

3 SHEETS—SHEET 1.

Fig. 1.

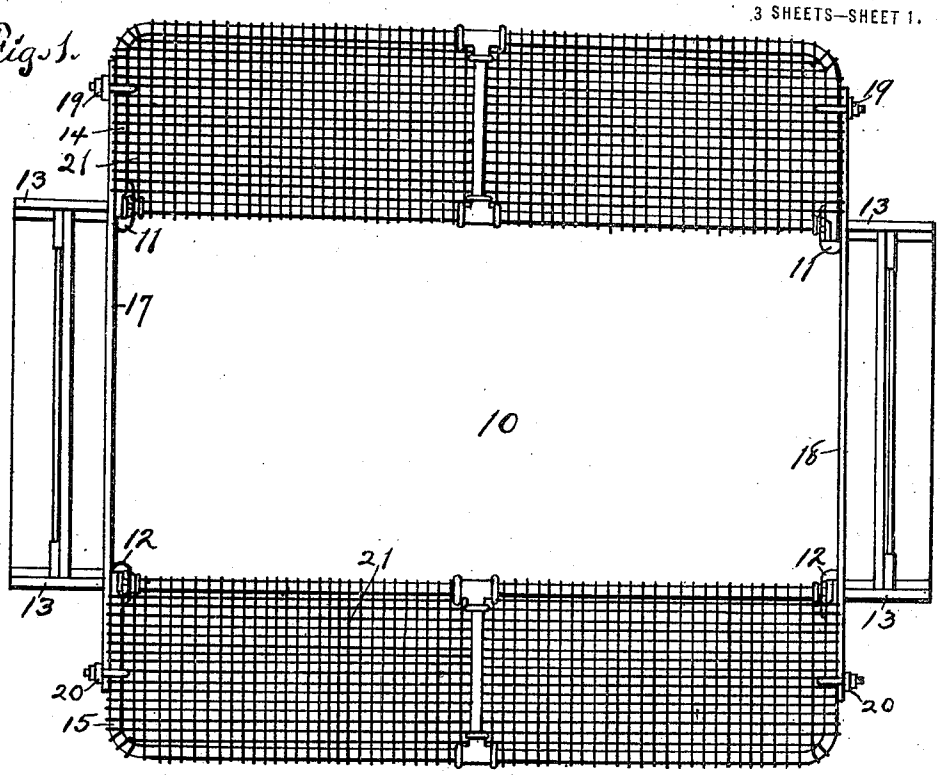
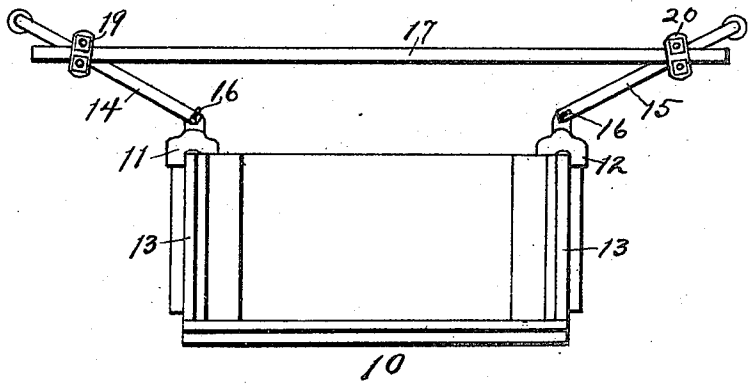


Fig. 2.



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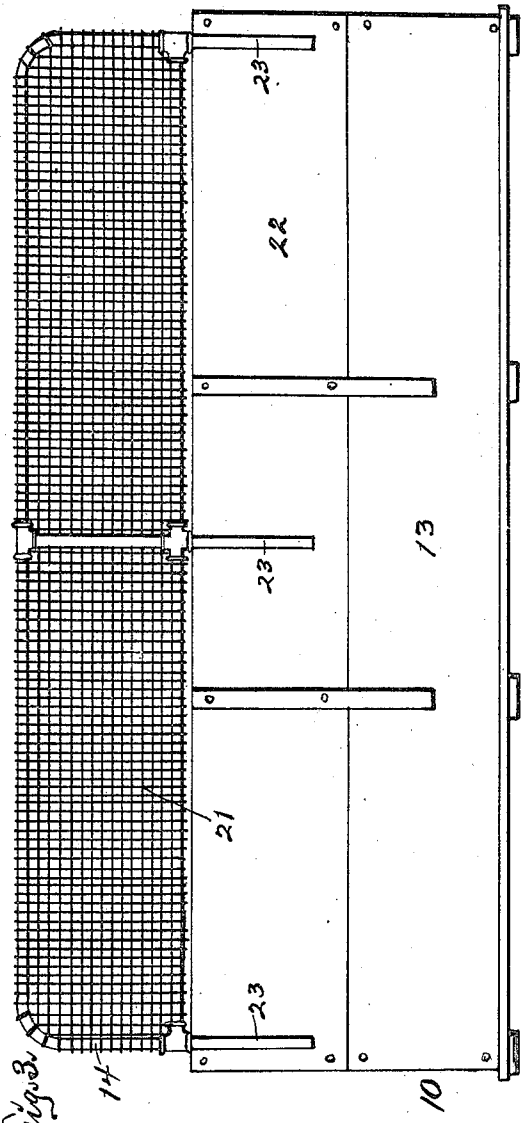


Fig. 3.

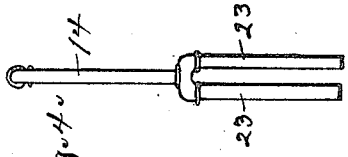


Fig. 4.

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3 SHEETS—SHEET 3.

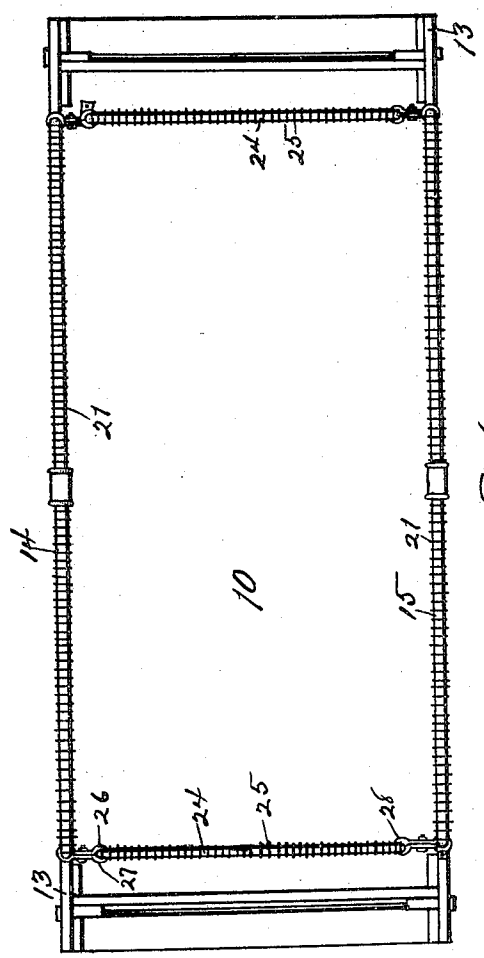


Fig. 5.

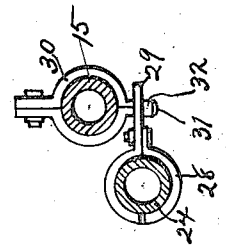


Fig. 8.

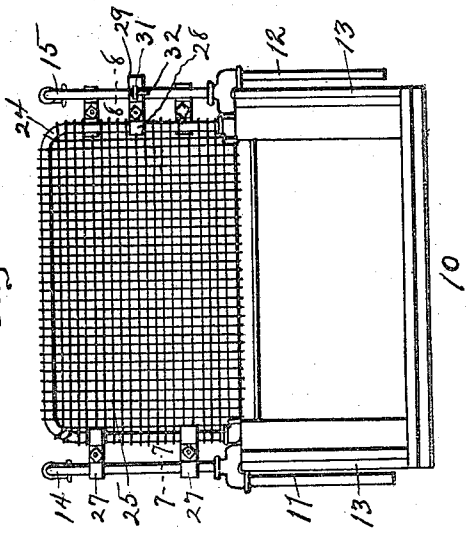


Fig. 6.

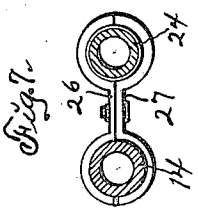


Fig. 7.

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UNITED STATES PATENT OFFICE.

JOSEPH W. HEDRICK AND CLARENCE S. HARPER, OF OTTUMWA, IOWA.

ADJUSTABLE THROW BOARD AND RACK FOR WAGON BOXES AND OTHER VEHICLES.

1,407,415. Specification of Letters Patent. Patented Feb. 21, 1922.

Application filed November 15, 1919. Serial No. 338,151.

To all whom it may concern:

Be it known that we, JOSEPH W. HEDRICK and CLARENCE S. HARPER, citizens of the United States of America, and residents of Ottumwa, Wapello County, Iowa, have invented a new and useful Adjustable Throw Board and Rack for Wagon Boxes and other Vehicles, of which the following is a specification.

The object of this invention is to provide an improved attachment for wagon-boxes adapted for a variety of uses, such as for a throw-board, animal-rack or forage-rack.

Our invention consists in the construction, arrangement and combination of elements hereinafter set forth, pointed out in the claims and illustrated by the accompanying drawing, in which—

Figure 1 is a plan and Figure 2 an end elevation showing our improved device assembled and adjusted for use as a forage-rack mounted on a wagon-box.

Figure 3 is a side elevation and Figure 4 an end view, showing the device assembled as indicated for use as a throw-board.

Figure 5 is a plan and Figure 6 an end elevation showing the device assembled and adjusted for use as an animal-rack mounted on a wagon-box. Figure 7 is a cross-section on an enlarged scale on the indicated line 7—7 of Figure 6 and Figure 8 is a similar view on the indicated line 8—8 of Figure 6.

In the construction of the device as shown in Figures 1 and 2, an ordinary wagon-box 10 is employed, said box being without auxiliary side-boards. A plurality of forks 11—12 are mounted on and in embracing relation with each side-board 13 of the wagon-box and said forks have their closed end portions uppermost and projecting above said boards. Metal frames 14, 15, preferably made of suitable tubing, such as gas-pipe, and fittings to connect the members thereof, and of a length each approximating to that of the wagon-box 10, are mounted in diverging oblique planes, and lower, inner, corners of said frames are pivoted to the upper ends of the forks 11, 12. A fork may be provided at the center of each side-board and have pivotal connection with the center of the inner side of the frames if desired. The pivotal connections between the corners of the frames 14, 15 and the forks preferably is made adjustable through the use of wing nuts 16 in a common manner, whereby oscillation of the frames through arcs may be made manually and stablized in any position selected. Braces or bars 17, 18 are mounted across and spaced above end portions of the wagon-box 10 and are secured to end portions of the frames 14, 15 by clamps 19, 20, which clamps preferably employ U-bolts and bar-washers. In this manner the frames 14, 15 are rigidly, yet adjustably, connected and braced, and made stable in relation to each other and the wagon-box. The frames 14, 15, preferably are overlaid by a suitable netting 21 of wire.

When constructed and mounted as shown, the frames 14, 15 increase the bulk-carrying capacity of the wagon-box and provide a rack suitable for receiving and transporting forage, such as hay, straw and fodder and similar bulky and relatively light substances.

In the construction of the device as shown in Figures 3 and 4, auxiliary side-boards 22, one of which is shown, are mounted on the wagon-box 10. Forks 23 are mounted in spaced relations on one of the side-boards 22 and end portions and a central member of a frame 14 are fixed to upper ends of said forks. The construction may be the same as that shown in Figures 1 and 2, the frame with its netting being extended in the same plane as the forks rather than oblique thereto and fixed against oscillation in such position. Or, as shown, the connection between the frame and forks may be by way of selected fittings and non-adjustable laterally.

When constructed and mounted as shown in Figure 3, the device partakes of the characteristics of a throw-board or bang-board and admirably serves to receive impact of and deposit in the wagon-box thrown articles such as ears of corn, sugar-beets, potatoes and the like. This device exceeds in durability, stability and convenience of use the common article for a like purpose made of wood.

In the construction of the device as shown in Figures 5, 6, 7 and 8, two of the frames with forks and nettings as illustrated in Figures 3 and 4, or like members from the illustrations in Figures 1 and 2 with extension of the frames in the planes of the forks, are mounted on the side-boards of the wagon-box 10; and end-gates composed of metal frames 24 and metal netting 25, are mounted across end portions of said wagon-box and connected to the respective frames.

The end gates are substantially of the same height as the side frames 14, 15. One end of each end-gate is hinged to an end portion of a side-frame 14 or 15, while the opposite end of each end-gate is latched to the opposite end of a side frame. The hinging means as shown in Figure 7 consists of clamp bars 26, 27 formed with end portions adapted to grip an end bar of a frame 14 or 15 and also formed with end portions adapted to embrace loosely an end bar of a gate frame 24, together with a clamping bolt connecting said bars. The latching means consists of a clamp 28 adapted to grip an end bar of a gate opposite the hinging means and formed with an extension 29 having a slot, together with a clamp 30 adapted to grip an end portion of a side frame 14 or 15 and formed with an extension 31 adapted to pass through the slot in the extension 29, which extension 31 is formed with a hole adapted to receive a pin 32 to connect the extensions.

When a wagon-box is equipped with the devices as shown in Figures 5 and 6, livestock may be carried therein, such as swine, sheep and calves, with safety and convenience of access and discharge. The rack members provide good and sufficient closure for the stock and at the same time permit ventilation thereof, a desirable feature in the transportation of such stock in hot weather.

The improvement herein described is suitable for use with automobile or motor truck bodies, beds and boxes and we desire the same to be read and considered as a part of the invention made and the use contemplated by us.

We do not desire to be limited to the construction and materials shown and described, as the same may be modified within the range of suitability and within the scope of the appended claims.

We claim as our invention—

1. In a rack attachment for wagon boxes and the like having a latticed metal side frame adapted to be superposed on a side board of said box, the combination with said side frame of a series of pipe-fittings secured to the lower margin thereof, and a pair of fork arms mounted in said fittings and extending therefrom, in parallel planes, opposite to said side frame, said fork arms being adapted to embrace said side board loosely.

2. In a rack attachment for wagon boxes and the like having a latticed metal side frame adapted to be superposed on a side board of said box, the combination with said side frame of a series of pipe fittings hinged to the lower margin thereof and having their axes or articulation in alinement, and a pair of fork arms mounted in each of said fittings and extending therefrom, opposite to the side frame, in parallel planes, said fork arms being adapted loosely to embrace said side board.

3. In a rack attachment for wagon boxes and the like having forks adapted to embrace side boards of said box and latticed side-frames pivotally mounted on said forks and adapted to be moved through arcs relative to the vertical planes thereof, the combination with said frames of brace bars arranged substantially horizontally above the box and extending across end portions of said frames, and clamps adjustably connecting said brace bars to end portions of said frames.

4. In a rack attachment for wagon boxes and the like having side frames adapted to be detachably mounted thereon and articulating relative thereto, of end brace bars and end gates selectively mounted transversely of end portions of said frames, and means for securing end portions thereof to said frame.

Signed at Ottumwa, in the county of Wapello and State of Iowa, this 18th day of October, 1919.

JOSEPH W. HEDRICK.
CLARENCE S. HARPER.