D. H. WEIR.

ADJUSTABLE VEHICLE BODY.

APPLICATION FILED DEC. 21, 1918.

1,311,429.

Patented July 29, 1919.

2 SHEETS—SHEET 1.

Fig. 1.

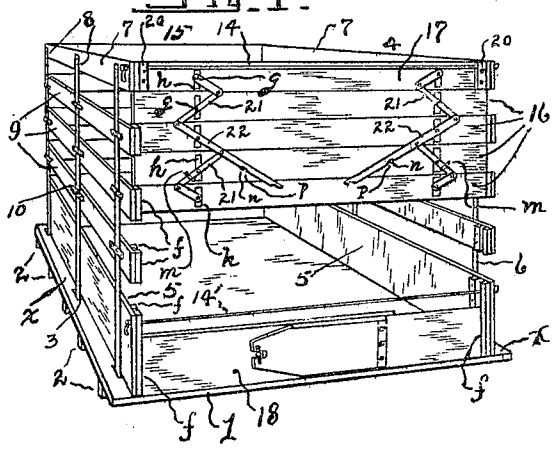
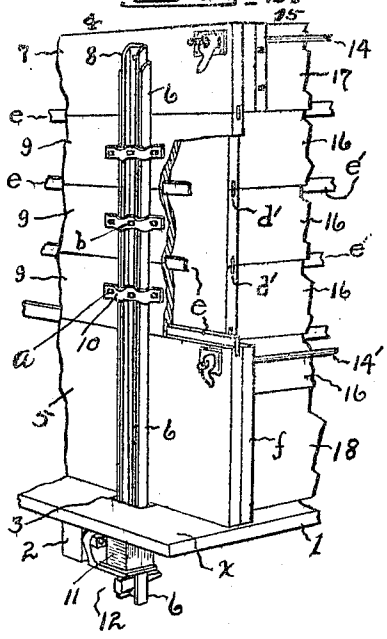


Fig. 2.



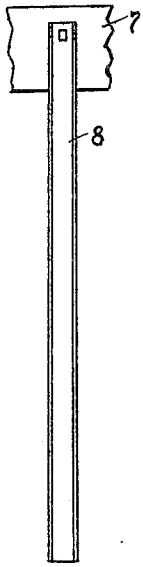


Fig. 3.

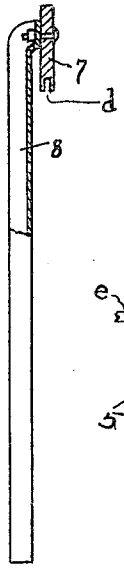


Fig. 4.

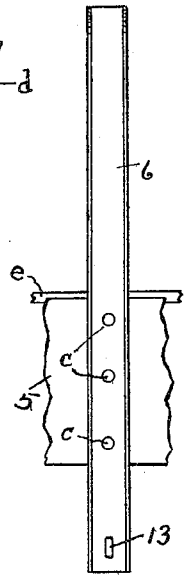


Fig. 5.

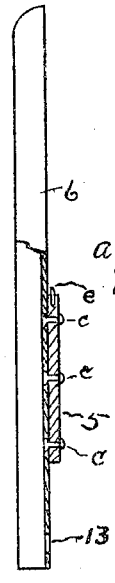
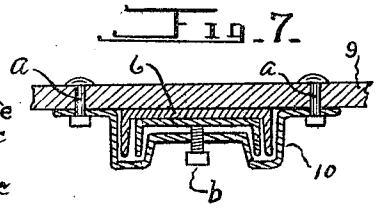


Fig. 6.

Fig. 7.



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2 SHEETS—SHEET 2.

Fig. 8.

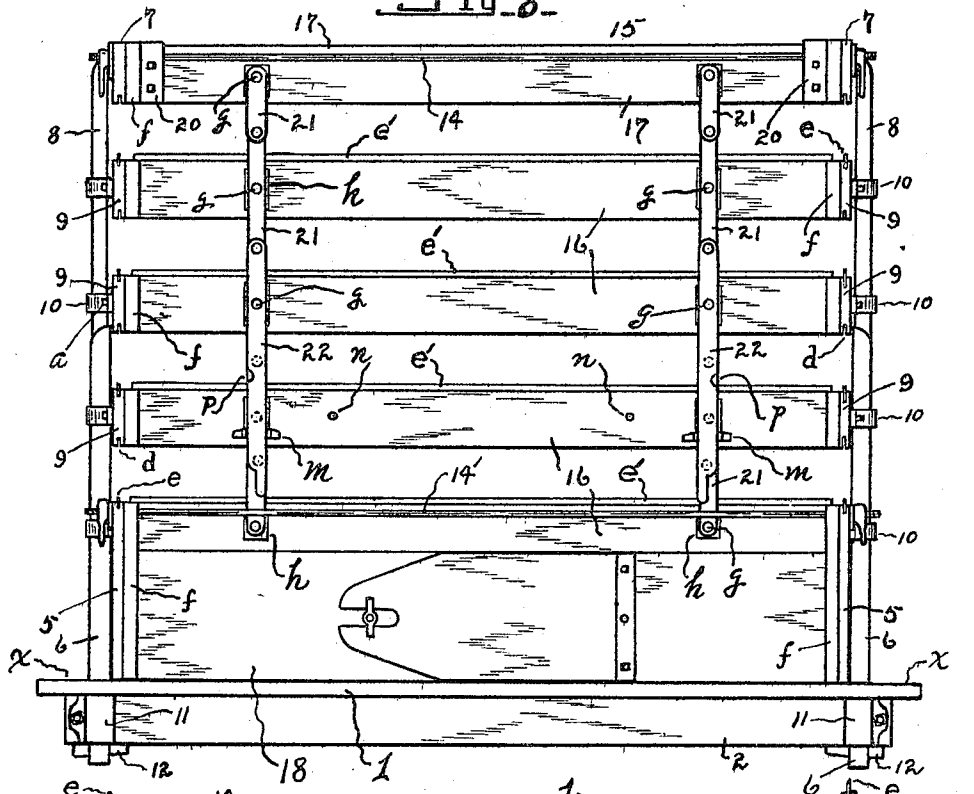


Fig. 9.

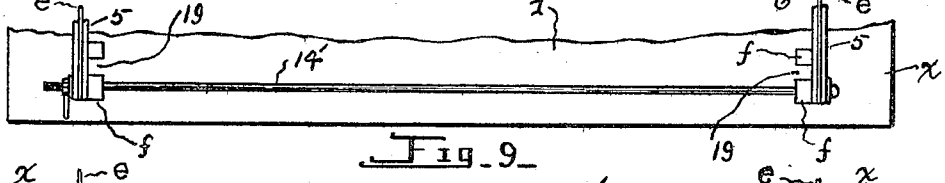


Fig. 10.

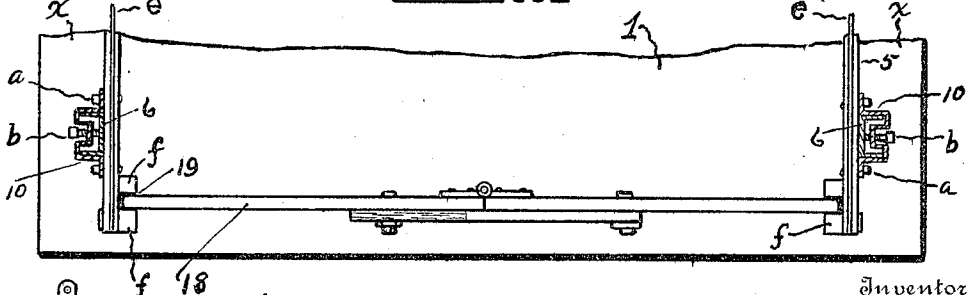
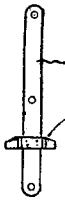


Fig. 11.



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ADJUSTABLE VEHICLE-BODY.

1,311,429. Specification of Letters Patent. Patented July 29, 1919.

Application filed December 21, 1918. Serial No. 267,778.

To all whom it may concern:

Be it known that I, DAVID H. WEIR, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Adjustable Vehicle-Bodies, of which the following is a specification.

This invention relates to an improved vehicle body or box of the class adapted to be adjusted in height for carrying live stock or grain, and has for its objects to provide such a construction that the adjustments may be conveniently made, and that stresses incident to its use will be adequately sustained. Another object is to provide few and simple parts so that manufacture will be economical and that durability may be attained; and the invention has reference to the use of a platform or bottom for the box which provides running-boards or side steps, and includes end-sections adapted to be adjusted to correspond in height with the side-sections, or may be adjusted independently thereof, or may be removed, and includes removable end-gates, these detachable features being of great advantage when loading or unloading live stock.

With the foregoing objects in view the invention presents a novel construction, combination and arrangement of parts as described herein and claimed, and as illustrated in the accompanying drawing, it being understood that changes in form, size, proportion and minor details may be made within the scope of the invention, as claimed.

In the drawing, Figure 1 is a perspective view of an adjustable vehicle body or box embodying my invention. Fig. 2 is a broken, perspective view in detail to illustrate the mounting for a side and an end section of the vehicle box, the strips being in contact. Fig. 3 is a front view of one of the alining-bars employed, a part of a top-strip being added, and Fig. 4 is a side view of the same, partly in section.

Fig. 5 is a front view of one of the standards employed, a part of a base-strip being added, and Fig. 6 is a side view, partly in section, of the same. Fig. 7 is a sectional view through one of the clamping brackets to illustrate means for maintaining the strips of a section in contact or in spaced relation.

Fig. 8 is an end view of the vehicle box, showing the parts extended to form a rack. Fig. 9 is a broken away, plan view showing grooves for receiving the strips for an end section or an end gate. Fig. 10 is a broken away plan view showing an end gate, a pair of clamping-brackets and a pair of standards being shown in transverse section. Fig. 11 shows a catch mounted on one of the links of a lazy tongs.

Referring now to the drawing, numeral 1 indicates a platform provided at its lower side with cross-strips or sleepers 2 so that it will be suitably reinforced, said platform preferably being rectangular in plan and of any desired length or width, and being provided, adjacent to its side edges and at longitudinal intervals, with apertures 3.

I provide a pair of side sections 4, each consisting of a base-strip 5, a plurality of standards 6 projecting above the platform, a top strip 7, a plurality of alining-bars 8 secured to and projecting downwardly from the top strip for engaging the standards, and auxiliary strips 9 intermediate the base-strip and top strip, a plurality of clamping-brackets 10 being employed and secured to the strips by bolts or equivalent keepers *a* to lie crosswise of the standards and alining-bars, so that by use of suitable set-screws *b*, the alining-bars may be pressed against the standards, or may be released therefrom, as may be required.

The base-strips 5, preferably, are secured to the standards by rivets *c* as best shown in Fig. 6. Numerals 11 (Figs. 2, 8,) indicate castings or brackets which are secured to the ends of the sleepers 2 and which provide housings for the lower ends of the standards 6, said standards being disposed in apertures 3, and by use of wedges 12, each engaging in an aperture 13 of a standard, the base-strips may be firmly seated upon the platform, or may be readily removed therefrom.

The standards and alining-bars may have any suitable form in cross-section, but for these members I prefer the use of channel-bars, substantially as shown, and it will be seen that the strips of the side sections may be disposed with their edges in contact, and may be secured in locked relation by means of the set-screws *b*, the alining-bars being disposed in the grooves of the standards and

engaging in the apertures 3 of the platform, any transverse swinging movement of the side sections being practically eliminated by operation of the brackets 11, and by means of the tie-rods 14 and 14′ which connect the side sections, the position of parts being as shown in Fig. 2 when the box is filled with grain or other like material, the lower edges of the strips being provided, longitudinally, with grooves *d* for receiving the tongues *e* which are provided for the upper edges of the strips 5 and 9, to prevent loss of grain which otherwise, on account of vibration, might move outwardly between the strips.

When adjusting the strips of the side sections to form a rack, the set screws may be loosened and the strips may then be spaced apart, the alining-bars sliding upwardly in the channels of the standards, and it is obvious that the distance between the strips for providing a rack of greater or lesser height will be a matter of choice of an operator, who by use of the holder-members or screws *b*, may cause the alining-bars and standards to be maintained in locked relation, and the rack thus provided may be used for carrying bulky articles or live stock. In this connection it should be stated that the number of strips 9, and their width, may be increased or decreased, and the standards and alining-bars may have any suitable length.

The end sections 15 each consist of a plurality of strips 16, a top strip 17 and a removable base plate or gate 18. As best shown in Figs. 9 and 10. vertical grooves 19 are formed, these being provided for the ends of the side strips 5, 7 and 9, upon the inner sides thereof, each groove 19 being formed by use of a pair of vertical struts *f* for receiving the ends of the strips 16 and 17 and the base-plate or gate 18 mentioned, the struts being suitably secured to the strips of the side sections.

Each top strip 17 is provided with a pair of blocks 20 traversed by a tie-rod 14, and it will be seen that when the top strips 7 of the side sections are elevated to form a rack, or are lowered to form a grain container, the strips 17 move therewith. However, the strips 17 may be disconnected from the strips 7, if required, by removing the tie-rod 14.

Numerals 21 and 22 indicate links of a lazy tongs, two pairs of the lazy tongs preferably being employed for an end section, as best shown in Figs. 1 and 8, the pivotal mounting *g* for each link being upon a metallic plate *h*, said plates being provided for the strips of the end sections; and it will be understood that, by use of the links 22 which operate as hand levers, the lazy tongs may be swung to cause the strips to be elevated so that their edges will be in contact while the strips of the side sections are disposed in spaced relation, the ends of the strips 16 moving in the grooves 19, this operation for an end section which is independent of the operation for the side sections, being illustrated in Fig. 1. Also, as shown in Fig. 8, the strips for an end section, by manual use of the levers or links 22, may be disposed in spaced relation to form a rack, the ends of the strips 16 being disposed in said grooves 19.

The edges of the strips of the end sections are provided, longitudinally, with grooves *d′* and tongues *e′*, similar to those provided for the strips of the side sections, to prevent loss of grain when said strips are disposed in their lowermost position as shown in Fig. 2.

At *m* are indicated suitable catches, each being mounted upon a link for receiving a link-lever 22, to maintain the strips of the end sections in spaced relation when the links are disposed in vertical alinement. At *n* are indicated suitable projections or detents, these being provided for one of the strips of each end section for engaging in recesses *p* of the link-levers 22 to maintain the edges of the strips of the end section in contact.

The rear end-section may be readily removed for loading or unloading cattle, the tie-rods 14 and 14′ being first removed for this purpose, and the end gate 18 also being removed. For loading or unloading sheep or hogs, the rear end-section may be elevated to the position shown in Fig. 1, the rear end-gate being removed. Since the apertures 3 are disposed inwardly from the edges of the platform and are in alinement, a pair of side-steps or ledges *x* are provided and are found to be of advantage. The advantages in the movable features of the vehicle box heretofore mentioned will be appreciated by users of trucks or wagons since they may be used for a variety of purposes. The several adjustments may be readily made and stresses incident to the various uses will be adequately sustained.

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

1. In an adjustable vehicle box, a platform rectangular in plan provided with upwardly projecting standards adjacent to two of its opposed edges, a pair of sections each including a plurality of horizontal strips adapted to be adjusted longitudinally of the standards, a second pair of sections normally connected with the first named sections, each second section including a plurality of horizontal strips disposed at right angles to the strips of the first named sections adjacent to the two remaining edges of the platform, and pairs of lazy tongs mounted on the second sections for moving the strips thereof into contact or into spaced relation.

2. In an adjustable vehicle box, a rectangular platform, a pair of side sections each

including a base-strip, standards projecting above the platform and secured to the base-strip, a top-strip, alining-bars secured to the top-strip and engaging the standards, auxiliary strips intermediate the base-strip and top-strip, a plurality of brackets each being secured to one of said auxiliary strips, a plurality of clamping elements each being mounted in a bracket and being movable for pressing an alining-bar against a standard, and a pair of end-sections above the platform, each being removably connected with the side-sections.

3. In an adjustable vehicle box, a rectangular platform, a pair of sections each including a base-strip, standards projecting above and adjacent to two opposed edges of the platform and secured to the base-strip, a top-strip, alining-bars secured to the top-strip and engaging the standards, auxiliary strips intermediate the base-strip and top-strip, means for securing the strips upon the alining-bars at longitudinal intervals of the standards, and a second pair of sections each including a plurality of connected, horizontal strips, said second sections being disposed above and adjacent to the remaining edges of the platform and removably connected with the first named sections.

4. In an adjustable vehicle box, a platform, a pair of side-sections each including a base-strip, standards projecting above the platform and secured to the base strip, a top-strip, alining-bars secured to the top-strip and engaging the standards, auxiliary strips between the base-strip and top-strip, a plurality of brackets each being secured to one of said auxiliary strips, a plurality of set-screws each being threaded in a bracket and being revoluble for engaging an alining-bar at indeterminate longitudinal intervals thereof for pressing said bar against a standard, and a pair of end-sections above the platform, each including a plurality of connected strips, each end-section being removably connected with the side sections.

5. In an adjustable vehicle box, the combination of an apertured platform provided with sleepers on its lower side, brackets mounted on the sleepers and disposed in alinement with the apertures of the platform, a pair of side-sections each including a base-strip, a plurality of standards traversing the apertures of the platform and secured to the base-strip, each having a part disposed below a bracket, a top-strip, alining-bars engaging the standards and secured to the top-strip, an auxiliary strip between the base-strip and top-strip, a bracket secured to the auxiliary strip, a clamping element engaging the last named bracket movable for pressing an alining-bar against a standard, a pair of end-sections above the platform removably connected with the side-sections, and means engaging the standards and said first named brackets tending to press the base-strips of the side-sections against the platform.

6. In an adjustable vehicle box, a rectangular platform provided with alining apertures adjacent to its side edges, a pair of side sections each including a base-strip, standards outwardly of the base-strip engaging in the apertures of the platform and secured to said base-strip, a top-strip, alining-bars secured to the top strip and engaging the standards, auxiliary strips between the base-strip and top-strip, a plurality of brackets each being secured to one of said auxiliary strips, a plurality of clamping elements each being threaded in a bracket and being movable for pressing an alining-bar against a standard, and a pair of end-sections above the platform, each being removably connected with the side-sections, that part of the platform, outwardly of the standards, being continuous throughout its entire length.

7. In an adjustable vehicle box, a rectangular apertured platform, standards above and extending through the apertures of the platform, a pair of sections including horizontal strips disposed inwardly of the standards, a second pair of sections including horizontal strips removably connected with the first named sections, a plurality of lazy tongs arranged in pairs for moving the strips of a section into contact or into spaced relation with reference to each other, and means to maintain the strips of a section in stationary relation after they have been moved.

8. In an adjustable vehicle box, a platform, a pair of sections above the platform each including a plurality of horizontal strips, standards mounted upon the platform each being secured to one of said strips, alining-bars engaging the standards each being secured to one of said strips, means for removably securing the strips of a section in stationary relation with the alining-bars, means for adjusting the alining-bars longitudinally of the standards, a second pair of sections including horizontal strips disposed at right angles and removably connected with the first named sections, and a plurality of lazy tongs arranged in pairs for moving the strips of a section into contact or into spaced relation with reference to each other.

9. In an adjustable vehicle box, a rectangular, apertured platform, a pair of side sections each including a horizontal base-strip, apertured channel-bars projecting above and traversing the apertures of the platform and secured to the base strip, a horizontal top-strip, channel-bars secured to the top-strip and engaging the first named channel-bars, horizontal auxiliary strips intermediate the base strip and top-strip, wedge-members in the apertures of the first

named channel-bars tending to press the base-strips against the platform, a plurality of brackets each being secured to an auxiliary strip, a plurality of screws threaded in the brackets movable for pressing the second channel-bars against the first named channel-bars, a pair of end-sections above the platform removably connected with the side-sections, each end-section including a plurality of horizontal strips, and a pair of lazy tongs mounted on a section for moving the strips thereof into contact or into spaced relation.

In testimony whereof, I have affixed my signature in presence of two witnesses.

DAVID H. WEIR.

Witnesses:
HIRAM A. STURGES,
ARTHUR H. STURGES.

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