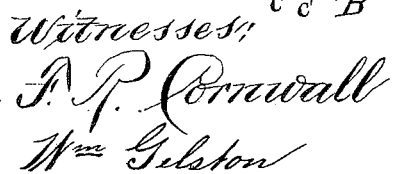


J. J. MARCO.
WAGON END GATE.

Patented Sept. 8, 1891.



Inventor
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UNITED STATES PATENT OFFICE.

JOSEPH J. MARCO, OF HARLAN, IOWA.

WAGON END-GATE.

SPECIFICATION forming part of Letters Patent No. 459,194, dated September 8, 1891.

Application filed May 2, 1891. Serial No. 391,379. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH J. MARCO, a citizen of the United States, residing at Harlan, in the county of Shelby and State of Iowa, have invented certain new and useful Improvements in End-Gates for Wagons; 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 letters of reference marked thereon, which form a part of this specification.

My invention relates to an improvement in end-gates for wagons, &c.; and it consists in the certain peculiar features of construction and combination of parts more fully described hereinafter and claimed.

The object of my invention is to provide an improved adjustable end-gate for wagons, and more especially for that class of wagons used in hauling grain and the like, in which it is desirable to have tight joints to prevent the wasting of the same. This object I accomplish by the construction illustrated in the accompanying drawings, in which like letters of reference indicate like parts in the several views, and in which—

Figure 1 is a perspective view of the end of a wagon-bed having my improved end-gate attached thereto and showing the same in a closed position, and Fig 2 is a similar view showing my improved end-gate in a lowered position.

In the drawings, A represents the wagon-body; B, a cross-bar secured to the under side of the bottom of the body at the end thereof, having the projecting cylindrical ends *c*, the ends being provided with metallic coverings *c'* to prevent wearing.

D is the end-gate, provided with suitable cross-braces *d'* on the outer face thereof.

d'' are cleats secured to the inner lower ends of the side guards *d*, and which engage the outer faces of the side-boards and prevent side movement, extending transversely across the lower portion of the outer faces of the side guards, and secured to the same by a bolt and nut *d'''* are rectangular-shaped metallic plates E, formed with longitudinal slots *e*, through which the bolt *d'''* passes, and a concave outer

end *e*, which engages over the cylindrical projecting ends *c* of the cross-bar C.

F are circular bearing-plates secured to the outer face of the end-gate near the edges of the same by the bolts *g* and having a circular opening *f* in the center thereof, which registers with similar openings in the end-gate and which are formed with the curved slots *f'* and *f''* near the outer edges thereof, through which the bolts *g* pass. These slots are of a length sufficient to leave the connections *f'''* and *f''''* between the inner and outer portions of the plate. On the plate F, between the slot and the central opening, is a curved inclined bearing-flange *f'''* at right angles to the same. G are eyes on the ends of bars secured to the wagon-body, and which project through the circular openings in the end-gate and plate F when the end-gate is in a closed position.

H are locking-rods formed at one end into hooks *h*, which pass through the eyes G, said hooks being small enough to pass through the circular openings in the plate F and the end-gate. The opposite ends of the rods are formed into eyes *h'*, of a diameter greater than the opening in the plate.

I are suitable securing-hooks for the rod H on the upper edge of the end-gate.

J is a lug on the lower edge of the end-gate, which engages with a hooked plate *j'*, secured to the cross-bar C, thereby preventing the end-gate from moving outward at the bottom when in a lowered position.

From the above construction it will be seen that when it is desired to make a tighter joint between the wagon-body and the end-gate it is only necessary to lower the end-gate to secure the plates E in a position nearer to the cross-bar C and to rotate the plates F in such a manner that the rods H will engage with the inclined flanges *f'''*, when the end-gate is closed and secured.

F² are blocks on the gate for supporting the overhanging edges of the plates F.

To lock the gate when it is in a closed position, the locking-rods are forced up under the hooks on the upper edge of the gate, the inclined flanges, as above stated, serving as a bearing for the hooked end of the rod, against which the same is forced, thereby holding the end-gate closely against the ends of the box, the inclination of the flange compensating for

bending or wearing of the parts, which is accomplished by turning the plate so that a higher portion of the flange will come in contact with the rod.

5 I am aware that many minor changes in the construction and arrangement of the parts of my device can be made without in the least departing from the nature and principle of my invention.

10 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a wagon-body, a cross-bar on the lower end of the wagon, and
15 projecting ends on the cross-bar, of an end-gate, side guards on the end-gate, adjustable metallic plates on the side guards adapted to engage with the projecting ends of the cross-bar, adjustable circular plates on the end-gate,
20 having a circular opening in the center thereof registering with openings in the end-gate, an inclined right-angle flange on the plate, eyes secured to the wagon-body, hooked rods in the eyes, and suitable securing-hooks for
25 the rods, substantially as described.

2. In a wagon-body, the combination, with the sides of the end-gate having openings therein, plates on the gate, having registering openings therein and curved slots near their

outer edges, bolts passing through said slots, 30 inclined flanges on the plates, eyes on the body, and hooks passing through the eyes and engaging the flange when the parts are adjusted to close the gate, substantially as described. 35

3. In a wagon, the combination, with the body, of an end-gate having openings therein, hooked rods secured to the body, adapted to work in the openings, eyes on the rods, hooks on the gate with which the rods engage, and
40 an adjustable inclined flange on the gate for engaging the rods, substantially as described.

4. In a wagon, the combination, with the body, of an end-gate, hooks secured to the body and passing through the gate, eyes on
45 the ends of the hooks, adjustable inclined bearing-plates with which the hook engages, means for locking the hooks, a cross-bar on the body, and adjustable side bearings on the gate engaging the cross-bar, substantially as
50 described.

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

JOSEPH J. MARCO.

Witnesses:

JAY WYLAND,
GEO. C. TRUE.