

(No Model.)

2 Sheets—Sheet 1.

C. A. ANDERSON.
END GATE.

No. 555,200.

Patented Feb. 25, 1896.

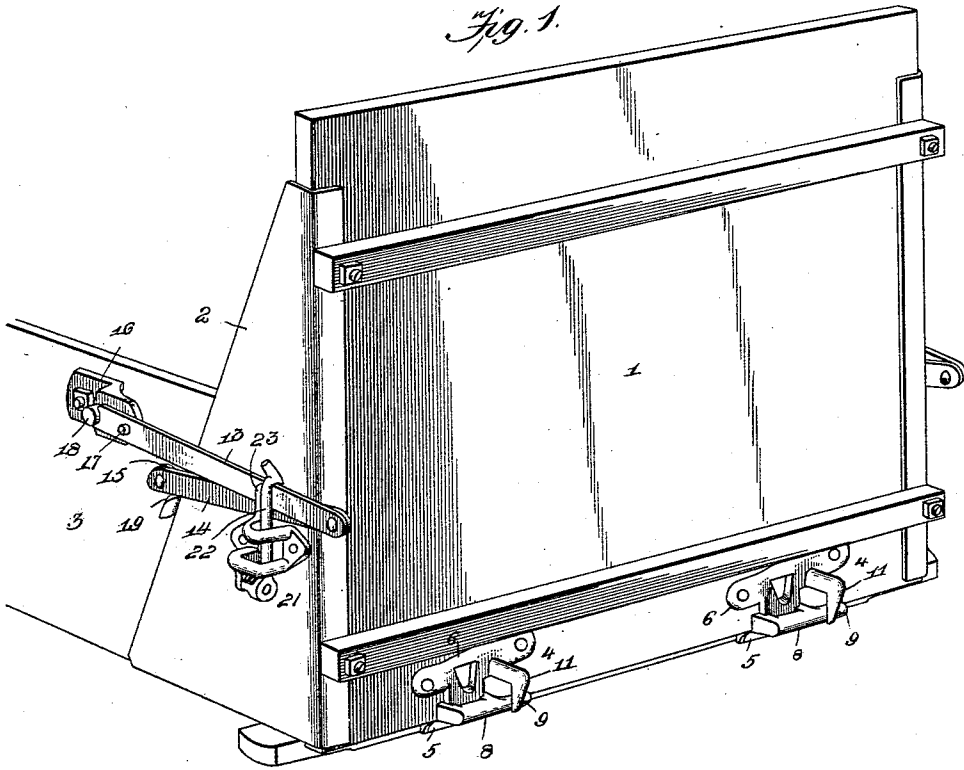


Fig. 3.

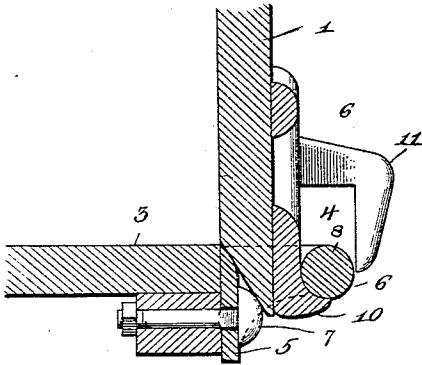


Fig. 4.

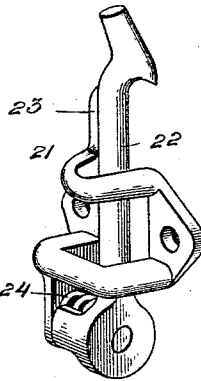
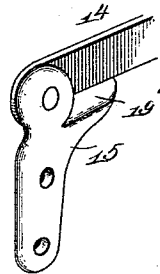


Fig. 9.



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2 Sheets—Sheet 2.

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Fig. 2.

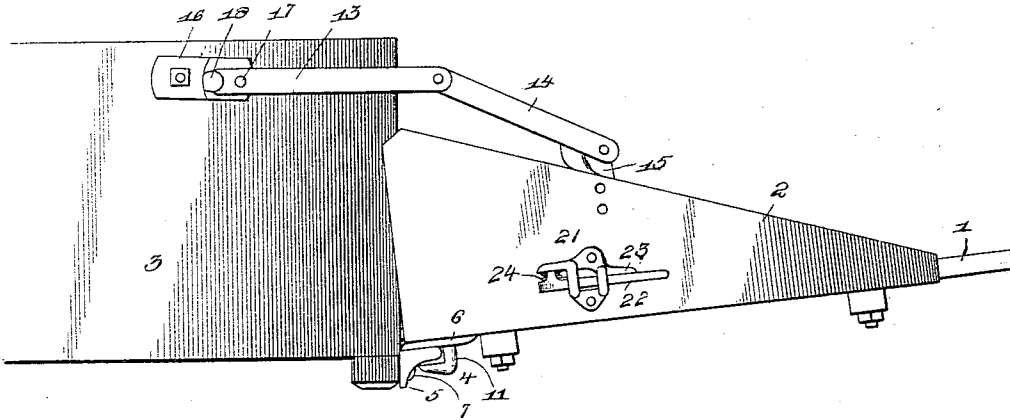


Fig. 5.

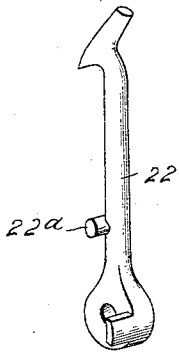


Fig. 6.

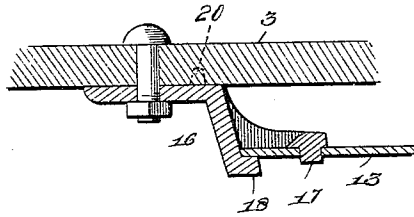


Fig. 8.

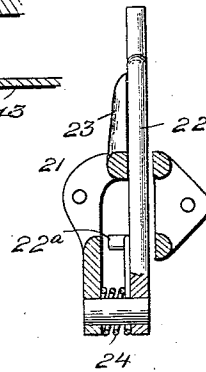
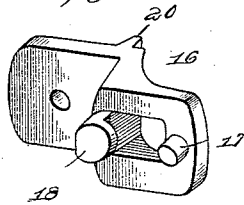


Fig. 7.



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UNITED STATES PATENT OFFICE.

CARL A. ANDERSON, OF ORION, ILLINOIS.

END-GATE.

SPECIFICATION forming part of Letters Patent No. 555,200, dated February 25, 1896.

Application filed May 24, 1895. Serial No. 550,546. (No model.)

To all whom it may concern:

Be it known that I, CARL A. ANDERSON, a citizen of the United States, residing at Orion, in the county of Henry and State of Illinois, have invented a new and useful End-Gate, of which the following is a specification.

The invention relates to improvements in end-gates.

The object of the present invention is to improve the construction of end-gates and to provide a simple and inexpensive one which may be readily locked in a vertical position for closing the end of a wagon-body and which may be readily lowered for shoveling as conveniently when in the wagon-body or on a load as from the ground.

A further object of the invention is to dispense with the transverse rods often employed for securing end-gates to wagon-bodies and to enable the end-gate to be readily detached from a wagon-body without removing any bolts or nuts and without having any parts liable to become mislaid and lost.

The invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of an end-gate constructed in accordance with this invention and shown applied to a wagon-body, the end-gate being closed. Fig. 2 is a side elevation, the end-gate being lowered for shoveling. Fig. 3 is an enlarged detail sectional view of one of the hinges for connecting the end-gate to the bottom of the wagon-body. Fig. 4 is an enlarged detail perspective view of the latch. Fig. 5 is a similar view of the latch-bar. Fig. 6 is a detail sectional view illustrating the manner of connecting the inner link-bar with the wagon-body. Fig. 7 is a detail perspective view of one of the pivot-plates. Fig. 8 is a detail sectional view of the latch. Fig. 9 is a detail view illustrating the construction of the ears for supporting the outer links.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates an end-gate provided with triangular metal wings 2 and connected with the bottom of a wagon-body 3 by hinges 4,

composed of sections 5 and 6. The section 5 is secured by a bolt 7 to the transverse end cleat of the wagon-body and consists of a bracket having a transverse pintle 8, which is extended laterally at one side of the bracket to form a lug 9. The leaf 6 consists of a plate, which is provided with a hook 10 engaging over the pintle of the leaf 5 and fitting between the sides thereof, and the said leaf 6 is provided adjacent to the lug 9 with a depending L-shaped arm 11, which, when the end-gate is in a lowered position for shoveling, extends beneath the lug 9 and locks the end-gate against any accidental upward movement tending to disengage the hooks from the pintles of the bracket-leaves 5 of the hinge. The back of the bracket-leaf is provided with a rectangular opening and receives the squared portion of the bolt 7 and is thereby held against rotation. This form of hinge enables the end-gate to be readily disconnected from the bottom of the wagon-body when it is in an upright nearly vertical position.

The wings or sides of the end-gate are connected with the sides of the wagon-body by a pair of inner and outer links, 13 and 14, arranged at each side of the body and having their inner ends pivotally connected. The outer link, 14, has its outer end pivoted to an ear 15 of the adjacent wing, and the inner end of the inner link is detachably pivoted to a plate 16. The plate 16 is secured to the outer face of the side of the wagon-body by a bolt or other suitable fastening device, and it has an outer laterally-offset or L-shaped portion, which is provided with a pivot-lug or projection 17, and the inner end of the link 13 is perforated to receive the pivot 17. The link 13 is detachably locked against accidental disengagement from the pivot 17 by an L-shaped lug 18, forming a recess between its head or outer portion and the plate with which it is formed integral, and the inner end of the link 13 is received in the recess of the lug when the end-gate is in its vertical or approximately horizontal position.

When it is desired to remove the end-gate from the body of the wagon, the end-gate is first detached or disconnected at its bottom by separating the leaves of the hinges, and the inner links may then be arranged in a

vertical position to permit their inner ends to be disengaged from the recesses of the lugs, whereby the links may be readily removed from the pivotal plates.

5 The end-gate is supported in a slightly-inclined position for shoveling, and is prevented from swinging downward to a horizontal position by shoulders 19, formed by integral projections of the ears 15 and located at the inner sides thereof. The ears are preferably 10 formed of plates riveted or otherwise secured to the inner faces of the wings, and the projections are inclined or arranged at an angle so as to form a firm support or shoulder for maintaining the outer links in an inclined position, as illustrated in Fig. 2 of the accompanying drawings. The plates 16, which 15 carry the pivots for the inner links, are provided on their inner faces with spurs 20 for engaging the wagon-body to prevent them from turning on the fastening devices.

When the end-gate is in a vertical position for closing the wagon-body, the links assume a horizontal position and are folded on each 25 other, as illustrated in Fig. 1 of the accompanying drawings, and they are received by keepers 21, and are retained therein by pivoted spring-actuated latch-bars 22, which combine with the keepers to form latches. Each 30 keeper consists of a plate, and is provided with an arm 23, arranged parallel with the wings of the end-gate, and forming a space between the same and the keeper for the reception of the links. The plate of the keeper is provided 35 with loops to receive the latch-bar, and it has at its lower end a pivot fitting in an eye of the lower end of the latch-bar. The latch-bar is provided at its upper end with a beveled head or tooth, forming a shoulder to retain the links 40 in the keeper, and adapted to spring aside automatically to allow the links to be swung downward into the keeper. The spring for holding the latch-bar in engagement with the links is coiled around the pivot of the keeper, 45 and this spring 24 has one end engaging the lower loop of the keeper and its other end bearing against the lug 22^a of the latch-bar.

It will be seen that the end-gate is exceedingly simple and inexpensive in construction, 50 that it is strong and durable, and is conveniently operated from a position in the wagon-body or on a load, or from the ground. It will also be apparent that the end-gate is firmly supported in its position for shoveling, 55 and that it may be detached from the wagon-body without disconnecting any bolts or nuts, and that when it is detached none of the parts can become lost.

Changes in the form, proportion, and the 60 minor details of construction may be resorted to without departing from the principle or

sacrificing any of the advantages of this invention.

What I claim is—

1. A hinge comprising a leaf 5 having a pintle 8, and provided with a laterally-extending bracket forming a lug 9, and a leaf 6 provided with a hook portion 10 for engaging over the pintle, and having a substantially L-shaped arm 11 depending from the leaf 6 and extending 70 beneath the lug 9 of the other leaf 5, substantially as described.

2. The combination with a wagon-body, and a detachable end-gate, of a hinge connecting the same, and comprising a bracket-leaf having 75 opposite sides, and provided with a pintle 8 connecting the sides and projecting laterally from one of them, and forming a lug 9, and a leaf consisting of a plate having a hook 10 to engage over the pintle and fit between 80 the sides of the other leaf, and provided with a substantially L-shaped arm 11 arranged to extend beneath the lug 9 when the end-gate is lowered, whereby the hook is prevented from becoming disengaged from the pintle, 85 substantially as described.

3. The combination with a wagon-body, and an end-gate, of a plate mounted on the wagon-body and provided with a horizontally-disposed pivot, and having a lug arranged adjacent 90 to the pivot and provided with a recess, and a pair of links pivotally connected together and one of the links being connected to the end-gate, and the other link being provided with an opening to receive the pivot, 95 and having its adjacent end fitting in the recess of the lug and engaged by the latter, substantially as described.

4. The combination with a wagon-body, and an end-gate, of a pair of links having their adjacent terminals pivoted to each other, and 100 having their other terminals connected respectively to the wagon-body and the end-gate, and a latch mounted on the end-gate and locking the links and comprising a keeper 105 having an upward-extending arm to receive the links and provided with a loop, a latch-bar pivoted at its lower end to the keeper, and arranged in the loop thereof, and provided at its upper end with a shoulder for engaging 110 the links, and a spring mounted on the keeper and engaging the latch-bar and holding the latter in its engagement with the links, substantially as described.

In testimony that I claim the foregoing as 115 my own I have hereto affixed my signature in the presence of two witnesses.

CARL A. ANDERSON.

Witnesses:

J. O. ANDERSON,
J. S. PETERSON.