

(No Model.)

N. BROADWELL.
WAGON END GATE.

No. 499,511.

Patented June 13, 1893.

Fig. 1.

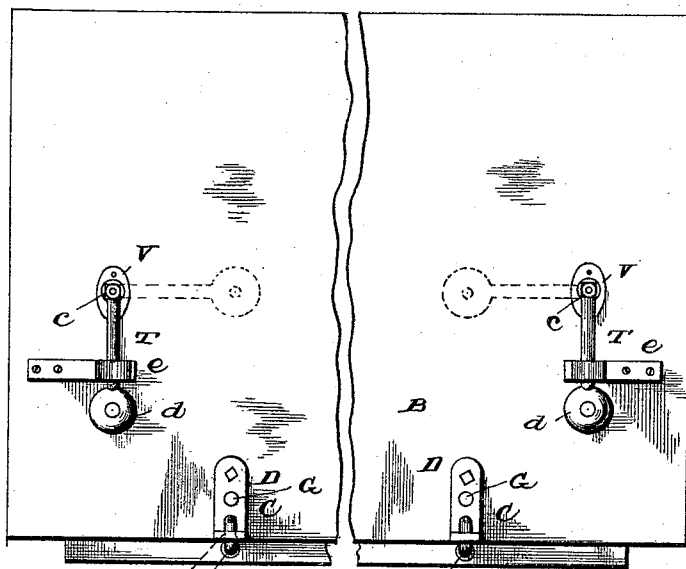


Fig. 6.

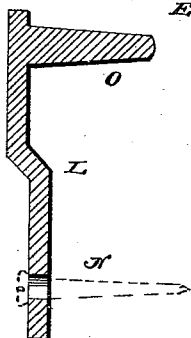


Fig. 2.

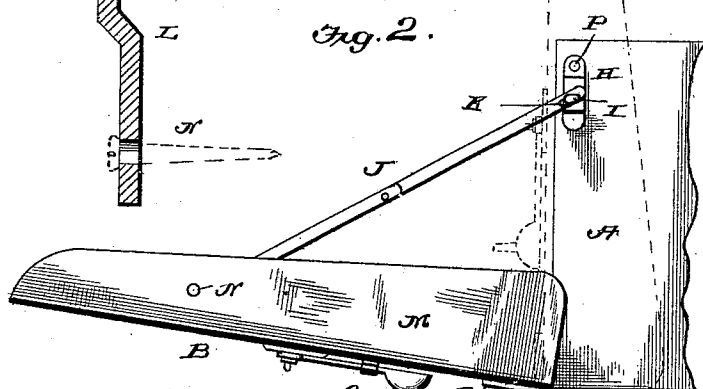


Fig. 4.

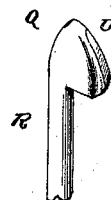


Fig. 5.

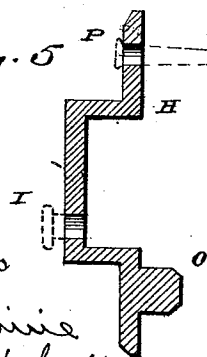
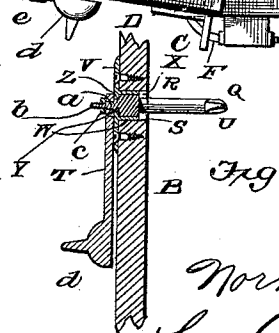


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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WAGON END-GATE.

SPECIFICATION forming part of Letters Patent No. 499,511, dated June 13, 1893.

Application filed March 1, 1893. Serial No. 464,158. (No model.)

To all whom it may concern:

Be it known that I, NORMAN BROADWELL, a citizen of the United States, residing at Jacksonville, in the county of Morgan and State of Illinois, have invented certain new and useful Improvements in End-Gates; 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 is an improved end gate and consists in certain novel features hereinafter described and claimed.

In the annexed drawings, Figure 1 is a rear elevation of an end gate embodying my improvements, the latches being shown down in full lines and raised in dotted lines. Fig. 2 is a side elevation, showing the gate lowered in full lines and raised in dotted lines. Fig. 3 is a detail sectional view showing the construction of the latch. Fig. 4 is a perspective view of the end of the latch. Fig. 5 is a detail view of the keeper for the latch, and Fig. 6 is a detail view of the keeper in or to which the lower end of the hanger or brace is pivoted.

The wagon bed or body, A, may be of any preferred construction and forms no part of my present invention.

The end gate, B, is, of course, arranged at the rear end of the wagon body and is connected thereto by hinges C. These hinges consist of the L-shaped plates D secured to the outer or rear face of the end gate and having openings E in their lower ends, and the upwardly curved pins F secured to the bottom of the wagon body at the rear end of the same and passing through the said openings E. The upturned portions of the pins are made sufficiently long to project above the plates D when the end gate is raised and thereby prevent the lower end of the gate swinging away from the wagon body after being raised. When the gate is lowered the ends of the pins engage recesses or sockets G in its outer side and thereby prevent lateral movement of the same while in use.

To the sides of the wagon body, at the up-

per rear corners of the same, I secure the hasps or keepers H which are provided with the T-shaped projections or lugs I on their outer sides. The lugs I may, if desired, be T-headed bolts secured in the keepers, and they are engaged by the upper ends of the jointed braces or hangers J which support the outer end of the gate when it is lowered. The said upper ends of these hangers or braces are provided with longitudinal slots K through which the shanks of the bolts or projections I pass and thereby serve as pivots for the said hangers. The slots permit the hangers to yield slightly to the twisting or jolting of the wagon body and the end gate while the T-heads will prevent the accidental disengagement or release of the hangers. Should it be desired, however, to disengage the hangers, they can be readily turned so that the slots will register with the T-heads and slip over the same. By then simply raising the gate bodily the plates D will be lifted from the pins F and the gate removed from the wagon body. The lower ends of the hangers are pivoted in or to the keepers L which are secured to the sides, M, of the end gate. These keepers are secured in position by a screw N at one end and a cylindrical projection or spur, O, near the opposite end which passes through the ends of the hanger, and serves as a pivot therefor, and into the sides of the end gate. The sides of the end gate prevent the spreading of the contents of the body during the act of unloading and also cover and protect the hangers and the ends of the latches when the gate is raised. The keepers H are somewhat similar to the keepers L in construction, being secured in position by a single bolt and a spur P passing into the side of the wagon body. It will be seen at once that the hangers support the end gate, when lowered, in proper position for directing the unloaded articles into a convenient receptacle and when the gate is raised they fold into a small compass.

In the end gate, near the sides of the same, I mount the latches Q which are adapted to engage the keepers H and thereby lock the gate in its raised position. These latches consist of the shaft R, which is journaled in a bearing S secured to the end gate, and a weighted handle T secured to the outer end

of the shaft. The inner end of the shaft is formed into a cam-shaped hook U which will impinge against the edge of the keeper as the gate is raised and will act thereon so as to rotate the latch to such a position that the hook can pass through the keepers and the handle will be raised. As soon as the hook has cleared the keeper, the weight of the handle will cause the same to swing downward and return the latch to its normal position so that the hook will engage the keeper and lock the gate. The bearing S consists of a plate V secured to the end gate and provided with a barrel or sleeve W entering an opening X in the end gate. The shaft of the latch is journaled in this barrel or sleeve and is provided with an annular shoulder Y which impinges against an annular stop Z on the bearing so that the latch cannot be drawn rearward through the end gate. The shaft of the latch is further provided with an angular stem *a* on which the handle is fitted and a threaded extremity *b* upon which I mount a nut *c* to prevent the loss of the handle. It is obvious that the motion of the shaft will be communicated directly to the handle and in order that the shaft may be maintained in its normal position, I provide the free end of the handle with the weight *d* which causes it to normally hang downward.

In order to more securely fasten the gate, I may provide the spring catches *e* on the rear side of the end gate which will engage the handles and prevent their swinging when the vehicle is moving over a rough road. These catches, however, are not important and may be dispensed with.

When it is desired to open the gate, the handles of the latches are swung upward so as to turn the latches into such a position that they may be disengaged from the keepers and the gate then swung downward. In closing the gate, the latches act automatically as above described.

It will be readily seen from the foregoing description that I have provided a simply constructed end gate which will be securely locked when closed, which can be easily opened when required and which can be quickly removed from the wagon body when necessary.

I wish it to be understood that I do not limit myself to the exact details of construction shown in the drawings as many minor changes may be made therein without departing from my invention.

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

1. The combination with the wagon body and the end gate having sockets or recesses in its outer side near its lower edge, of L-shaped plates secured to the lower edge of the end gate and having openings in their outwardly projecting arms, and upwardly curved pins secured to the wagon body, passing through the openings in the L-shaped plates and adapted to engage the recesses in the end gate.

2. The combination with the wagon body and the end gate detachably hinged thereto, of T-shaped projections on the sides of the wagon body, and jointed hangers having their lower ends pivoted to the sides of the end gate and their upper ends provided with longitudinal slots adapted to pass over the heads of the projections and engage the shanks of the same.

3. The combination with the wagon body and the end gate, of keepers secured to and projecting from the sides of the body, and rotary latches journaled in the end gate and provided with cam-shaped hooks at their inner ends adapted to impinge against the keepers and be thereby automatically rotated so as to pass through and engage the same.

4. The combination of the wagon body, the end gate, bearings secured in the end gate and provided with annular stops, keepers secured on the wagon body, latches journaled in said bearings adapted to engage the keepers and provided with annular shoulders adapted to bear against said annular stops, and weighted handles secured to the outer ends of the latches.

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

NORMAN BROADWELL.

Witnesses:

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G. W. LORRELLS.