(No Model.)

I. VAN WINKLE.

WAGON END GATE.

No. 455,370. Patented July 7, 1891.

Fig. 1.

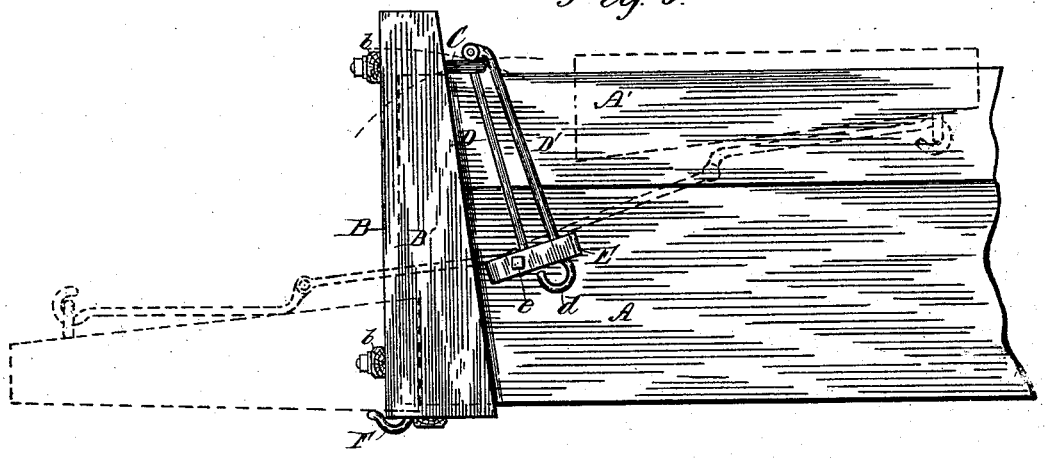


Fig. 2.

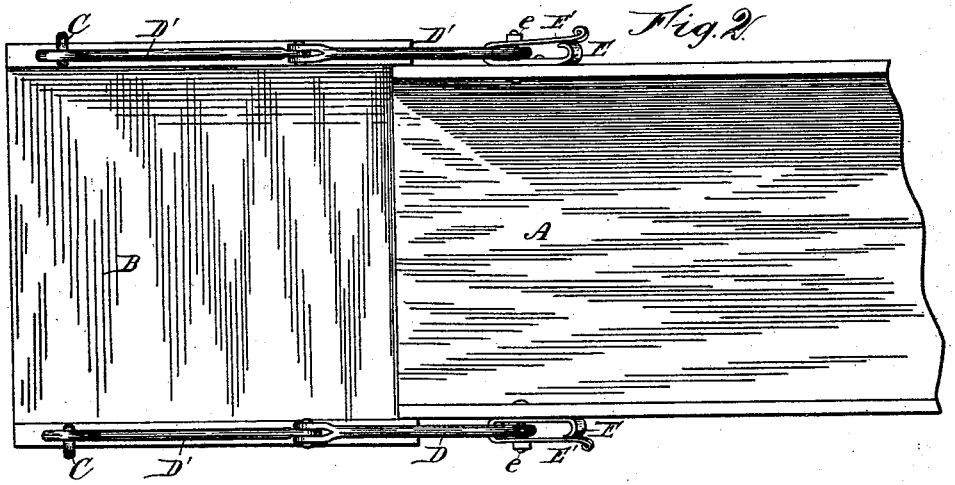
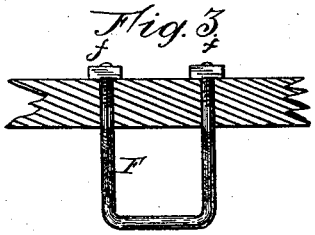


Fig. 3.



Attest.

W. Wagers.

L. A. St. John.

Inventor.

Isaac Van Winkle.

By J. M. St. John.

Atty.

UNITED STATES PATENT OFFICE.

ISAAC VAN WINKLE, OF DYSART, IOWA.

WAGON END-GATE.

SPECIFICATION forming part of Letters Patent No. 455,370, dated July 7, 1891.

Application filed March 16, 1891. Serial No. 385,223. (No model.)

To all whom it may concern:

Be it known that I, ISAAC VAN WINKLE, a citizen of the United States, residing at Dysart, in the county of Tama and State of Iowa, have invented certain new and useful Improvements in End-Gates; and I do hereby 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.

The object of this invention is to provide an end-gate for a wagon-box, which is adapted to be easily locked to close the end of the box, automatically locks the end-gate in a horizontal position when open, and permits of a wide range in the movement of the same.

The invention consists in the construction, combination, and arrangement of parts, as hereinafter fully set forth and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is a plan view of the same, and Fig. 3 is a plan view of one of the supports for the lower edge of the gate.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A is a common wagon-box, and A′ the top box, this being the usual arrangement for hauling grain, and the like. On top of this is sometimes placed another box or rack used in hauling hogs, &c.

The end-gate proper—that is to say, the wooden part thereof—consists of an end-board B, suitably stiffened and stayed by cleats *b b*, and two side-boards B′, which, when the gate is in the position shown in Fig. 1, overlap the box on the outside. The lower edge of the gate rests on a pair of supports F, (one being shown in the drawings,) extending back from the box, and near each side thereof. It will be seen that the outer end of the support curves upwardly somewhat, so that the gate edge rests in a hollow in the support. In practice I make these supports or brackets in the form shown in Fig. 3, a simple stirrup of round iron fastened to the cleat *a* of the box by suitable nuts *f f*.

Near the upper end of the gate in each side is secured an eyebolt C. Through the eye of this eyebolt passes the locking-lever D D′. This consists of two rods D D′, hinged together near the middle. In one end of the rod D is an eye, through which passes a bolt *e*, connecting it with the box A and serving as a pivot for the rod. The corresponding end of the rod D′ forms a hook *d*.

To the side of the box is secured a spring clamp or latch E E′. This is a simple loop of spring-steel, one side of which is fastened to the box and the other side from the pivot-bolt *e* outward is free to spring outwardly. The end of the part E forms a hook adapted to catch and hold the lower end of the rod D′. The end of the spring portion E′ should be turned out somewhat, as shown, to facilitate the entering of the rod between it and the hook. To lock the parts the rod D′ is drawn in between the spring and the adjacent hook. To unlock the rod the operator springs it away from the box and slips it out.

It is to be understood that the device would be operative without the spring, simply a hook to hold the end of the rod D′; but the spring is employed to give greater security to the parts.

The operation of the device will now be understood. Referring to Fig. 2, or the dotted outline at the rear of the box in Fig. 1, the position of the parts will be apparent when the gate is down and the end of the box open. By this it will be seen that the lock-lever D D′ is straightened out, the rod D′ resting on the edge of the side-board B′, and the hook at the end holding in the eye of the eyebolt C. The rods thus form a pair of tie-rods, and in connection with the end of the box, against which the lower edge of the gate in this position abuts, holds said gate firmly in the position shown.

To close the gate, the outer end is lifted up, the rod D′ sliding through the eye C as the gate is raised. It is locked in the vertical position by drawing the rod D′ behind the hook E. When in this position, the eye C is close against the joint in the rods, so that it is impossible to raise the gate. The same connection of parts also prevents the upper end of the gate from swinging away from the end of the box, as will be evident by reference to the motion of the parts, as indicated by the arcs *y y z z*. The center from which the arc *y y* is struck is the lower outer angle of the gate, and indicates the path of the eye C.

The other arc shows the path of the joint of the rods, the center from which it is struck being the pivot-bolt *e*.

The upper dotted outline in Fig. 1 indicates a convenient position for the end-gate when a chute is not desired, as in unloading wheat, or the like. This admits of the front end of the box being tilted upward to dump the contents. The length of the tie-rods when straightened out admits of the end-gate being elevated much higher even than the top of the box shown, permitting it in fact to swing up over the top of the very high box or rack used for hauling hogs, &c.

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

1. The combination of the end-board B B′, eyebolts C C near the upper end thereof and practically central with respect to the edge of the board B′, the rods D D′, passing through said eyebolts, the rod D being hinged to the box A and to the other rod, and the rod D′ having an outward curvature near the joint to allow space for the eyebolt when the rods are brought together and to bear on the upper edge of the board B′ when down, and a terminal hook *d*, and the box A, having hooks E E and supports F F, substantially as described.

2. The combination, with a wagon-box and end-board, substantially as described, of the jointed rods D D′ and the spring-catch E E′, formed of a single piece, with a terminal hook to hold the rod D′, and the body bent outwardly backwardly and forming a spring E′, the said rod D′ being pivoted between the body of the said catch and the spring by means of a bolt *e*, attaching the catch to the wagon-box.

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

ISAAC VAN WINKLE.

Witnesses:
PETER WINKEL,
E. J. KULLMER.