

No. 661,582.

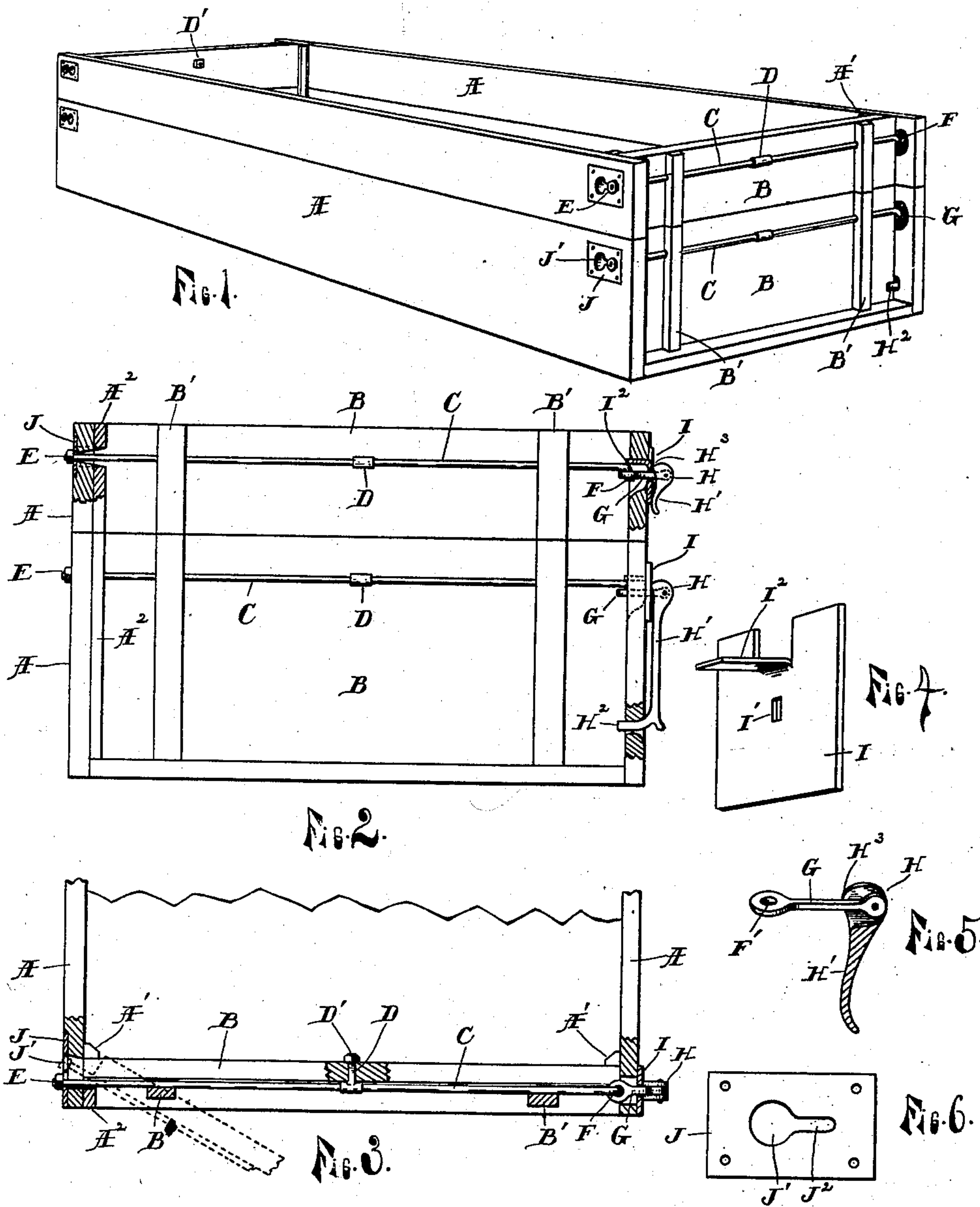
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A. H. & S. A. KRING.

WAGON END GATE.

(Application filed Aug. 23, 1900.)


(No Model.)



WITNESSES:

Lewis E. Sanders.
Joseph A. Welke.

INVENTORS:

Albert H. Kring
Silas A. Kring
By 
Attorneys

UNITED STATES PATENT OFFICE.

ALBERT H. KRING AND SILAS A. KRING, OF GRAPE, MICHIGAN.

WAGON END-GATE.

SPECIFICATION forming part of Letters Patent No. 661,582, dated November 13, 1900.

Application filed August 23, 1900. Serial No. 27,815. (No model.)

To all whom it may concern.

Be it known that we, ALBERT H. KRING and SILAS A. KRING, citizens of the United States of America, residing at Grape, in the county of Monroe and State of Michigan, have invented certain new and useful Improvements in Wagon End-Gates, of which the following is a specification, reference being had therein to the accompanying drawings.

Our invention relates to new and useful improvements in end-gates for wagon-boxes, and has for its object to provide a fastening means therefor whereby the end-gate is readily detachable and when locked is securely held in place; and to this end the invention consists in the use of a tie-rod detachably secured to one side of the wagon-box and an eccentric cam-lever upon the opposite side of the box, to which the free end of said rod is detachably secured.

The invention further consists in the construction, arrangement, and combination of parts, all as more fully hereinafter described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a wagon-box embodying our invention. Fig. 2 is an end elevation of such a box with parts broken away to show the construction. Fig. 3 is a plan view of one end of the same with parts broken away to show the construction. Fig. 4 is an enlarged detail of the cam-plate in perspective. Fig. 5 is an enlarged detail of the cam-lever shown in section, and Fig. 6 is a detail plan view of the slotted plate.

Like letters refer to like parts in all of the figures.

A represents the sides of the wagon-box, having the stop-cleats A', against which the end-gates B are held by the rods C, which rods pass through cleats B' on the outside of the gates, and are each provided with a projecting arm D, extending through the gate and secured thereto by a nut D' on its inner end. On one end of each rod C is secured a nut E, which forms a head, and at the opposite end said rod is bent at right angles to form a hook F, which hook is adapted to engage an eye F' in the end of the connecting-link G, and to the outer end of which link is pivoted the cam H, having a contact-point H³ and a lever H'. A plate I,

having an opening I', through which the link G passes, is secured to the wagon-box side, and a portion I² of said plate is bent at right angles to project through an opening in the box side and form a stop for the hook F. As the lower box or wagon-box proper is much deeper than the upper or detachable portion, it is desirable to provide a fastening for the lower corner of its end-gate. Such a fastening is secured by extending the lever H' of the cam and providing its lower end with an arm H², adapted to project through an opening in the box side and engage the gate at its inner end.

To the opposite side of the box is secured a plate J, provided with an opening J', having a lateral slot J², and the box side is cut away beneath said plate to allow the head E to be passed through the opening J' and the rod C engaged with the slot J². The plate J is so positioned that in order to pass the head E through the opening J' it is necessary to insert it at an angle, as shown in dotted lines in Fig. 3, and when so inserted and the gate brought to a position at right angles to said side the inner side of the gate engages the stop A' and prevents the rod from being removed from the slot J² until the opposite end of said gate is again swung outward. The outer side of the gate is engaged by the stop A² at this end when in place. When the gate is so placed, the eye in the end of the link G is engaged with the hook F and the point H³ of the cam brought in contact with the plate I by turning the lever H' down until it comes in contact with the box side, when it is firmly held by the pull of the link G, said point H³ being above the line of such pull. The box side is thus firmly held against the end of the gate and the cam prevented from turning or rattling. The link G is longitudinally movable in the opening I', so that when the eye is disengaged from the hook said eye may be withdrawn into the recess in the box side to allow the gate to pass. The stop I² prevents the hook F from moving upward or jumping out when strain is put upon it by the cam, and the arm D prevents the rod from turning or moving longitudinally.

Having thus fully described our invention, what we desire to secure by Letters Patent is—

1. In combination with the sides and end-gate of a wagon-box, a plate secured to one of said sides and having an opening provided with a lateral slot, a rod secured to said end-gate and provided with a head adapted to pass through said opening and engage the outer side of said plate, and a stop-cleat secured to said side and adapted to engage the end-gate to move the end of said rod into engagement with said lateral slot when said gate is turned at right angles to said side, substantially as described.

2. In combination with the sides and end-gate of a wagon-box, a hook on said gate, a link engaging said hook at one end and extended through the box side and provided with a cam at the opposite end, a downwardly-extending lever on said cam, an arm on said lever adapted to pass through an opening in the box side and engage the outer surface of the gate near its lower edge, substantially as described.

3. In combination with the sides and end-gate of a wagon-box, a hook secured to the gate, a plate secured to the box side having an opening and a portion extended at right angles through an opening in said side to form a stop for said hook, a link extending through the opening in said box and plate, and engaging said hook at one end, a cam pivoted to the opposite end of said link, a projecting contact-point on said cam adapted

to engage said plate at a point above the pivot of said cam and a lever on said cam to engage said plate below said pivot, substantially as described.

4. The combination of wagon-box sides having openings near their ends, plates secured to said sides and over said openings, one of said plates being provided with an opening having a lateral slot and the opposite plate formed with a portion extended at right angles through the opening in said box side to form a stop, an end-gate, stops on said box sides to engage said gate, a rod secured to said gate, a head on one end of said rod to engage the slotted plate, a hook at the opposite end of said rod engaging the stop on the other plate, a link formed with an eye at one end to engage said hook and passing through said plate having the stop, a cam pivoted to the outer end of said link, a downwardly-extending lever on said cam, and an arm on said lever extending through an opening in said box side and engaging said gate, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

ALBERT H. KRING.
SILAS A. KRING.

Witnesses:

OTTO F. BARTHEL,
LEWIS E. FLANDERS.