

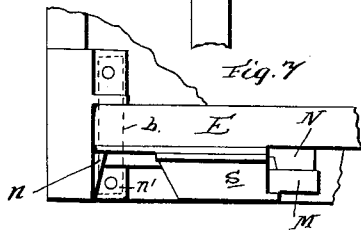
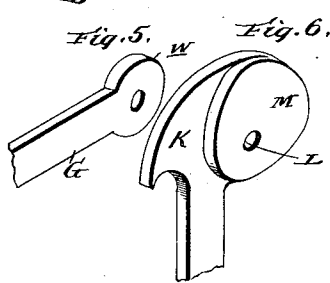
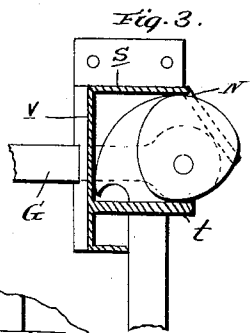
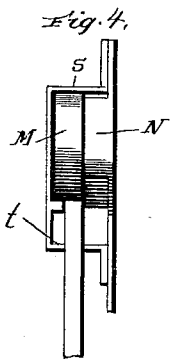
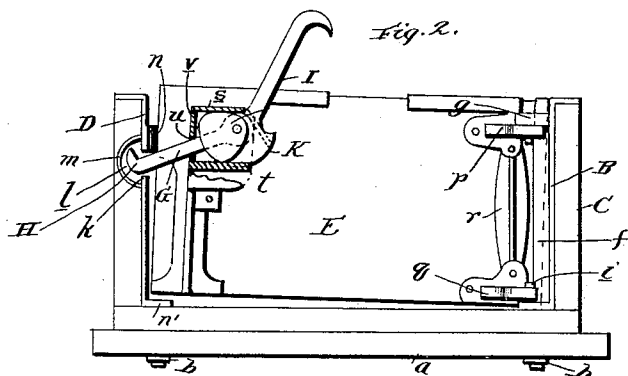
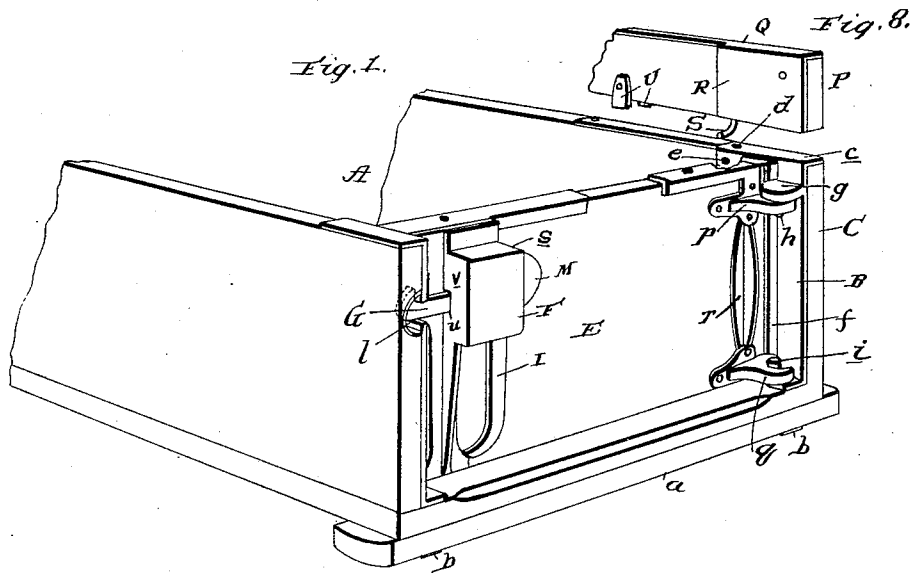
(No Model.)

B. F. CLARK & J. C. CARRICK.

WAGON END GATE.

No. 480,383.

Patented Aug. 9, 1892.



Witnesses:
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UNITED STATES PATENT OFFICE.

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WAGON END-GATE.

SPECIFICATION forming part of Letters Patent No. 480,383, dated August 9, 1892.

Application filed September 10, 1890. Serial No. 364,579. (No model.)

To all whom it may concern:

Be it known that we, BENJAMIN F. CLARK, residing at Harper, in the county of Harper, and JAMES C. CARRICK, residing at Spivey, in the county of Kingman, State of Kansas, citizens of the United States, have invented certain new and useful Improvements in Wagon-Bodies; and we 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.

This invention relates to an improvement in wagon-bodies, and is designed more particularly as an improvement upon means for securing the end-gate in position and in connection therewith tightening the body-frame by drawing its wall when the gate is locked.

The invention will be fully understood from the following description and claims when taken in connection with the annexed drawings, in which—

Figure 1 is a perspective view of a portion of a wagon-body with our improvements applied and the gate in a locked position. Fig. 2 is an end elevation of the body with the casing of a locking mechanism in section and the gate closed in a position ready to be locked. Fig. 3 is a vertical sectional view of the lock or latch casing, showing the latch and locking-lever partly broken away. Fig. 4 is an edge view of Fig. 3. Fig. 5 is a perspective view of one end of the latch. Fig. 6 is a perspective view of the cam end of the locking-lever. Fig. 7 is a plan view of a portion of one of the side walls of the body and a portion of the end-gate with the improved fastening device in position, and Fig. 8 is a perspective view of a portion of one of the auxiliary side walls or boards which we employ in some cases.

Referring by letter to said drawings, A indicates a wagon-body, which may be mainly of any ordinary or improved construction. This wagon-body is provided on its bottom at opposite ends with a cross-bar *a*, there being but one shown in the present illustration, and these cross-bars are firmly secured in position by means of bolts or the like taking through metallic plates *b*.

B indicates a metallic plate. This plate is of a form substantially as shown, having a lateral flange *c* at its upper end, which is designed to overlap the upper edge of the side wall C of the body, as shown, and this flange is provided near its inner end with a vertical hole *d*, communicating relatively at right angles with a similar hole *e*, for a purpose which will be presently explained. This plate is furthermore provided on its inner side with a vertically-disposed flange *f*, and on the outer side of said vertically-disposed flange and at the upper end of the plate is an inwardly-directed lug *g*, from which depends a fixed pintle *h*. The plate B is furthermore provided at its lower end on the inner side of the flange *f* with an inwardly-directed horizontal flange perforated for the reception of a bolt or the like, whereby said plate is secured to the floor of the body, and the plate is provided at its lower end on the outer side of the flange *f* with a vertical stud or pintle *i* at a point directly below the pintle *h*.

D indicates a plate secured to the rear end of the opposite wall of the body having the lateral flange at its upper end, the inwardly-directed flanges at its lower end, and the vertically-disposed flange similar to those of the opposite plate, and these plates are respectively secured to the rear ends of the side walls and to the floor of the body, so as to connect such parts together. The plate D is provided in its rear edge at a suitable altitude with a notch *k*, and the side wall to which said plate is secured is recessed at the point where said notch is formed, as shown at *l*, and this recess is preferably faced with metal, as shown at *m*. The plate D is also provided on its inner side and above the notch *k* with a beveled lug *n*, for a purpose which will be presently described.

E indicates the end-gate, which may be of any ordinary or approved construction, and in some cases it is desirable that more than one be used; but a description of one will answer for one or more. This end-gate is provided on its outer side near one of its upper ends with a lug-eye *p*, which is designed to receive the pintle *h*, carried by the plate B, so as to form a detachable hinge connection therewith. At a point just below the lug-eye

p is a hook-lug *g*, which has its hook disposed laterally to engage the pintle *i* after the eye *p* has received the pintle *h*, and for the sake of strengthening these castings and also the gate they may be connected by a body portion *r*, although we do not wish to confine ourselves to such construction, the object being to permit this end of the gate to have a hinge connection with the side wall of the body and to afford a ready attachment and detachment of said gate.

F indicates the latch-casing. This casing is secured on the upper outer side of the free end of the gate and is provided with a top wall *s* and a bottom horizontal wall *t*. Said casing is furthermore provided in its outer side with a slot *u* in its outer vertical wall *v*.

G indicates a latch, which has one end arranged within the casing F, and its opposite end, which passes through the slot *u* therein, is provided with a hook H, designed to enter the slot *k* in the plate D and engage said plate in a locked position. This latch, as will presently appear, has a lateral reciprocating movement and is also allowed to oscillate vertically, the hook at the outer end being vertically directed.

I indicates the operating or locking lever. This lever is provided at its inner end with a cam K, bearing an eccentric hole *l*, and formed on or fixed to one side of this cam and over one-half thereof is a heart-shaped cam M, which also bears a hole and is pivotally connected with the inner end of the latch G by means of a pin or the like.

It will be observed that the cam K is allowed to pass out of the opening in one of the vertical walls of the casing F when turned in one direction, and while the heart-shaped cam is designed to pass out of said opening when the lever has been turned downwardly or in the opposite direction, yet the pivot end *w* of the latch-lever will be prevented from coming out of the casing by reason of an oblique wall N, with which said latch engages when drawn inwardly and in a locked position.

It is by reason of the double cams on one end of the lever I that the latch-lever is given a vertically-oscillating and laterally-reciprocating movement.

P indicates one of the side-boards, which may be used to build up the body when desired. These side-boards may have metallic plates, such as Q and R, and are provided in their lower edges with downwardly and inwardly directed hooks S, designed to take into the holes *d* and *e*, and said boards may be provided with plates U on their inner and outer sides, depending below the lower edges of the side-boards to receive the upper edges of the side walls of the body.

In operation when it is desired to place the end-gate in position the lug-eye *p* is first placed to receive the pintle *h*, and the hook *g* then placed to receive the pintle or stud *i*

when a hinge connection is formed between one end of the gate and one of the side walls of the body. The lever I is then raised, as shown in Fig. 2 of the drawings, which causes the hook end of the latch to fall and move outwardly, and after the gate has been swung around in the position shown in Fig. 2, with the hook of the latch in the notch *k* of the plate D, the lever I is then drawn down, when the latch will draw the side walls tightly against the opposite ends of the gate and the cam will turn in the position shown in Fig. 3 of the drawings, so as to lock both the latch and lever I in the positions illustrated and the gate firmly in position.

It will be observed that when the gate is swung around in the position shown in Fig. 2 of the drawings the lever I, in conjunction with the latch G, will serve to draw down the free end of the gate, and consequently draw the walls of the body slightly toward each other, while the beveled lug *n* and the lug or flange *n'* at the base will serve to hold the gate from being forced open.

The top edge of the gate is preferably provided with facing-strips of metal and provided with holes similar to the lateral flanges *c*, so that when it is desirable to build up the end-gate this may be accomplished by means similar to that employed in building the side walls. The metal facing for the edge of the end-gate may be formed integral with the plates carrying the hinge-pintle and lock-casing, or they may be formed separately, as desired.

By reference to Fig. 7 of the drawings it will be seen that the plates *b*, which are placed beneath the cross-bar *a*, receive bolts, which also take through the flanges at the base of the plates B and D, respectively.

Having described our invention, what we claim is—

1. The combination, with a wagon-body having a plate on the inner side of one of its side walls provided with a notch, of a removably-hinged end-gate carrying a latch-casing, as described, a pivoted latch arranged in said casing and having a hook to engage the notched plate in the side wall, and the operating-lever having the double cams at one end to bear in the walls of said latch-casing and pivotally connected with the latch, substantially as specified.

2. A wagon end-gate having a latch-casing secured thereto, in combination with the lever having the double cam at one end, arranged to bear in the walls of the casing, and the hooked latch pivotally connected with said lever and adapted to receive a vertical and lateral oscillating motion, substantially as specified.

3. The combination, with a wagon-body, of the plate B, having the vertically-disposed flange on its inner side, the flanges at its upper and lower ends and also the studs or

pintles at opposite ends, the plate D, having the vertical flange on its inner side, the beveled lug and the flanges at opposite ends, and also provided with the notch, the end-gate
5 having the lug-eye and hook near one end and the latch-casing near its opposite end, and the pivoted oscillating latch having the hook at one end and the lever pivoted to said latch

and having the double cam at said pivoted end, substantially as specified.

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