No. 660,479. Patented Oct. 23, 1900.

C. S. WRIGHT.

END GATE.

(Application filed Aug. 6, 1900.)

(No Model.)

Fig. 1.

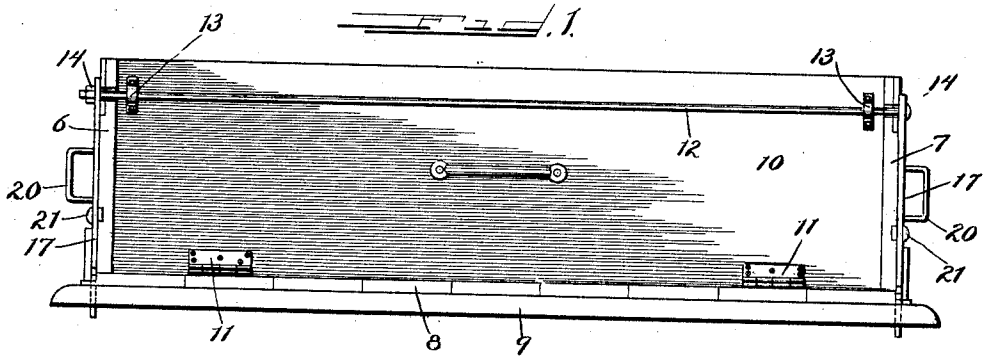


Fig. 2.

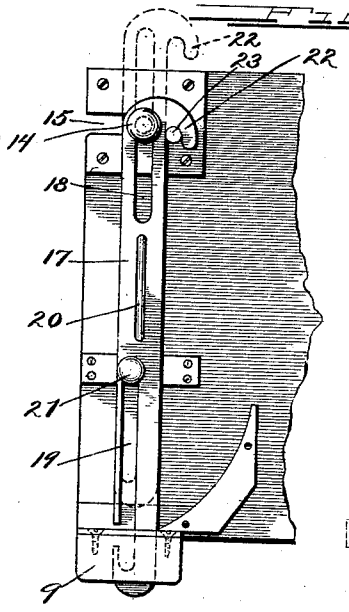


Fig. 3.

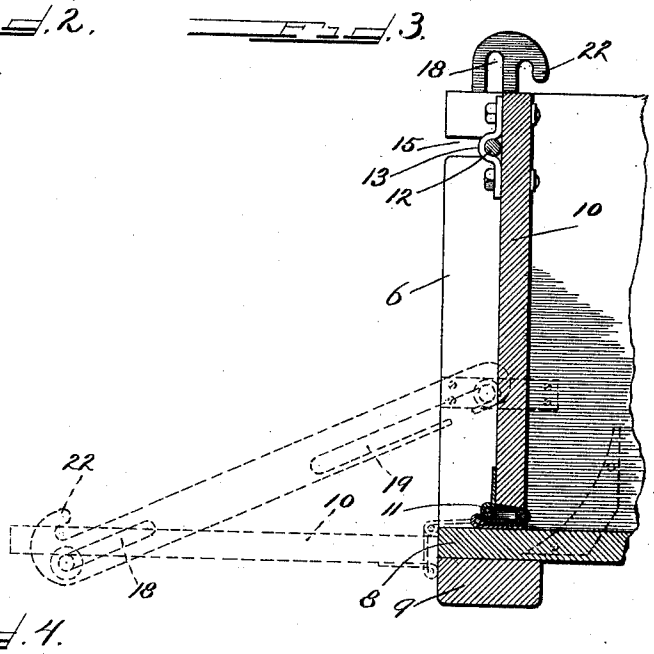


Fig. 4.

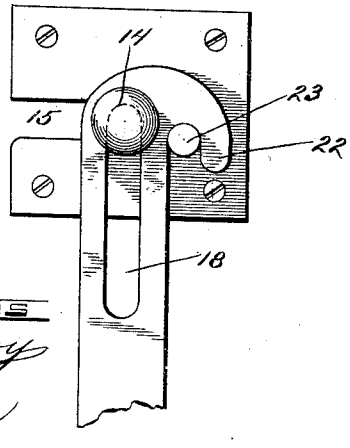
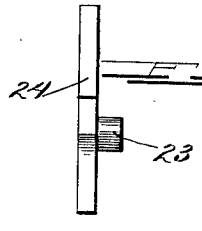


Fig. 5.



Witnesses
Ira D. Perry
J. B. Weir

Inventor
Charles S. Wright.
by Bond Adams Pickard & Jackson
his Att'ys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES S. WRIGHT, OF KANSAS CITY, KANSAS.

END-GATE.

SPECIFICATION forming part of Letters Patent No. 660,479, dated October 23, 1900.

Application filed August 6, 1900. Serial No. 26,011. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. WRIGHT, a citizen of the United States, residing at Kansas City, in the county of Wyandotte and State of Kansas, have invented certain new and useful Improvements in End-Gates, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to end-gates for wagons and similar vehicles, and has particularly to do with end-gates of the type illustrated and described in my Patent No. 651,620, dated June 12, 1900.

It has for its object to provide certain improvements in such end-gates by which a locking device will be provided at the upper end of the end-gate to prevent it from being turned down from its normal or vertical position between the sides of the wagon-box, such locking device being susceptible of use either conjointly with the locking devices at the lower ends of the locking-bars or without such lower locking devices, as may seem desirable.

To this end my invention consists in providing hooks or catches at the upper ends of the locking-bars adapted when the locking-bars are moved to the proper position to engage pins or equivalent devices carried by the wagon-box. Such hooks or catches are arranged to be disengaged when the locking-bars are operated to lower the end-gate and to be automatically locked when the locking-bars are operated to carry the end-gate to its normal position. I accomplish this object as hereinafter specified and as illustrated in the drawings.

What I regard as new will be set forth in the claims.

In the accompanying drawings, Figure 1 is an end view of a wagon-box, illustrating my improved end-gate. Fig. 2 is a side view of the rear portion of a wagon-box, illustrating my improvements. Fig. 3 is a longitudinal vertical section of the rear portion of a wagon-box and the end-gate. Fig. 4 is an enlarged detail illustrating my improved locking devices, and Fig. 5 is an edge view of one of the plates which are attached to the wagon-box and carry the locking-pins.

Referring to the drawings, 6 7 indicate the side-boards, and 8 the bottom, of a wagon-box.

9 indicates a cross-timber arranged under the bottom 8.

10 indicates the end-gate, which extends across the rear end of the wagon-box between the side-boards 6 7, resting on the bottom 8.

11 indicates hinges which connect the lower edge of the end-gate with the bottom 8. The hinges 11 are preferably of the construction illustrated and described in my patent hereinbefore referred to.

12 indicates a rod secured to the end-gate 10, near its upper edge, preferably by clips 13. Heads 14 are provided at the ends of the rod 12 and extend a short distance beyond the side-boards 6 7, as shown in Fig. 2. The latter are provided with slots 15 large enough to permit the passage of the rod 12, as shown in Figs. 2 and 3, so that the end-gate may be secured between the side-boards at a point a short distance from their rear ends.

17 indicates vertically-movable locking-bars, one of which is arranged at each side of the wagon-box, as shown in Fig. 1. Each of said locking-bars is provided with an upper longitudinal slot 18 and a lower longitudinal slot 19 and with a handle 20, preferably between said slots, as shown in Fig. 2. The locking-bars 17 are fitted against the side-boards 6 7 near their rear ends, the ends of the rod 12 passing through the upper slots 18, the heads 14 of said rod operating to prevent the disconnection of said locking-bars with said rod. Said locking-bars are further held in position by bolts 21, which are secured to the side-boards 6 7 and project through the lower slots 19, said bolts having suitable heads to prevent their accidental disengagement with said locking-bars. It will be noted that by this construction the locking-bars may be moved longitudinally, the slots 18 19 permitting such movement.

22 indicates hooks carried by the locking-bars 17. Said hooks are adapted to engage fixed pins 23, carried by and projecting from the sides of the wagon-box, as shown in Figs. 2, 4, and 5. Said pins are so placed with relation to the hooks 22 that when the locking-bars 17 are in the position shown in Fig. 2, at which time the end-gate is in its normal position, the hooks 22 will engage the pins 23, thereby preventing the upper ends of the locking-bars 17 from being moved backward, as is necessary when the end-gate is turned down out of its normal position. The pins 23 are preferably attached to the side-boards by screwing to the side-boards metal plates 24,

from which the pins 23 project, as illustrated in Figs. 2 and 4. This construction may, however, be varied. The position of the hooks 22 and pins 23 may also be varied; but the best results are secured by placing the hooks 22 at the upper ends of the locking-bars 17, the pins 23 being suitably placed to be engaged by said hooks. Said hooks may, however, be placed at other points on the locking-bars 17, or the arrangement of the parts may be reversed, the pins being carried by the bars 17 and the hooks by the side-boards, in which case it will be necessary to arrange the hooks so as to permit longitudinal movement of the locking-bars. The construction illustrated is, however, that which I prefer.

As illustrated in Figs. 1 and 2, the lower ends of the locking-bars 17 when in their lowermost position enter slots or sockets in the beam or cross-timber 9, said sockets serving as retaining devices which prevent said locking-bars 17 from swinging, so that it is necessary to move said locking-bars vertically sufficiently to clear said sockets before the end-gate can be opened. The latter construction, separately considered, is described and claimed in my prior patent above referred to and is claimed herein only in combination with the supplementary locking devices already described.

In operation, the end-gate being in the position shown in Fig. 2, when it is desired to lower it the locking-bars 17 are moved vertically sufficiently to release the hooks 22 and in the construction shown to release the lower ends of the locking-bars 17 also. The end-gate may then be turned down, the rod 12 moving out of the slots 15 into the position illustrated in dotted lines in Fig. 3, or it may be suspended from the rear end of the wagon-box, as described in my former patent referred to. When the end-gate is raised, the ends of the rod 12 move into the slots 15, at which time the locking-bars 17 are in the position illustrated in dotted lines in Fig. 2. When the end-gate reaches its normal position, the locking-bars are allowed to drop, the hooks 22 then engaging the pins 23 and the lower ends of the locking-bars entering the sockets in the beam or cross-timber, securely locking the end-gate in position.

By the construction described a very strong firm lock is secured for the end-gate, which is nevertheless simple in construction and operation, since the locking-bars are unlocked simply by moving them vertically and their locking is effected by reverse movement thereof.

That which I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of a box, an end-gate therefor, a locking-bar at one end of said end-gate, said locking-bar being connected with said end-gate and being pivotally mounted on said box, and a hook and a retaining device therefor carried by said box and locking-bar, adapted to interlock when the end-gate is moved into position to close the ends of the box and prevent the turning of said locking-bar on its pivot, substantially as described.

2. The combination of a box, an end-gate therefor, a locking-bar for said end-gate, said locking-bar having a slotted connection with the upper end of said end-gate and with the side of the box, whereby it may be moved longitudinally, a hook and a retaining device therefor, carried by said locking-bar and the side of the box, said hook and retaining device being adapted to interlock when said locking-bar is in its normal vertical position, substantially as described.

3. The combination of a box, an end-gate therefor, a locking-bar for said end-gate, said bar having a slotted connection with the upper end of said end-gate and with the side of the box, whereby it may be moved longitudinally, a hook at the upper end of said locking-bar, and a pin projecting from said box and adapted to be engaged by said hook when it is in its normal vertical position, substantially as described.

4. The combination of a box, an end-gate therefor, a locking-bar for said end-gate, said locking-bar having a slotted connection with the upper end of said end-gate and with the side of the box, whereby it may be moved longitudinally, a hook and a retaining device therefor, carried by said locking-bar and the side of the box, said hook and retaining device being adapted to interlock when said locking-bar is in its normal vertical position, and a retaining device adapted to engage the lower end of said bar when it is in such normal position and prevent swinging thereof, substantially as described.

5. The combination of a box, an end-gate therefor, a locking-bar for said end-gate, said bar having a slotted connection with the upper end of said end-gate and with the side of the box, whereby it may be moved longitudinally, a hook at the upper end of said locking-bar, a pin projecting from said box and adapted to be engaged by said hook when it is in its normal vertical position, and a slot adapted to receive the lower end of said locking-bar when in its normal vertical position, substantially as described.

6. The combination of a box, an end-gate therefor, a longitudinally-moving locking-bar at one end of said gate, said locking-bar being connected with said end-gate and being pivotally mounted on said box, a hook, and a retaining device therefor carried by said locking-bar and the side of the box, substantially as described.

CHARLES S. WRIGHT.

Witnesses:
J. S. BLACK,
W. F. TILTON.