No. 691,031. Patented Jan. 14, 1902.

F. L. WHEATLEY & S. STEEN.

END GATE.

(Application filed July 5, 1901.)

(No Model.)

Fig. 1.

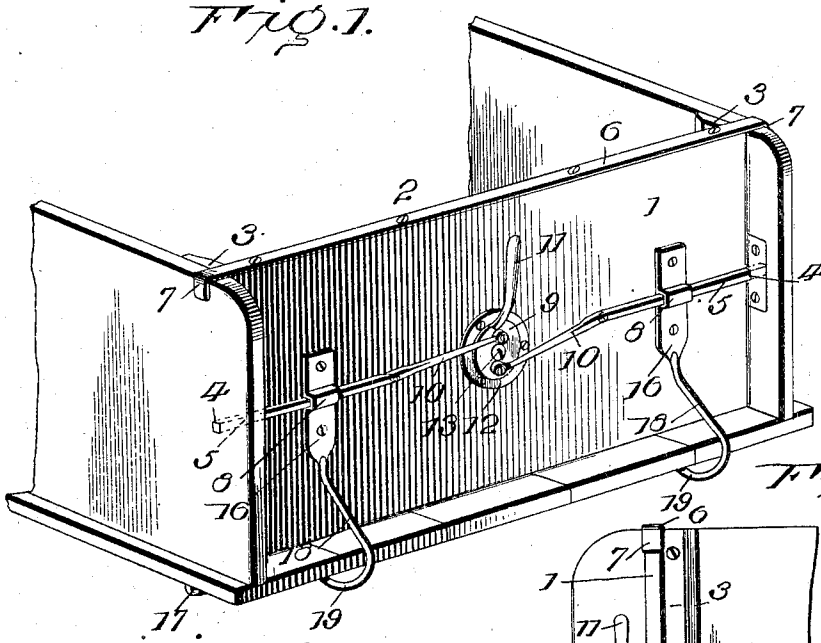


Fig. 3.

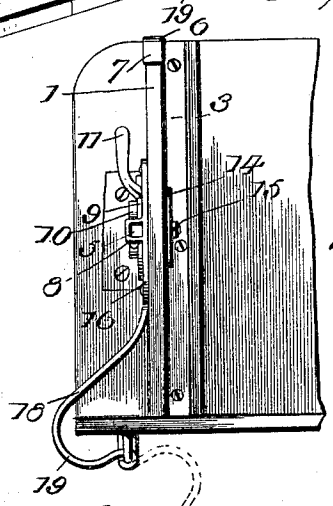
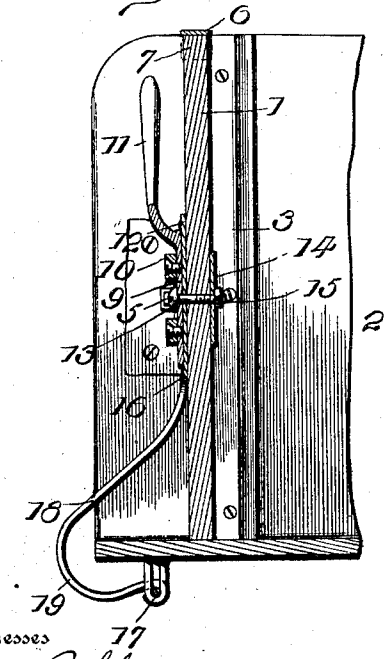
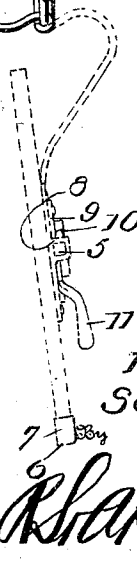


Fig. 2.





Witnesses

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UNITED STATES PATENT OFFICE.

FREDERICK L. WHEATLEY, OF GLEASONTON, AND SCHRAEDER STEEN, OF MEDIXRUN, PENNSYLVANIA.

END-GATE.

SPECIFICATION forming part of Letters Patent No. 691,031, dated January 14, 1902.

Application filed July 5, 1901. Serial No. 67,215. (No model.)

To all whom it may concern:

Be it known that we, FREDERICK L. WHEATLEY, residing at Gleasonton, Clinton county, and SCHRAEDER STEEN, residing at Medixrun, Elk county, State of Pennsylvania, citizens of the United States, have invented certain new and useful Improvements in End-Gates; and we 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 purpose of the present invention is to provide novel means for the securement of an end-gate when in position and for the hinging of the same to the bottom of the wagon-body, whereby when the gate is turned down it is entirely out of the way, the hinge members forming guides for the lock-bars by means of which the gate is secured to the sides of the wagon-body when in position.

The improvement consists of the novel features and details of construction which hereinafter will be more particularly set forth, illustrated, and finally claimed.

In the drawings hereto attached, Figure 1 is a perspective view of the rear portion of a wagon-body, showing the end-gate in position and embodying the essential features of the invention. Fig. 2 is a vertical section taken on a line midway of the ends of the gate. Fig. 3 is an end view of the gate, showing the relation of the parts when it is swung outward and downward beneath the bottom of the wagon-body.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The end-gate 1, as also the wagon-body 2, may be of any desired construction, and in accordance with the principles of this invention the side-boards of the wagon-body are provided near their rear ends with cleats 3 for the end-gate to rest against and with openings 4, reinforced by metal plates, for the reception of the outer ends of the lock-bars 5. In order to prevent the spreading of the side-boards and to protect the upper edge of the end-gate, a metal bar or strip 6 is secured to the upper edge of the end-gate and its end portions project beyond the extremities thereof and are bent to provide hooks 7, which engage over the upper edges of the side-boards, so as to hold them close against the extreme edges of the end-gate 1, as clearly indicated in Fig. 1.

The lock-bars 5 are held to the outer side of the end-gate and are directed in their reciprocating movements by guides or keepers 8 and are connected for simultaneous operation in opposite directions, so as to be either withdrawn or projected at one and the same time. A plate or disk 9 is pivoted centrally to the end-gate and links 10 have pivotal connection therewith at points equidistant from its axis, and their outer ends are pivotally connected to the inner ends of the lock-bars 5 in any substantial way, preferably by butt or rule joints. The plate or disk 9 has an operating-handle 11, which projects vertically when the lock-bolts are projected, so as to enter the openings 4 and lock the end-gate to the side-boards of the wagon-body. In order to prevent wear of the plate or disk 9 upon the end-gate, a wear plate or disk 12 is secured to the outer or rear side of the end-gate and receives the abrasive action of the plate or disk 9 when operating the same either to lock or release the end-gate. The pivot-fastening 13 for the plate or disk 9 preferably consists of a bolt and passes through the wear-plate 12 and end-gate 1, and its projecting head, besides serving to hold the plate or disk 9 in place, constitutes a stop to limit the turning of the plate or disk 9 and the inward movement of the lock-bars by engagement of the links 10 on opposite sides thereof. An inner wear-plate 14 is applied to the end-gate 1 for the nut 15 applied to the inner end of the pivot fastening or bolt 13 to bear against, thereby preventing the nut 15 from wearing away the end-gate and pulling therethrough.

As stated above, the end-gate is hinged to the wagon-body, and the hinge connection comprises hinge members 16 and a hinge-bar 17, the latter being locked below the bottom of the wagon-body and a short distance from the rear end thereof and attached to the wagon-body in any substantial manner either by eyebolts or analogous fastenings. The hinge members 16 are secured to the end por-

tions of the end-gate in any substantial manner and are formed with transverse openings which constitute the guides or keepers 8, in which the lock-bars 5 are mounted for sliding movement. The lower portion of the hinge members 16 is curved rearwardly and downwardly, as shown at 18, and thence forwardly, as indicated at 19, to receive the hinge-bar 17, which passes through the terminal eyes thereof. By curving the hinge members, as shown at 18 and 19, they form braces to supplement the action of the lock-bars, and the end-gate when released and swung downward is enabled to come entirely beneath the bottom of the wagon-body, so as to be out of the way, as indicated most clearly in Fig. 3. The hinge members 16 serve as guides for the lock-bars, braces for the end-gate, and as means to support the end-gate beneath the bottom of the wagon-body in such a manner as not to interfere with the loading or unloading of the wagon having its end-gate equipped with the invention.

Having described the invention, what is claimed as new is—

1. In combination with a wagon-body and the end-gate, lock-bars, actuating mechanism therefor, and hinge connections between the end-gate and wagon-body, the upper hinge members forming guides or keepers for the lock-bars and having their lower end portions extended downwardly and rearwardly, thence forwardly and pivoted to the bottom of the wagon-body, substantially as and for the purpose specified.

2. In combination, a wagon-body, an end-gate, a metal bar reinforcing the upper edge of the end-gate and extended beyond the extremities thereof and terminating in hooks to engage over the upper edges of the side-boards, lock-bars, a pivoted disk having an operating-handle, links pivoted at their outer ends to the inner ends of the lock-bars and at their inner ends to the said disk at points diametrically opposite to and equidistant from its pivotal connection with the end-gate, and hinge connections between the end-gate and the bottom of the wagon-body, the upper hinge members constituting guides or keepers for the locking-bars and curved rearward and downward, thence forward to provide braces and having pivotal connection with the bottom of the wagon-body a distance from its rear end to admit of the end-gate swinging beneath the bottom entirely out of the way, substantially as set forth.

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

FREDERICK L. WHEATLEY. [L. S.]
SCHRAEDER STEEN. [L. S.]

Witnesses:
C. F. JOHNSON,
W. E. DERR.