

E. ROWLAND.
WAGON END-GATE.

No. 192,351.

Patented June 26, 1877.

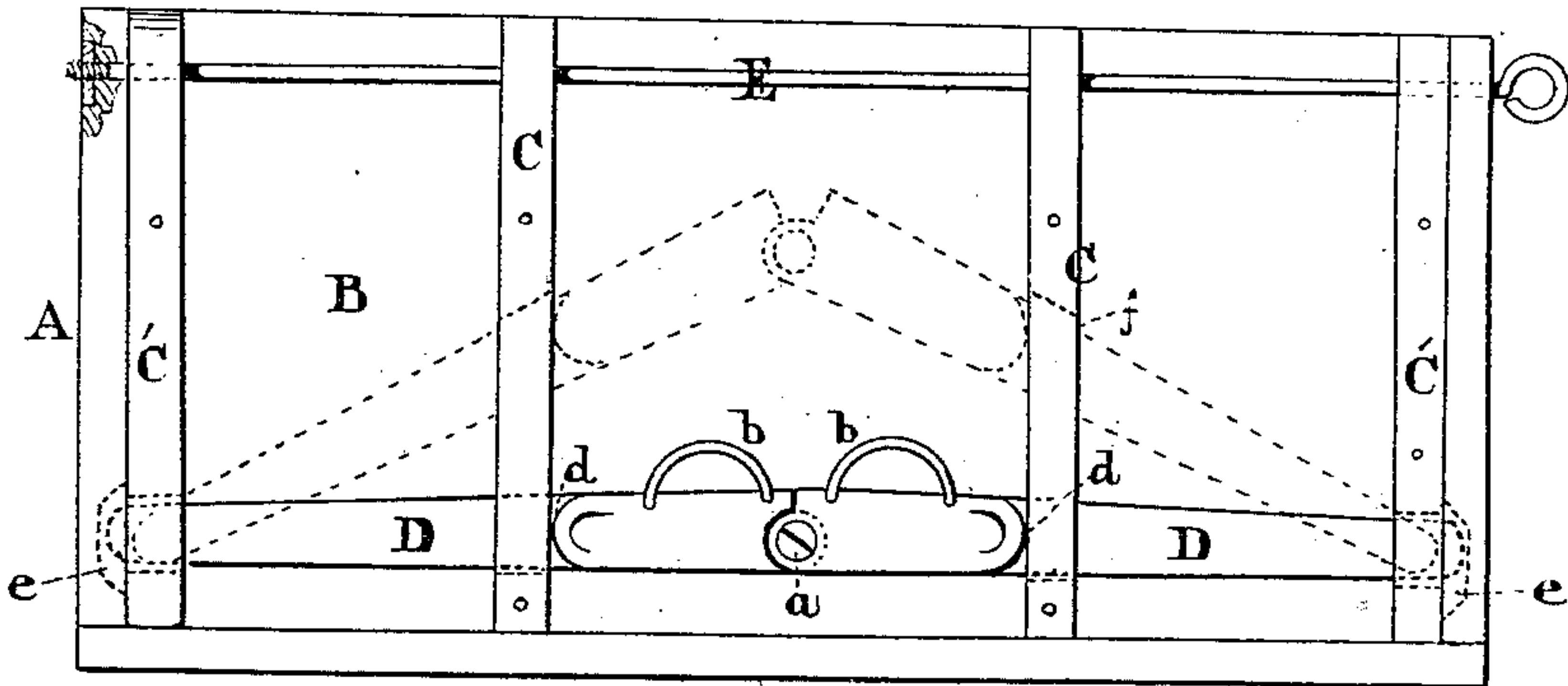


Fig. 1.



Fig. 2.

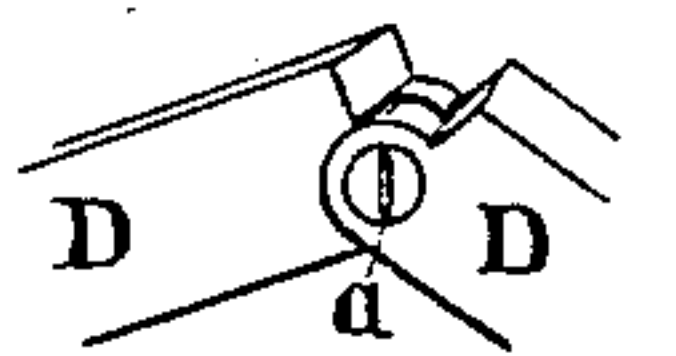


Fig. 4.

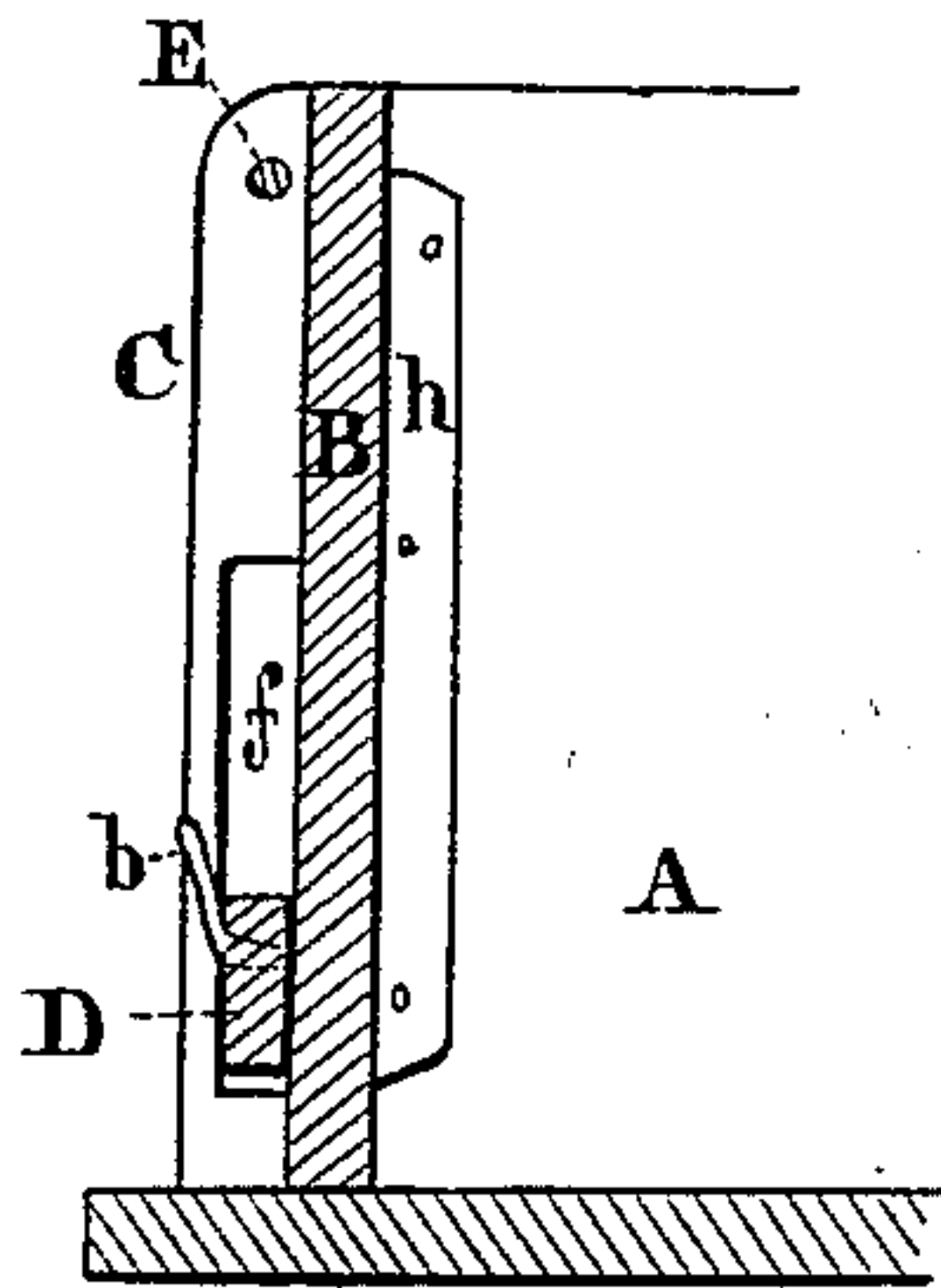


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD ROWLAND, OF ELMWOOD, ILLINOIS.

IMPROVEMENT IN WAGON END-GATES.

Specification forming part of Letters Patent No. **192,351**, dated June 26, 1877; application filed May 15, 1877.

To all whom it may concern:

Be it known that I, EDWARD ROWLAND, of Elmwood, in the county of Peoria, in the State of Illinois, have invented an Improvement in End-Gates for Wagons and other Vehicles; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, making a part of this specification, in which like letters of reference refer to like parts, and in which—

Figure 1 represents a longitudinal elevation of end-gate; Fig. 2, a superficial view; Fig. 3, a vertical cross-section; Fig. 4, view of bolt-hinge or pivot.

This is an improvement on that class of swinging end-gates which are fastened with bolts or latches at each end, and operated from the middle part of the gate by levers or slides; the object being to abolish the use of all pivots or jointed connections of operating parts, excepting but one, this one being the hinge by which said bolts or latches are connected at their inner ends, whereby the locking devices are much simplified and just as effective; and, further, it admits of the superposition of a top box without interfering with the upper edge of the gate. It is applied to such gates, and is more useful for such, as are hung to swing outward on a horizontal rod or hook; and consists of two bars or bolts, of equal length, extending together in a line (which may be direct or bent) the whole length of said gate, and passing beyond the latter into slots or recesses in the wagon sides. These bolts are jointed together at the center of said gate in such a manner as to be forced sidewise along the face of the gate simultaneously, to release each point from said retaining-recesses in the wagon sides, and allow said gate to be swung open. Each bolt slides in proper guides, staples, or slots upon the surface of the former, and has each a shoulder or detent between their common joint and their respective ends, said shoulders abutting against and sliding upon the respective vertical sides of corresponding cleats or guides which project from the gate-surface. These shoulders or lugs cause the respective bolts to move back out of their respective recesses in the wagon sides simultaneously. When

the bolts are moved for this purpose, their own gravity, abutting, as they do, against each other at the joint, keeps their points within their respective recesses in the wagon.

In the drawings, which represent one of the forms in which I construct this device, A represents the wagon sides; *h h*, cleats or stops fastened thereto behind each end of the wagon end board or gate; B, the gate, suspended by the rod E in the sides A, in which it is held by a screw-thread at one end; C C', vertical braces or gate-strengtheners, one at each end, and two others placed intermediately, so as to divide the gate into three nearly equal vertical divisions. The latter cleats are each provided with vertical slots *f f*, next to the surface of said gate, to retain the respective bolts D D, and allow each to slide upward. The end cleats C' are also provided each with a smaller slot, of about the width of the bolt, for the passage and protection of the respective bolt-points. The gate shuts back against the before-mentioned cleats or stops *h h*, fastened to the wagon sides A, each cleat stopping short of the floor, in order to avoid the collecting of grain or other substances between the gate and said cleats at the floor.

D D represent the extensible bolts, which are detained, and slide within the cleats C C', just described. They are jointed or pivoted together with a rule-hinge at the center of the gate, are of equal length, and each is provided with a shoulder, *d*, abutting against one of the vertical cleats, C, or guides, to cause said bolts to act in concert in retracting their respective outer ends simultaneously from the recesses *e e* in the wagon sides A back into the slots near the base of each outer cleat C'. The weight of the united bolts will be sufficient to keep them extended into the respective recesses *e e* in the wagon sides. The slots are sloped outward at the bottom, to shed any grain or dirt which might prevent the bolts from entering. To readily raise the latter, one or more hand rings or loops, *b b*, are attached to the same near the joint *a*.

This gate in opening or closing does not interfere in the least with a superimposed top box used sometimes on wagons, and this fact recommends the gate much for the purpose.

What I claim as my invention is—

1. In an end-gate for wagons or other vehicles, the bolts D, when constructed to slide loosely in vertical slots on the face of the gate, and mutually confined to an equal extension beyond said gate by means of their respective shoulders or detents *d d*, near their common junction or hinge, substantially as and for the purposes described.

2. The combination, with a gate, B, of the bolts D D, having shoulders or bearings *d d*

and guides C C', substantially as and for the purposes described.

In testimony that I claim the foregoing improvement in end-gates for wagons I have hereunto set my hand this 7th day of May, A. D. 1877.

EDWARD ROWLAND.

Witnesses:

JAMES M. MORSE,
H. W. WELLS.