A. S. GOODELL.

WAGON END-GATE.

No. 175,968. Patented April 11, 1876.

Figure 1.

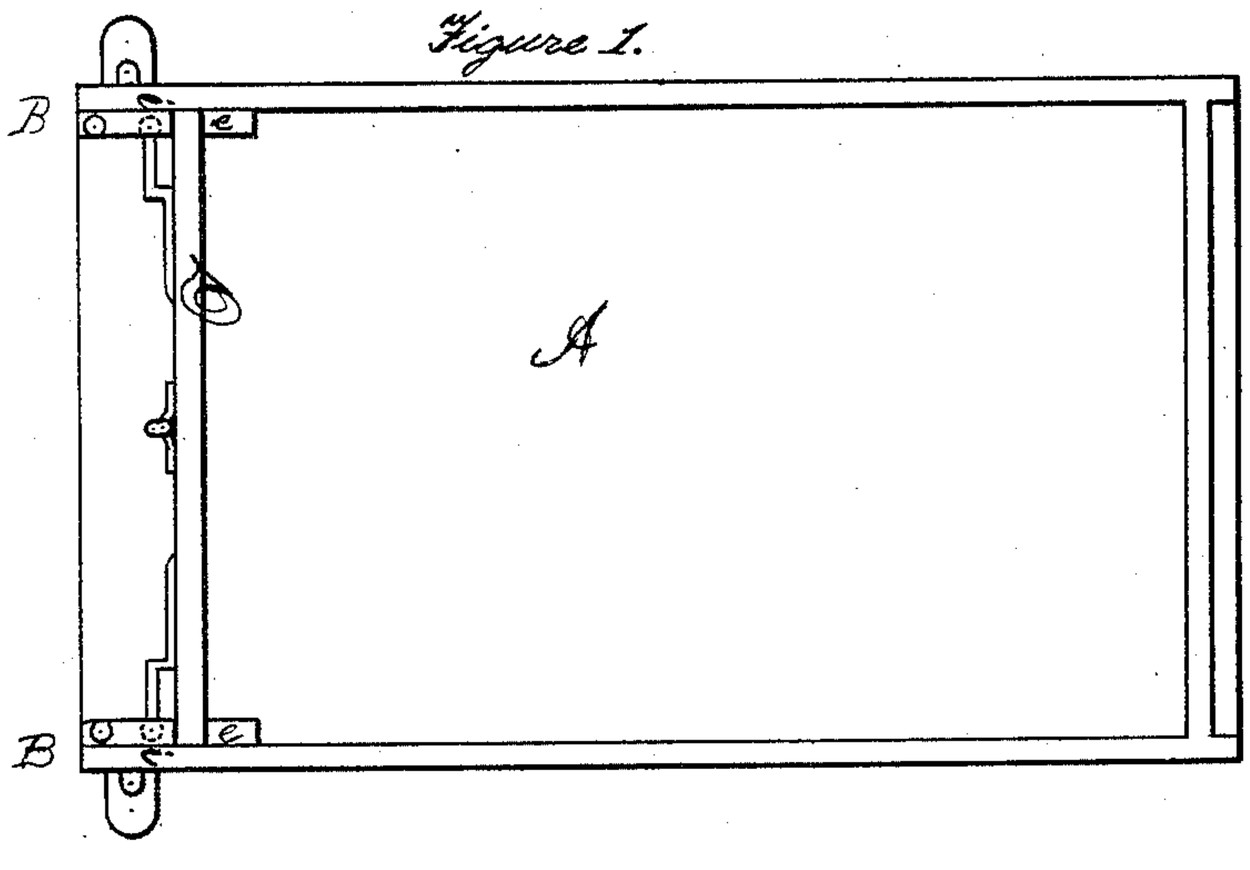


Figure 2.

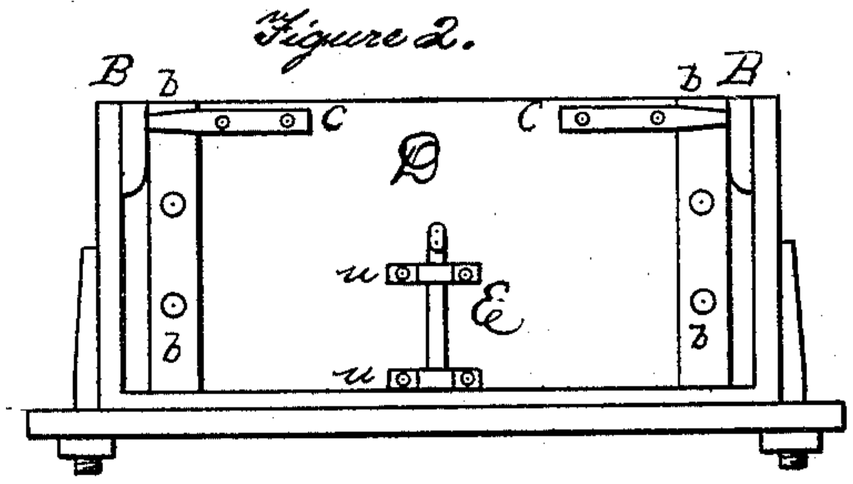
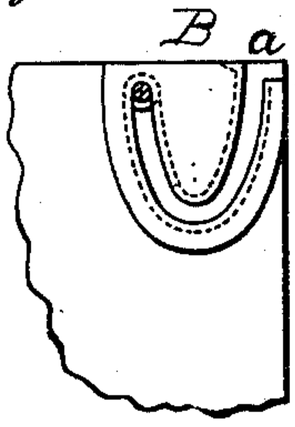


Figure 3.



WITNESSES

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ANDREW S. GOODELL, OF ROCK FALLS, ILLINOIS.

IMPROVEMENT IN WAGON END-GATES.

Specification forming part of Letters Patent No. **175,968**, dated April 11, 1876; application filed October 23, 1875.

To all whom it may concern:

Be it known that I, ANDREW S. GOODELL, of Rock Falls, in the county of Whitesides and State of Illinois, have invented a new and valuable Improvement in End-Gates; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my gate, and Fig. 2 is a front view thereof. Fig. 3 is a detail view.

This invention has relation to end-gates for wagon-bodies; and it consists in the construction and novel arrangement of the guide-plates having curved grooves enlarged within the slotted openings, and the projecting arms with enlarged ends corresponding in shape with said grooves, as hereinafter shown and described.

In the annexed drawings, the letter A designates a wagon-body of the usual well-known form and construction, the sides of which are provided, near their rear ends and upper edges, with metallic guide-plates B, having inverted curved grooves *a*, enlarged within the slotted openings. Plates B are preferably of malleable or cast iron, and the groove therein may be in cross-section, of dovetailed form, or of any of the many varieties of retaining-grooves; but I prefer that it should be of circular form within the slotted outer surface of the said plate. Their rear ends are open and front ends closed, for a purpose hereinafter explained. D designates the end gate, the outer ends of which are provided with vertical braces or strips *b*, which are designed to strengthen it, and *c* designates projecting arms, rigidly secured to the upper lateral edges of the same, the ends of which are provided with heads *i*, corresponding in shape to the curved grooves *a* in the guide-plates B, and which are designed to be received into the rear upper end of the said grooves, by which means the gate is attached to the wagon-body. These arms are secured in a horizontal position to the gate, and are bent over vertical strips *b* on the gate in such a manner as to conform to the shape thereof, and to prevent them from being detached by twisting or wrenching when a load is on the wagon and is pressing down against the gate. *e e* designate vertical cleats, secured to the inner sides of the wagon in front of the gate, which prevents the said gate from inward displacement.

By this means in dump-wagons a means is provided for swinging the lower edge of the gate outward and upward, whereby the lower end of the wagon is opened for the purpose of dumping the load out of the same; also, a means whereby in stationary wagon-bodies the end-gate may be easily and readily detached for the purpose of discharging the load from the said body. In either case I propose to use a vertical and movable bolt or bolts, E, guided in staple-shaped plates *u* on the end-gate, the lower end of which bolt is adapted to be received into a perforation made in the rear end of the wagon-bottom. By this means the end-gate, either in dump-wagon bodies or in stationary-wagon bodies, is prevented from casual outward displacement until the said pin is removed from the perforation in the wagon-body.

To attach the gate to the body, hold it in a reversed position with locking-bolt E upward; then insert the heads *i* on the arms in the open rear end of the grooves *a* in the plates B, and then release it. The attraction of gravitation will cause the gate to vibrate into a position nearly closing the wagon-body, a slight rearward thrust of the lower portion of the gate causing the arms *c* to enter the upper rear portion of grooves *a*, and the gate to rest against cleats *e e*, thus completely closing the same, when, by pushing the bolt E home, the gate will be secured against all outward displacement.

The rear upper ends of grooves *a* being closed, the end-gate cannot rise vertically, and it will be thus locked against all displacement whatever, and cannot even jolt so as to create an appreciable clatter.

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a wagon-body hav-

ing plates C with curved grooves *a* enlarged within the slots, the end-gate D, having projecting arms with ends corresponding in shape with the said grooves, and the locking-pin E, substantially as described.

2. The arm *c*, having heads *i* upon its outer projecting end, and a bent shank, *i'*, adapted for use in connection with a groove-plate upon the wagon-body sides, substantially as specified.

3. The plate C, having a curved groove, *a*, enlarged within the slot, adapted for use substantially as specified.

4. The curved groove *a* in a plate, C, having an open and a closed end, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ANDREW S. GOODELL.

Witnesses:
LEONARD H. WOODWORTH,
CYRUS C. WOODWORTH.