(No Model.)

L. P. DAMON.

END GATE AND SHOVELING BOARD FOR WAGONS.

No. 346,534. Patented Aug. 3, 1886.

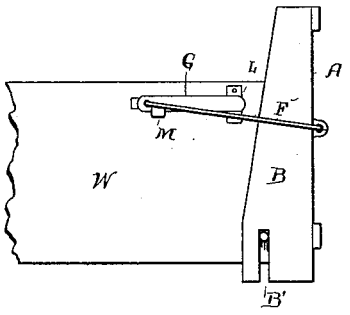

fig. 2.

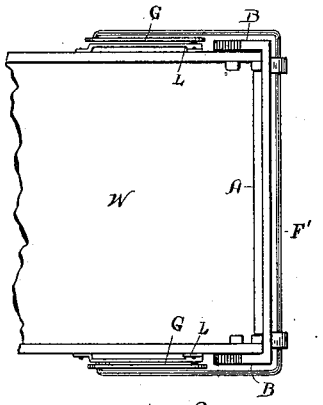

fig. 3

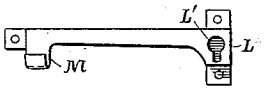

fig. 4.

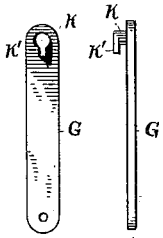

fig. 5.

fig. 6.

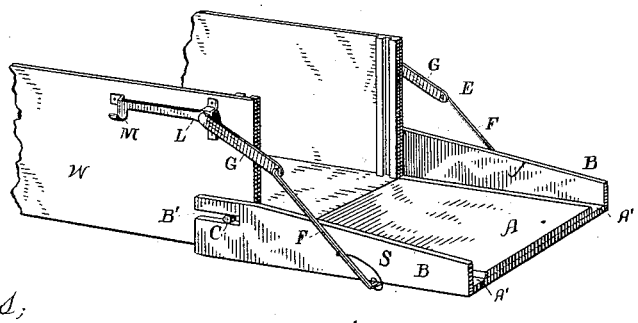

fig. 1.

Witnesses,
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His Attorney.

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UNITED STATES PATENT OFFICE.

LEWIS P. DAMON, OF WYOMING, ILLINOIS.

END-GATE AND SHOVELING-BOARD FOR WAGONS.

SPECIFICATION forming part of Letters Patent No. 346,534, dated August 3, 1886.

Application filed November 6, 1885. Serial No. 181,979. (No model.)

To all whom it may concern:

Be it known that I, LEWIS P. DAMON, of Wyoming, in the county of Stark, in the State of Illinois, have invented an Improved End-Gate and Shoveling-Board for Wagons; and I 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 perspective view of the shoveling-board; Fig. 2, a side elevation of the same; Fig. 3, a plan view of the rear end of the wagon-bed; Fig. 4, a side elevation of the strap; Figs. 5 and 6, views of details.

This invention is in the line of shoveling-boards which are adapted to turn up against the rear end of the wagon-bed to form an end-gate therefor. In former inventions of this class it has been customary to hinge the lower edge of the shoveling-board to the rear edge of the wagon-bed and provide a link or two by which to hold the board in a horizontal position, and furnish some form of catch or lock for securing the board up against the end of the wagon-bed.

My invention relates especially to an improved mechanism for holding the shoveling-board in its horizontal position, for locking it when turned up, for enabling the board to be readily removed, and for permitting its vertical displacement in dumping. To this end I have constructed the shoveling-board support and lock, which consists, essentially, of toggle-joints pivoted to the wagon-bed and board.

In the drawings, W represents the rear portion of a wagon-bed.

A is the shoveling-board, having side pieces, B. In the lower ends of the side pieces, B, are the deep notches B′, which are adapted to receive the pins C C, projecting from the sides of the wagon-bed. Said notches are, as shown in the drawings, parallel to the board A, so that when said board is in a vertical position it cannot be pushed away from the wagon-bed, but it can by moving it in the direction of said notches be readily removed from engagement therewith.

The toggle-joints E, which are pivotally connected to the wagon-bed and to the shoveling-board, are formed as follows: The rods F F, which are connected to the shoveling-board, I prefer to unite rigidly together by securing them to the cross-bar F′, or forming them as parts thereof. The object of this is, that both rods F shall be moved by the action on one alone. Said rods F are pivotally held by the passage of the cross-bar F′ through eyes or staples projecting from the shoveling-board. The links G, forming the remainder of the toggle-joints, are pivoted to the wagon-bed W by means of joints, adapted to be readily detached in the following manner: The strap L, having ears for fastening it to the side of the wagon-bed, has through it the key-hole-shaped orifice L′. From the link G projects the pintle K, having the one-sided head K′, as in Fig. 5, which can be inserted through said orifice when the link K is hanging vertically downward. When the link is moved to any other position, the pintle-head K′ comes behind the edges of the orifice L′, and cannot therefore be removed; hence, looking at Fig. 1, the only way in which the shoveling-board can be removed from the wagon-bed is by first deflecting the toggle-joints until the links G depend vertically from their straps L. The pintles K can then be withdrawn, and the shoveling-board pulled away from the end of the wagon-bed until the notches B′ are clear of the pins C.

The straps L, I usually prolong toward the head of the wagon and furnish with the hooks M. The object of these hooks is to receive the toggle-joints when the shoveling-board is closed up against the wagon-bed, as shown in Fig. 2. In this position it will be noticed that the rods F are below the pintles K of the links G, and the said joints are therefore locked, and the only way in which the shoveling-board can be lowered is to first raise the toggle-joints from the hooks M, and so unbending the same to let down the said board A. In closing the shoveling-board, the toggle-joint must be first bent upward, when the board can then be easily pushed upward against the end of the wagon-bed. To keep the toggle-joint flexed upward somewhat all the time, and so ready to be closed at any time by an upward pressure on the board, I add the spring S, adapted to thus hold the toggle-joint. This spring permits the toggle-joint to be bent downward to bring the links G in the proper vertical position for removal, as previously described.

At the junction of the board A and its sides B, I usually form the channels A′, the object of which is to receive the ends of the side-boards of the wagon-bed, and to cause the lower edge of the board A to rest upon the edge of the wagon-bed.

When it is desired to dump from the wagon-bed, the toggle-joints E are raised somewhat, and the board then can be moved vertically upward, and the contents of the wagon dumped out through the orifice between the lower edge of the shoveling-board and the wagon-bed; or the board can be raised entirely away, and the links G still resting in the hooks M, it can be laid upon the top of the wagon-bed.

The pins C, I usually form with the shoulders C′, which, acting in connection with the screw-threaded inner ends and their nuts C^3, enable the said pins to be securely fastened to the sides of the wagon-bed.

What I claim as my invention, and for which I desire Letters Patent, is as follows, to wit:

1. The combination, with the wagon-bed, of the shoveling-board hinged at its lower edge to the wagon-bed and the toggle-joints pivoted at their ends to said shoveling-board and wagon-bed, and the hooks projecting from said wagon-bed and adapted to support said joints, substantially as described, for the purpose set forth.

2. The combination, with the wagon-bed, of the shoveling-board A, having the side pieces, B, provided with the notches B′, the pins C, projecting from the wagon-bed and adapted to enter said notches, and a flexible connection for loosely uniting the upper part of said shoveling-board to the wagon-bed, substantially as and for the purpose specified.

3. The combination, with the wagon-bed, the shoveling-board, and the toggle-joints connected to said shoveling-board, of the joints for removably uniting said toggle-joints to the wagon-bed, consisting of the straps fixed to the wagon-bed, and having the key-hole orifices L′, and the pintles K, projecting from said toggle-joints, and having the heads K′, as and for the purpose specified.

4. The combination, with the wagon-bed, the shoveling-board, and the toggle-joints, of the spring S, for the purpose set forth.

5. The combination, with the wagon-bed, of the shoveling-board A, having the notches B′ in its side pieces, B, the pins C, projecting from the wagon-bed and adapted to enter said notches, the rods F F, formed continuous with the cross-bar F′, said cross-bar being held in eyes or staples projecting from the shoveling-board, the links G, pivotally joined to said rods F, and having the pintles K, the straps L, having the key-hole orifices adapted to receive said pintles, and the hooks M, substantially as and for the purpose described.

In testimony that I claim the foregoing invention I have hereunto set my hand and affixed my seal this 27th day of October, 1885.

LEWIS P. DAMON. [L. S.]

In presence of—
FRANK THOMAS,
E. J. EDWARDS.