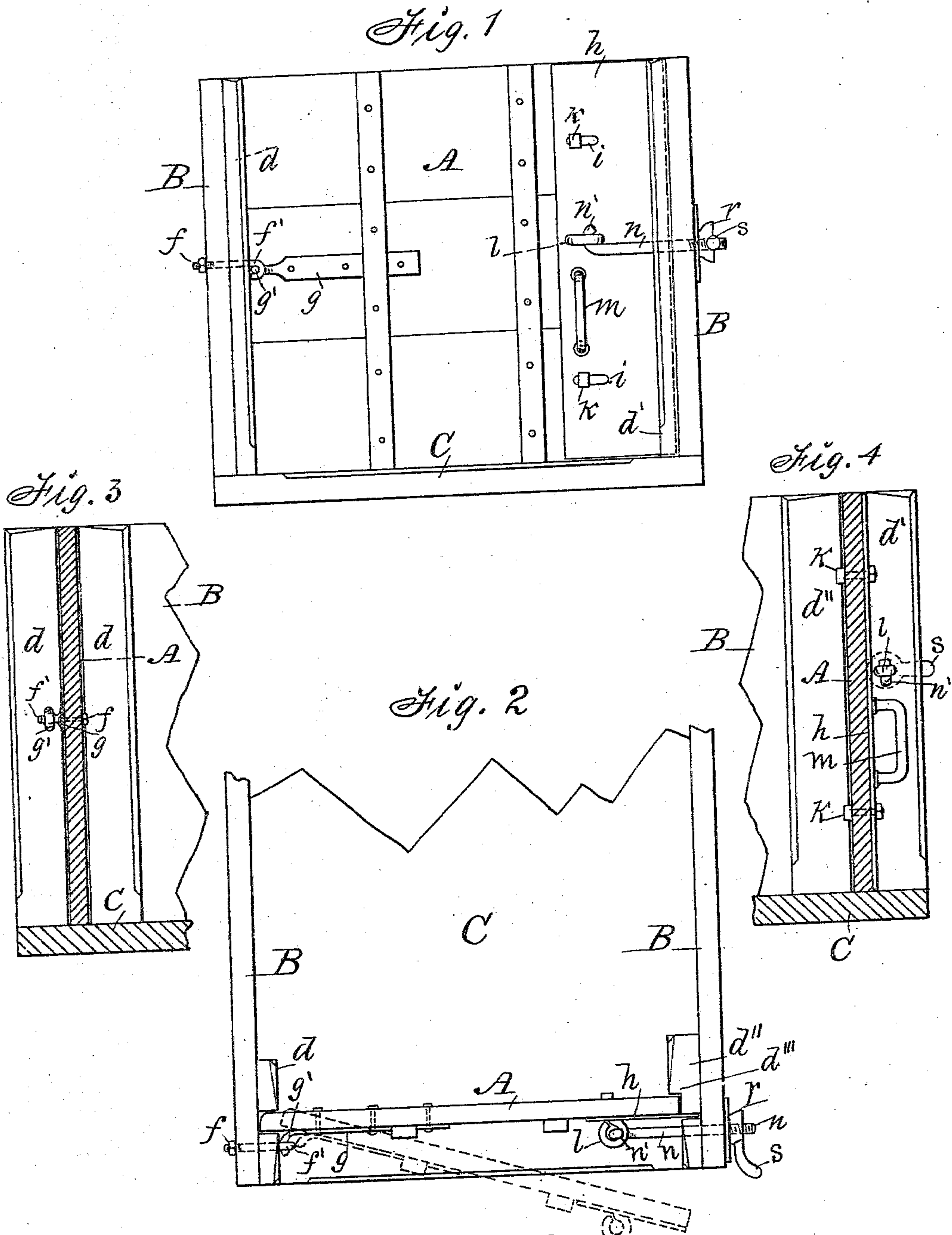


(No Model.)

P. SMITH.
WAGON END GATE.

No. 286,647.

Patented Oct. 16, 1883.



Witnesses:

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UNITED STATES PATENT OFFICE.

PHILLIP SMITH, OF PRAIRIE CITY, IOWA.

WAGON END-GATE.

SPECIFICATION forming part of Letters Patent No. 286,647, dated October 16, 1883.

Application filed December 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, PHILLIP SMITH, of Prairie City, in the county of Jasper and State of Iowa, have invented an Improved End-Gate for Wagons, of which the following is a specification.

The object of my invention is to facilitate the attaching and detaching of the end-gate of a wagon-box, and to dispense with the use of a long rod in drawing and holding the side-boards of the box firmly against the ends of the removable gate.

It consists in detachably hanging one end of the end board or gate to one of the sides of the box and attaching a sliding plate to the opposite end of the gate in such a manner that it will serve as an extension of the end-gate that can be readily moved by means of a detachable screw, to engage a cleat on the side-board and to draw the side-boards toward each other and against the ends of the gate, as hereinafter fully set forth, and as required to maintain tight joints at the ends and bottom edge of the end-gate.

Figure 1 of my accompanying drawings is a rear view of a wagon-box having my end-gate attached. Fig. 2 is a top view of the rear portion of the same box. Figs. 3 and 4 are detail views, showing transverse sections of the end-gate abutting against the sides of the box. Jointly considered, these figures clearly illustrate the construction, application, and operation of my complete invention.

A is the detachable end-gate, B B are the side-boards, and C the bottom or floor of the wagon-box.

$d d$ are cleats of uniform thickness, fixed to one of the side-boards B. d' is a corresponding cleat fixed to the end of the opposite side-board, and d'' is a thicker cleat, that has a shoulder, d''' , fixed to the same board parallel with and close to the cleat d' .

f represents a bolt, having a catch or eye, f' , fixed to the cleat and side-board.

g is a metal strap that terminates in a hook-shaped end, g' , and that is fixed against the outside of the end-gate A in such a manner and position relative to the eye f' of the bolt f that the hook will readily enter the eye and thereby form a hinged connection between the end of the detachable end-gate and the side-board.

h is a sliding plate, preferably metal, adjustably connected with the end-gate A by means of slots $i i$, formed in the plate, and studs $k k$, fixed to the end-gate, as clearly shown in Fig. 1.

l represents a staple, perforated ear, or an eye formed on or fixed to the sliding plate h . m represents a handle formed on or fixed to the same plate to facilitate adjusting the plate.

n is a short screw-bolt that extends through the side-board B and its cleat d' , and has a hook, n' , at its end, to engage the eye or catch device l , that projects outward from the plate h .

In the practical operation of my improved end-gate thus constructed, I simply place it in position, as indicated by dotted lines in Fig. 2, so as to allow the hook part g of the hinge-connection to enter the eye f , and the end of the gate to enter between the cleats d as I press the opposite and free end of the gate past the cleat d' and against the shoulder d''' of the cleat d' , to close the end of the box. I then insert the hook n' of the screw-bolt n into the eye or catch l , and by means of a nut, r , having a handle, s , I draw the bolt outward, and with it the sliding plate h , in such a manner as to bring the edge of the plate and extension h to pass the rear side of the cleat d' and to abut against the side-board B, as required, to produce a tight joint, and also in such a manner that the complete end-gate will, by means of its hinged connection with the opposite side of the box, draw the two side-boards together in the manner they have heretofore been drawn together by means of a long rod that had a screw-threaded end. The short screw-bolt, sliding plate, and hinge-joint by which the side-boards are drawn to and held firmly against the ends of the detachable gate also prevent the end-gate from any vertical movement, as required to retain it firmly on the floor or bottom of the wagon-box. To remove the end-gate, I simply make reverse movements of the different operative parts.

I am aware that a wagon end-gate having a joint in its middle has had curved hooks at its ends to project through the sides of the wagon-box for the purpose of preventing the end-gate from rising relative to the bottom and sides of the box. I am also aware that a sliding plate has been combined with the end of a wagon end-gate to move horizontally relative to the

cleats on the side-board; but my manner of forming a detachable hinged connection between one end of a wagon end-gate and one side of a wagon-box and securing its opposite
5 end to the opposite side of the box by means of a sliding plate and a nut and screw in such a manner as to draw the side-boards firmly against the ends of the end-gate without a rod or other extraneous device is novel and greatly
10 advantageous.

I am also aware that a jointed end-gate has had screws at each end to project through the sides of the box in such a manner that both of the sides of the box could be clamped to the
15 ends of the jointed gate by means of nuts on the screws; but my manner of hinging one end of the gate to one of the sides of the box and securing the other end by means of a sliding

section and screw and nut greatly facilitates attaching and detaching the gate, and is a novel way of combining an end-gate with a wagon-box.

I claim as my invention—

A detachable end-gate for wagons, having a hook, *g g'*, and a sliding plate, *h i k l*, in combination with a wagon-box having cleats *d d'* 25 and a catch or eye, *f f'*, on one of its sides and cleats *d' d'' d'''* and an adjustable screw-bolt, *n n'*, on the opposite side, substantially as shown and described, to operate in the manner set forth, for the purposes specified.

PHILLIP SMITH.

Witnesses:

GEO. H. BAUST,
A. C. BUTZ.