

No. 640,802.

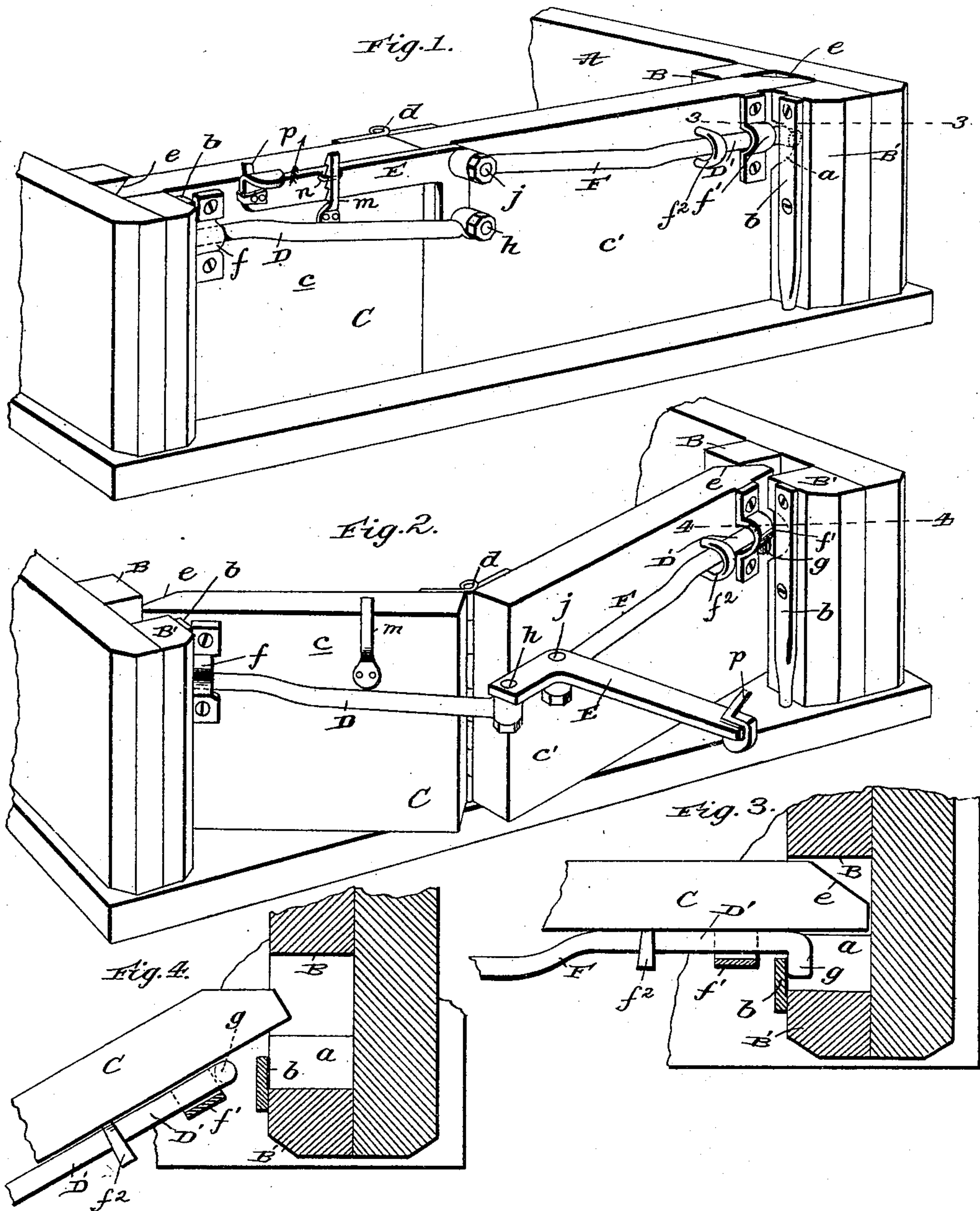
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J. F. OVERCASH.

END GATE.

(Application filed Oct. 21, 1899.)

(No Model.)



Witnesses:

*C. H. Raeder*  
*J. B. Coney*

Inventor

*J. Frank Overcash*

BY

*James Sheehy*

Attorney



# UNITED STATES PATENT OFFICE.

JOHN FRANKLIN OVERCASH, OF CRETE, NEBRASKA.

## END-GATE.

SPECIFICATION forming part of Letters Patent No. 640,802, dated January 9, 1900.

Application filed October 21, 1899. Serial No. 734,377. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN FRANKLIN OVERCASH, a citizen of the United States, residing at Crete, in the county of Saline and State of Nebraska, have invented new and useful Improvements in End-Gates, of which the following is a specification.

My invention relates to end-gates and means for removably securing the same in wagon-boxes; and its novelty and many advantages will be fully understood from the following description and claims when taken in conjunction with the annexed drawings, in which—

Figure 1 is a perspective view illustrating the rear portion of a wagon-box and my improved end-gate secured therein. Fig. 2 is a perspective view illustrative of the manner in which the end-gate is released and removed from the wagon-box. Fig. 3 is an enlarged detail section taken on broken line 3 3 of Fig. 1. Fig. 4 is a similar view taken on broken line 4 4 of Fig. 2.

Referring by letter to the said drawings, A is a wagon-box of the ordinary shape, and B B' are cleats, which are arranged in pairs on the side walls of the box adjacent to the rear end thereof and are designed to receive the ends of the end-gate between them after the manner shown in Fig. 1. The rear cleats B' are provided in their forward sides with notches *a*, over which are arranged keepers *b* in the form of metallic straps, which are connected to the inner sides of said cleats and also to the bottom of the box, as shown.

C is the end-gate. This gate comprises two sections *c c'*, which are flexibly connected by a hinge *d* and have their outer ends beveled, as indicated by *e*, to facilitate the entrance thereof between the cleats B B'.

D D' are endwise-movable and rock bolts, which are loosely arranged in guides *f f'* on the rear side of the gate-sections *c c'*, respectively. These bolts D D' are provided at their outer ends with angular branches *g*, which in one position are adapted to engage the keepers *b*, as best shown in Fig. 3, and in another position are adapted to be drawn inwardly past the forward edge of the keepers, as shown in Fig. 2. The bolt D is pivotally connected at its inner end to a lateral projection *h* at the end of the short arm of an angular hand-lever

E. The bolt D' extends through inner guides *f*<sup>2</sup> in addition to guide *f'* and is connected at its inner end to a lateral projection *j*, extending from the angular lever E, adjacent to the apex of the angle thereof.

By virtue of the construction described when the gate is flexed and the bolts D D' are in the position shown in Fig. 2 the ends of the gate may be inserted between the cleats B B' and the angular branches *g* of the bolts may be moved outwardly past the rear edges of the keepers *b*. After the gate is arranged as stated, with reference to the box all that is necessary to secure it in the box is to move the sections *c c'* into alinement with each other and then swing the hand-lever E upwardly and forwardly and downwardly and laterally in the order named into the position shown in Fig. 1. When the lever E is swung upwardly and forwardly, the bolts D D' are rocked on their axes and the angular branches *g* of said bolts are swung behind the keepers *b* and up against the upper walls of the notches *a*, which are beveled, as shown, and constitute abutments. This results in the gate being moved down tight upon the floor of the box and precludes leakage of grain or the like between the gate and floor of the box. When the long arm of the hand-lever E is swung outwardly and downwardly toward the left, the angular branches *g* of the locking-bolts are drawn into engagement with the keepers *b*, as best shown in Fig. 3, and the side walls of the wagon-box are drawn inwardly against the ends of the gate, thus rendering it unnecessary to employ a connection between the said walls of the box. It will also be seen that when the lever is in the last-named position its long arm intersects or extends across the point of flexure of the gate, and thereby precludes flexing of the gate, which is necessary to its removal from between the cleats of the box.

To remove the gate from the box, it is simply necessary to reverse the operation described—that is, to swing the lever E laterally and upwardly until its long arm rests in a perpendicular position and then swing it downwardly and rearwardly into the position shown in Fig. 2, so that the pivotal connection between it and the bolt D rests in alinement with the point of flexure of the



gate. When the lever has assumed the position last stated, the gate C and the rods D D' may be flexed after the manner shown in Fig. 2, and the former may be drawn rear-  
5 wardly out of the wagon-box.

In order to secure the lever E against casual movement when the same is swung down into the position shown in Fig 1, I provide the keeper-rack *m* on the gate-section *c*, the  
10 catch *n* on the lever, and the spring *p*, connected to the lever and arranged, when the lever is depressed, to bear against the gate-section and press and hold the lip on the lever in engagement with the rack.

15 When it is desired to raise the lever precedent to removing the gate, the operator has but to press the lever toward the gate against the action of spring *p* in order to disengage the lip *n* from the rack *m*.

20 Having thus described my invention, what I claim is—

1. The combination with a wagon-box having cleats on its side walls, the rear ones of which are provided in their forward sides with  
25 notches, the upper walls of which constitute abutments and also having keepers connected to the inner sides of the rear cleats and partially covering the notches therein; of a removable end-gate arranged between the cleats,  
30 endwise-movable rock-bolts arranged in bearings on the end-gate and having angular portions adapted to engage the keepers and the upper walls of the notches in the rear cleats, and suitable means for moving the said bolts  
35 endwise and rocking the same, substantially as specified.

2. The combination with a wagon-box having keepers and abutments on its side walls; of an end-gate, endwise-movable, rock-bolts  
40 arranged in bearings on the end-gate, and having angular portions adapted to engage the keepers and also adapted to bear against the abutments on the side walls of the box, and a lever for moving the bolts endwise and rock-  
45 ing the same on their axes; the said lever being loosely connected with the bolts, substantially as specified.

3. The combination with a wagon-box having cleats provided with abutments and also

having keepers on its side walls; of an end- 50 gate comprising flexibly-connected sections, endwise-movable, rock-bolts arranged in bearings on the sections of the end-gate, and having angular portions adapted to engage the keepers and also adapted to bear against abut- 55 ments on the side walls of the box, and a lever for moving the bolts endwise and rocking the same on their axes; the said lever being loosely connected with the bolts, substantially as specified. 60

4. The combination with a wagon-box having cleats and keepers on its side walls; of an end-gate comprising flexibly-connected sections, endwise-movable, rock-bolts arranged in bearings on the sections of the end-gate, 65 and having angular portions adapted to engage the keepers and also adapted to bear against abutments on the side walls of the box, and an angular hand-lever having lateral projections at one end and at its apex pivotally 70 connected to the bolts, substantially as specified.

5. The combination with an end-gate comprising flexibly-connected sections; of endwise-movable rock-bolts arranged in bearings 75 on the sections of the end-gate, and a lever for moving the bolts endwise and rocking the same on their axes; the said lever being loosely connected with the bolts, substantially as specified. 80

6. The combination with an end-gate; of endwise-movable rock-bolts arranged in bearings on the end-gate, a keeper connected to the gate, and a lever connected to and adapted to move the bolts endwise and rock the same 85 on their axes; the said lever being provided with a catch to engage the keeper and a spring arranged to bear against the gate and thereby hold the catch in engagement with the keeper, substantially as specified. 90

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN FRANKLIN OVERCASH.

Witnesses:

C. A. HILL,

CH. MCKINLEY.