

No. 696,340.

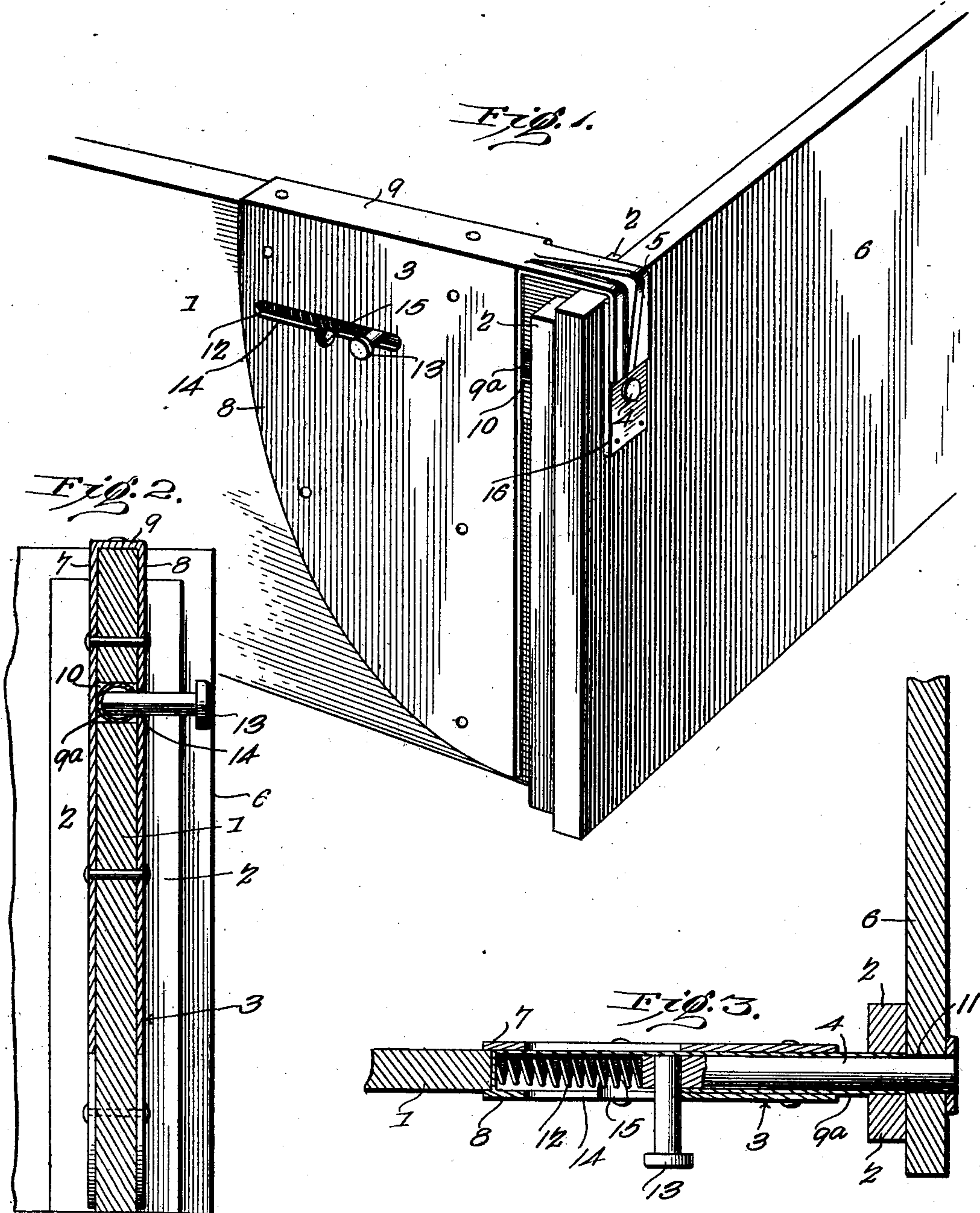
Patented Mar. 25, 1902.

C. F. HUPFER.

END GATE.

(Application filed Nov. 16, 1901.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

CHARLES F. HUPFER, OF MONONA, IOWA.

## END-GATE.

SPECIFICATION forming part of Letters Patent No. 696,340, dated March 25, 1902.

Application filed November 16, 1901. Serial No. 82,585. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES F. HUPFER, a citizen of the United States, residing at Monona, in the county of Clayton and State of Iowa, have invented a new and useful End-Gate, of which the following is a specification.

The invention relates to improvements in end-gates.

The object of the present invention is to improve the construction of end-gates, more especially the means for securing them to the sides of a wagon-body, and to provide a simple, inexpensive, and efficient device of great strength and durability adapted to be readily applied to a vehicle and capable of securely fastening an end-gate to the sides of a wagon-body.

A further object of the invention is to dispense with the use of a transverse rod and a nut or nuts for this purpose and to enable all the parts of the locking device to be carried by the end-gate, so that when the end-gate is removed from the wagon-body there will be no liability of losing any of the parts of the locking device.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a perspective view of a portion of a wagon-body provided with an end-gate-locking device constructed in accordance with this invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a horizontal sectional view.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates an end-gate arranged between vertical cleats 2 of a wagon-body and designed to be provided at each side thereof with a locking device, consisting of a casing 3, a spring-actuated bolt 4, and an approximately L-shaped arm 5, which engages the side 6 of the wagon-body, whereby the latter is effectually preventing from spreading. The casing, which reinforces the end-gate, is composed of inner and outer sides 7 and 8 and a top 9, which is arranged on the upper edge of the end-gate. The sides of the casing may

be formed integral with the top or they may be constructed in any other suitable manner, and the casing is secured to the end-gate by suitable fastening devices arranged at intervals.

The spring-actuated bolt, which is disposed horizontally, is mounted within a tubular housing 9, which is secured to the casing and which is also arranged within a horizontal slot 10 of the end-gate. The slot extends inward from the vertical edge of the end-gate, and the bolt, which is adapted to project beyond the end-gate and engage an opening 11 of the side of the wagon-body, is held in an extended position by a coiled spring 12, arranged within the tubular housing and interposed between the inner end thereof and the bolt. The bolt is provided with a projecting handle 13, extending through a slot 14 of the outer plate of the casing and adapted to be swung downward into engagement with a notch 15 when it is desired to hold the bolt in a retracted position to facilitate the removal or replacing of the end-gate within the wagon-body.

The L-shaped arm, which forms a hook for engaging the side of the wagon-body, extends outward horizontally from the top of the casing to a point beyond the side of the wagon-body, and it depends at the outer face of the side of the wagon-body and engages the same. The lower end of the hook-shaped arm preferably terminates short of the opening through which the bolt extends, and the side 6 of the wagon-body is preferably reinforced at the opening by a plate 16. The hook-shaped arm is also preferably reinforced by a rib extending longitudinally of it. The hook-shaped arms, which embrace the sides of the wagon-body at the upper edges thereof adjacent to the end-gate, prevent the said sides from spreading, so that there will be no loss of material at those points, and the bolts securely lock the end-gate against vertical movement. The locking devices are carried by the end-gate, and when the latter is removed there is no liability of the parts of the locking devices becoming mislaid or lost. The locking-bolts are adapted to be quickly withdrawn and may be retained in such position by engaging the handles with the notches or recesses 15, and

when the bolts are retracted the end-gate may be readily removed from the ways formed by the cleats and replaced therein.

It will be seen that the locking devices are  
5 exceedingly simple and inexpensive in construction, that they are easily operated, and that the casings which extend over the end-gate reinforce the same and increase the durability thereof.

10 What I claim is—

In a device of the class described, the combination with the side of a wagon-body provided with an opening, and an end-gate having a slot, of a casing embracing inner and  
15 outer plates arranged on the inner and outer

faces of the end-gate, and a connecting top portion having an extension forming substantially an L-shaped arm engaging the upper portion of the side of the wagon-body, and a bolt mounted in the casing and engaging the opening of the side of the wagon-body, substantially as described. 20

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHAS. F. HUPFER.

Witnesses:

H. D. BROWN,  
WM. GRUBE.