

No. 719,107.

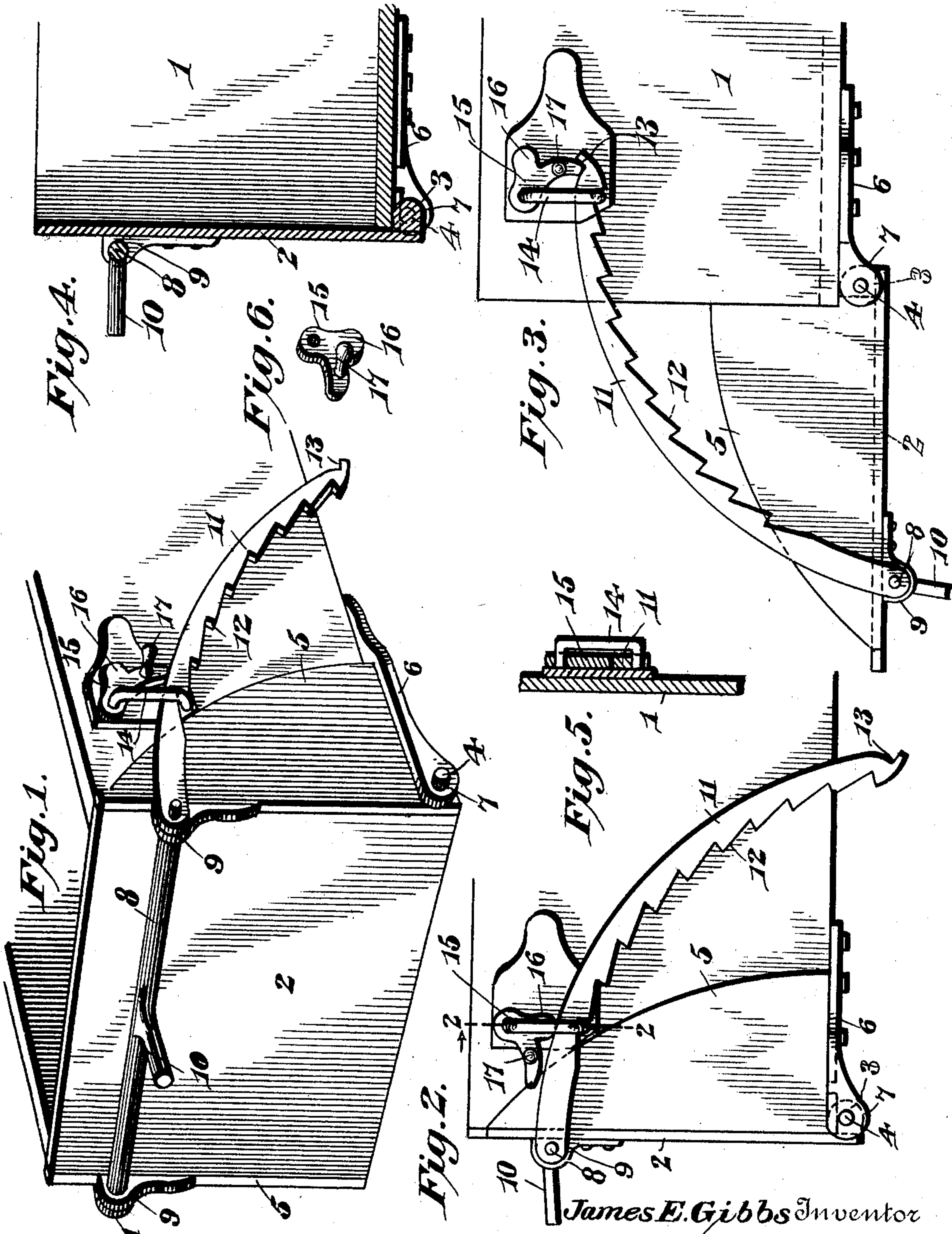
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J. E. GIBBS.

END GATE.

APPLICATION FILED SEPT. 19, 1902.

NO MODEL.



Witnesses:
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END-GATE.

SPECIFICATION forming part of Letters Patent No. 719,107, dated January 27, 1903.

Application filed September 19, 1902. Serial No. 124,060. (No model.)

To all whom it may concern:

Be it known that I, JAMES EDWIN GIBBS, a citizen of the United States, residing at Bridgewater, in the county of Rockingham and State of Virginia, have invented a new and useful End-Gate, of which the following is a specification.

This invention relates to end-gates, and has for its object to provide improved means for adjustably fastening end-gates and also to facilitate the opening and closing thereof. It is furthermore designed to provide for preventing accidental disengagement of the fastening means by jolting of the vehicle and at the same time to permit convenient swinging of the end-gate upon its hinged support either to partially or entirely close and open the gate.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of the rear end of a vehicle-body having the improved end-gate applied thereto. Fig. 2 is a side elevation thereof. Fig. 3 is a side elevation showing the gate at its opened limit. Fig. 4 is a detail sectional view taken through the rear end of the vehicle and the end-gate. Fig. 5 is a detail cross-sectional view taken on the line 5 5 of Fig. 2. Fig. 6 is a detail perspective view of the tumbler or ratchet-dog for locking the end-gate fastening against accidental looseness.

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

Referring to the accompanying drawings, 1 designates the vehicle-body, and 2 the improved end-gate, which is preferably formed of sheet metal, with a round bar 4 secured to the front face thereof and at its lower end, the ends of the bar being reduced and projected at opposite edges of the end-gate to form journals 4. Suitable segmental end

pieces 5 are secured to the ends of the end-gate, so as to embrace the opposite sides of the vehicle when the gate is closed. The bar 3 extends transversely beneath the body of the vehicle and close to the same, so that the end-gate may close flat against the rear end of the vehicle-body. A metallic plate 6 is secured flat against the bottom of the vehicle at each side thereof and is provided with a pendent rearwardly-projecting bearing-eye 7 for the reception of the adjacent journal 4, thereby to form a pivotal or hinged connection between the end-gate and the vehicle.

By reference to Fig. 3 of the drawings it will be noted that the bottom portion of the end-gate laps and underlies the rear end of the bottom of the vehicle-body, thereby obviating a vertical interspace between the body and the end gate, through which portions of the contents of the vehicle might drop in shoveling the same out of the vehicle and over the end-gate.

For adjustably fastening the end-gate to the vehicle a rock-bar 8 is applied transversely across the rear side of the end-gate, near the top thereof, with its end portions journaled in suitable bearings 9, carried by the end-gate. At the middle of the rock-bar there is a handle 10 for convenience in rocking said bar. Each end of the bar is projected beyond the adjacent end of the end-gate and is provided with a rigid arcuate latch-arm 11, the under concaved side of the latch being provided with ratchet-teeth 12 and the upper convexed side of the latch being smooth, with a notch or seat formed therein at or adjacent to the forward terminal of the latch.

Connection between each latch-arm and the body of the vehicle is had through the medium of an open or slotted keeper 14, preferably in the shape of a staple, which is driven into the outer face of the adjacent side of the vehicle-body and slidably receives the arcuate latch-arm, whereby the ratchet-teeth on the under side of the arm are adapted to engage the lower side of the keeper, and thereby hold the end-gate at any desired position. It will here be observed that as both latch-arms are rigidly carried by the rock-arm they will be simultaneously swung in a vertical direction by turning the rock-bar

Hence both latches may be conveniently engaged and disengaged from the keepers by manipulating the handle 10.

To prevent accidental disengagement of the latches from the keepers, there is provided a dog, pawl, or detent 15, which is pivoted upon the upper arm or prong of one keeper and has a projection or cam portion 16, which is adapted to be thrown down into engagement with the top of the latch, and thereby lock the same in engagement with the keeper, so as to prevent disengagement thereof by jolting movements of the vehicle. For convenience in turning the detent it is provided with a laterally-projecting handle 17.

When it is desired to open the end-gate, the cam is turned so as to bring the free hooked end into engagement with the smooth convexed upper side of the latch-arm, thereby freeing the latter and permitting of the end-gate being swung upon its pivotal connection with the vehicle. The end-gate may be closed by merely forcing the same inwardly, as the ratchet-teeth of the latch-arm will ride over the keepers; but to open the gate it is necessary to manipulate the handle 10, so as to rock the bar 8, and thereby elevate the latches out of engagement with the lower sides of the keepers.

To prevent the latch-arms from accidentally running out of the keepers, and thereby dropping the end-gate, the free end of the pawl, cam, or detent is adapted to drop into the notch or seat 13 at the forward end of the latch-arm, as clearly indicated in Fig. 3 of the drawings.

As the latch-arms are rigidly carried by the rock-bar, one dog, pawl, or detent is sufficient.

What I claim is—

1. An end-gate fastener, comprising a keeper, an arcuate pivotal latch having its concaved side provided with ratchet-teeth for engagement with the keeper, and also provided with a seat on its convex side, and means to hold the ratchet-teeth of the latch in engagement with the keeper, and also capable of being turned to permit free movement of the latch across the keeper and to engage the seat to prevent entire disengagement of the latch from the keeper.

2. An end-gate fastener, comprising a keeper, an arcuate pivotal latch having its under concaved side provided with ratchet-teeth for engagement with the keeper and also provided with a seat near the free extremity of its upper convexed side, and means pivoted above the latch with a portion normally bearing upon the upper side of the latch to hold it in locked engagement with the keeper, and another portion lying in frictional engagement with the upper side of the latch and in the path of the seat thereof when said means has been turned upon its pivot to disengage the first-mentioned portion from the latch.

3. An end-gate fastener, comprising an arcuate latch-arm having a pivotal support for

application to an end-gate, the under concaved side of the latch-arm having ratchet-teeth and its upper convexed side being smooth and provided at its free end with a seat, a keeper having means for connecting with a vehicle-body and provided with an opening for the loose reception of the latch-arm, and a detent pivoted upon the keeper with a portion constructed to bear against the upper side of the latch-arm and hold the same in engagement with the keeper, and capable of being turned to bring its free end into frictional engagement with the upper side of the latch-arm to permit free movement thereof through the keeper and also to engage the seat and hold the latch-arm.

4. An end-gate fastener, comprising an arcuate latch-arm having a pivotal support for engagement with an end-gate, the under concaved side of the latch-arm being provided with ratchet-teeth, and its upper convexed side being smooth and provided with a seat at its free end, a substantially U-shaped keeper to be driven into the side of the vehicle and loosely embrace the latch-arm with the ratchet-teeth thereof in coöperative relation with the under side of the keeper, and a dog pivoted to the upper side of the keeper, and provided with a cam portion to bear against the upper side of the latch and hold the same in engagement with the keeper, and also capable of being inverted to bring its free end into frictional engagement with the upper convexed side of the arm and into position to engage the teeth and lock the arm.

5. The combination with a vehicle-body, of an end-gate hinged thereto, a rock-bar mounted transversely across the outer side of the end-gate and provided with a handle for turning the bar, arcuate latch-bars rigidly carried by the opposite ends of the rock-bar and working at opposite sides of the vehicle-body, the under concaved sides of the latches having ratchet-teeth, and their upper convexed sides being smooth, one of the latter being provided with a seat at its free end, keepers carried externally by the opposite sides of the vehicle and having openings loosely receiving the latch-arms, and a detent pivoted to the upper side of one of the keepers and provided with a cam portion to bear against the top of the adjacent latch and hold the latter in engagement with the keeper, and also capable of being turned to bring its free end into frictional engagement with the top of the latch-arm to permit free movement thereof through the keeper and also to engage the seat and prevent entire disengagement of the latch from the keeper.

6. An end-gate fastener, comprising a slotted keeper, an arcuate pivotal latch working through the slot in the keeper with its under concaved side provided with ratchet-teeth for engagement with the lower end of the slot, and also provided with a seat on its convexed upper side near the free end thereof, and a dog pivoted above the latch with an interme-

5 diate cam portion normally in engagement with the upper side of the latch to hold any one of the teeth in engagement with the keeper, the free end of the dog being in friction engagement with the top side of the latch and in the path of the seat thereon when the dog has been turned to disengage its cam from the latch.

10 7. The combination with a vehicle-body, of a pair of bearing-ears pendent from the rear end and at opposite sides thereof with the bearing-openings disposed in front of the rear edge of the bottom of the body and below the same, a rotatable bar disposed transversely across

the under side of the bottom of the body with 15 its opposite ends journaled in the respective bearing-openings, and an end-gate secured flat against the bar and movable therewith, whereby the bottom portion of the end-gate underlies and laps the bottom of the body 20 when open.

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

JAMES EDWIN GIBBS.

Witnesses:

S. G. DINKEL,

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