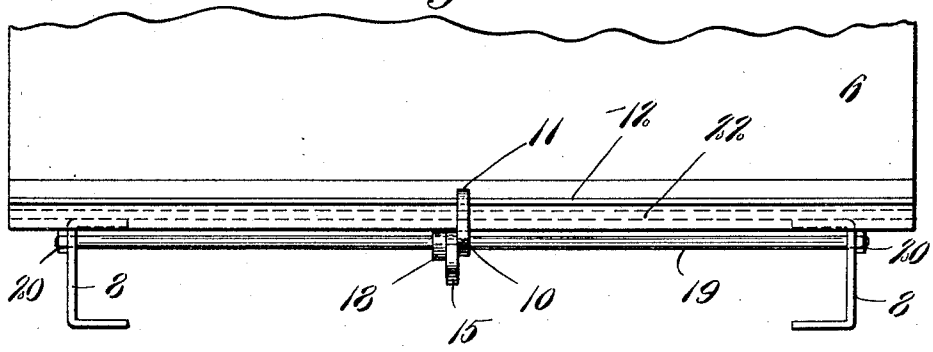
G. BOWDEN.

END GATE FASTENER.

APPLICATION FILED APR. 11, 1919.

1,327,079. Patented Jan. 6, 1920.

Fig. 1.



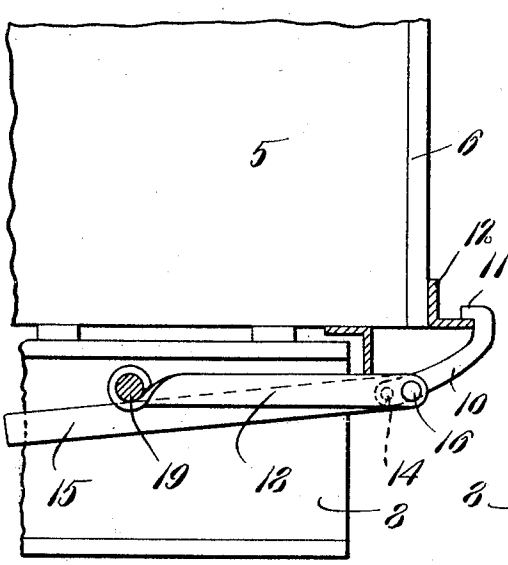


Fig. 2.

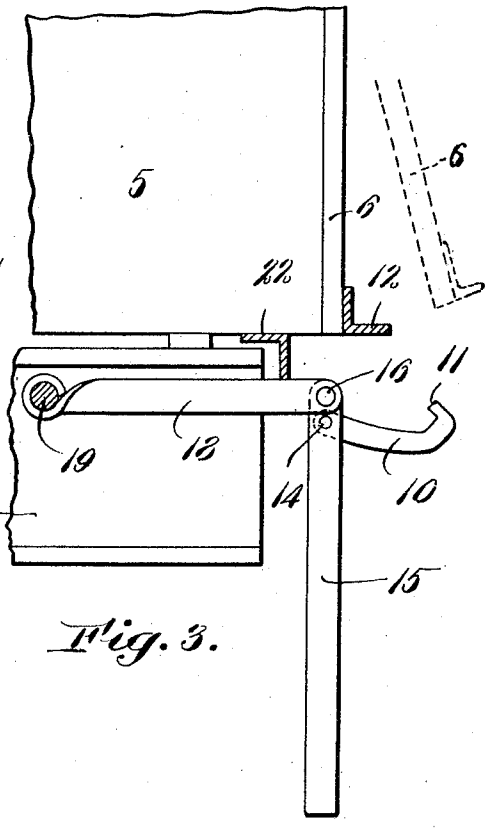


Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE BOWDEN, OF MALDEN, MASSACHUSETTS.

END-GATE FASTENER.

1,327,079. Specification of Letters Patent. Patented Jan. 6, 1920.

Application filed April 11, 1919. Serial No. 289,180.

To all whom it may concern.

Be it known that I, GEORGE BOWDEN, a citizen of the United States, residing at Malden in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in End-Gate Fasteners, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to end-gates for wagons and auto trucks and more particularly to a lock for fastening such end-gates.

The main object of my invention is the provision of a simple and efficient lock for end-gates which is easily and rapidly operated and which, after being locked, cannot become accidentally unlocked.

Another object of the invention is the provision of locking means so arranged that any increase in strain upon the lock serves only to make it more secure.

An additional object is the securing of a lock of such form of construction that it may be easily mounted upon wagons and trucks of old and varied construction, and which is in short, applicable to a vehicle of any form of construction.

Other objects of the invention will be more specifically set forth and explained hereinafter.

Briefly my invention contemplates a lock for end-gates in which a pivoted latch is provided for engaging the end-gate loosely with means for setting up the latch by moving its pivot point. Preferably the pivot point of the latch is moved around a fixed point so that when the latch is set up to hold the end-gate in a locked position, the latch cannot be released without the exertion of force to move the pivot point of the latch through the arc of a circle.

In the drawings illustrating one embodiment of my invention, Figure 1 is an elevation of a portion of the rear end of a wagon or auto-truck equipped with an end-gate lock constructed and operated in accordance with my invention; Fig. 2 is a side elevation of the rear end of the same showing my lock in a locked position and Fig. 3 is a similar view with the lock in an unlocked position.

Referring to the drawings, in which one embodiment of my invention is shown as applied to the end-gate of a truck, 5 designates the body of the vehicle having an end-gate 6 which is mounted on hinges at the top (not shown) of the body. The end-gate is shown in a closed position in the several views of the drawings, but in Fig. 3, the dotted lines indicate its open position. The body 5 is supported by the frame or chassis 8. The foregoing construction which is old and well known is merely typical of the many various forms of vehicles and constitutes no part of my invention.

For locking the end-gate in a closed position, I provide a latch 10 of any suitable form but preferably with a hooked nose 11 adapted to engage a part of the end-gate 6 such as a flange 12. The latch 10 is pivotally mounted at 14 on a lever 15 which in turn is pivotally mounted at one end 16 on a fixed support 18 fastened to a bar 19 secured in the frame or chassis 8 by nuts 20.

The operation of my device is of extreme simplicity. In Fig. 3, it is shown in an unlocked position with the lever 15 hanging vertically and the latch out of engagement with the end-gate. To lock the latter, the latch is raised by hand and its nose 11 placed over the flange or angle iron 12 on the end-gate. In that position the latch holds the gate loosely. The lever 15 is then turned from right to left (referring to the drawings) around the pivot 16 as a center into the position illustrated in Fig. 2. As a result of this movement, the pivot point 14 of the latch travels through an arc of which 16 is the center, into the position of Fig. 2, which is farther away from the flange 12 than when the lever 15 is hanging vertically or turned upwardly to the right. The latch is therefore set up and its grip on the end-gate tightened by the foregoing movement of the lever from the position of Fig. 3 to that of Fig. 2.

It will be noticed that the lever 15 is of extreme length as compared with the distance between the pivot points 14 and 16 which results in a high leverage. This high leverage is necessary because the pivot point 16 is so located with respect to the edge of the flange 12 that great force is required to swing the lever upwardly to draw the latch into a locked position and the pivot point 14 forwardly around the pivot point 16 into its position as shown in Fig. 2. For that reason it is unnecessary to provide any means for holding the lever 15 against the force of gravity because it requires a considerable downward pull on the lever to unlock the end-gate.

To prevent any bending of the support 18

when the latch is being set up or when the end-gate is subjected to great strain, an angle iron or flange 22 may be secured to the under side of the body 5 with its lower edge engaging the support 18.

After the latch has been locked, as shown in Fig. 2, the pivot point 14 and the nose 11 of the latch lie in a straight line which is above the point 16 and therefore any strain exerted upon the latch tends to pull the lever 15 upwardly and against the bar 19 and thereby to keep the latch in its locked position. It is apparent, therefore, that the latch cannot become unlocked however great the strain upon it may be, because the greater the force exerted upon the end-gate and latch, the more firmly it holds.

The releasing of the latch requires nothing more than the movement of the lever 15 from the position of Fig. 2 to that of Fig. 3; that is, the swinging of the lever through an arc sufficient to carry the pivot point 14 near enough to the flange 12 to release the latch.

It will be observed that my locking device comprises very few parts of the simplest construction and that it may be easily applied to any form of end-gate irrespective of the construction of the vehicle without making any material changes. Because of its simplicity both in construction and operation, it has the advantages of cheapness, efficiency and durability.

It will be apparent to those skilled in the art that my invention may be embodied in various forms of construction other than that herein illustrated and described and it is my intention to claim it broadly except where specifically limited in the following claims.

What I claim is:—

1. A vehicle having in combination, a body, an end-gate hinged at its upper edge to said body and provided with a projecting flange at its lower edge, a fixed support secured at one end to the said body and extending rearwardly to a point underneath and near said flange on said end-gate, a comparatively long lever pivotally mounted at one end on the rear end of said fixed support, said pivotal point being below a straight line drawn from said flange on said end-gate to the point where said fixed support is secured to said body and a latch pivotally mounted on said lever adjacent the pivot point of said lever and having a hooked nose adapted to engage said flange on said end-gate and to hold said end-gate locked when said lever is turned upwardly around its pivot point and into engagement with said fixed support.

2. A vehicle having in combination, a frame, a body mounted on said frame, an end-gate hinged at its upper edge and provided with a projecting flange at its lower edge, a fixed support fastened at one end to said frame and extending rearwardly of said body to a point underneath and near said flange on said end-gate, said point being below a straight line extending from said flange to the point at which said fixed support is fastened to the frame, a lever pivotally mounted at one end at the free end of said fixed support and a latch pivotally mounted on said lever near the pivot end thereof and having a hooked nose adapted to engage the edge of said flange; said lever being sufficiently long in proportion to the distance between its pivoted end and the pivot point of said latch to give said lever a high leverage when operating it to lock said end-gate.

In witness whereof, I hereunto set my hand this seventh day of April, 1919.

GEORGE BOWDEN.