Sept. 13, 1927. 1,642,059

J. S. BOWER

END GATE LOCKING DEVICE

Filed Oct. 29, 1926

Fig. 1

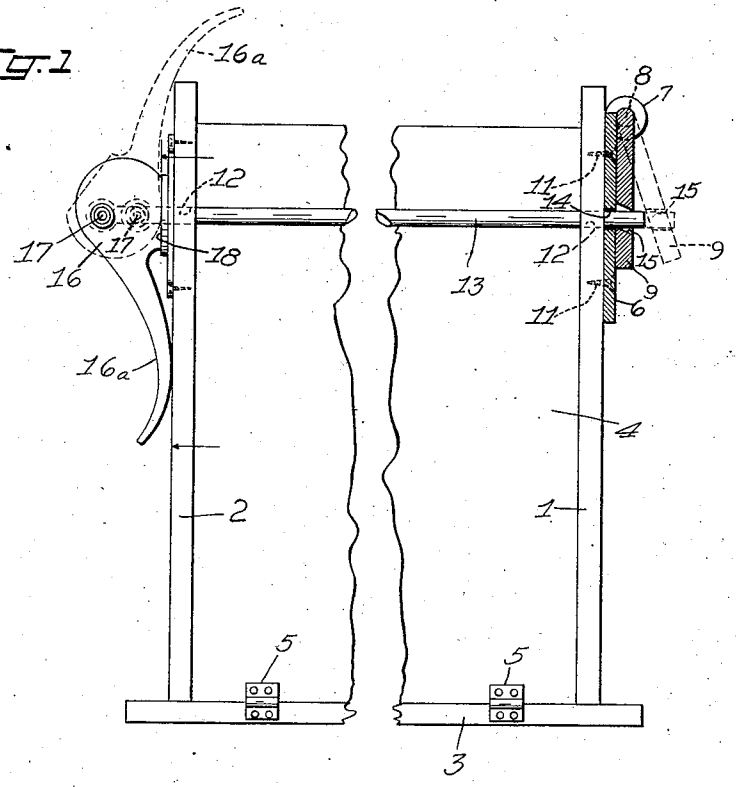


Fig. 2

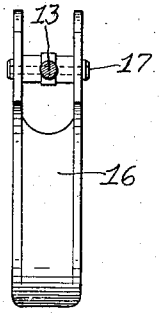
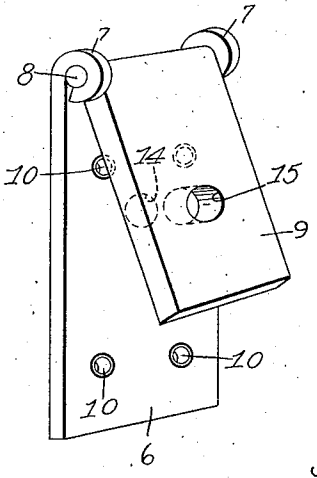


Fig. 3



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UNITED STATES PATENT OFFICE.

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END-GATE LOCKING DEVICE.

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My invention relates to improvements in locking means for end gate rods, such as those used on wagon and truck bodies, and it consists in the combinations, constructions, and arrangements herein described and claimed.

An object of my invention is to provide locking means for an end gate rod, which will hold the rod securely, but which may be released by manipulating one end of the rod, thereby facilitating the withdrawal or replacement of the rod.

A further object of my invention is to provide a device of the type described in which the locking means is relatively simple and inexpensive.

A further object is to provide a locking means which will not easily get out of order.

Other objects and advantages will appear in the following specification, and the novel features of the invention will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawings, forming part of this application, in which

Figure 1 is an end view of a wagon body provided with my improved locking means.

Figure 2 is a detailed view of a portion of the locking means, and

Figure 3 is a perspective view of a hinged locking plate.

In the drawing, 1 and 2 indicate the sides of the wagon body and 3 the bed. The end gate is indicated at 4 and is shown as being hinged to the bed by hinges 5.

Secured to the side 1 near the top thereof is a locking member which consists of a metal plate 6, having portions 7 turned over at the corners to form bearings for the pintles 8 of a plate 9, which is hinged to the plate 6, as shown in the drawing. The plate 6 has screw openings 10 for screws 11, by means of which the plate 6 is securely fastened in position.

The sides 1 and 2 have aligned openings 12, through which the rod 13 may extend. The plate 6 has an opening 14, which registers with the openings 12. The plate 9 has an inclined opening 15, the purpose of which will be explained later.

The opposite end of the rod is provided with an eccentric clamp 16, which is pivotally connected to the rod at 17, and which is arranged to bear on a plate 18 connected to the member 2. It will be observed that this clamp 16 has a flattened portion, which will rest on the flat surface of the plate 18 when the handle 16^a of the eccentric 16 is in the position shown in the drawings.

From the foregoing description of the various parts of the device the operation thereof may be readily understood. In Figure 1 I have shown the device in its locked position with the rod 13 in the rear of the end gate 4. In this position it will be observed that the plate 9 is in parallelism with the plate 6 and that the inner lower and outer upper edges of the opening 15 grip the rod.

In order to loosen the rod and to withdraw it, all that is necessary is to swing the handle 16^a outwardly and up in a position shown in dotted lines. This will push the rod forwardly and will carry with it the plate 9, so that the opening 15 in the plate 9 will be substantially in alignment with the longitudinal axis of the rod. I have found that when the plate is in this position the rod may be very easily released by twisting it slightly and pulling on it, so that the rod will come free from the plate and may be drawn out. The plate will then swing down so that in replacing the rod it is thrust through the side 2, through the side 1, and through the openings in the plates 6 and 9, the plate 9 swinging out to permit the opening to align itself with the longitudinal axis of the rod. Now when the clamp is swung downwardly into the dotted line position as shown in Figure 1, the rod will be pulled to the left in Figure 1 and the plate 9, in swinging toward the left, will grip the rod so that when the clamp is in the full line position the rod will be held tightly at both ends. The particular feature of this invention, and the one which had to be tried out by experiment before I found that it would operate, is the fact that with the construction shown the twisting of the rod while pulling toward the left in Figure 1 to remove it will result in the release of the rod from the plate 9 with very little effort, whereas when a direct pull, as by the clamp, is made, the plate 9 will grip the rod securely.

I claim:

1. The combination with a vehicle body having sides provided with openings, of a rod extending through said openings, a plate secured to one of said sides and having an opening arranged to register with said first-named openings, a locking plate hinged to said last-named plate and having an open-

ing arranged to receive the rod, the opening in said locking plate having an axis disposed angularly with respect to the axis of the rod when the first-named plate and the locking plate are in parallel position, and means at the opposite end of the rod for exerting tension on the rod.

2. The combination with a vehicle body having sides provided with aligned openings, of a rod arranged to extend through said aligned openings, an eccentric clamp secured to said rod at one end, and arranged to bear on the outer surface of one of said sides, a metal plate secured to the outer surface of the other side and having an opening arranged to register with said first-named openings, and a locking plate hingedly connected at its top to said metal plate and having an opening arranged to receive one end of said rod, the opening in the locking plate having an axis disposed angularly with respect to the axis of the rod when the locking plate is in parallelism with the first-named plate, said locking plate being arranged to swing outwardly to bring the opening into registration with the first-named openings, whereby the release of the rod is effected.

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