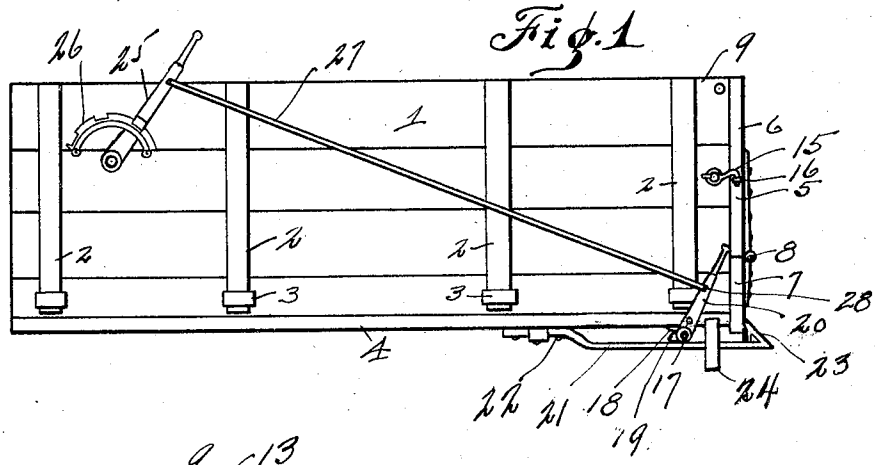
H. P. OLSEN.

END GATE.

APPLICATION FILED MAR. 15, 1919.

1,351,436. **Patented Aug. 31, 1920.**

Fig. 1



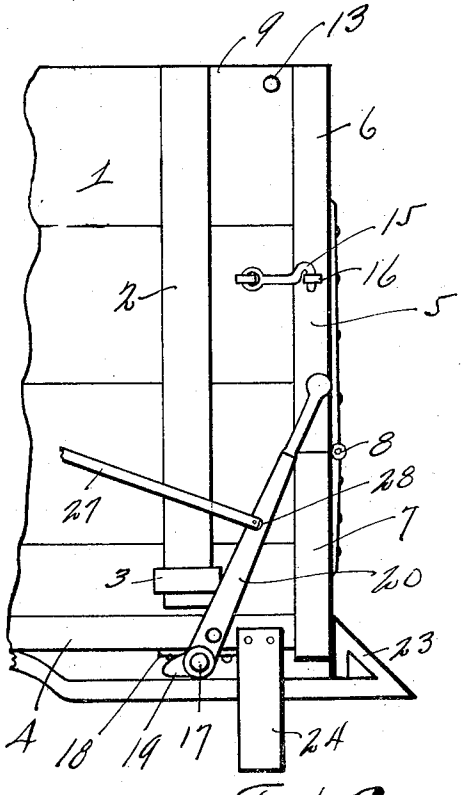


Fig. 2

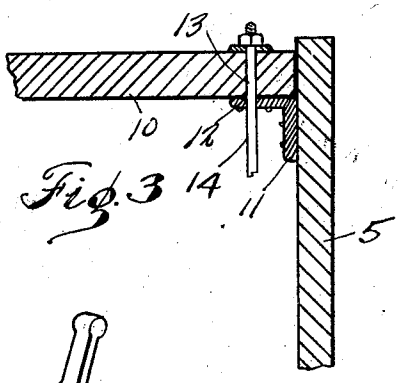


Fig. 3

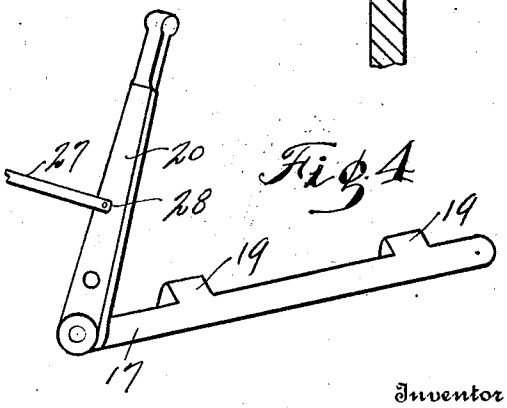


Fig. 4

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END-GATE.

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Application filed March 15, 1919. Serial No. 282,908.

To all whom it may concern:

Be it known that I, HANS P. OLSEN, a citizen of the United States, residing at Spokane, county of Spokane, and State of Washington, have invented certain new and useful Improvements in End-Gates, of which the following is a specification.

The present invention relates to improvements in end gates, especially for wagon boxes, truck bodies and the like.

The primary object of the invention is in the provision of means whereby the end gate may be manipulated in various manners to best accommodate itself to the conditions imposed upon it.

It is especially an object to provide means whereby a portion of said end gate may be detachably engaged and its release effected to empty the contents of the box without the removal of the entire gate.

It is still a further object to provide means whereby grain or bulk materials may be handled and by which means leakage of such materials will be prevented and also furthermore manipulation of the gate may be effected from the driver's seat.

In the accompanying drawings one complete example of the physical embodiment of the invention is illustrated, constructed and arranged according to the best mode so far devised for the practical application of the principles of the invention.

Figure 1 is a side elevation of a wagon box with the end gate of my construction in place thereon.

Fig. 2 is an enlarged side elevation of one end of the box showing the construction of the various features of the invention.

Fig. 3 is a fragment in cross section through one corner of the box disclosing the method of attaching the gate to the side members.

Fig. 4 is a perspective view of the cam shaft and lever for controlling and releasing a portion of the end gate.

In the preferred form of the invention as illustrated in the drawing, 1 represents the side members or sides of a wagon box, these side members being secured and held in place by stakes 2 mounted in sockets 3 secured to the bed 4 of said box. Upon the end of the box is provided the end gate of the present construction showing as a whole at 5 and having an upper member 6 and a lower member 7 hingedly connected at 8. Secured to the gate members 6 and 7 and closely engaging the corners or rather the ends of the box members 9 and 10 are angle strips 11 effecting in conjunction with the end gate and the side members a tight and leak-proof joint for grains or other fine materials handled in bulk. On the upper leg of the angle member 11 near the top of the box is provided an aperture 12 and in register therewith when the gate is in position is an aperture 13 through the upper side walls of the box body. Through this a rod 14 is passed extending from wall to wall and may be held in adjustable position by suitable nut or other locking features. By this contact the entire end gate consisting of the members 6 and 7 may be held in substantial connection with the box body.

Located on the sides of the box body and having engagement with the end member 6 is a hook 15 engaging the staple 16 secured to the end member 6 to hold the upper member rigidly secured to the box. The lower end member 7 hingedly connected to the upper member at 8 is designed to be free to swing upon its hinge and will be especially useful in connection with the handling of bulk grains wherein the loaded wagon is driven upon a scale and when weighed is tipped to allow the grain to be poured forth from the box. For this purpose it is desirable to have the end gate open or at least a portion thereof as will allow the contents free movement into the hoppers placed to receive it.

To accomplish the purpose providing for the free flow of the grain from the box there is provided on the under side of the box frame 4 a pivoted cam shaft member 17 secured and held in position by bearings 18. Upon this shaft are constructed cam members 19 and upon the end thereof a lever member 20, the latter providing means for proper manipulation. Directly under the cam members and in position to be acted upon by them are spring latch devices 21 secured to the underside of the box bed 4 at 22. The member 21 which is constructed of spring steel is provided with a retainer 23 upon its end which will engage the lower edges of the gate 7 to retain said gate closely engaged with the end of the box. A strap 24 is provided and secured to the under side of the box to act as a guide to prevent lateral motion of the spring retainer 21. When it is desired to open the lower portion of the end gate the lever may be moved for-

ward from its normal position and the latch device will be depressed to allow the gate to swing outward and the contents of the box to pour forth. The arrangement of these various parts, especially the latch and the end gate are such that when the contents is removed the end gate may be slammed shut, in which event it will ride upon the angular face of the member 23 to press same and be held and retained thereby.

It is frequently desirable that the driver maintain his seat and be in control of his horses when a load is being dumped as above related, and to accomplish this there has been provided a lever and rod connection consisting of the lever 25 pivotally mounted on the body and engaging a segment 26 for adjustment. The rod 27 pivoted upon 25 is also pivotally connected at 28 on the lever 20. By reference to the drawing it will be seen that the lever 20 may be manipulated from the forward end of the box and the spring 21 depressed to open the end gate for the purpose described.

This type of gate has other advantages such as allowing the placing in the wagon box of material such as lumber that has a greater length than that of the box in which case the gate may be hinged upward or held open to receive the load and then allowed to rest thereupon.

In case it is desired to have the entire end of the box open this may be quickly accomplished by withdrawing the rod 14 in which case the gate may be quickly and easily removed.

I claim:—

The combination with a vehicle body, of an end gate having a detachable top section and a horizontally hinged lower section a spring latch on the body to retain the hinged section, a shaft journaled beneath the body having a cam member engaging the latch to depress it, a rear lever arm on said shaft, a front lever, and a connecting rod between said lever arm and lever, for the purpose described.

In testimony whereof I affix my signature.

HANS P. OLSEN.