DETACHABLE COMBINED END-GATE AND SCOOP BOARD.

1,294,665.


To all whom it may concern:

Be it known that I, WINFRED W. HUBBARD, a citizen of the United States, and resident of Prole, in the county of Warren and State of Iowa, have invented a certain new and useful Detachable Combined End-Gate and Scoop-Board.

The object of my invention is to provide a detachable combined end gate and scoop board, hereinafter sometimes briefly called "scoop board", of simple, durable and inexpensive construction which may be quickly and easily mounted on an ordinary wagon bed or removed therefrom.

A further object is to provide such a device which can be mounted on a wagon bed and will be properly held in position thereon without the use of nails, bolts, screws, rods or similar devices, but which may if desired be specially held by some such separate fastening means.

A further object is to provide such a device having members adapted to be detachably mounted on the wagon bed, and to provide in connection therewith a movable scoop board member adapted in one position to be locked to the rear of the wagon for use as an end gate and in another position to serve as a scoop board.

With these and other objects in view my invention consists in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claim and illustrated in the accompanying drawings, in which:

Figure 1 shows a side elevation of the rear end of a wagon bed having installed thereon a detachable scoop board embodying my invention.

Fig. 2 shows a similar view, the scoop board being removed, for more clearly showing part of the means for mounting the scoop board on the wagon.

Fig. 3 shows a detail, sectional view taken on the line 3-3 of Fig. 2, the cleats being removed.

Fig. 4 shows an enlarged, detail view of part of the scoop board mechanism.

Fig. 5 shows a top or plan view of the mechanism shown in Fig. 4.

Fig. 6 shows a top or plan view of part of the device shown in Fig. 3; and

Fig. 7 shows a slightly modified form of the brackets at the upper ends of the supports.

In the accompanying drawings, I have used the reference numeral 10 to indicate generally the side of a wagon bed below which is the bottom 11, and above which is the sideboard 12.

It is a usual construction to have beneath the rear end of the bottom 11 a cross bar 13 such as that shown in Fig. 2.

My improved device consists of an ordinary scoop board 14 having suitable side wings 15 of ordinary construction adapted when the scoop board is in its position for use as an end gate to overlap the sides of the wagon bed on the outer surfaces thereof. For suitably mounting my scoop board on the wagon bed the following means are provided.

I use an angle iron 16, which is preferably placed with a vertical flange resting against the rear lower portion of the wagon bed, preferably below the upper surface of the bottom 11, as shown in Figs. 1 and 2.

The angle iron 16 preferably has at its upper edge a rearwardly extending horizontal flange which is preferably located below the upper surface of the bottom 10 a distance substantially equal to the thickness of the scoop board member 14.

On each side of the wagon bed there is provided what I shall call a support comprising in each case a bar 17 having at its upper end a yoke 18 designed to extend over and receive the upper edge of the wagon bed 10, as shown in Figs. 1, 2 and 3, and to be placed on the side of the wagon bed preferably forwardly of the cleats on the inside of the rear part of the bed.

Each support 17 is preferably curved slightly from its forward end downwardly and rearwardly, and at its lower end has a portion 19 extending rearwardly and arranged substantially in a horizontal plane.

Each portion 19 is secured at each rear end to the angle iron 16 as for instance by means of a flange 20 and a bolt 21. The lower portion of each support 17 is provided with an elongated slot 22 so arranged as to be
below the bottom 11 and adjacent to the forward edge of the bar 13, as illustrated in Figs. 1 and 2. Secured to each support 17 near its upper end is a bracket member comprising in each case a laterally extending bracket 23 having at its outer end an upwardly extending pin 24.

At the inner end of each bracket 23 is preferably an extension 26 designed to be extended through and into a hole in the support 17 and to be welded thereto. Each bracket 23 has an arm 25 extended rearwardly, thence toward the wagon bed, and thence rearwardly, as shown in Fig. 6, and designed to serve as a brace for the bracket.

Mounted in each of the wings 15 is a sleeve 27. Rotatably mounted in the sleeve 27 is a shaft 28 having the form of a bolt with a head 29 on one end and a nut 30 on the other end. Received on the bolt shaft 28 on the opposite sides of each wing 15 are parallel strips 31 the outer surfaces of which are corrugated as at 32 where they are engaged by corrugated washers 33 on the shaft 28.

The sleeves 27 serve for spacing the strips apart and permit the nuts 30 to be tightened without interfering with the free turning of the sleeves in the wings 15.

When the end gate is in its vertical position, shown in Fig. 1, the strips 31 extend forwardly therefrom substantially in horizontal position and at their forward ends converge as shown at 34 in Fig. 5.

Received in the forward ends of the strips 31 is a ring 33 on a rod 36. The rod 36 has at its free end a hook member 37. On the outer surfaces of the side wings 15 near the lower ends thereof, when the side wings are in upright position, as shown in Fig. 1, are hook-shaped keepers 38.

Secured to the rear surface of the end gate 14 near the lower edge thereof are keepers 39, such as that shown in Fig. 1. In the practical installation and use of my improved end gate the frame comprised of the support 17 and the angle irons 16 is mounted on the rear end of the wagon bed in the position shown in Figs. 1, 2 and 3.

It will be noted that the side wings 15 extend downwardly below the lower edge of the scoop board member 14 when the scoop board is in its upright position shown in Fig. 1, so that the scoop board may be placed in position shown in Fig. 1, for use as an end gate with the lower edge of the member 14 resting on the horizontal flange 18, and with the downwardly extending portions of the wings 15 resting in front of the angle irons 16.

The strips 31 are extended forwardly above the bracket 23 and the rods 36 are extended downwardly and secured by keepers 38. It will be noted that the upper ends of the rods 36 in this position of the parts extend forwardly of the bracket 23.

I have found that for practically all purposes the end gate will remain tight in use when installed in the position mentioned above without the use of any bolts, rods or the like.

On account of the fact that the bracket 23 is located forwardly a substantial distance from the rear upper corner of each of the side members 10, it will be seen that there will be little tendency for the bottom of the end gate to swing outwardly.

However, to meet conditions where the rearward pressure of the load would be very great at the lower part of the end gate 1 have provided the openings 22, so that the rod 36 having its ends bent may be extended through the openings 22 and will stand when so inserted just forwardly of the bar 13 to prevent any rearward movement of the bottom of the end gate and the supports 17 especially when the rods 36 are released from the keepers 38.

Where it is desired to use the device as a scoop board, the lower ends of the rods 36 are released from the keepers 38, and the upper portion of the end gate is swung rearwardly and out toward position shown by dotted lines in Fig. 1. As the end gate moves toward the position thus shown by dotted lines, the members 39 will engage and receive the horizontal flange of the angle iron 18, as shown by dotted lines in Fig. 1.

The rods 36 will travel over the brackets 23 until the hook members 37 engage said brackets and hold the device in position for use as a scoop board.

The members 25 serve to brace the brackets 23 and prevent the rearward sliding movement of the upper ends of the supports 17 by binding on the bed when there is rearward pressure by the upper ends of the rods 36 on the brackets. The ordinary cleats on the inside of the wagon bed at the rear end thereof will also prevent the rearward sliding movement of the yokes 18.

It will be seen that if it is desirable to adjust the parts somewhat for making the device tight when used as an end gate this may readily be done by loosening the nuts 30 and adjusting the strips 31 on the shaft 28.

In Fig. 7 there is shown a slightly modified form of the bracket at the upper end of the support 17 comprising a laterally extending member 40 which may be bolted to the upright 17.

Some changes may be made in the construction and arrangement of the various parts of my improved detachable scoop board without departing from the essential features and purposes of my invention, and it is my intention to cover by my present claim any modified forms of structure or use of mechanical equivalents which may be reasonable.
sonably included within the scope of my claim.

I claim as my invention:

A detachable scoop board comprising a scoop board member having side wings adapted to overlap the rear end of a wagon bed; a frame for mounting said scoop board on a wagon bed, said frame comprising a horizontal member adapted to rest adjacent to the rear lower portion of the wagon bed, supports secured to the last described member near its ends outside the wagon bed and extending upwardly and slightly forwardly with relation to the wagon bed, said supports having at their upper ends yokes designed to extend over and receive the upper edges of the sides of the wagon bed, laterally extending brackets near the upper ends of said supports, members pivotally mounted on said wings, rods pivotally mounted on said last named members, keeper devices on said wings near their lower ends when the scoop board is in upright position, said wings having their last described ends projected beyond the scoop board member, said supports having aligned openings in their lower portions, and a rod extended through said openings.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D.C."