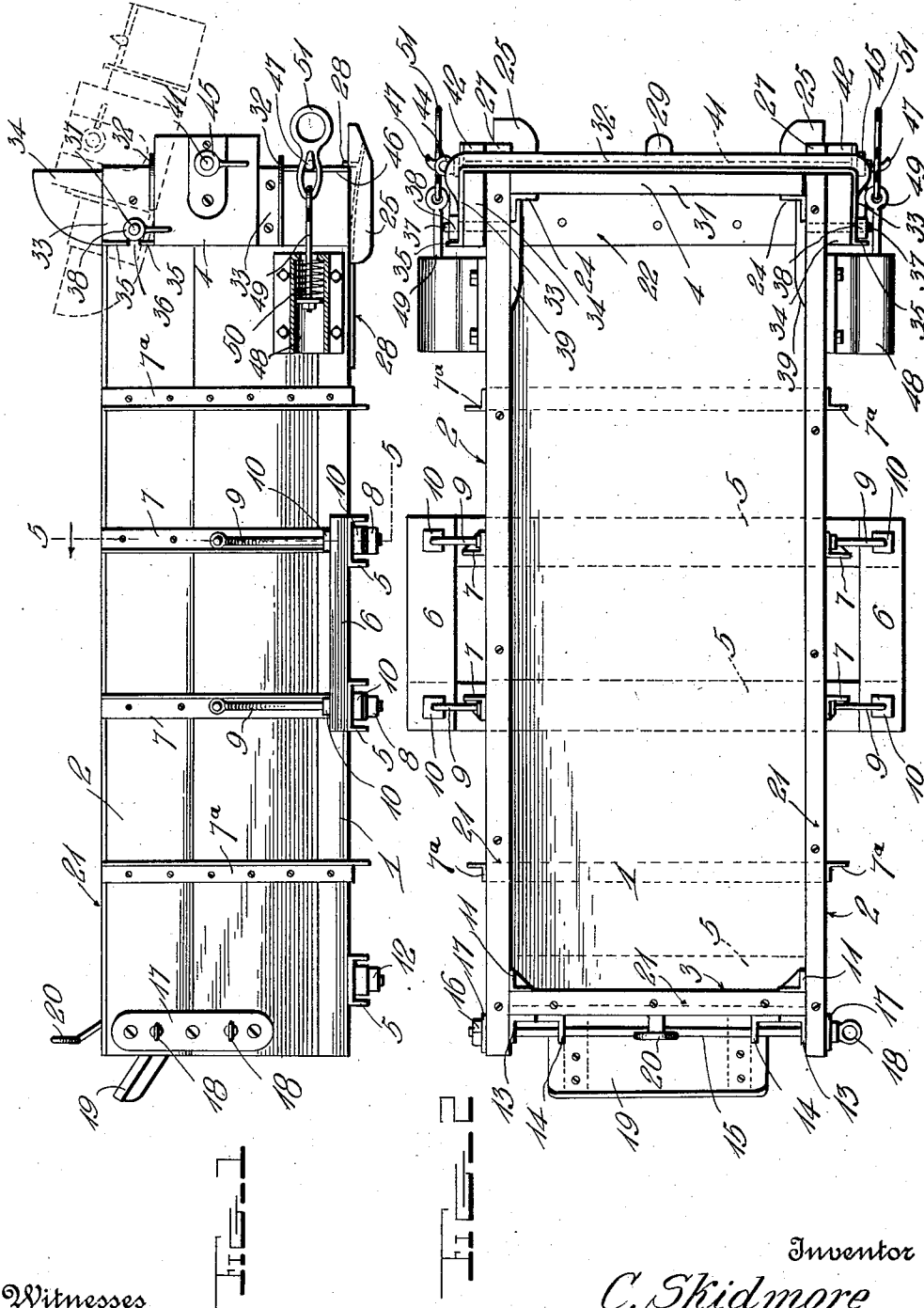


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 END GATE FOR WAGONS.
 APPLICATION FILED FEB. 25, 1911.

1,025,024.

Patented Apr. 30, 1912.

2 SHEETS—SHEET 1.



Witnesses

E. Clement
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Inventor

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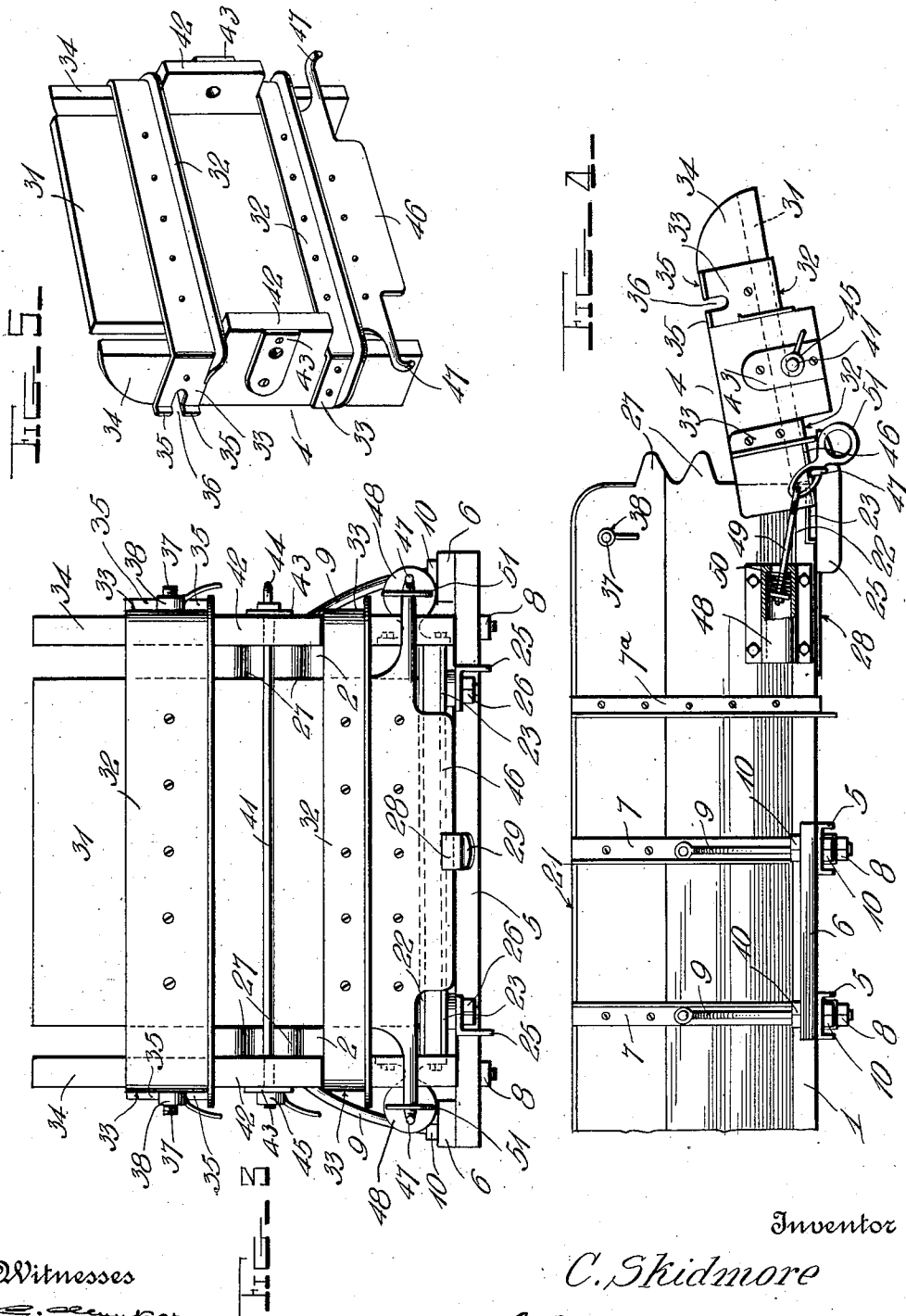
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UNITED STATES PATENT OFFICE.

CHARLES SKIDMORE, OF HOMER, NEBRASKA.

END-GATE FOR WAGONS.

1,025,024.

Specification of Letters Patent.

Patented Apr. 30, 1912.

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To all whom it may concern:

Be it known that I, CHARLES SKIDMORE, a citizen of the United States, residing at Homer, in the county of Dakota and State of Nebraska, have invented certain new and useful Improvements in End-Gates for Wagons; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in end gates for wagons.

The object is to provide an improved construction of end gate and means for attaching the same to the rear end of the wagon body.

With this and other objects in view, the invention consists of the improved construction, arrangement and combination of parts herein fully described and afterward specifically claimed.

In the accompanying drawings: Figure 1 is a side view partly in section of a wagon body constructed in accordance with my invention; Fig. 2 is a plan view thereof; Fig. 3 is a rear end view of the wagon body showing an outer side view of the end gate; Fig. 4 is a detail side view of the rear end of the wagon body showing the end gate lowered to form a scoop board; Fig. 5 is a detail perspective view of the end gate removed from the wagon body.

My improved wagon body comprises a bottom 1, sides 2, a front end 3 and an end gate 4. The bottom 1 is braced and strengthened by transversely disposed channel iron bars 5 one of which is arranged near the front end of the wagon body and two midway between the ends of the body. The two intermediate channel bars 5 have their ends projecting beyond the opposite sides of the body and connected by bars 6.

Secured to the outer sides of the wagon body above the projecting ends of the central channel bars 5 are vertical angle iron cleats 7 the lower ends of which terminate in cylindrical threaded extensions projecting through the ends of the channel iron bars 5 as shown. On the lower extended ends of the cleats 7 are nuts 8 whereby the bars 5 are secured at their ends to the outer sides of the wagon body. The outer ends of the bars 5 are further braced and secured to the sides of the wagon body by curved upwardly projecting brace bars 9 the upper ends of

which are secured to the angle iron cleats 7 in any suitable manner. The lower ends of the brace bars 9 are threaded and have screwed thereon nuts 10 one of which is screwed down into engagement with the cross bar 6 and the other screwed up into engagement with the lower side of the projecting end of the channel bars 5. Between the cleats 7 and the front and rear ends of the body are arranged additional braces in the form of angle iron bars 7^a which extend entirely around the sides and bottom of the body and are secured thereto in any suitable manner. The sides 2 of the body are formed of two boards or in two sections which are secured together by the braces and cleats hereinbefore described.

The front end and sides of the wagon body are braced on their inner sides by angle iron corner braces 11 the lower ends of which terminate in cylindrical threaded extensions which project through the bottom of the body and through the adjacent portion of the front channel bar 5 and have screwed thereon nuts 12. The sides and front end of the wagon body are further braced on their outer sides by angle iron corner braces 13 which are secured to the sides in any suitable manner. The front end of the wagon body is further braced by angle iron brace bars 14 which are secured to the outer side of the end as shown. Through the front ends of the sides of the wagon and through the angle iron brace bars 13 and 14 are arranged tie rods 15 having on their outer ends nuts 16, said nuts being screwed into engagement with wear plates 17 secured to the outer sides of the body as shown. On one end of the rods 15 are formed eyes 18 whereby said rods may be held while the nuts are being screwed thereon.

On the front end 3 is arranged a foot rest 19 and to said front end is secured a rein holder 20, comprising a standard the upper end of which is in the form of an offset eye. In engaging the reins with the holder the loop or buckled ends of the reins are inserted through the eye and the loop then thrown back over the upper end of the standard, thus securely fastening the ends of the reins. The upper edge of the front end and sides of the body are preferably provided with a metal binding strip which is secured to the edges in any suitable manner.

The bottom of the body at the rear end thereof is provided on its upper side with a transversely disposed wear plate 22 set in flush with the upper face of the bottom as shown. On the under side of the bottom below the plate 22 is arranged a transversely disposed angle iron bracing plate 23. The plates 22 and 23 are bolted or otherwise secured to the bottom in any suitable manner.

On the inner sides of the side pieces of the body adjacent to their rear ends are secured vertically disposed combined angle iron braces and stop bars 24, the lower ends of which are reduced to form cylindrical extensions which pass through the plates 22 and 23 and adjacent portions of the bottom and are engaged with angle iron end gate supporting plates 25 which project a suitable distance beyond the end of the body and are held in position by nuts 26 screwed onto the reduced threaded extremities of the angle iron bars 24. The ends of the side boards of the body are provided with notched extensions 27 which are adapted to engage and project between the parts of the end gate 4 as will be hereinafter more fully described. On the lower side of the bottom is secured the inner end of a centrally disposed spring catch 28 the outer end of which projects a slight distance beyond the end of the bottom of the wagon body and is adapted to engage the lower end of the end gate 4 whereby said end of the latter is held in position as will be hereinafter more fully described. The end of the catch 28 serves as an operating lug 29 Fig. 3 whereby the catch may be depressed to release the lower end of the end gate.

My improved end gate 4 comprises a board 31 which is adapted to closely fit between the ends of the opposite sides of the body and to engage or rest on the bottom of the same. When so arranged the inner side of the board 31 at its opposite edges will engage the combined stop and brace bars 24 and will be thus held against inward movement. Secured to the outer side of the board 31 are upper and lower angle iron bars 32 the ends of which project some distance beyond the side edges of the board and said ends are bent forwardly at right angles to form upper and lower flange attaching plates 33 which are bolted or otherwise secured to side members 34, spaced from the side edges of the board 31 to the thickness of the sides of the wagon body, which when the end gate is in place project between the edges of the board 31 and the adjacent inner sides of the side members 34 as shown in Fig. 2 of the drawings. The end flanges 33 of the upper cross bars 32 are bent outwardly at right angles to form stops 35 and in the ends of said plates and the adjacent portions of the side members 34 and through the stops 35 are formed notches 36 with

which are engaged pivot bolts 37 which are secured in the adjacent sides of the body of the wagon and project laterally therefrom. The outer ends of the bolts 37 are threaded and on said threaded ends are tail nuts 38 adapted to be screwed up into engagement with the flanges 33 of the upper cross bar and when thus screwed up the stops 35 on the ends of said flanges will prevent the nuts leaving the notches, thereby holding the upper end of the end gate in pivotal engagement with the end of the wagon body. On the inner sides of the wagon body to receive the inner ends of the bolts 37 are arranged reinforcing plates 39 which serve to hold the bolts in position and to strengthen the upper portion of the sides of the body.

As hereinbefore stated the rear ends of the sides of the wagon body are provided with notched extensions 27 which project between the side members and adjacent edges of the end gate. Between the notched extensions 27 and extending across in the rear of the end board 31 is a tie bolt 41. The ends of the tie bolt extend through apertures formed in projections 42 on the rear edges of the side members 34 between the upper and lower cross bars 32 and through apertured wear plates 43 secured to the outer sides of said projections as shown. On one end of the tie bolt 41 is formed an eye 44 while the opposite end of the bolt is threaded and has screwed thereon a tail nut 45 which, when screwed up into engagement with the adjacent wear plate firmly holds the side members 34 against spreading apart and in engagement with the outer sides of the wagon body thus preventing the sides of the body spreading.

Secured to the lower edge of the board 31 of the end gate is a latch plate 46 the lower edge of which projects below the lower edge of the board 31 and is adapted to be engaged by the spring catch 28 on the bottom of the body thereby holding the lower end of the end gate in position. On the ends of the plate 46 are arranged hooks 47 projecting a short distance beyond the outer sides of the side members 34. On the outer sides of the wagon body adjacent to the rear ends thereof are secured cylinders 48 in which are arranged the inner ends of eye bolts 49 the outer ends of which project a slight distance beyond the rear ends of the cylinders and slidably engage in the same. On the inner ends of the eye bolt 49 are arranged stop plates between which and the rear ends of the cylinders are arranged coiled springs 50, the pressure of which is normally exerted to draw the bolts forward in the cylinders. Loosely connected with the outer ends of the eye bolts 49 are links 51 on which are formed handles 52 whereby the links and the outer ends of the eye bolts

may be drawn rearwardly against the pressure of the springs in the cylinders. When thus drawn rearwardly the links 51 are adapted to be engaged with the hooks 47 on the ends of the latch plate 46 thus connecting said hooks with the spring retracted bolts 49 whereby the lower end of the end gate is held in engagement with the lower portion of the wagon body.

In Fig. 1 of the drawing the end gate is shown in dotted lines as being swung outwardly at its lower end on the bolts 37. In order to swing the gate outwardly into this position it is simply necessary to disengage the links 51 from the ends of the hooks 47 and to depress the catch 28 from engagement with the lower edge of the end gate. After these fastening devices have been thus released the lower end of the gate may be swung outwardly and upwardly on the bolts 37 and may be secured at any desired angle by tightening up the tail nuts 38 on the bolts 37 and into engagement with the adjacent outer sides of the flanges 33 of the upper cross bar 32 on the side members 34 of the gate.

In Fig. 7 of the drawings the end gate is shown as arranged in position to form a scoop board and when in this position the gate is lowered or swung outwardly at its upper end and the latch plate 46 on the lower end thereof projects between the angle iron plates 25 and the lower side of the rear end of the bottom of the body, while the lower angle iron cross bar 32 engages or rests on the ends of said angle iron plates as clearly shown in Fig. 7 of the drawings. When the end gate is thus arranged it will be supported at a slight angle with the rear end of the body and will be held in this position by the spring retracted eye bolts 49 which are connected with the hooks 47 on the latch plate 46 by the links 51 in the same manner as when the end gate is in a position for closing the end of the wagon.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as defined in the appended claims.

Having thus described my invention, what I claim is:

1. The combination with a wagon body, of an end gate comprising a board adapted to fit between the sides of the body, a transverse cross bar secured to the rear face of the end gate board and extending beyond the sides thereof, right angle flanges formed on the ends of the cross bar embracing the

sides of the wagon body, the flanges of the cross bar being provided with right angle stops at their forward ends, said flanges and stops being provided with horizontal notches, bolts secured in the sides of the wagon body and adapted to engage in said notches, and tail nuts on said bolts adapted to engage said stops and prevent the bolts from leaving the notches and to clamp the parts together.

2. An end gate for a wagon body comprising a board adapted to fit between the sides of the wagon body, angle iron cross bars secured to the rear side of the end gate board, projecting beyond the sides thereof and provided with right angle forwardly projecting flanges, side members secured to said flanges and adapted to embrace the sides of the wagon body, rearward extensions on said members projecting beyond the rear of the end gate board and provided with horizontal openings, and a tie bolt passing through said openings in the rear of the end gate board.

3. The combination with a wagon body, of an end gate pivoted to the body near its top, comprising a board adapted to fit between the sides of the wagon body, a latch plate secured to the rear lower edge of said board and provided with hooks on its opposite ends projecting laterally beyond the sides of the body, supporting plates secured to the bottom of the wagon body and adapted to receive the lower edges of said latch plate, spring retracted links on the opposite sides of the wagon body adapted to engage the hooks of the latch plate, and a spring catch secured to the bottom of the body and adapted to engage the bottom edge of the latch plate.

4. The combination with a wagon body, of an end gate pivoted to the body near its top, comprising a board adapted to fit between the sides of the wagon body, a latch plate secured to the rear lower edge of said board and provided with hooks on its opposite ends projecting laterally beyond the sides of the body, a spring catch on the bottom of the body adapted to engage said latch plate, cylinders secured to the opposite sides of the wagon body, eye bolts slidably mounted in said cylinders, retracting springs on said bolts, and links loosely connected to the outer ends of the bolts and engaging with the hooks on the ends of the latch plates.

5. The combination with a wagon body provided with notched extensions projecting beyond the rear ends of the middle portions of the sides thereof, of an end gate comprising a board pivoted to the body near its top, cross bars secured to the rear face of the end gates and projecting laterally beyond the sides of the wagon body, side members resting against the outer faces

of the side of the wagon body, right angle flanges on the ends of the cross bars secured to said side members, extensions on the side members provided with horizontal openings
5 coinciding with the throat of the notches in the extensions of the sides of the body, and tie bolts passing through said openings and in the rear of the end gate and engaging in said notches.

10 6. The combination with a wagon body, of an end gate, a latch plate secured to the rear face thereof and projecting below its lower end, hooks on the ends of the latch plate projecting beyond the sides of the
15 wagon body, angle irons secured to the bot-

tom of the wagon body and projecting beyond the rear ends thereof to serve as rests for said latch plates, a spring retracted bolt secured to the wagon body and to the hooks of the latch plate, and a spring latch se- 20 cured to the bottom of the wagon body and adapted to engage the lower edge of the latch plate.

In testimony whereof I have hereunto set my hand in presence of two subscribing 25 witnesses.

CHARLES SKIDMORE.

Witnesses:

L. O. HILTON,

O. B. HOPKINS.

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