

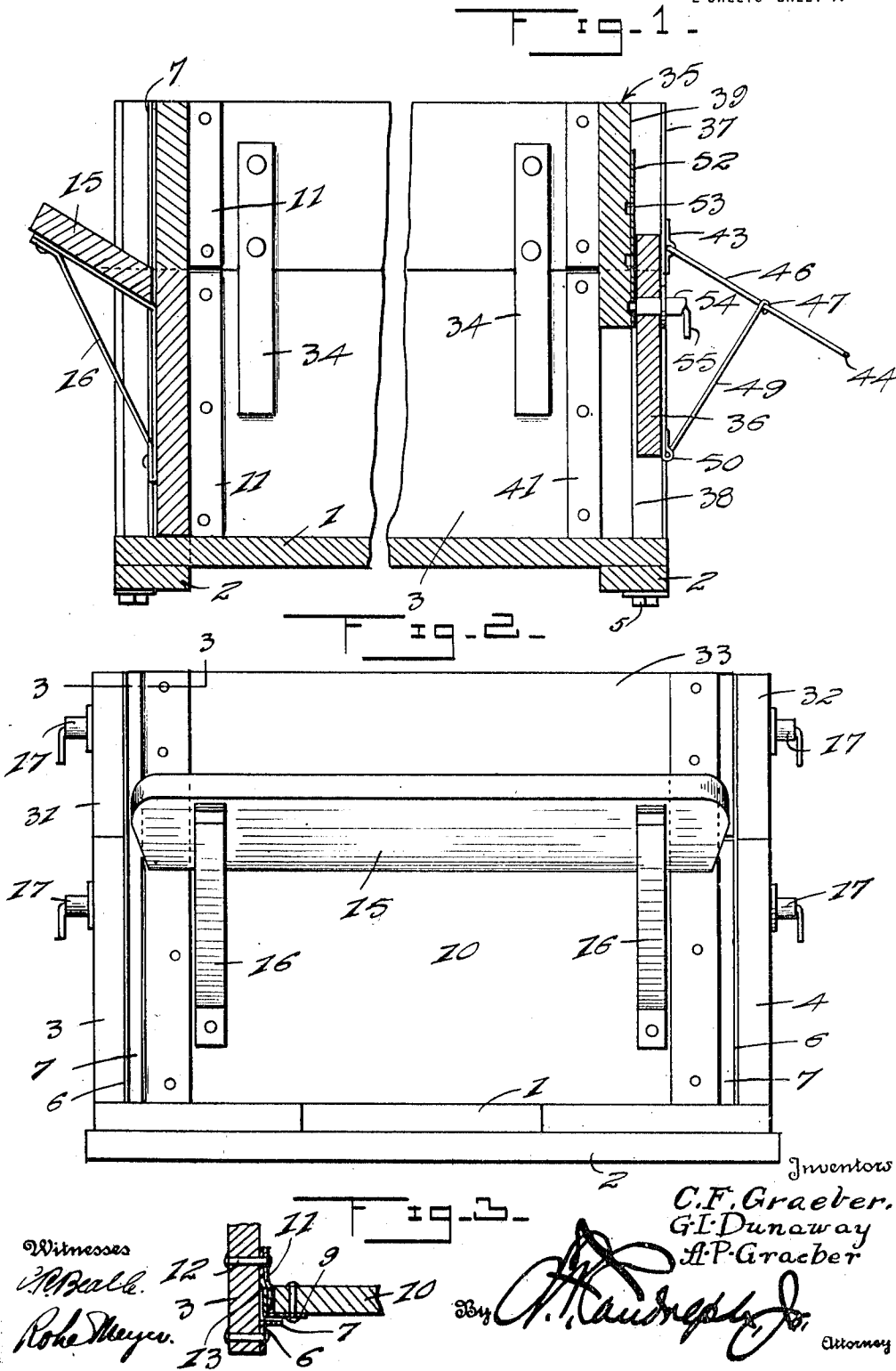
C. F. GRAEBER, G. I. DUNAWAY & A. P. GRAEBER.
WAGON END GATE.

APPLICATION FILED NOV. 16, 1915.

Patented June 18, 1918.

2 SHEETS—SHEET 1.

1,270,026.



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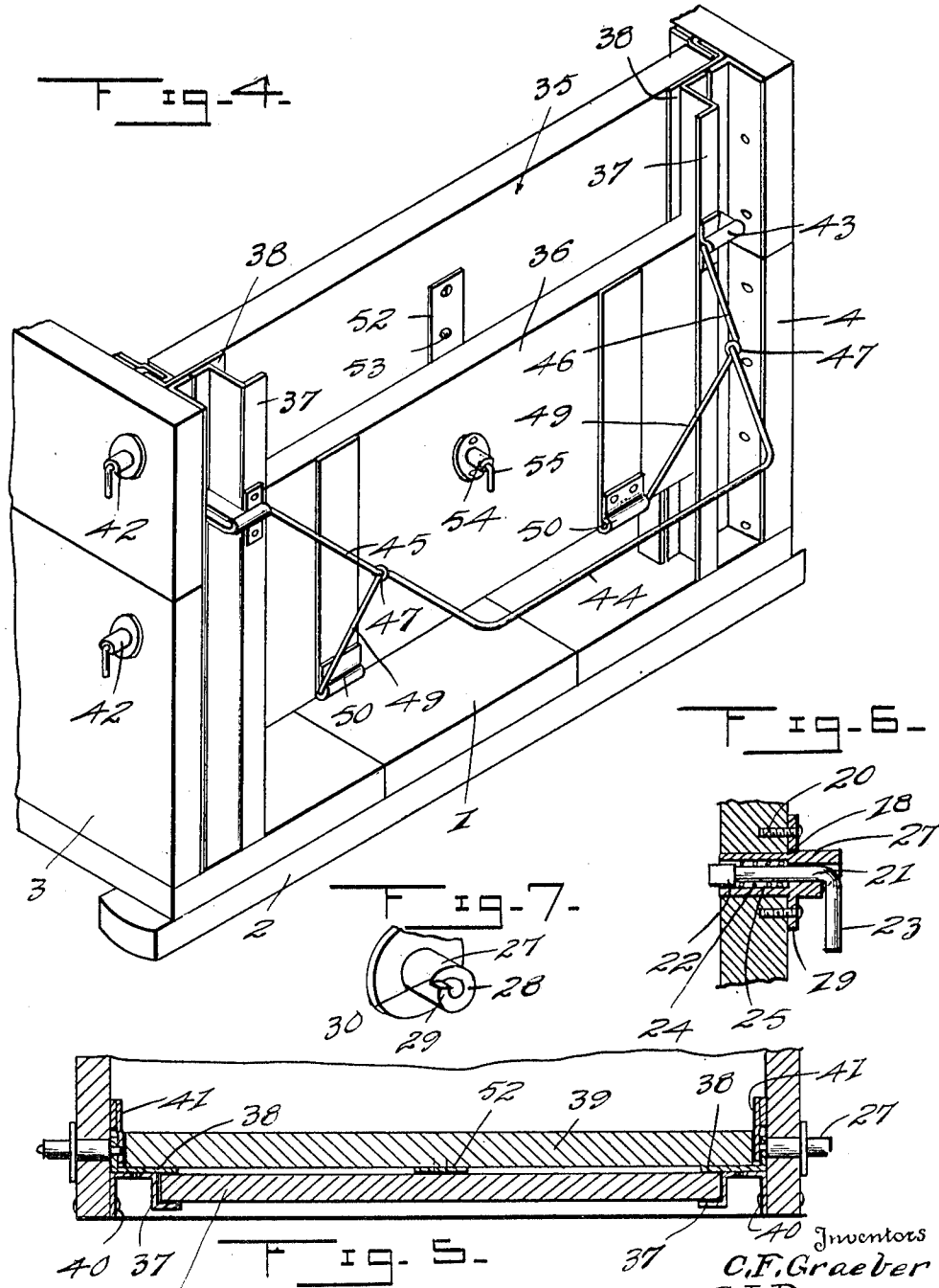
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Witnesses

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UNITED STATES PATENT OFFICE.

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WAGON END-GATE.

1,270,026.

Specification of Letters Patent.

Patented June 18, 1918.

Application filed November 16, 1915. Serial No. 61,791.

To all whom it may concern:

Be it known that we, CHARLES F. GRAEBER, GUY I. DUNAWAY, and ALFRED P. GRAEBER, citizens of United States of America, residing at Lytton, in the county of Calhoun and State of Iowa, have invented certain new and useful Improvements in Wagon End-Gates; and we do hereby 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 wagon end gates, and the primary object of the invention is to provide an end gate construction wherein the use of rods or bolts are eliminated, and to provide metallic guide ways which are attached to the inner surfaces of the side boards of the wagon bed and which coact with metallic strips carried by the ends of the front and rear end gates of the wagon bed for guiding the movement of the end gates and properly positioning them with respect to the side boards of a wagon bed.

Another object of this invention is to provide a rear end gate of novel construction, wherein the lower half of the gate is slidably supported by the upper half of the end gate, and further to provide a novel form of rod or leverage construction by means of which the lower half of the end gate may be readily and easily moved into an upward position along-side of the upper portion of the end gate to permit of the emptying of the wagon bed.

With the foregoing and other objects in view this invention consists in such novel features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings and claimed.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters designate like and corresponding parts throughout the several views, and in which:—

Figure 1 is a longitudinal section through the wagon bed having the intermediate portion of the bed broken away,

Fig. 2 is an end view of the front end of the wagon bed,

Fig. 3 is a sectional view on the line 3—3 of Fig. 2,

Fig. 4 is a perspective view of the rear end of the wagon bed showing the movable part of the rear end gate partially raised,

Fig. 5 is a sectional view through the rear end of the wagon bed,

Fig. 6 is a fragmentary sectional view through a part of the wagon bed showing the construction of one of the spring controlled latches or locks, and

Fig. 7 is a perspective view of a portion of the lock or latch structure.

Referring more particularly to the drawings, 1 designates the bottom of the wagon bed which is braced by suitable cross bars 2 that extend across beneath the bottom 1. Side boards 3 and 4 are secured to the bottom 1 of the wagon bed by bolts 5, which extend through the cross bars 2 and the bottom 1 of the wagon bed and have their upper ends flattened and secured to the ends of the side boards 3 and 4. The side boards 3 and 4 have angle plates or irons 6 secured to their inner surfaces at their forward ends. The sides 7 of the angle irons 6 which extend transversely to the side boards 3 and 4 are positioned inwardly of the edges or ends of the side boards and form guide ways for engagement with the metallic angle irons 9 which are secured to the front end gate 10. Each of the side boards 3 and 4 has a flat strip of metal 11 secured thereto as is shown at 12, the free edges of which metallic strips are bent outwardly from the surface of the side boards for forming a space indicated at 13, in which one side of the angle iron 9 rides, as is clearly shown in Fig. 3 of the drawings, providing means for guiding the vertical movement of the end gate 10, and also preventing movement of the end gate with respect to the bottom and the side boards 3 and 4. The front end gate 10 has a foot rest 15 supported forwardly thereof, by suitable angle supporting braces 16.

The end gate 10 is held against vertical accidental movement by means of catch or latch structure generically indicated by the numeral 17. The catch or latch structures 17 are more particularly illustrated in Figs. 6 and 7 of the drawings, and they comprise a sleeve or casing member 18, a portion of which extends into and through the side boards or the board to which the catch is attached. The bodies 18 have transversely extending annular flanges 19 formed thereon, through which any suitable type of attaching means, such as screws or the like, indicated at 20, extend for attaching the body 18 to the side boards. A locking bolt 21 extends longitudinally through the body

or sleeve 18 and has an enlarged locking head 22 formed upon its inner end. The outer end 23 of the locking bolt is bent transversely to the main body of the bolt, and forms a handle for actuating the same. A spiral spring 24 is coiled about the bolt and positioned interiorly of the sleeve structure 18. The spring 24 is positioned within the enlarged portion 25 of the bore of the sleeve or body structure 19, as is clearly shown in Fig. 6 of the drawings, and it tends to hold the enlarged locking head 22 in a locking position at all times. The outer end of the portion 27 of the body or sleeve 18, which projects outwardly of the side boards or other portions of the wagon bed to which the catches are attached, is cut spirally, as is clearly shown at 28 in Fig. 7 of the drawings so that when the bolt 21 is rotated within the sleeve or body, the angled end 23 will ride upon the spirally cut end 28, and will move the bolt 21 longitudinally within the sleeve or body, causing it to move into an unlocking position when the handle 23 rests against the higher portion indicated at 29 of the spiral end of the section 27. When the handle rests against the lowermost portion indicated at 30 of the spiral end 28, the locking bolt 21 will be in a locking position. Extra side boards indicated by the numerals 31 and 32, and an extra forward end gate 33 are provided for increasing the height of the sides of the wagon bed and increasing its capacity. These extra side boards are attached to the main body of the wagon bed in the usual manner, such as by cleats 34 which are secured to the opposite side of the extra side boards and extend over the upper edges of the ordinary side boards 3 and 4. A novel end gate structure is provided for use in connection with the improved wagon bed which includes end gate proper generically indicated by 35. The rear end gate 35 has its lower portion cut away and normally closed by an auxiliary end gate 36. The auxiliary end gate 36 is slidably supported by metallic angle irons 37 which are secured to the outer surface of angle irons 38. The angle irons 38 are in turn secured to the main body 39 of the end gate structure 35. The side boards 3 and 4, and the auxiliary side boards 31 and 32 have angle irons 40 secured thereto which form guides for guiding the vertical movement of the rear end gate structure 35. Relatively flat metallic bars 41 are secured to the side boards 3 and 4 and the auxiliary side boards 31 and 32 and they have their free edges bent outwardly for forming a space between the inner surface of the side boards and their inner surfaces, which space receives one side of the angle irons 38 as is clearly shown in Figs. 4 and 5 of the drawings. The insertion of the sides of the angle bars 38 into the spaces between the inner surfaces of the

side boards and the flat bars 41 prevents movement of the end gate structure longitudinally of the wagon bed. The end gate structure is held against vertical movement independent of the wagon bed by a plurality of latch structures indicated by the numeral 42. The latch structures 42 are identical with the latch structures 17, previously described.

The angle irons 37 have bearings 43 secured thereto in which the ends of bail-shaped rods 44 are journaled. The bail-shaped rod 44 has its legs 45 and 46 bent intermediate their ends as is shown at 47, forming relatively short spaces which extend substantially parallel to the end gate structure. Rods 49 are pivotally connected to the relatively straight sections 47 and have their lower ends journaled in bearings 50 which are attached to the auxiliary end gate 36. The end gate body 39 has a metallic bar 52 attached to its outer surface centrally of its end, which bar is provided with a plurality of spaced openings 53. A latch structure 54 is carried by the auxiliary end gate 36 and the locking end of the bolt 55 is adapted for seating in any one of the openings 53 for holding the auxiliary end gate 36 in various adjusted positions for regulating the size of the opening at the rear end of the wagon bed. When it is desired to raise or open the rear end of the wagon, the bight portion of the bail member 44 is gripped and moved upwardly, which swings the bail member upon its pivotal support, formed by the seating of its ends in the bearings 43. The upward swinging movement of the bail member 44 will raise the auxiliary end gate 36, owing to the connection between the bail member and end gate or by the rods 49. When it is desired to lower the end gate, the locking bolt 55 must be rotated for moving it into an unlocking position, which will permit the end gate to fall downwardly by its own weight.

The openings 53 extend into the body 39 of the end gate structure.

In reducing the invention to practice, certain minor features of construction, combination and arrangement of parts may necessitate alterations to which the patentee is entitled provided such alterations are comprehended within the scope of what is claimed.

What is claimed is:—

In a wagon bed structure, side boards, metal bars secured to the inner surfaces of said side boards near their rear ends and bent to form vertically extending portions spaced from the inner surfaces of the side boards, an end gate, angle irons secured to the rear surface of said end gate and having sides extending parallel with and in spaced relation to the ends of said end gate, said spaced guides fitted between the spaced por-

tions of said first named bars and said side boards, angle irons secured to the inner surface of the side boards and engaging the rear surface of said end gates, angle bars
5 comprising a pair of parallel portions and a perpendicular portion joining the parallel portion attached to the outer surfaces of said first named angle irons, an auxiliary end gate slidably supported by said last
10 named angle irons, means carried by said last named angled irons and connected to said auxiliary end gate for moving the aux-

iliary end gate, and locking means carried by said auxiliary end gate to prevent accidental movement of the auxiliary end gate. 15

In testimony whereof we affix our signatures in presence of two witnesses.

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Witnesses:

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