(No Model.)

A. W. HAINES.

SECTIONAL WAGON BOX.

No. 538,162. Patented Apr. 23, 1895.

Fig. 1.

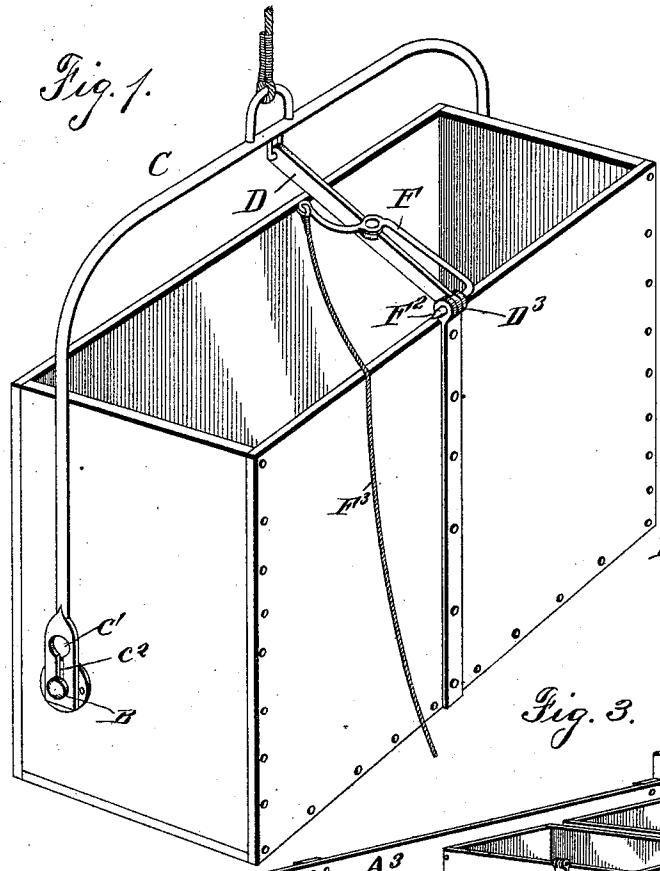


Fig. 2.

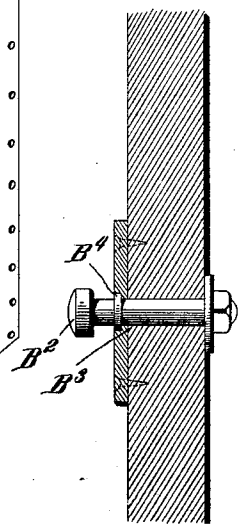
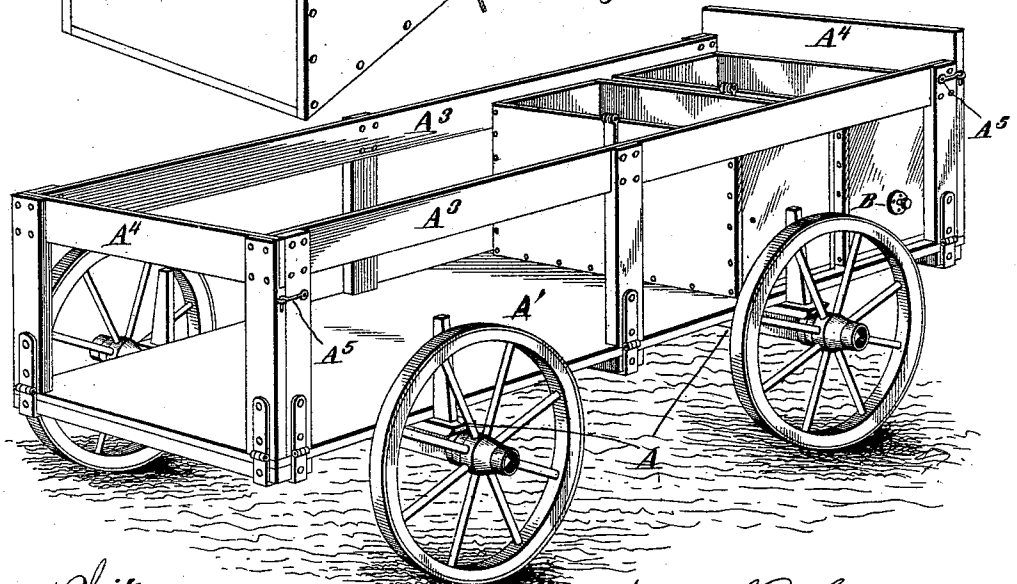


Fig. 3.



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UNITED STATES PATENT OFFICE.

ALFRED W. HAINES, OF DES MOINES, IOWA.

SECTIONAL WAGON-BOX.

SPECIFICATION forming part of Letters Patent No. 538,162, dated April 23, 1895.

Application filed October 2, 1894. Serial No. 524,705. (No model.)

To all whom it may concern:

Be it known that I, ALFRED W. HAINES, a citizen of the United States of America, residing at Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Sectional Wagon-Box for Handling Grain, &c., of which the following is a specification.

The object of this invention is to provide a wagon adapted to admit and hold a number of sections arranged when combined to form a wagon box and adapted to be separately loaded and unloaded and capable of being independently removed from the wagon and automatically dumped.

My invention consists in the construction of the wagon, the arrangement and combination therewith of the sections and in the construction of the section tripping devices, as hereinafter set forth, pointed out in my claims and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of one of the sections showing the detachable bail or handle connected therewith. Fig. 2 is a detail sectional view of one of the bolts to which the bail is attached, and Fig. 3 is a perspective view showing the wagon.

Referring to the accompanying drawings the reference letter A is used to indicate the trucks of the wagon.

A′ is a flat bottom placed on the trucks and A^3 are side pieces composed of two end and a central upright and a longitudinal top piece, said uprights being hinged to the sides of the bottom to fold outwardly and downwardly, and so arranged that the sides may fold outwardly without being limited by the standards on the wagon trucks or by the wheels.

A^4 indicates the ends, the rear one preferably being hinged, as in an ordinary wagon box, and the sides connected therewith by hooks A^5.

The sectional boxes are each composed of a rectangular box open only at its top and of a width adapting it to enter between the sides of the wagon box and of such a height as to extend within a slight distance of the top of the longitudinal piece of the sides so that when being loaded, grain, &c., will not readily fall over the sides but will be retained and directed into the sectional boxes. Said boxes may be of any length, so that any desirable number may be placed in the wagon.

Each sectional box has means for detachably connecting a bail therewith, located at its sides at one side of a central vertical line and beneath and at the side of its gravity center and consisting of a bolt B passed through the side of the box and having its head B^2 at a slight distance from the side of the box. B^3 is a metal plate surrounding the bolt and secured to the side of the box and having an annular depression therein adapted to admit an annular ring B^4 flush with said plate said ring being fixed to the bolt to prevent its inward movement.

C indicates a metal bail having flattened end portions each having an opening C therein adapted to admit the head of the bolt B and a slot C^2 leading downwardly therefrom adapted to admit the bolt proper. This provides a readily detachable connection between the bail and box, it being necessary to only lower the bail and then press its ends outwardly.

D indicates an arm pivotally attached to the under side of the center of the bail and having an opening in its lower end.

D^3 is a lug secured to the central portion of the box on its side farthest from the bolts and projecting upwardly above the top of the box. This lug is bifurcated at its upper end and adapted to admit the end of the arm D, said lug being also perforated horizontally in alignment with the opening in the armD.

F is a lever pivoted to the top of the arm D and having a pin F^2 on one end adapted to enter the openings in the lug D^3 and the arm D; and F^3 indicates a rope attached to the other end of the lever which is curved in such a manner that a pull upon the rope will withdraw the pin. It is obvious that when said pin is withdrawn the box will swing to an inverted position and its contents be discharged.

In practical use the boxes may be loaded either separately or when placed in the wagon and when it is desired to unload the sides of the wagon box are lowered and a lifting device such for instance as a hay fork elevator, windlass, or other common hoisting apparatus may be used. The bail is first attached to the bolts at the sides of the boxes, the box

elevated and when in the proper position the rope pulled and the boxes dumped.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent of the United States therefor, is—

1. An apparatus for handling grain &c. comprising a wagon truck of common form, a flat bottom mounted thereon, upright ends secured to the bottom, side pieces hinged to the bottom and adapted to fold outwardly and not engage the wagon wheels a number of boxes open at their tops and adapted to be placed in the wagon box, bolts secured to the sides of the boxes as set forth, a bifurcated and perforated lug secured to the top of the box as set forth, a bail having openings in its ends, adapted to admit said bolts and slots leading downwardly therefrom, an arm pivoted to the central portion of the bail with a perforation on its lower end and a lever pivoted to the top of said arm and having a pin formed on its one end adapted to enter said perforated lug and a rope attached to the other, substantially as and for the purposes stated.

2. An automatic dumping wagon for handling grain &c. comprising a box open at its top, bolts secured to the sides of the boxes as set forth, a bifurcated and perforated lug secured to the top of the box as set forth, a bail having openings in its ends adapted to admit said bolts and slots leading downwardly therefrom, an arm pivoted to the central portion of the bail with a perforation on its lower end and a lever pivoted to the top of said arm and having a pin formed on its one end adapted to enter said perforated lug and a rope attached to the other, substantially as and for the purposes stated.

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