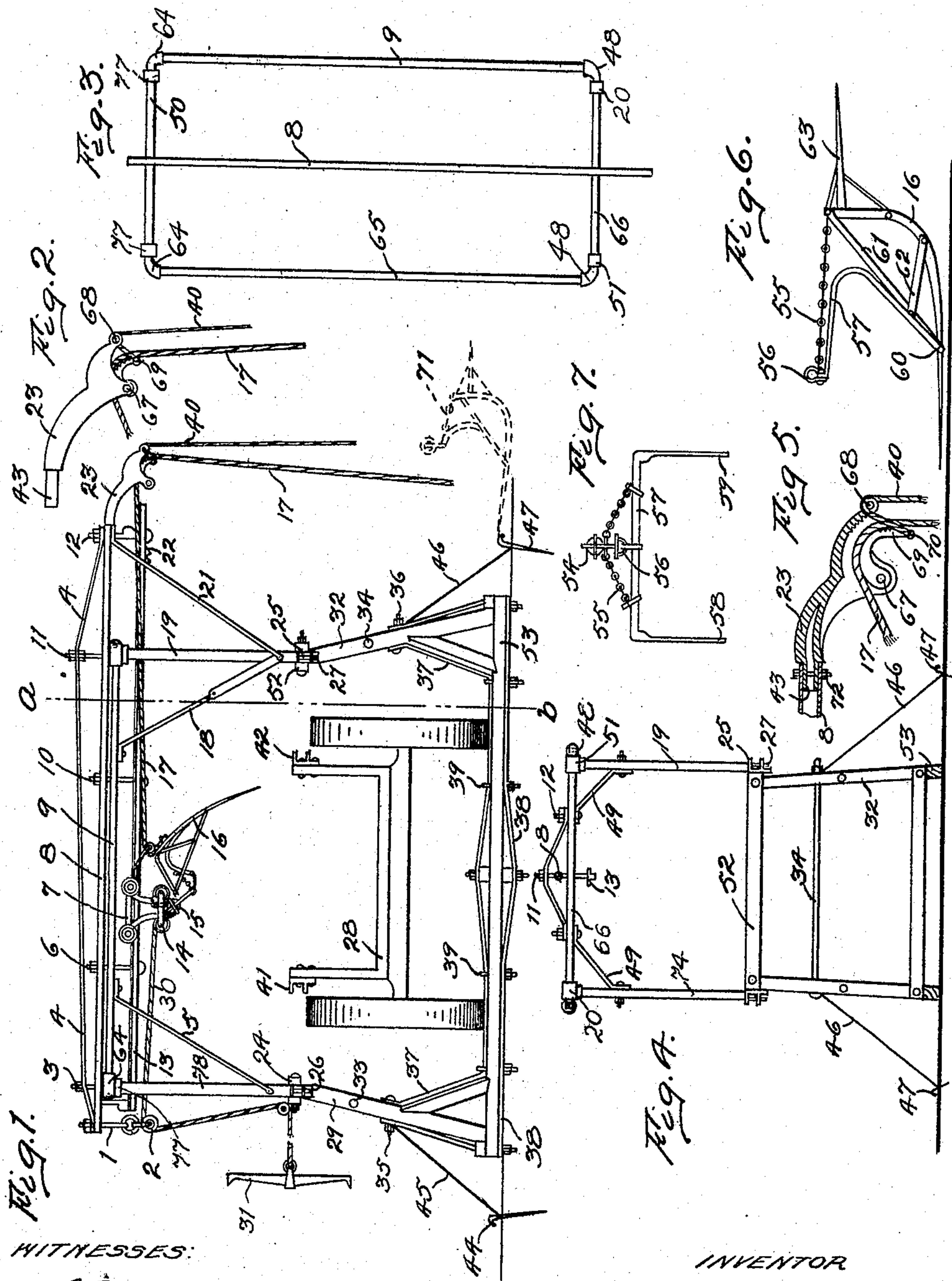


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WAGON LOADING DEVICE.  
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915,881.

Patented Mar. 23, 1909.



WITNESSES:

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RASMUS PEDERSON, OF PARKERSBURG, IOWA.

## WAGON-LOADING DEVICE.

No. 915,881.

Specification of Letters Patent.

Patented March 23, 1909.

Application filed June 20, 1908. Serial No. 439,571.

*To all whom it may concern:*

Be it known that I, RASMUS PEDERSON, a citizen of the United States of America, and a resident of Parkersburg, Butler county, Iowa, have invented certain new and useful Improvements in Wagon-Loading Devices, of which the following is a specification.

My invention relates to improvements in wagon loading devices, and the objects of my improvements are these; First, to provide an improved form of bail for the loading fork; second to furnish an improved method of suspending said fork to keep it in equilibrium; third, to construct a novel and efficient form of clutch-mechanism for the draft-cable of the said fork; fourth, to supply a trussed substructure adapted to detachably support the superstructure of the knock-down framework of the loading device when it is desired to support such superstructure apart from a wagon to be loaded thereunder, and fifth, to so modify the rear part of said superstructure as to adapt it for use either with said substructure or with the wagon on which it may otherwise be removably supported.

These improvements are designed to be improvements in the construction and use of the form of wagon loading device, which is illustrated, described and claimed in my former application for patent, filed in the United States Patent Office under Serial Number 405,875, on December 10, 1907.

These objects I have accomplished by the means which are hereinafter fully described and claimed, and which are illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of my improved wagon loading device, as supported on my new substructure over a wagon. Fig. 2 is an enlarged detail side elevation of the mounting of my improved draft-cable clutch. Fig. 3 is an upper plan view of the middle and side framing-tubes and their connections of the superstructure. Fig. 4 is a transverse section of the loader and its substructure looking toward the rear and taken on the line *a—b* in Fig. 1. Fig. 5 is an enlarged longitudinal vertical section of the clutch mounting shown in Fig. 2. Fig. 6 is a side elevation of my improved form of fork or scoop. Fig. 7 is a front elevation of my improved bail for the fork or scoop and its

improved method of suspension for securing its equilibrium.

Similar numbers refer to similar parts throughout the several views.

The knockdown superstructure of my wagon loading device consists of the following separable elements. The forward cross-tube 50 is connected by couplings 64 to the side tubes 9 and 65. The rear cross-tube 66 is connected to said side tubes by the couplings 48. The forward uprights or risers 78 are connected to said cross-tube 50 by couplings 77, while the rear risers 19 and 74 are pivotally connected to the cross-tube 66 by couplings 51 and 20 respectively. A medial longitudinal tube 8 is supported upon the cross-tubes 50 and 66, and secured thereto by truss-rods 73 and bolts 12, also by corner supports 49 and bolts 12 and 75. Fixed braces 5 connect the front risers 78 to the side-tubes 9 and 65. 18 designates a brace on each side whose upper end is fixed to the side-tube above it, and whose lower end is adapted to be detachably connected to the lower end of the adjacent rear riser by a bolt 79. A longitudinal truss-rod 4 connects the ends of the medial tube 8. A Y-rail 13 is suspended from and under the medial tube 8 on hangers 3, 6, 10, 11 and 12, the rear end of said rail extending rearwardly a desired distance beyond the risers 19 and 74. The detachable substructure for said superstructure is shown in Figs. 1 and 4, and consists of corner posts 29 and 32 at front and rear respectively, said posts being superposed on the ends of the parallel longitudinal beams 53, and secured thereto by struts 76, and by truss-rods 37 having holding-bolts 39. Said posts are also connected at the ends by cross-bars 52 and 72, and by rods 34. The bolts 36 secure the ends of said truss-rod 37 to the corner-posts 29 and 32. 38 is another truss-rod on the under side of each longitudinal beam 53, and secured to it by the bolts 39. The whole forms a light, rigidly braced structure, which may be anchored to the ground, if desired, by means of the pegs 47 and connecting links 46.

The lower ends of the risers 78 and 19 have downwardly projecting pins 27 which may be received, as desired, either in the orificed brackets 41 and 42 on the wagon 28, or in the orificed brackets 25 on the upper ends of the



posts 29 and 32. When supported on the substructure posts mentioned at 29 and 32, the risers are vertical as indicated by the full lines in Figs. 1 and 4, but when the super-  
 5 structure is to be placed upon a wagon 28, the bolt 79 is withdrawn from the lowermost seat in each of the risers 19 and braces 18 on each side, and inserted in the uppermost bolt-hole 80 of the braces 18 and the uppermost  
 10 bolt-hole 35 of said risers. This brings the risers forward obliquely, which places them in a better position to sustain the strain when the overhanging superstructure is applied to such a wagon.

15 7 is a wheeled carriage adapted to ride suspended upon the Y-rail 13, and has a pulley 14 pivoted in its hanging portion over which passes the draft-cable 30. The cable 30 may be moved forward by a horse hitched to the  
 20 swingle-tree 31, the cable being passed over the fixed pulleys 44 and 2, the latter connected to a hanger 1 of the superstructure. The rear end of the cable 30 is attached to the rear portion of the carriage 7, and a rolling pulley  
 25 54 is supported on the slack of the cable 30 between the fixed pulley 14 and the point of connection of said cable with the rear end of the carriage 7.

A fork or scoop 71 is suspended from the  
 30 block of the pulley 54 by a rail 57 having rearwardly curved members 58 and 59, the latter being pivoted at 60 to the side tines 16 of the fork 71. The pulley 54 is medially connected to said bail by a link 56, and also by  
 35 chain-connections extending obliquely at 55 to the bail 57 at points near its corners. These oblique connections serve to keep the fork or scoop in equilibrium in case a little more weight of load is located on one side  
 40 thereof than on the other. A chain-connection 82 serves to connect the middle of the bail 57 to the rear upper part of the fork 71 and limit its amount of forward play. The bail-members 58 and 59 are rearwardly bent  
 45 as shown in Fig. 6, and this form is useful when loading manure having straw as a component. The members so bent afford a clearance on the sides of the scoop for any projecting straw, and prevents any clogging of such  
 50 a load.

The fork 71 consists of side members 16 with intermediate tines or a plate scoop as desired, connected together transversely in any suitable manner, the upwardly curved  
 55 side pieces being braced by the bars 61 and 62. 63 is a rearwardly-projecting handle on each side of the fork or scoop 71 used to guide it when taking in a load.

17 is the dumping-rope, and is connected  
 60 to the rear part of the fork or scoop a little in advance of its center of gravity. Said rope 17 is conducted back over a dentated clutch-member 69, the latter being pivoted at 67 in the lower part of the casting 23. This cast-  
 65 ing has a cylindrical plug 43 adapted to be

seated in the rear end of the tube 8 and secured thereto by a bolt 81. The rear portion of the casting is hood-shaped to contain the movable clutch-member 69 and has a  
 70 rearward projection on one side of which is a small pulley 68. The inner curved surface of the casting 23 opposite the member 69 is provided with counterpart dentations, whereby, when the member 69 is moved up-  
 75 ward the rope 17 is caught and held securely between the opposing dentations of said parts. The member 69 is moved upward by means of a pull-rope 40 connected to the rear part of the member 69 and then passed  
 80 over the pulley 68. When the pull-rope is at rest the member 69 drops releasing the dumping-rope 17. When the fork or scoop has been elevated with its load by the means mentioned and then drawn forward to the proper place for dumping, the pull-rope 40  
 85 being pulled down causes the clutch-member 69 to catch and hold the rope 17 against the dentated face of the casting 23, and the draft on the cable 30, draws upon the rear part of the fork enough to tilt it forward as  
 90 shown in Fig. 1, dumping its contents into the wagon 28 thereunder in a desired location.

In practice, the tube 8 and Y-rail 13 are sufficiently inclined from the front rearwardly as to permit the carriage 7 with its  
 95 suspended fork or scoop 71 to move rearwardly by gravity when the fork is unloaded, the pull-rope 40 released from the clutch, and the draft removed from the cable 30. The fork or scoop then moves backward, as  
 100 far as the end of the rearwardly-projecting end of said Y-rail, where the fork or scoop may be permitted to descend and be drawn back along the ground for reloading.

Having described my invention, what I  
 105 claim as new, and desire to secure by Letters Patent, is:

1. In a wagon loading device, in combination, uprights connected at the top, a rail supported by said uprights, a carriage adapted to move along said rail, a pulley mounted  
 110 in said carriage, a draft-cable secured to said carriage and passed forward over the said pulley, means for creating a forward draft on said cable to move said carriage to a desired position, a fork or scoop slidably suspended on the slack of said cable between  
 115 its place of attachment to said carriage and said pulley, a framework having upwardly-directed posts, and detachable connections between said posts and said uprights, the said uprights being adapted to be removably supported on either a wagon or on said posts.

2. In a wagon loading device, in combination, uprights connected at the top, a rail  
 125 supported by said uprights, a carriage adapted to move along said rail, a pulley mounted in said carriage, a draft-cable secured to said carriage and passed forward over the said pulley, means for creating a forward draft  
 130



on said cable to move said carriage to a desired position, a fork or scoop slidably suspended on the slack of said cable between its place of attachment to said carriage and said pulley, a framework having upwardly-directed posts, detachable connections between said posts and said uprights, the said uprights being adapted to be removably supported on said posts, and suitable means for anchoring said framework in a desired location.

3. In a wagon loading device, in combination, uprights located at front and rear thereof connected at the top, the rear pair of uprights being pivoted at the top to permit them to be swung forwardly, detachable means for securing said rear uprights in either a vertical or in a forwardly inclined position, pintles on the lower ends of said uprights, a rail supported by said uprights, a carriage adapted to move along said rail, a pulley mounted in said carriage, a draft-cable secured to said carriage and passed forward over its said pulley, means for creating a forward draft on said cable to move said carriage to a desired position, a fork or scoop slidably suspended on the slack of said cable between its point of attachment to said carriage and said pulley, a framework having upwardly-directed posts, means at the upper ends of said posts for detachably receiving

the pintles of said uprights, whereby said uprights may be removably supported on said posts.

4. In a wagon loading device, in combination, uprights connected at the top, a rail supported by said uprights, a carriage adapted to move along said rail, a pulley mounted in said carriage, a draft-cable secured to said carriage and passed forward over said pulley, means for creating a forward draft on said cable to move said carriage to a desired position, a fork or scoop slidably suspended on the slack of said cable between its point of attachment to said carriage and said pulley, a wagon adapted to removably support said uprights, an interiorly dentated casing supported at the rear of said device, a dentated clutch-member pivoted in said casing, a dumping-cable secured to the rear of said fork or scoop and passed between said clutch-member and casing, and means for moving said clutch-member to compress and secure said dumping-cable detachably between said member and the dentated surface of said casing.

Signed at Parkersburg, Iowa, this 1st day of June 1908.

RASMUS PEDERSON.

Witnesses:

W. T. EVANS,  
T. R. TAMMEN.