

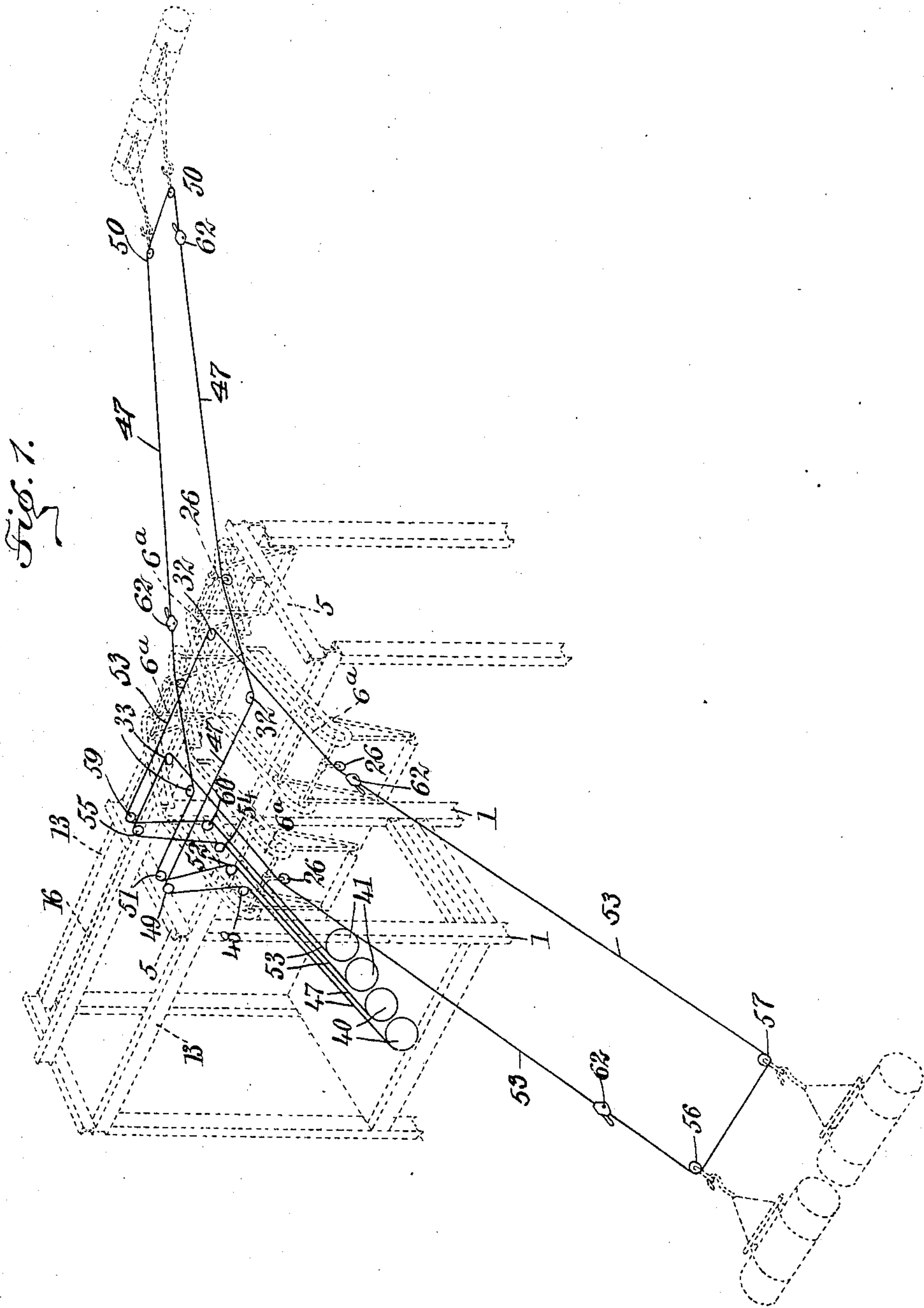
No. 872,278.

PATENTED NOV. 26, 1907.

A. J. DERBY.  
LOADING APPARATUS.

APPLICATION FILED AUG. 12, 1905. RENEWED JULY 21, 1906.

4 SHEETS—SHEET 1.



WITNESSES:

*W. C. Abbott*  
*E. E. Ellis*

INVENTOR

*Albert Jones Derby*

BY *Munn & Co.*

ATTORNEYS

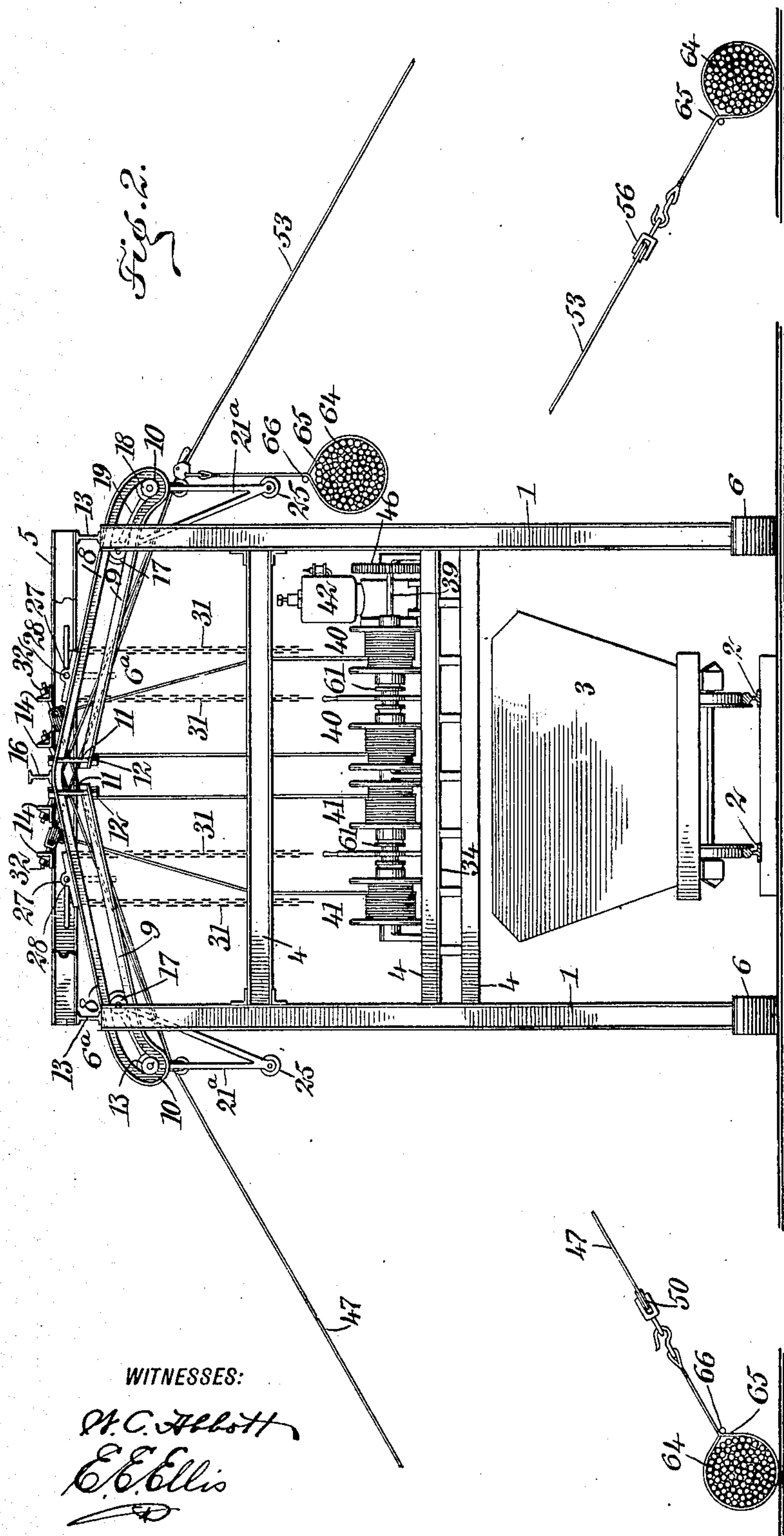
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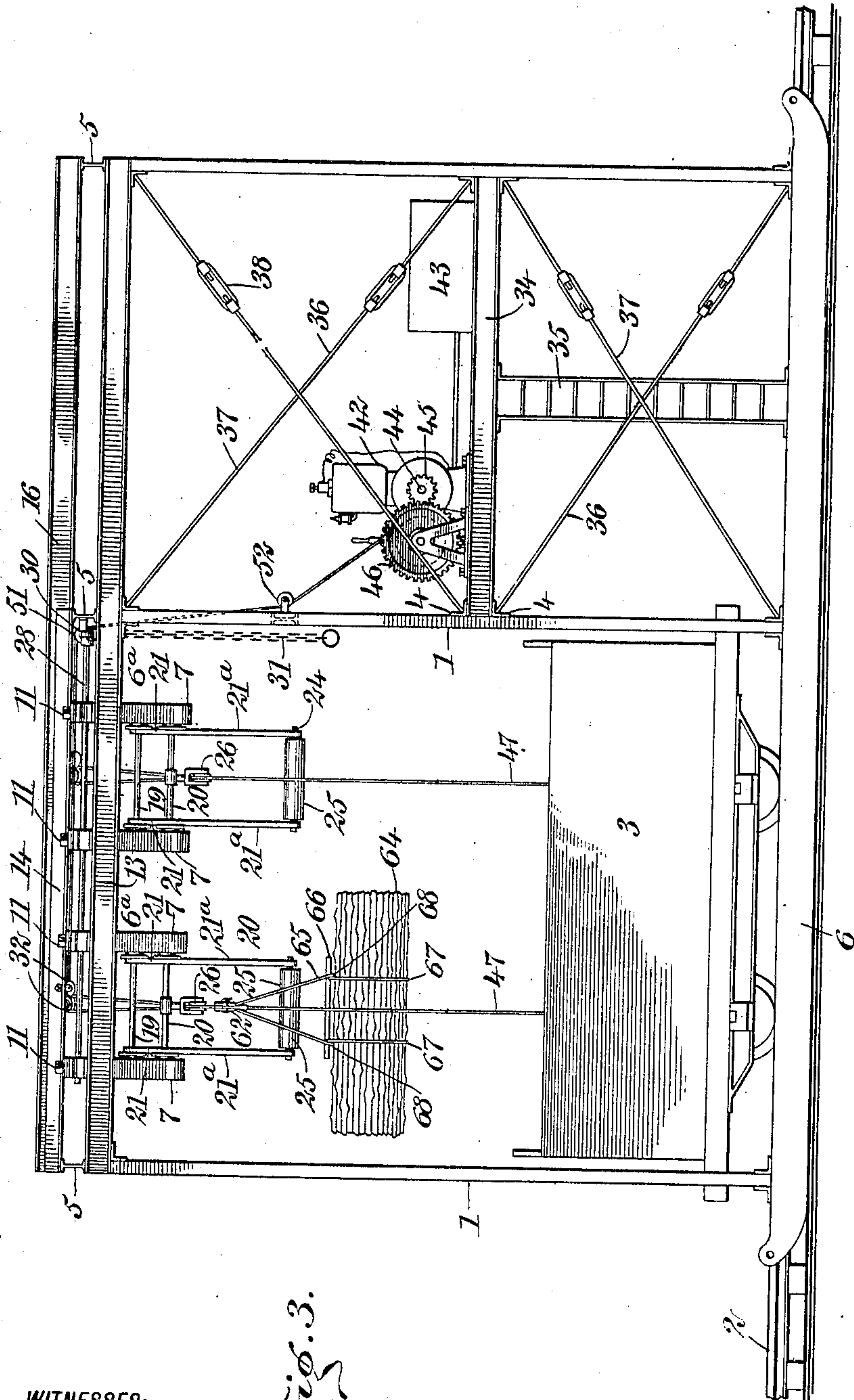
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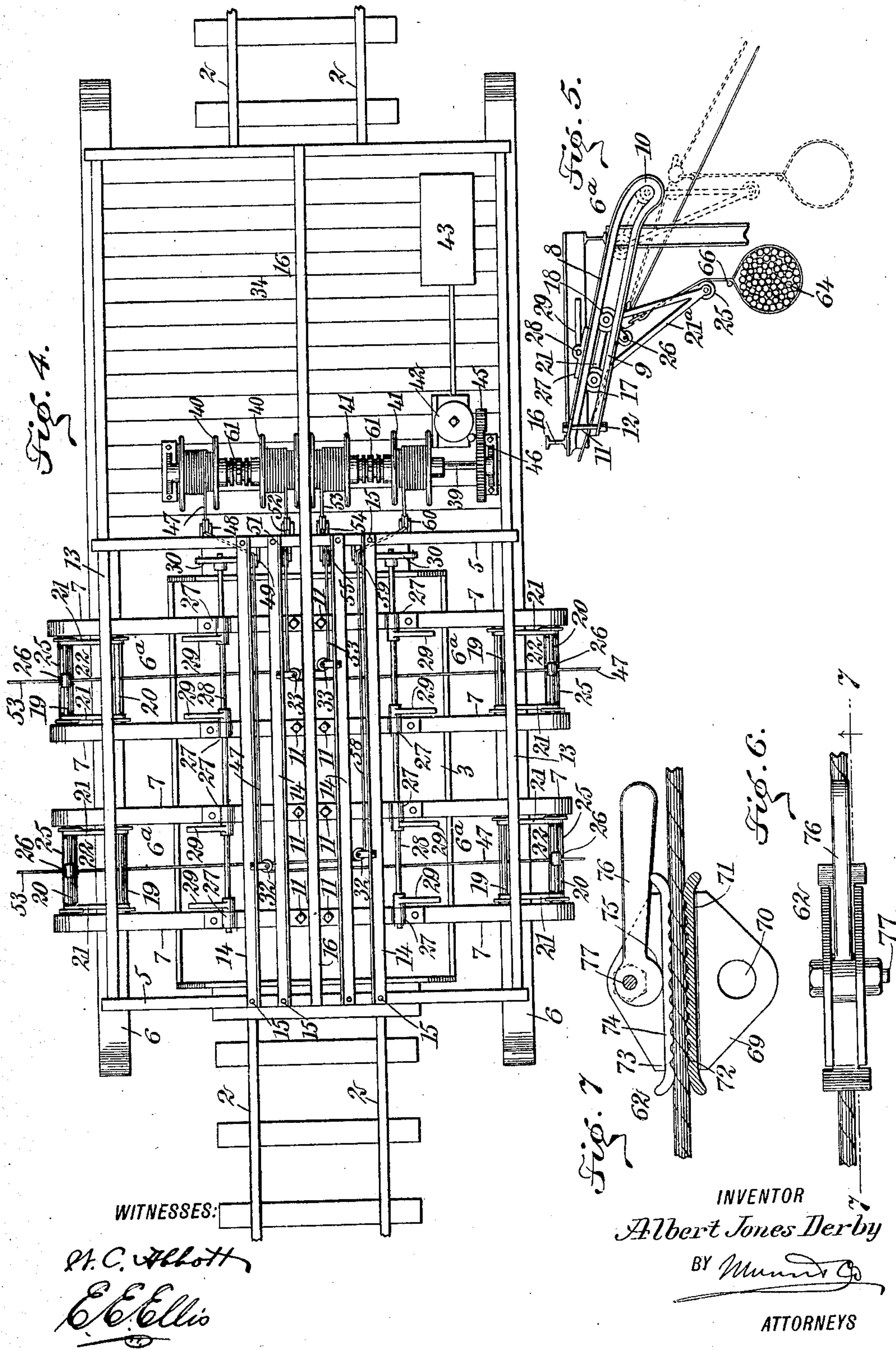
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WITNESSES:

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# UNITED STATES PATENT OFFICE.

ALBERT JONES DERBY, OF HONOLULU, TERRITORY OF HAWAII.

## LOADING APPARATUS.

No. 872,278.

Specification of Letters Patent.

Patented Nov. 26, 1907.

Application filed August 12, 1905, Serial No. 273,963. Renewed July 21, 1906. Serial No. 327,215.

*To all whom it may concern:*

Be it known that I, ALBERT JONES DERBY, a citizen of the United States, and a resident of Honolulu, in the Island of Oahu and Territory of Hawaii, have invented a new and Improved Loading Apparatus, of which the following is a full, clear, and exact description.

This invention relates to loading apparatus, and it consists substantially in the details of construction and combinations of parts hereinafter more particularly described and pointed out in the claims.

The invention has reference more especially to apparatus for loading sugar-cane and the like in the field for conveyance and transportation of the same to one or more places or stations, as a sugar factory for instance, and one of the principal objects of the invention is to provide an apparatus of this kind which is simple in its embodiment and comparatively inexpensive to construct or install, besides being time- and labor-saving, effective and reliable in operation, and possessing the capacity for long and repeated service.

A further object of the invention is to overcome numerous disadvantages and objections frequently encountered in the use of other apparatus hitherto devised for similar purposes.

The above and additional objects are attained by means substantially such as are illustrated in the accompanying drawings, in which

Figure 1 is a diagrammatic perspective view illustrating the operation of the parts constituting my improvements; Fig. 2 is an enlarged end view of my improved loading apparatus; Fig. 3 is a side view thereof; Fig. 4 is a top plan view; Fig. 5 is an enlarged view in detail to indicate more clearly the construction and organization of the trackways employed in connection with the derrick or frame structure; Fig. 6 is an enlarged top view of the clamp employed upon each of the hoisting cables of the apparatus; and Fig. 7 is a side view thereof in part section on the line 7—7 of Fig. 6.

Before proceeding with a more detailed description it may be stated that in the form of my improvements herein shown I employ a portable derrick or frame of special construction, the vertical and transverse dimensions of which are sufficient to span a car or similar vehicle which is to be loaded with the bun-

dles or sheaves of sugar-cane or the like, said derrick or frame preferably having associated therewith an elevated platform also of special construction, on which is located certain of the operative devices of the apparatus, and also on which one or more operatives may stand to control said devices in effecting the proper disposition of the said bundles or sheaves within the said car or other vehicle therefor, all as will presently be explained more fully. The car or other vehicle into which the bundles or sheaves are to be loaded may be of ordinary construction, and the same may be provided with suitable supporting-wheels traveling on rails extending throughout the field in the direction to be followed by the car; or else the car may be provided with runners for traversing the ground, it being understood in either case that the car is moved to occupy a position beneath the derrick or frame during the time of the loading of the same.

The derrick or frame is provided at the upper part thereof with a plurality of sets of duplicate reversely-disposed inclined trackways of special construction, upon each set of which is mounted a carrier of special construction, a special binder or sling being also employed for each bundle or sheaf of the sugar-cane or the like to be loaded into the car, by which the said bundle or sheaf when elevated or hoisted to a certain position with reference to the car will be caused to automatically assume a position to enable the stalks of which the same is made up to be disposed within the car parallel with the sides thereof, thus to economize in the amount of space occupied by the stalks within the car, besides providing regularity of disposition of the stalks therein, each of which is a desideratum in loading the stalks directly upon the field, as will be understood. I employ herein preferably four sets of the said duplicate reversely-disposed inclined trackways, two sets thereof being disposed in either direction transversely of the derrick or frame, and combined with each of said two sets thereof is a special embodiment of hoisting cable and anchors and guides therefor, together with specially organized winding and unwinding drums for said cable, by which the bundles or sheaves of sugar-cane or the like may be hoisted from the ground into position to be loaded into the car therefor.

The construction and organization of the



parts of the hoisting devices of the apparatus are such that the bundles or sheaves of the material to be loaded will be deposited in any one of a number (eight as herein shown) of places within the car, thus insuring even distribution thereof and quick loading, and while I have herein represented my improvements in a certain preferred general embodiment, it will be understood of course that I am not limited thereto, in precise detail, as immaterial changes therein may be resorted to coming within the scope of my invention.

Reference being had to the drawings by the designating characters thereon, 1 represents a suitable number of parallelly-disposed upright members of a suitable derrick or frame embodied in my improvements, said members being of the desired height and disposed on opposite sides of parallel rails 2 suitably mounted on the ground and extending in the directions which the car or other vehicle 3 thereof is supposed to travel for transporting the bundles or sheaves of sugar-cane or the like from some part of the field in which the same are gathered, to a suitable place or places (not shown), as for instance a sugar factory. Each pair of said upright members 1 are connected or joined together in any suitable way, as by means of one or more cross-braces 4, and similar cross-braces 5 uniting the same at the upper ends thereof, it being here mentioned that each of the parts constituting the derrick or frame is preferably constructed of channel-metal in the form of I-beams, for instance, as shown. The height of the cross-braces 4 should be amply sufficient to enable the car or other vehicle 3 to pass beneath the same and within the sides of the derrick or frame as will be apparent, and it will be observed that the said derrick or frame, or, rather, the said uprights 1 of which the same is constituted, are preferably mounted at their lower ends upon skids or runners 6, thus to render the entire structure readily portable so as to be carried or moved about from one point of the field in which located, to another, accordingly as may be required in practice. Other means of portability for the structure may be employed instead of those shown, as will be understood, as for instance, the entire structure may be mounted upon supporting-wheels therefor, as in the manner of the car or other vehicle 3 itself, which is intended to receive or contain the stalks comprised in the bundles or sheaves of sugar-cane or the like gathered from the field.

As shown in Figs. 2 and 4, I herein employ four sets of oppositely disposed inclined trackways 6<sup>a</sup>, each set comprising duplicate parallel rails 7 occupying an outwardly and downwardly inclined position transversely of the derrick or frame of the structure, and each rail itself being constructed of parallel members 8 and 9 disposed one

above the other, and uniting at the outer and lower end of the rail in the form of a sunken or lowered extremity 10, the inner edges of said members 8 and 9 thus forming practically a recess at the said sunken or lowered extremity of the rail, the purpose of which will be presently more fully explained. There are two sets of the aforesaid track-rails disposed on each side of the derrick or frame as indicated, those of one set alining or corresponding with those of the set opposite thereto, and the rails of the two sets being disposed at any desired distance apart. The members 8 and 9 of each of the rails of each trackway are connected at or near the upper inner ends or extremities thereof by means of a bolt 11 secured in place by suitable nuts 12 (see Fig. 2) each bolt being in alinement with the next succeeding one longitudinally of the structure, thus to bring all of them on one side of the structure substantially in parallelism with those on the opposite side thereof. The said trackways are permanently secured in the desired outwardly and downwardly inclined positions by any suitable means, and on reference to Fig. 4 it will be observed that the hereinbefore-mentioned cross-braces 5 are connected together at the sides of the derrick or frame by means of longitudinal braces 13 seated and secured upon the upper ends of the parallelly disposed upright members 1, thus to give stability to the structure. Also connecting the said cross-braces 5 a suitable distance within the said longitudinal braces 13, are a plurality of other longitudinal braces 14, herein preferably shown as constructed of angle-iron or other metal, and the ends of which are secured to the said cross-braces 5 by means of bolts 15, or in any other suitable way. Located centrally of the said additional longitudinal braces 14 for the structure is still another longitudinal brace 16, which may extend centrally between the sets of parallelly disposed bolts 11 hereinbefore referred to as employed at the inner ends or extremities of the said members 8 and 9 of each rail of each trackway of the several sets of the latter, this embodiment serving to steady the structure, and it being apparent, of course, that the said central longitudinal brace 16 may if desired be also secured to the cross-braces 5, as well as to the upper surfaces of the adjacent members 8 of the rails of the oppositely disposed trackways.

The construction of the parts thus far described has been simply shown herein as illustrative of the general features of my improvements, and it will be understood that changes therein may be resorted to in actual practice without in any manner departing from the intent or spirit of the invention. Supported and guided between the adjacent edges of the parallel members 8 and 9 of the



rails constituting each trackway referred to, are the sets of wheels 17 and 18, connected together by shafts 19 and 20 extending between the parallel sides 21 of a carrier 22, the pendent extremities 21<sup>a</sup> of which sides 21 are united by a rod or shaft 24 having thereon a roller 25, it being noted that the said shaft 20 of each carrier is provided centrally thereof with a pulley or sheave 26.

10 The hereinbefore-mentioned bolts 11 for the rails of each trackway constitute stops by which the carrier working on the trackway is prevented from being carried upwardly and inwardly transversely of the structure beyond a certain or predetermined limit, and by referring to Figs. 2 and 4 it will be observed that the upper surfaces of the members 8 of the rails of the trackways on either side of the structure are provided with

20 corresponding bearing-plates 27, in which is supported a longitudinally-disposed rotatable rod 28 provided, for each set of trackways with which the rod is associated, with duplicate fingers 29 normally occupying substantially horizontal positions transversely of the structure (see Fig. 2), but which may be carried to vertical positions (see dotted lines same figure) by properly turning the rod on which the same are carried, so as to

30 partially rotate the same in the said bearing-plates therefor. As a convenient means of rotating either of the said rods 28, thus to either carry the said fingers thereon to the described horizontal or to the vertical positions thereof, I provide the same preferably at the inner end thereof with a crank-arm 30, provided at each end thereof with a pendent chain 31 to be taken hold of by the operator for that purpose. The said parallel fingers

40 for each trackway of the duplicate sets thereof disposed on either side of the structure, when carried to the vertical positions thereof just indicated, constitute stops for the carrier for that trackway, by which the inward and upward movement of the carrier is arrested at a point intermediate the inner extremities of the rails of the trackway and the hereinbefore-mentioned sets of bolts 11 for connecting together the inner ends or extremities of the aforesaid members 8 and 9 of said rails.

As shown in Figs. 2 and 4, the outermost ones of the longitudinal braces 14 for the upper part of the derrick or frame are provided

55 with corresponding sheaves or pulleys 32, while the innermost ones of said braces are also provided with corresponding sheaves or pulleys 33, those of each of the sets referred to being disposed toward each other and in

60 inclined positions (see Figs. 2 and 4).

As shown in Figs. 3 and 4, the derrick or frame structure of the apparatus has associated therewith a platform 34 located at a suitable height with reference to the sets of

65 trackways referred to, said platform preferably having a ladder or stairway 35 leading thereto from the ground, and the same being strengthened in position by means of suitable brace-rods 36 and 37, those of each set preferably crossing each other as indicated, 70 and provided with turnbuckles 38 by which the same may be tightened up or rendered taut. The hereinbefore-mentioned longitudinal braces 13 are of length sufficient to extend the full length of the said platform as 75 shown, as is also the central longitudinal brace 16, and mounted on the platform in suitable position with reference to the other parts of the structure hereinbefore described is a transversely extending shaft 39, on which 80 are mounted two sets of winding drums 40 and 41, two of such drums comprising each set. This shaft 39 may be rotated from any suitable driving power, as for instance from a gasoline motor 42 having connection 85 with a supply tank 43, and provided with a shaft 44 having at one end thereof a pinion 45 engaging with a gear-wheel 46 carried by the corresponding end of the aforesaid shaft. Winding upon one of the drums 40 of the 90 one set is one leg or portion of a cable 47 which passes beneath a guide sheave or pulley 48 on a suitable part of the frame or derrick, and thence extends diagonally across to another guide-sheave or pulley 49 95 supported by the derrick or frame, from whence this leg or portion of the said cable 47 extends longitudinally of the frame or derrick to one of the aforesaid sheaves or pulleys 32, thence transversely of the structure 100 and over the hereinbefore-mentioned sheave or pulley 26 of one of the carriers at one side of the structure, thence outwardly any suitable distance laterally of and beyond the structure (see Fig. 1), where it is anchored 105 in any suitable way, as by means of sheaves or pulleys 50 firmly established in position by means of any weighted anchoring device, as for instance one or more bundles of the stalks of sugar-cane or the like which are 110 being gathered in the field. After thus having passed around the sheaves or pulleys 50 of the anchoring devices, the aforesaid cable 47 extends upwardly in the direction of the structure and passes over the sheave or 115 pulley 26 of the corresponding carrier of the set on this side of the structure, thence across and to the sheave or pulley 33 at the opposite side of the structure and over another sheave or pulley 51, thence to still 120 another sheave or pulley 52, and finally to the other winding drum 40 corresponding to the one from which the tracing of the said cable was started. In like manner one leg or portion of the winding cable 53 is wound 125 upon one of the winding drums 41 of the other set of such drums, and extends beneath and over sheaves or pulleys 54 and 55 respectively, from whence this leg or portion of the said winding cable passes over the 130



opposite one of the aforesaid pulleys or sheaves 33, thence transversely of the structure and to and over the guide-sheave or pulley 26 of one of the carriers on the opposite side of the structure, thence to other anchoring sheaves or pulleys 56 and 57 located laterally of and a suitable distance beyond the other side of the structure, and then after passing through these anchoring sheaves 56 and 57 the said winding cable 53 is returned and carried to and over the guide-sheave or pulley 26 of the other carrier of the set on the side of the structure now under consideration, thence over the opposite one of the aforesaid sheaves or pulleys 32, thence longitudinally of the structure at 58 (see Fig. 4), and finally over a guide-sheave or pulley 59 on a suitable part of the derrick or frame and under another sheave or pulley 60 also on the derrick or frame, and finally this leg or portion of the said winding cable 53 is wound upon the other drum 41 corresponding to that one from which the course of this winding cable was started to be traced.

Intermediate the two winding drums of each set a suitable clutch device 61 (see Fig. 4) is shown to be mounted upon the shaft 39, it being here mentioned that the winding drums are loose upon the said shaft in the intermediate positions of the said clutch devices. By moving the clutch device of either set in one direction one of the winding drums of that set will be thrown into rotatable operation with the shaft, while the other will be caused to remain idle on the shaft, and thus it will be seen that, for instance, by throwing corresponding drums of the two sets thereof into operative relation with the shaft, one leg or portion of each of the said winding cables thereof will be caused to be wound upon one of the winding drums of a set, while the other leg or portion thereof will be caused to be unwound or paid out from the other drum of the set, thus imparting a continuous traveling movement to each of the said winding cables.

Now, on referring to Figs. 1 and 5, it will be noted that during the operations described, a suitable clamp 62, such as shown in Figs. 6 and 7 for instance, is fastened in suitable position upon one leg or portion of each of the winding cables referred to, it having been mentioned that said cables are anchored suitable distances from and laterally of the structure, and the operator in the field on each side of the structure attaches to said clamp 62 a bundle or sheaf 64 of canestalks or the like, the stalks of which the said bundle or sheaf is made up being held together by means of a binder or sling 65, which includes a longitudinally disposed block or member 66, around which the duplicate bights 67 of the sling may be wrapped one or more times at 68 (see Fig. 3). The

clamp 62 referred to may be of any preferred construction, but as shown in Figs. 6 and 7 the same comprises a pair of plates 69 having an opening 70 therein for the insertion of a portion of the binder or sling for a bundle or sheaf of the material being loaded, said plates being also provided with a stationary projection 71, having serrations 72 thereon cooperating with corresponding serrations 73 formed on the corresponding face of a movable projection 74, between which two projections a portion of the leg of the winding cable for the bundle or sheaf is securely clamped by means of a cam 75 carried at the end of an operating lever 76 therefor, pivoted at 77 to the said plates 69.

From the foregoing it will be understood that while a bundle or sheaf of cornstalks or the like is being hoisted by one leg or portion of the cable on each side of the structure, the other leg or portion of such cable is being correspondingly paid out with reference to the anchoring device for the cable, and it will also be understood that as soon as a bundle or sheaf has been emptied into the car or other vehicle therefor, the clutch devices for the sets of winding drums are reversed so as to reverse the action of said drums and consequently reverse the operative directions followed by the winding cables, thus, in other words, to cause the other leg or portion of the cable on each side of the structure to be operated to hoist a bundle or sheaf of cornstalks or the like to the desired elevated position above the car, while the other leg or portion (being the one first referred to) of the cable will be simultaneously paid out from the other drum in like manner, as explained in the first instance. As each bundle or sheaf of sugar-cane or the like is elevated to such a position as that the same, or the clamp 62 by which the same is carried, is brought into contact with the sheave or pulley 26 of one of the carriers, said carrier will be moved from the dotted-line position thereof, indicated in Fig. 5, to the full-line position thereof, indicated in said figure, and, if the stop-fingers for this carriage are in the vertical position indicated in dotted lines in Fig. 2, then the carrier will be arrested in such a position as that a bundle or sheaf of material may be deposited within the car or other vehicle at a certain place therein; whereas, if the said stop-fingers are in their horizontal positions, as indicated in full lines in Fig. 2, it is apparent that the upward and inward movement of the carriage will continue until arrested by the hereinbefore-mentioned bolts or stops 11, and thus may the bundle or sheaf of material be deposited within the car at another place therein. In this way it will be seen that accordingly as controlled by the operator or operators, the operation of the hoisting devices may be so carried out as to deposit the



bundles or sheaves of material at eight different places within the car, thus insuring economy of space occupied thereby, and deriving a great saving of time and labor in the loading operations generally. When each of the carriers is in its outermost position on the rails of the trackway with which the same is associated, the supporting-wheels 18 therefor are received in the depressions formed at the free extremities of the trackways by the intersections of the members 8 and 9 of the rails thereof respectively, and thus is the pendent frame of the carrier normally maintained in the position indicated in full lines in Fig. 2, and also indicated in dotted lines in Fig. 5. But whenever the sheave or pulley 26 of the carrier is engaged in either of the ways hereinbefore mentioned, the impact caused by the weight of the bundle or sheaf forces the carrier upwardly and at the same time carries the sheave or pulley 26 from the dotted-line position in Fig. 5 to the full-line position shown therein, and this action causes the binder or sling of the bundle or sheaf to be carried over the roller 24 supported between the ends of the sides 21<sup>a</sup> of the carrier, thereby causing the bundle or sheaf to assume a position parallel with the sides of the car, and both facilitating the loading operations as well as preventing undue swinging of the bundle or sheaf, both as will be apparent.

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

1. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction.

2. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction; the said sets of trackways being laterally and downwardly inclined with reference to the derrick.

3. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction; said trackways each embodying duplicate rails laterally and

downwardly inclined with reference to the derrick and connected together at their outer ends by a rod having a roller thereon.

4. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction; said trackways each embodying duplicate rails laterally and downwardly inclined with reference to the derrick, and each rail being constructed of separated members united together at their outer ends to form a depression for normally receiving a wheel of one of the carriers.

5. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction; said trackways each embodying duplicate rails laterally and downwardly inclined with reference to the derrick, and each rail being constructed of parallel separated members connected together at their inner ends by a bolt, the bolts for the said parallel members of the rails for each set of trackways constituting stops for the carrier.

6. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction; the trackways of each of said duplicate sets thereof being provided intermediate of their ends with movable stops adapted to be carried into the path of that one of the carriers belonging thereto.

7. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, means for paying out the same in the opposite direction, and a rotatable rod supported across said duplicate sets of trackways and provided with stop-fingers adapted to be brought into the paths of said carriers.

8. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor



and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction; said carriers each being provided with a guide for the cable.

9. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction; each of said means embodying a rotatable drum.

10. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction; each of said means embodying a drum, and a clutch device therefor.

11. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, means for paying out the same in the opposite direction, and means for reversing this order at will.

12. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, means for paying out the same in the opposite direction, and a clamp for attachment to the cable for removably supporting a sling for a bundle of material to be hoisted by the cable.

13. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction; said derrick being provided at the base thereof with means for enabling the same to be propelled over the ground.

14. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device

therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction, said derrick being provided at the base thereof with runners.

15. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, means for paying out the same in the opposite direction, and means for reversing this order at will; said first and second named means together embodying two rotatable drums, and the said last-named means being a clutch device adapted for engagement with either of said drums.

16. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction; said derrick having associated therewith an elevated platform for supporting both of said means.

17. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, means for paying out the same in the opposite direction, means for reversing this order at will, a motor for operating both the first and second-mentioned means, and an elevated platform for supporting said motor, together with all three of the means mentioned.

18. A loading apparatus, comprising a portable derrick for spanning a railway for a vehicle to be loaded, duplicate sets of trackways thereon, duplicate carriers on the trackways each having a guide thereon, guides on the derrick adjacent to said sets of trackways, a hoisting cable, an anchoring device therefor, means for winding the cable in one direction, and means for paying out the same in the opposite direction, said cable traveling from said first-named means to and around one of said guides, thence over the guide on one of the carriers and to and around the anchoring device, thence back and over the guide on the other carrier and to and over the other of said guides, and finally to the said second-named means.

19. A loading apparatus, comprising a portable derrick for spanning a railway for a vehicle to be loaded, duplicate sets of trackways inclined downwardly and reversely to-



ward either side thereof, carriers on the trackways each having a guide thereon, two sets of guides on the derrick intermediate of the trackways of the two said duplicate sets thereof, a hoisting cable associated with each of the duplicate sets of said trackways, an anchoring device for each cable located on the ground a suitable distance from the derrick, means for winding each cable in one direction, and means for paying out the same in the opposite direction; each cable traveling from said first-named means therefor to and around a guide of one of said two sets thereof, thence over one of the anchoring devices, thence back and over the guide of the corresponding carrier and to and over a guide of the other of the said two sets thereof, and finally to the said second-named means therefor.

20. A loading apparatus comprising a derrick, a guideway on the derrick, a carrier mounted to travel on the guideway, a hoisting rope, means for operating the hoisting rope, and a clamp adjustable on the hoisting rope and provided with means for the attachment of a bundle or the like thereto, said clamp being adapted to engage the carrier to move the same when the hoisting rope is operated.

21. A loading apparatus, comprising an elevated support, a track thereon, a carrier mounted to travel on the track, a hoisting rope, means for operating the hoisting rope, means secured to the hoisting rope for supporting a bundle or the like, said means being adapted to engage the carrier to operate the same, an adjustable stop mounted upon the track intermediate of the ends of the track for arresting the movement of the carrier, and manually controlled means for moving the stop into and out of the path of the carrier.

22. A loading apparatus comprising a derrick, an inclined track on the derrick, a wheeled carrier mounted on the track and provided with a depending guide arm, a hoisting rope, means for operating the hoisting rope, means secured to the hoisting rope for supporting a sling therefrom, said means being adapted to engage the carrier to operate the same, and the sling to engage the guide arm and an adjustable stop for arresting the movement of the carrier.

23. A loading apparatus, comprising a derrick, an inclined track on the derrick, each rail of the track being formed of spaced parallel members, a wheeled carrier having its wheels traveling between the members of the track rails, and provided with a depending

guide member, a hoisting rope, means for operating the hoisting rope, and a clamp secured to the hoisting rope for supporting a sling therefrom, said clamp being adapted to engage the carrier to operate it and the sling to engage the guide member.

24. A loading apparatus, comprising a portable derrick, an inclined track on the derrick, the rails of the track being formed of spaced parallel members and having a depression at their outer ends, a wheeled carrier having its wheels traveling between the members of the track rails and provided with a depending guide member, a hoisting rope, means for operating the hoisting rope, a clamp on the hoisting rope for engaging the carrier to operate it, said clamp being adapted to support a sling which engages the guide member, an adjustable stop for arresting the movement of the carrier, and manually controlled means for moving the stop into and out of the path of the carrier.

25. A loading apparatus comprising an elevated support, a guideway on the support, and projecting beyond the same, a carrier mounted to travel on the guideway and provided with depending parallel guide arms and with a stop between the guide arms, a hoisting rope, means for operating the hoisting rope, and a clamp secured to the hoisting rope for supporting a sling, said clamp being adapted to engage the stop of the carrier to cause the carrier to move with the said rope, and the sling supported thereby to engage the guide arms to hold it from contact with the support.

26. A loading apparatus comprising an elevated support, inclined tracks on the support, the track being formed of spaced parallel members having a depression at their ends, said ends projecting beyond the support, a wheeled carrier mounted on the track, and provided with parallel depending guide arms having a roller mounted in their ends and with a pulley projecting from the axle of one set of wheels of the carrier, a hoisting rope, means for operating the hoisting rope, and a clamp secured to the hoisting rope for supporting a sling, said clamp being adapted to engage the pulley on the axle of the carrier and the sling to engage the roller of the depending arms.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT JONES DERBY.

Witnesses:

MADISON T. OWENS,  
W. C. STICKEL.