No. 799,287. PATENTED SEPT. 12, 1905.

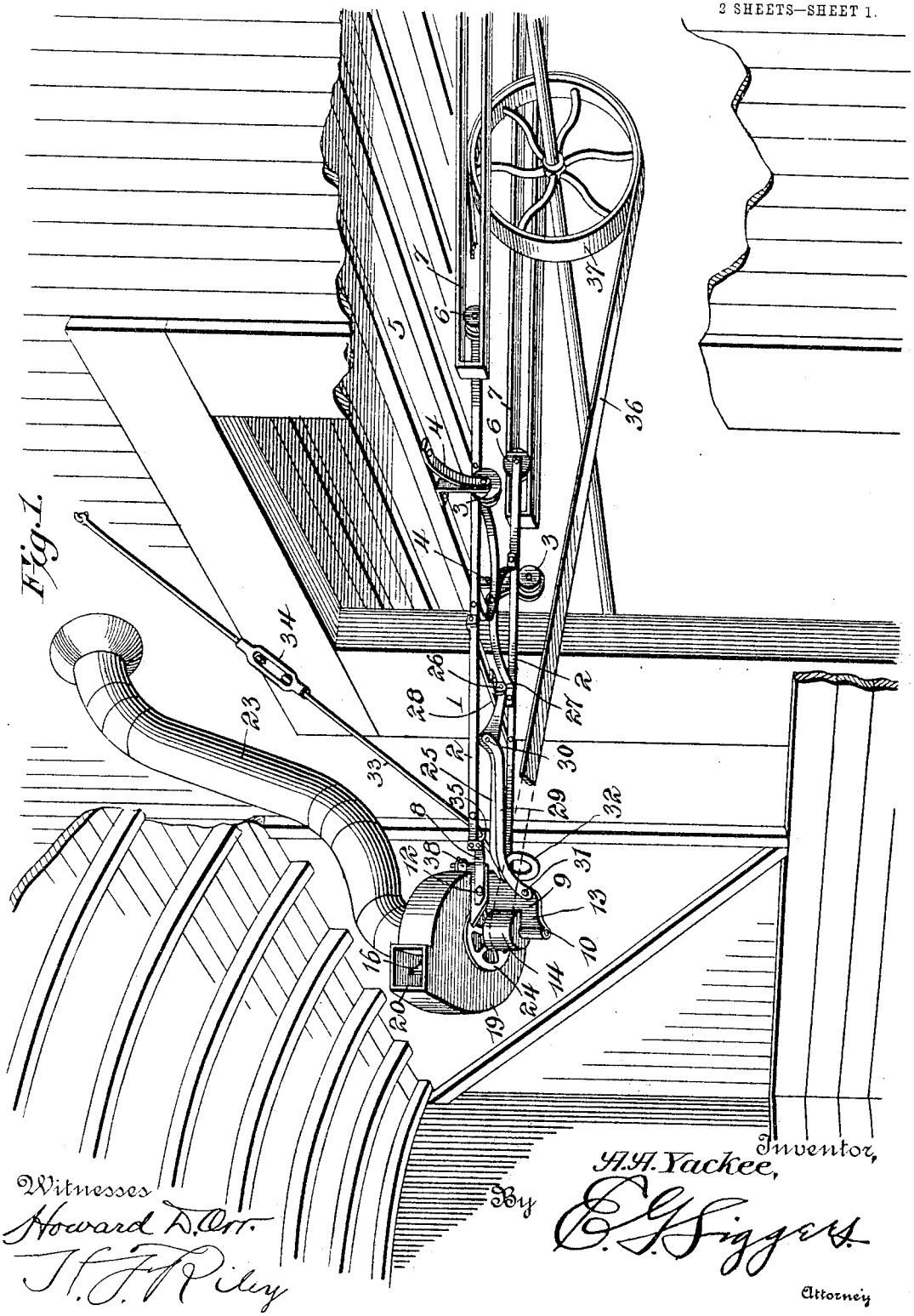
A. A. YACKEE.

CAR LOADER FOR GRAIN CARS, &c.

APPLICATION FILED SEPT. 13, 1904.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses
Howard D. Orr.
T. F. Riley

Inventor,
A. A. Yackee,
By E. G. Siggers.
Attorney

ANDREW. B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

No. 799,287. PATENTED SEPT. 12, 1905.

A. A. YACKEE.

CAR LOADER FOR GRAIN CARS, &c.

APPLICATION FILED SEPT. 13, 1904.

2 SHEETS—SHEET 2.

Fig. 2.

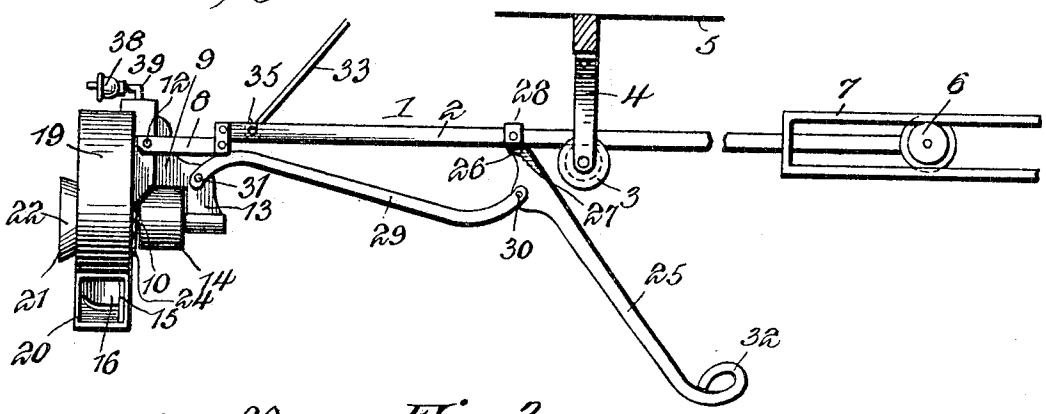


Fig. 3.

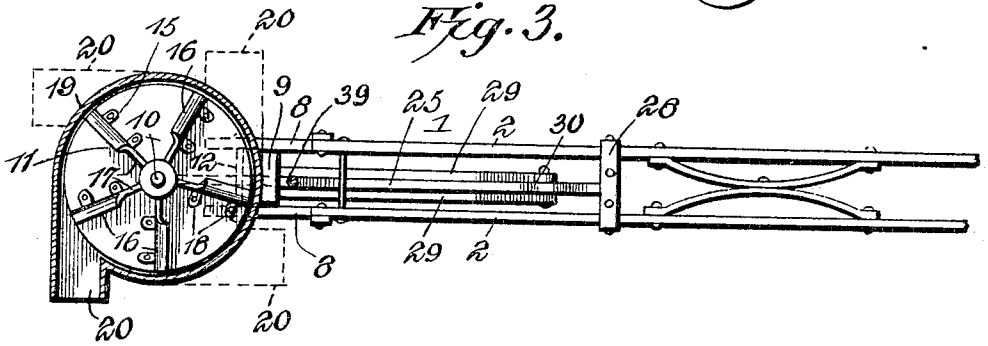


Fig. 4.

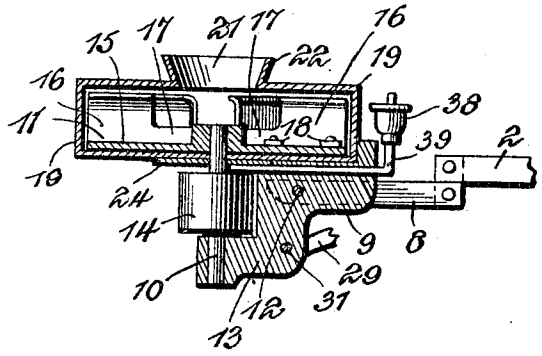
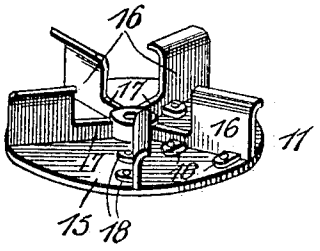


Fig. 5.



Witnesses:
Howard D. Orr.
T. C. F. Riley

A. A. Yackee, Inventor,
By E. G. Siggers.
Attorney

UNITED STATES PATENT OFFICE.

AUGUST A. YACKEE, OF ROBERTS, ILLINOIS.

CAR-LOADER FOR GRAIN-CARS, &c.

No. 799,287. Specification of Letters Patent. Patented Sept. 12, 1905.

Application filed September 13, 1904. Serial No. 224,275.

To all whom it may concern:

Be it known that I, AUGUST A. YACKEE, a citizen of the United States, residing at Roberts, in the county of Ford and State of Illinois, have invented a new and useful Car-Loader for Grain-Cars, &c., of which the following is a specification.

The invention relates to improvements in car-loaders for grain-cars, &c.

The object of the present invention is to improve the construction of car-loaders for grain-cars and the like and to provide a simple and comparatively inexpensive car-loader of increased capacity adapted to be operated by less power than has heretofore been required.

A further object of the invention is to provide a car-loader adapted to be connected with the discharge chute or conduit of an elevator and capable of being readily run into and out of a car and adapted also to discharge the grain or the material in any desired direction within a car, whereby the latter may be quickly and uniformly loaded.

The invention also has for its object to provide a device adapted in discharging the grain to keep the same in motion, whereby less power will be required to effect a discharge of the grain and the grain will be more rapidly discharged.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a car-loader constructed in accordance with this invention and shown in an extended position for loading a car. Fig. 2 is a side elevation of the same, the rotary discharging device being swung downward preparatory to sliding the car-loader inwardly. Fig. 3 is a plan view, partly in section, the parts being arranged as shown in Fig. 1. Fig. 4 is a vertical sectional view of the outer portion of the car-loader, illustrating the construction of the rotary discharging device. Fig. 5 is a detail perspective view of the rotary device.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a slidable frame disposed horizontally and composed of spaced side bars 2 and suitable connecting-bars, which may be arranged in any desired manner. The slidable frame, which is adapted to be moved inward and outward to carry the loader into and out of a car, is supported by outer flanged rollers or wheels 3, mounted on hangers 4 and arranged at opposite sides of the slidable frame, as clearly shown in Figs. 1 and 2 of the drawings. The hangers, which may be of any desired construction, are designed to be secured to the ceiling 5 or any other suitable support at a point opposite the doorway or door-opening to enable the frame to be projected from the elevator and to be returned into the same, as will be readily understood. The inner or rear ends of the side bars of the slidable frame are provided with flanged rollers or wheels 6, which are arranged in horizontal guides 7 of substantially oblong shape, as clearly shown in Figs. 1 and 2, the upper portions of the oblong guides forming tracks for the rear or inner rollers or wheels, which are held against the same by the weight of the outer portion of the car-loader when the same is extended. The outer ends of the sides of the slidable frame are provided with approximately L-shaped supporting-arms 8, to which is pivoted a bearing-bracket 9, provided with suitable bearings for the shaft 10, on which the rotary device 11 is mounted. The L-shaped arms consist of short inner vertical portions and long horizontal portions, which are perforated to receive the pivot 12, which pierces the arms and the bearing-bracket. The bearing-bracket is provided at its outer portion with an arm or extension 13, having a bearing for the shaft 10 and forming a seat for a pulley 14, which is suitably fixed to the shaft 10.

The rotary device consists of a disk 15 and a series of blades 16, spaced from the central portion of the disk to provide a central open space to receive the grain or other material to permit the same to drop directly upon the disk. The disk is arranged in a horizotal position and is provided at its center with a hub portion, to which the blades are connected by the arms 17. The blades, which are bent at their upper edges to form inclined overhanging flanges, are also provided with projecting ears 18, which are riveted or otherwise se-

cured to the rotary disk; but the blades may be mounted on the disk in any other desired manner. The rotary disk is arranged within a substantially cylindrical casing 19, having an outlet-opening 20 at one side and extending thereat for discharging the grain or other material in a stream. The casing is provided at the center of its top with a flanged opening 21, the flange 22 being adapted to receive the lower end of a flexible discharge pipe or conduit 23 of the elevator. The rotary disk is arranged in a horizontal position when in use, and the grain or other material falling upon the rotary plate is kept in motion by the same, and it is discharged from the casing by the blades 16. By keeping the grain in motion in this manner much less power is required to discharge it than when its motion is checked by the discharging device. The casing is mounted for rotary adjustment, the shaft 10, which extends through its bottom and to which the rotary device is fixed, forming a pivot. The casing is arranged upon a curved plate or support 24, which is suitably secured to the bearing-bracket at the upper portion thereof, as clearly shown in Figs. 1 and 4 of the drawings. The bearing-bracket is pivotally mounted to enable it and the rotary discharging device to be swung downward to the position shown in Fig. 2 of the drawings to facilitate moving the loader into the elevator. The bracket is operated by means of a lever 25, fulcrumed at one end at 26 between a pair of depending ears 27 of a cross-piece 28 of the slidable frame, and provided adjacent to its pivoted end with a lateral extension, to which a pair of links 29 is pivoted by a pin 30. The inner ends of the links are connected to the projecting portions of the lever, and the outer ends of the links are connected by a pivot 31 to the bearing-bracket, which is swung upward and downward by oscillating the lever. When the rotary discharging device is swung upward to a horizontal position, as indicated in Fig. 1 of the drawings, the inner ends of the links and the pivot 30 are carried to a point above the plane of the pivot of the lever, and the parts are thereby locked in such position. The lever is provided at its outer or free end with a suitable handle or grip 32, which is arranged to engage the bearing-bracket, whereby the outward movement of the lever is limited. The rotary agitator is thereby locked and held in a horizontal position. The outer portion of the loader is supported in its extended position by means of a brace 33, consisting of two rods or members connected at their adjacent ends by a turnbuckle 34. The upper rod is suitably connected to the wall of the elevator, and the lower rod is provided with a hook 35 or other suitable device for detachably engaging the slidable frame. The brace is disengaged from the slidable frame when it is desired to move the latter inwardly.

The pulley 14 is operated by a belt 36, extending to a pulley 37, which is mounted on a suitable shaft within the elevator. The pulley 37, which operates the car-loader, is mounted on a horizontal shaft, while the pulley 14, which is smaller than the pulley 37, is mounted on a vertical shaft, and the belt is correspondingly twisted, as will be readily understood.

The car-loader is adapted to be readily projected into and removed from a car, and the rotary discharging device is capable of rotary adjustment to turn the outlet or discharge opening in the desired direction, as indicated in dotted lines in Fig. 3 of the drawings, for discharging the grain into either end of a car. The rotary discharging device is also adapted to be swung downward to arrange it in convenient position for returning the car-loader to its position within the elevator; but when there is sufficient space to permit this operation to be effected without folding or swinging the rotary discharging device downward the folding or pivotal feature may be omitted. The blades of the rotary device are offset from the center, and, as indicated in Fig, 3, they are adapted to drive the grain or other material through the discharge-outlet 20 with considerable force.

The car-loader is provided with a suitable lubricator 38, consisting of an oil-cup having a discharge-tube 39, mounted on the bearing-bracket and leading to the shaft 10. Any suitable means may be provided for conveying the lubricant to the lower bearing of the shaft.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A car-loader, comprising a horizontal casing having inlet and outlet openings, and a rotary device located within the casing and consisting of a disk arranged at the bottom of the casing and provided at its upper face with a central hub, and a series of blades mounted upon the disk and spaced from the central portion of the same to provide a central opening and having arms extending from their inner ends to the hub of the disk, said blades being also provided at their upper edges with inclined overhanging flanges.

2. A car-loader, comprising a slidable frame arranged to be projected into and removed from a car, a pivotal bracket mounted on the frame, a casing having inlet and discharge openings, a chute having detachable connection with the casing at the inlet-opening thereof, a rotary device operating within the casing for discharging the material, and means for swinging the bracket on the frame.

3. A car-loader, comprising a movable frame arranged to be projected into and removed from a car, a casing having inlet and discharge

openings and designed to be connected with the discharge-conduit of an elevator, a rotary device operating within the casing for discharging the material, and means for pivotally connecting the casing with the frame and for swinging the same upward and downward, said means being mounted on and carried by the movable frame in its movement into and out of a car.

4. A car-loader, comprising a slidable frame arranged to be projected into and removed from a car, a bracket carried by the frame, a casing mounted on the bracket, a flexible conveyer located above the casing and discharging into the same, a rotary discharging device operating within the casing, a vertical shaft mounted on the bracket and extending through the bottom of the casing and connected at its upper portion with the discharging device, and gearing carried by the frame and connected with the shaft at a point below the casing.

5. A car-loader, comprising a frame, a bearing-bracket pivotally mounted on the frame and arranged to swing upward and downward, a casing mounted on the bearing-bracket and having inlet and discharge openings, a rotary device operating within the casing, means for actuating the rotary device, and means for swinging the bearing-bracket upward and downward and for locking the same in its raised position.

6. A car-loader, comprising a frame, a bearing-bracket pivotally mounted on the frame, a casing carried by the bearing-bracket and provided with inlet and discharge openings, said casing being mounted for rotary adjustment to turn the discharge-opening in the desired direction, a rotary device operating within the casing, and means for swinging the bearing-bracket upward and downward and for locking the same in its raised position.

7. A car-loader, comprising a frame, a bearing-bracket pivotally mounted on the frame and provided with a circular support, a casing mounted for rotary adjustment on the support and having inlet and discharge openings, a rotary device operating within the casing, and means for swinging the bearing-bracket upward and downward.

8. A car-loader, comprising a frame, a bearing-bracket pivotally mounted on the frame and arranged to swing upward and downward, a discharging device carried by the bearing-bracket, a lever fulcrumed on the frame, and a link connecting the lever with the bearing-bracket, said lever being arranged to form a lock for holding the bearing-bracket in its raised position.

9. A car-loader, comprising a slidable frame provided at its inner portion with wheels, guides forming tracks for the wheels and having longitudinal openings for the latter, hangers having wheels receiving the outer portion of the frame, a discharging device carried by the frame, and a brace provided with means for detachably engaging the outer portion of the frame for supporting the car-loader in its extended position.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

AUGUST A. YACKEE.

Witnesses:
W. H. YACKEE,
L. MOSHER.