No. 836,970.

PATENTED NOV. 27, 1906.

D. M. HARTSOUGH.

LOADING APPARATUS.

APPLICATION FILED FEB. 19, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

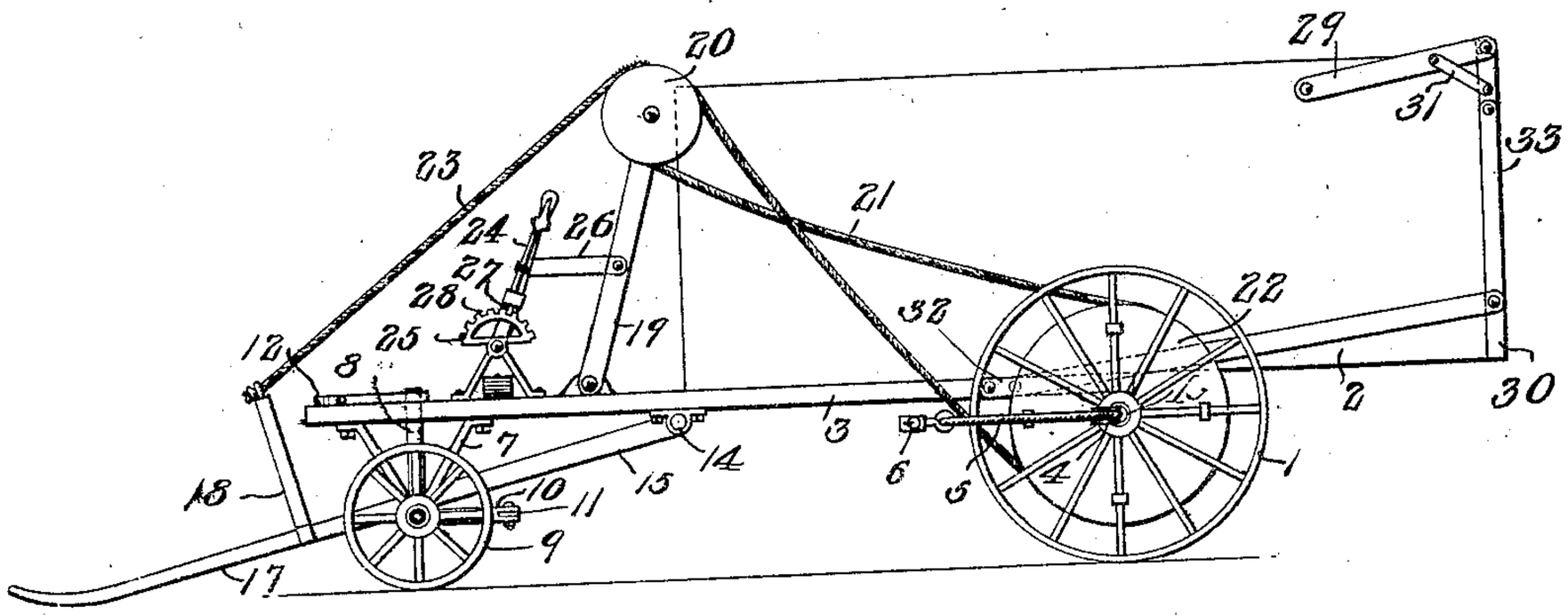
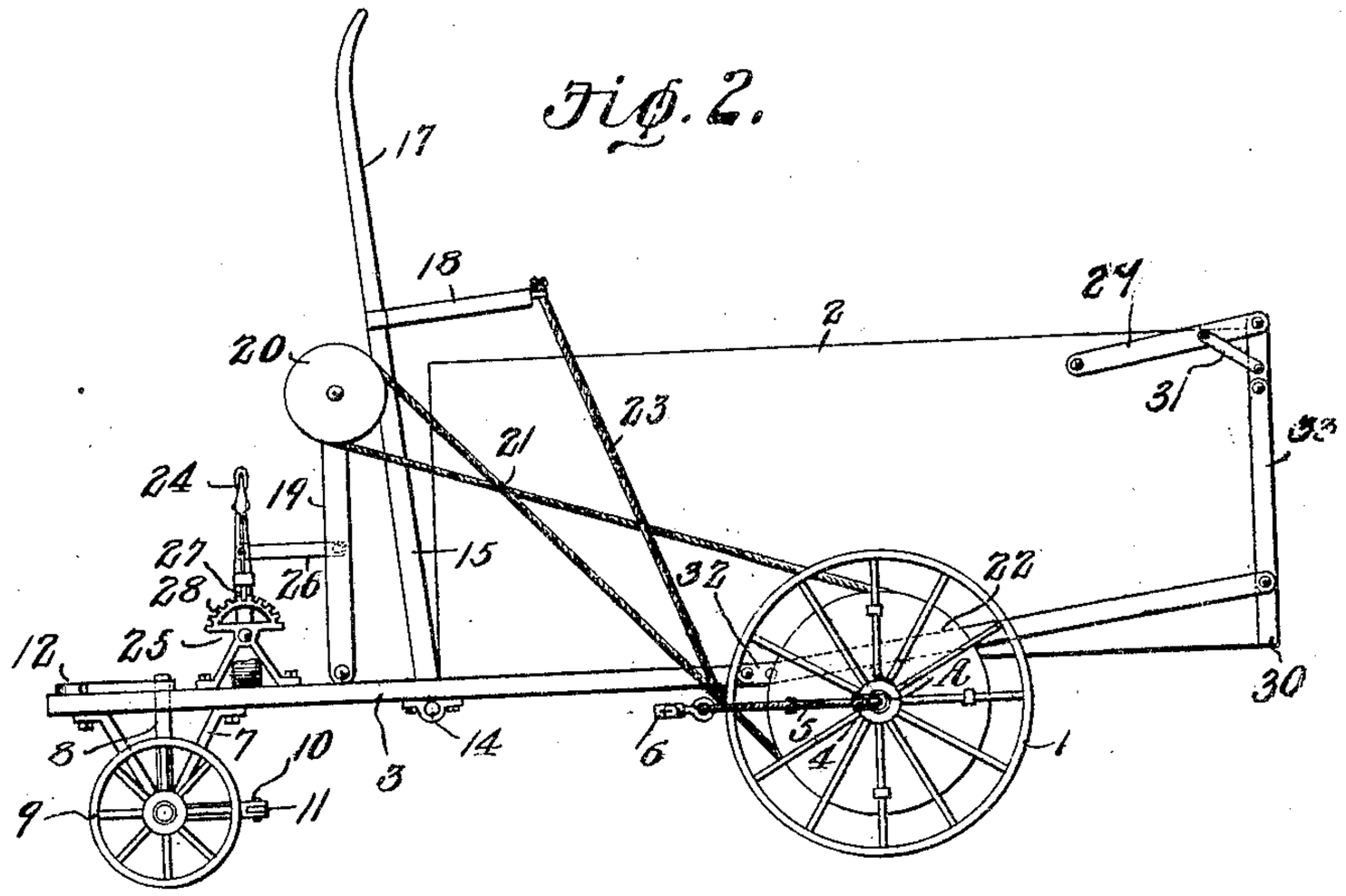


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

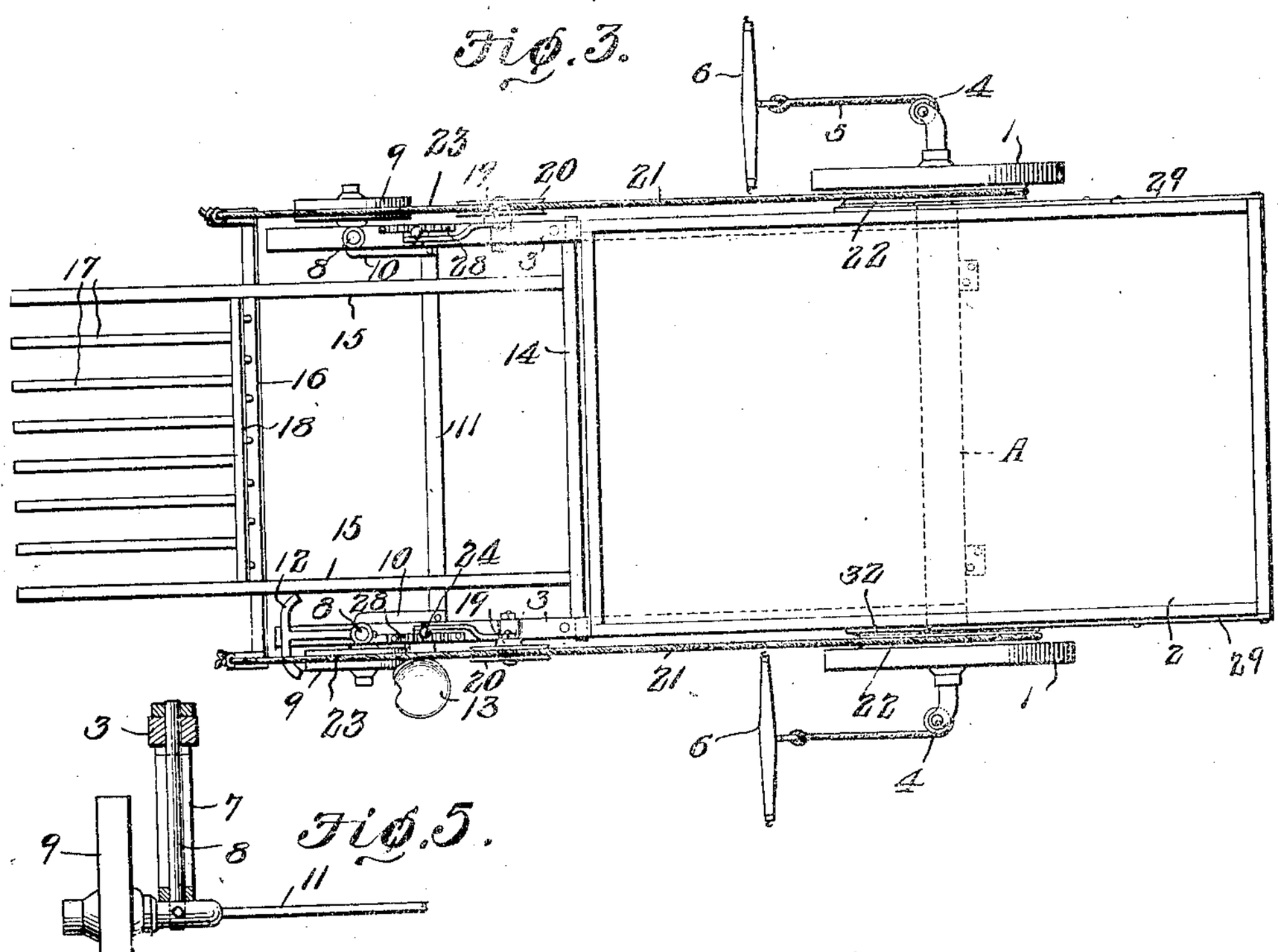
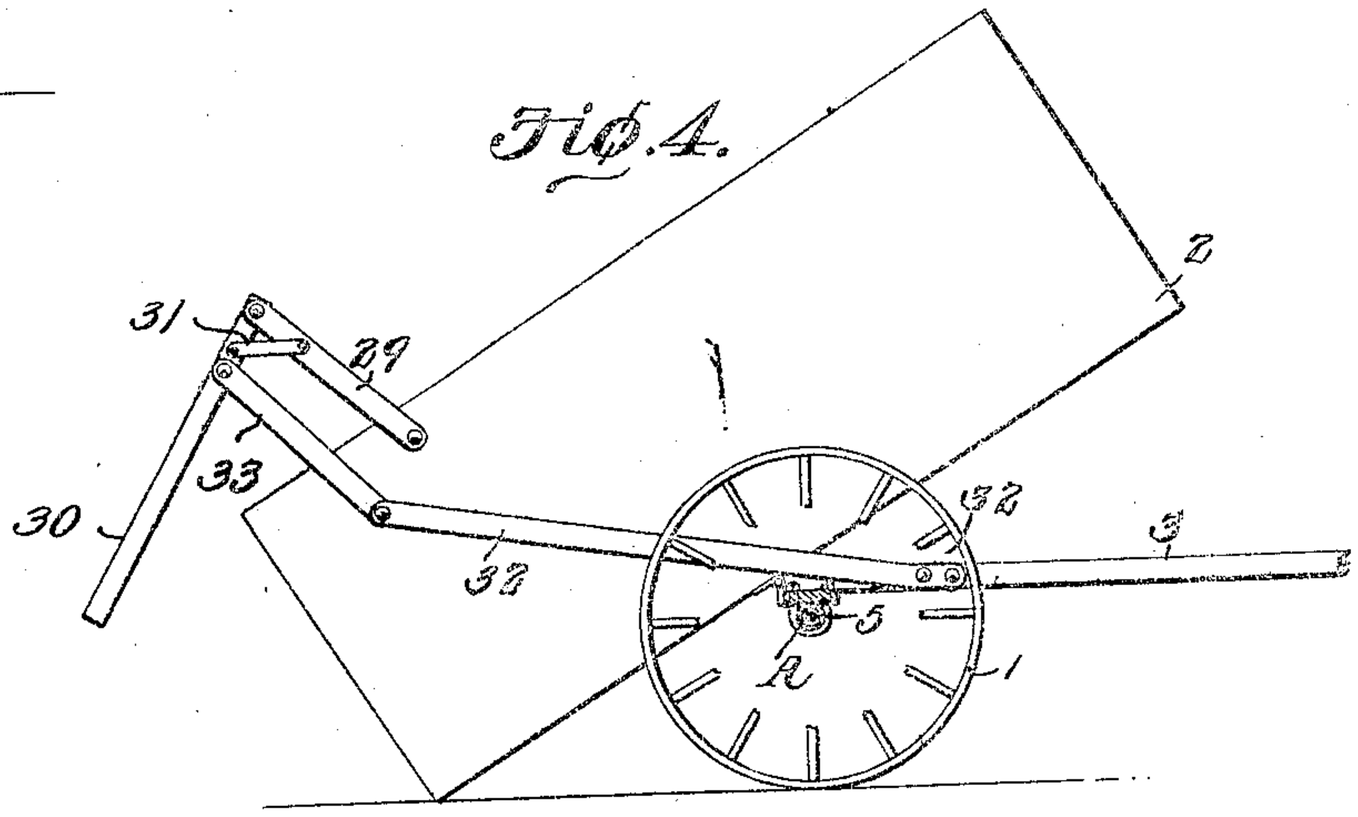


Fig. 5.

Fig. 4.



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LOADING APPARATUS.

No. 836,970. Specification of Letters Patent. Patented Nov. 27

Application filed February 19, 1906. Serial No. 301,396.

To all whom it may concern:

Be it known that I, D MAURICE HARTSOUGH, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Loading Apparatus, of which the following is a specification.

This invention relates to devices for loading hay and grain and for carrying the same to a place of deposit; and the principal object of the invention is to provide a device or apparatus embodying a receptacle mounted upon rotary supporting means and means for pitching or loading material—such as hay, grain-shocks, and like material—into the receptacle, the power for operating the loading mechanism being derived from the carrying-wheels of the machine.

Further objects of the invention are to simplify and improve the construction and operation of this class of machines.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations, and modifications within the scope of the invention may be made when desired.

In the drawings, Figure 1 is a side elevation of a device constructed in accordance with the principles of the invention with the driver's seat removed and showing the loader in position for picking up or accumulating a load. Fig. 2 is a side elevation showing the device with the driver's seat removed and the loader in load-discharging position. Fig. 3 is a top plan view. Fig. 4 is a side elevation of a portion of the device, showing the same with the receptacle in dumping position. Fig. 5 is a sectional detail view of a portion of the steering-gear.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

In the construction of this machine a tubular axle A is provided having spindles upon which the main carrying-wheels 1 1 are journaled. Frame-bars 3 3 are suitably connected with the axle, and said frame-bars serve to support a tilting box or receptacle 2, which is hingedly connected with the frame of which the side bars 3 3 form a part. Near the outer extremities of the tubular axle are suitably supported sheaves or pulleys 4 4, over which passes a flexible member, such as a wire rope or cable 5, the extremities of which are provided with whiffletrees 6 for the attachment of the draft. The flexible member 5, passing over the pulleys 4, constitutes an evener or equalizer, as will be readily understood. By this simple construction and arrangement of parts the draft-animals will be attached at the sides of the box or receptacle directly in front of the axle.

The side bars of the frame are provided near their front ends with brackets 7, affording bearings for shafts 8, provided at their lower ends with spindles upon which steering-wheels 9 are journaled. The shafts 8 are also provided with rearward-extending arms or cranks 10, which are connected with each other by means of a link 11, serving to transmit motion between the shafts, so as to enable the steering-wheels to be simultaneously adjusted. One of the shafts 8 carries a foot-lever 12, disposed in convenient proximity to the driver or operator for whom a seat 13 is provided. The steering-wheels, as will be readily understood, support the front end of the frame of the machine.

The side members 3 3 of the frame are provided with bearings for a shaft 14, having arms 15, carrying a rake or fork 16, provided with forwardly-extending teeth or tines 17, and with an upright frame 18, said fork being of suitable construction to gather hay or similar material as the machine advances over the ground or to engage a bundle or a shock of grain.

Pivotally mounted upon the frame-bars 3 3 are upright arms 19, carrying pulleys 20, which are connected, by means of crossed ca-

bles or bands 21, with pulleys or band-wheels 22, that are clamped upon or otherwise connected with the traction-wheels or carrying-wheels 1 1. Flexible connections, such as ropes or cables 23, extend from the upright frame 18 of the fork to the cables 21, with which they are suitably connected. Adjusting-levers, as 24, are pivoted upon stands 25, mounted upon the frame-bars 3, said levers being connected by links 26 with the arms 19, which latter may thus be manipulated so as to tighten or loosen the cables 21 at the will of the operator. Stop means, as 27, engaging quadrants 28, may be provided for the purpose of securing the levers 24 at various adjustments.

Upon each side of the box or receptacle 2 there is pivoted an arm 29, said arms lying in proximity to the upper edges of the sides of the box and carrying an end-gate 30, which is connected with the arms 29 by reinforcing-braces 31. Securely connected with each of the side bars 3 of the frame is a rearwardly-extending arm or bracket 32, and said arms or brackets are connected with the edges of the end-gate by means of links 33. By this construction when the box or receptacle is tilted to a dumping or load-discharging position, as shown in Fig. 4 of the drawings, the end gate will be automatically lifted out of the path of the contents of the receptacle, which may thus be quickly and conveniently discharged.

The operation and advantages of this invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. The normal position of the rake or fork is the lowered load-engaging position, which is illustrated in Fig. 1. When the device is propelled over the field, the fork will engage the load, which if consisting of hay may be gradually accumulated as the machine progresses, while if it consists of bound grain it will quickly slide onto the fork. When the load is upon the fork, the operator by manipulating the levers 24 will tighten the bands or cables 21, thus causing motion to be transmitted from the carrying-wheels 1 to said bands or cables and causing the flexible connection 23 to move with the cables 21 in the direction of the carrying-wheels, thus quickly lifting or tilting the fork in an upward direction and discharging the load over the frame 18 into the box or receptacle 2. When the levers 24 are manipulated to slacken the bands or cables 21, the weight of the fork will restore it to load-engaging position. When a sufficient load has been accumulated in the receptacle 2, it is conveyed to a place of deposit and discharged by tilting the receptacle to the dumping position. (Illustrated in Fig. 4.)

While this improved device is useful for a variety of purposes, it has been especially designed for the purpose of conveying shocks of grain to the threshing-place, where it may be quickly and conveniently dumped without waiting to pitch the bundles of grain from the box or receptacle into the threshing-machine.

The improved device is simple in construction, inexpensive, easily guided and manipulated, and in every respect efficient for the purposes for which it is provided.

Having thus described the invention, what is claimed is—

1. In a device of the class described, a frame having carrying-wheels, a receptacle supported upon the frame, a hingedly-supported fork located on and extending directly in front of the frame, arms pivoted upon the frame, pulleys on said arms, pulleys connected with the carrying-wheels, bands connecting the pulleys, manually-operated means arranged on the frame for manipulating the pulley-carrying arms to tighten the bands, and flexible members directly connected with the bands and fork.

2. In a device of the class described, a frame, an axle having carrying-wheels, a tiltable receptacle supported upon the frame, and extending on opposite sides of the axle with one end overhanging the rear of the frame to tilt downwardly, a shaft journaled upon the frame in front of and independent of the receptacle, a fork connected with said shaft and located at the front of the frame, and means for transmitting motion from the carrying-wheels to the fork to tilt the latter from a load-receiving to a load-discharging position.

3. In a device of the class described, a frame having carrying-wheels, a receptacle supported upon the frame, a hingedly-supported fork, arms pivoted upon the frame, pulleys upon said arms, pulleys upon the carrying-wheels, bands connecting the pulleys, flexible members connecting the bands with the fork, adjusting-levers, links connecting said levers with the pulley-carrying arms, and means for retaining the levers at various adjustments.

4. In a device of the class described, a vehicle-frame having side bars, an axle at one end of the frame, a tiltable box supported thereon, and extending to the front and rear of the same with its front end normally resting on the side bars, a fork or gathering member arranged centrally on the front of the frame, an axle, an end-gate for the box, and draft devices located at the sides of the frame and intermediate the fork and gate.

5. In a device of the class described, including a fork or gathering member, an axle having carrying-wheels, a frame connected

with the axle and having steering-wheels, a tilting box hingedly connected with the frame, arms pivoted upon the sides of the box and carrying an end-gate, brackets extending rearwardly from the sides of the frame, and links connecting said brackets with the side edges of the end-gate.

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

D MAURICE HARTSOUGH.

Witnesses:

W. H. GOULD,

W. M. GILLIGAN.