

(No Model.)

2 Sheets—Sheet 1.

J. SIMPSON.  
WAGON DUMP.

No. 418,763.

Patented Jan. 7, 1890.

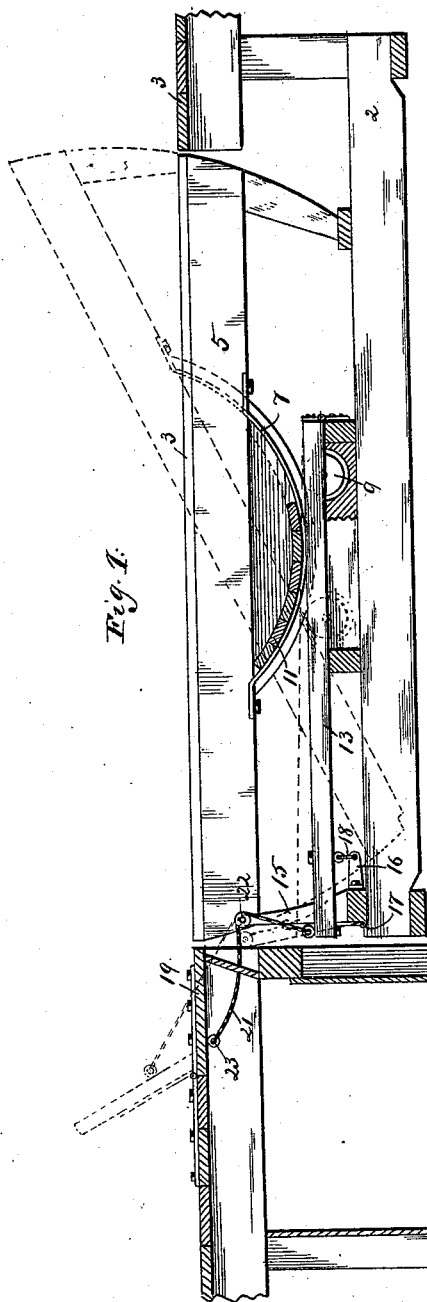
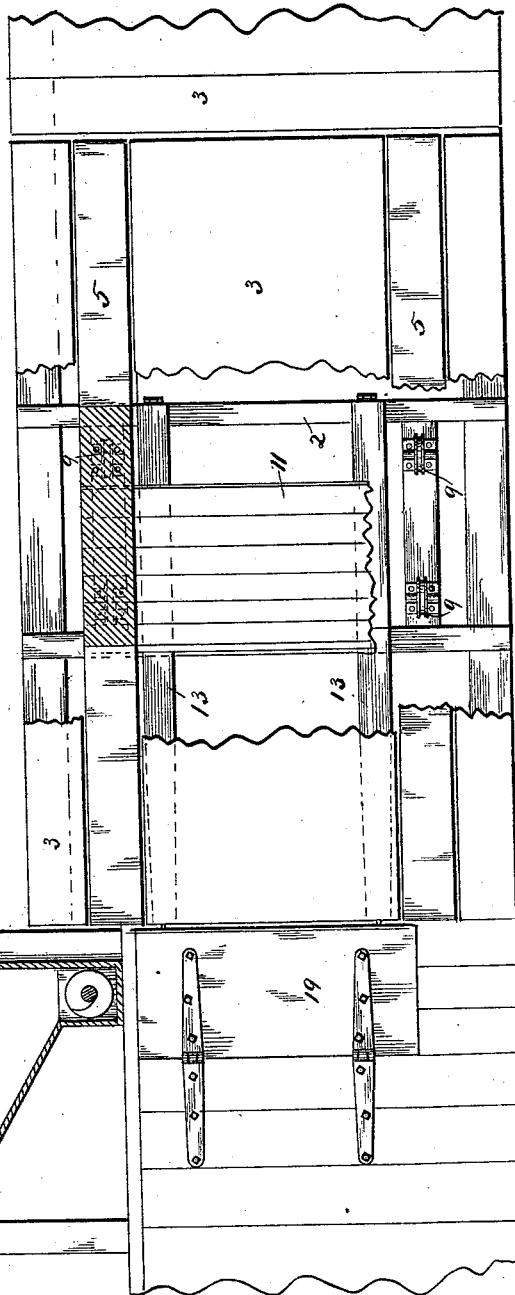


Fig. 1.

Fig. 2.



witnesses.

J. Jensen.  
C. L. Nachtrieb

Inventor

John Simpson.  
By Paul, Sanford & Merwin Attys.

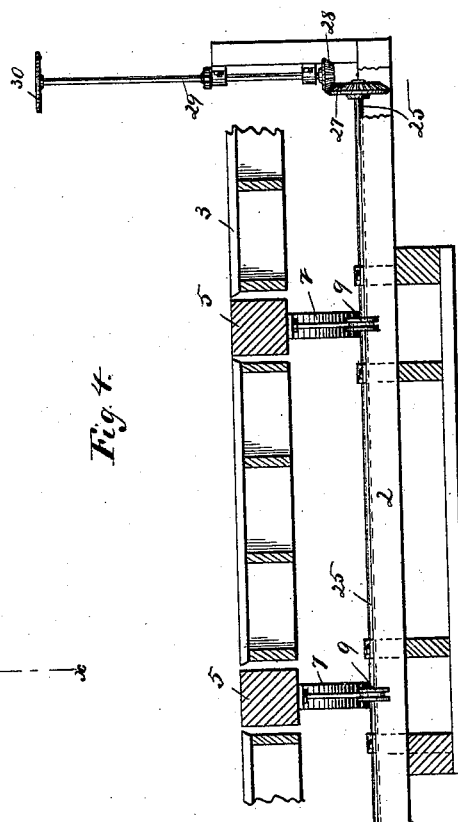
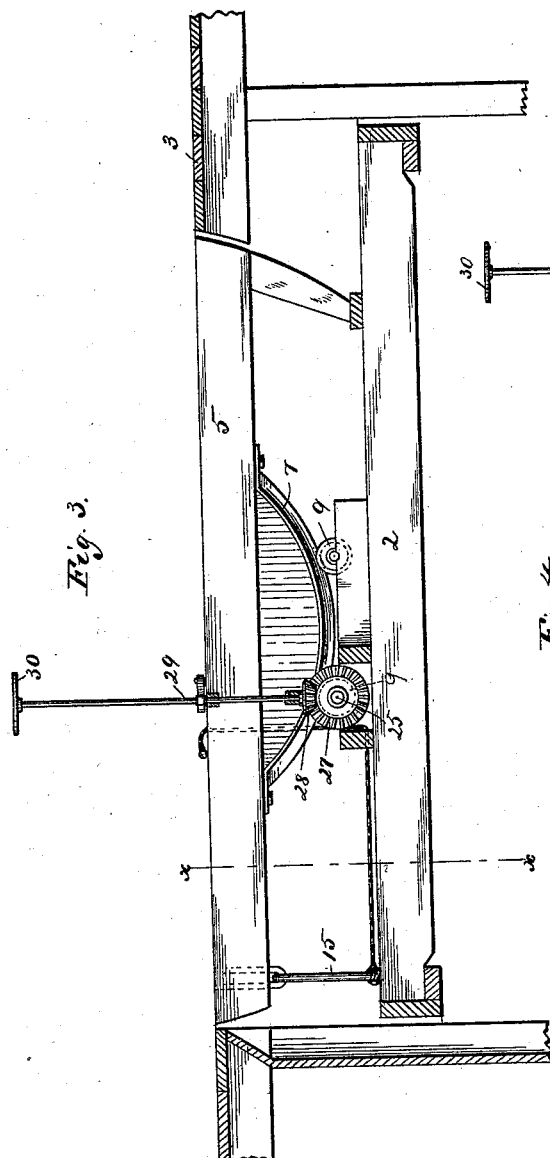
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2 Sheets—Sheet 2.

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*Witnesses.*

J. Jessen.

C. L. Nachtrieb

*Inventor.*

*John Simpson.*

By Paul Sanford Munn in Atty

# UNITED STATES PATENT OFFICE.

JOHN SIMPSON, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF ONE-HALF TO  
DEIGHTON A. ROBINSON, OF SAME PLACE.

## WAGON-DUMP.

SPECIFICATION forming part of Letters Patent No. 418,763, dated January 7, 1890.

Application filed August 24, 1888. Serial No. 283,663. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN SIMPSON, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Wagon-Dumps, of which the following is a specification.

My invention relates to improvements in a dumping-platform commonly used in elevators or other warehouses for tilting a wagon in order that its contents may be quickly removed.

My invention consists, generally, in the construction and arrangement hereinafter described, and particularly pointed out in the claims.

In the drawings which form a part of this specification, Figure 1 is a longitudinal vertical section of a wagon-dump embodying my improvement. Fig. 2 is a plan view with a portion of the platform broken away in order to more clearly show the operation of the brake. Fig. 3 is a vertical longitudinal section showing the modification consisting of an attachment for raising the dumping-timbers. Fig. 4 is a cross-section taken on line *x x* of Fig. 3.

In the drawings, 2 represents the frame-work upon which the mechanism is supported, and this frame-work may, if found desirable, be supported upon suitable levers to form a weighing apparatus. Around the frame 2 and above it I prefer to construct a platform 3. This platform is preferably constructed with suitable openings running longitudinally therein, which receive the dumping-timbers or track-beams 5. These track-beams are preferably placed at a distance apart to correspond with the spread or gage of an ordinary wagon, and are made of a size and length suitable to support the wagon when loaded. Each of these track-beams is supplied with a segmental supporting-frame 7, extending longitudinally thereof. This frame is preferably constructed of T-iron and is secured to the under side of the track-beams.

Rollers 9 are mounted in suitable bearings supported upon the frame 2 and placed in line with the segmental frame 7 and so arranged that each frame will bear upon two or more of the rollers 9. In order that both

of the track-beams may operate together, I prefer to connect them by means of the plank or other suitable connections 11, preferably secured to the upper flange of the T-irons forming the segmental frame. The space between the segmental frame and the track-beams is preferably filled in with suitable timbers in order to properly support the said frame. Instead of arranging the track-beams to tilt while the main part of the platform remains stationary, I may support the entire platform upon the segmental frame, in which case it will be understood that the platform itself will tilt.

One or more brake-beams 13 may be hinged or pivoted upon the frame 2 and extend under the segmental frame 7 and bear against it or the planks 11, so that as the end of the beam 13 is moved upward the said beam will be brought in contact with the planking or with the segmental frame, and the friction between the two will control the movement of the track-beams as the frame travels on the rollers 9. A suitable shoe may be secured upon the beam at its point of contact to take the necessary wear. A stop or dog 15 is preferably located under the end of the track-beam, and is secured to the frame 2 by a suitable hinge 17. I may prefer to connect this stop with the brake-beam 13, so that as the brake-beam is raised the stop will be operated. This may be done by providing the stop with an arm 16, projecting from the side opposite the pivot or hinge 17. A suitable link 18 connects the ends of this projection with an eyebolt upon the brake-beam 13.

It will be seen that by raising the outer end of the lever 13 the projection 16 is also raised, which causes the stop 15 to swing upon its pivot, releasing its upper extremity from the track-beam against which it rests. The track-beam is now in condition to be lowered, and the weight of the wagon resting on the beam, being back of the segmental frame 7, the beams will have a tendency to assume the position shown in dotted lines in Fig. 1. Their sudden or immediate change to this position will be retarded by the friction brought to bear by the contact of the brake-beam 13 and the surface of the segmental frame 7.

Any suitable device may be used for rais-

ing the brake-beams. The one which I have shown is arranged to connect the outer end of the brake-beam with the door 19 of the receiving-bin, into which the grain or other material is deposited. For this purpose a cable 21 may be secured to the end of the brake-beam 13, pass upward over a sheave or pulley 22 and be connected with a ring or staple secured to the said door 19, and so arranged that as the door is raised tension will be brought upon the said cable and the brake-beam operated. The pulley 22 is preferably journaled upon the upper portion of the stop 15, in order that tension on the cable will aid in releasing the said stop from the track-beams.

In Fig. 3 I have shown a device for independently operating the track-beams, by which they may be raised without removing the wagon. This device consists of two of the pulleys 9, secured upon a continuous shaft 25, hung in suitable bearings upon the frame 2 and extending to the side of the machine and provided with suitable means by which it may be rotated at will of the operator.

The means which I prefer to employ are a bevel-gear 27, secured to the shaft 25 and meshing with the pinion 28 upon an upright shaft 29. This shaft 29 may be provided with a suitable hand-wheel 30, by which it is turned and by which motion is imparted to the shaft 25. It will be seen that as the shaft 25 is revolved the rollers 9, secured thereto, will revolve with their outer surfaces in contact with the T-iron or the segmental frame 7, which will cause the said segmental frame to travel over the roll and raise or lower the track-beams, as desired. The stop 15 in this case may be hinged or fulcrumed upon the track-beams, with its lower end resting upon the frame 2 when the track-beams are in a horizontal position. A suitable ratchet and pawl may be provided upon the upright shaft 29, in order to hold the said shaft in any desired position. A rope or other tripping device may be connected to or operate upon the end of this stop, in order that it may be thrown out of the perpendicular.

The advantage of my improvement over the ordinary pivoted dumping-platform is that

by supporting the timbers upon a segmental frame resting on rollers, as described, I place the pivoted center, upon which the beams oscillate, above the bearing-point of the load, thus balancing the load as it is tilted, preventing any sudden movement of the timbers and avoiding the liability of breakage. The larger the radius of the segments the slower the timbers will operate. The segments may be constructed of a radius having the center of motion a sufficient distance above the platform to completely balance the load upon the rollers and require force to be exerted upon the platform in order to tilt the load; but for ordinary use I prefer to construct the segments of such a length and radius that the load will be dumped by its own weight when the beams or platform are released.

I prefer to place a support 33 under the rear end of the track-beams bearing upon the frame 2, in order to provide a stop or rest for the beam when in a horizontal position.

I claim as my invention—

1. The combination, in a wagon-dump, of the track-beams 5, the segmental frames secured to said beams, the rollers 9, upon which said frames are supported, the brake-beam 13, bearing upon said frame, and a stop 15, connected and operated by said brake-beam, substantially as described.

2. The combination, in a wagon-dump, of the track-beams 5, the segmental frames secured to said beams, the rollers 9, upon which said frames are supported, the brake-beam 13, arranged to bear against said frame, the door 19, and a cable 21, connecting said brake-beam with the door, substantially as described.

3. The combination, in a wagon-dump, of the track-beams 5, the segmental frames secured to said beams, the rollers 9, upon which said frames are supported, the shaft 25, upon which two of said rollers are secured, and means for turning said shaft, substantially as described.

In testimony whereof I have hereunto set my hand this 18th day of August, 1888.

JOHN SIMPSON.

In presence of—

A. C. PAUL,  
R. H. SANFORD.