(No Model.)

2 Sheets—Sheet 1.

A. L. GRINNELL.

PORTABLE PLATFORM DUMP AND ELEVATOR.

No. 332,654. Patented Dec. 15, 1885.

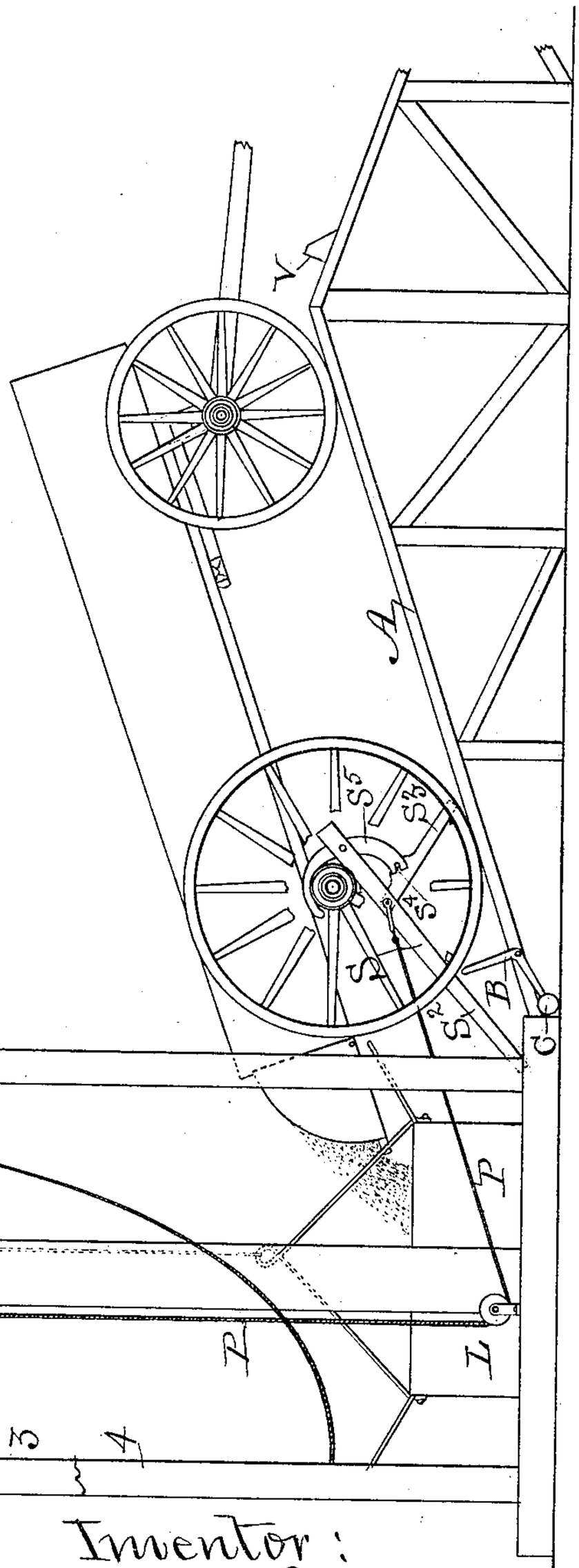

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2

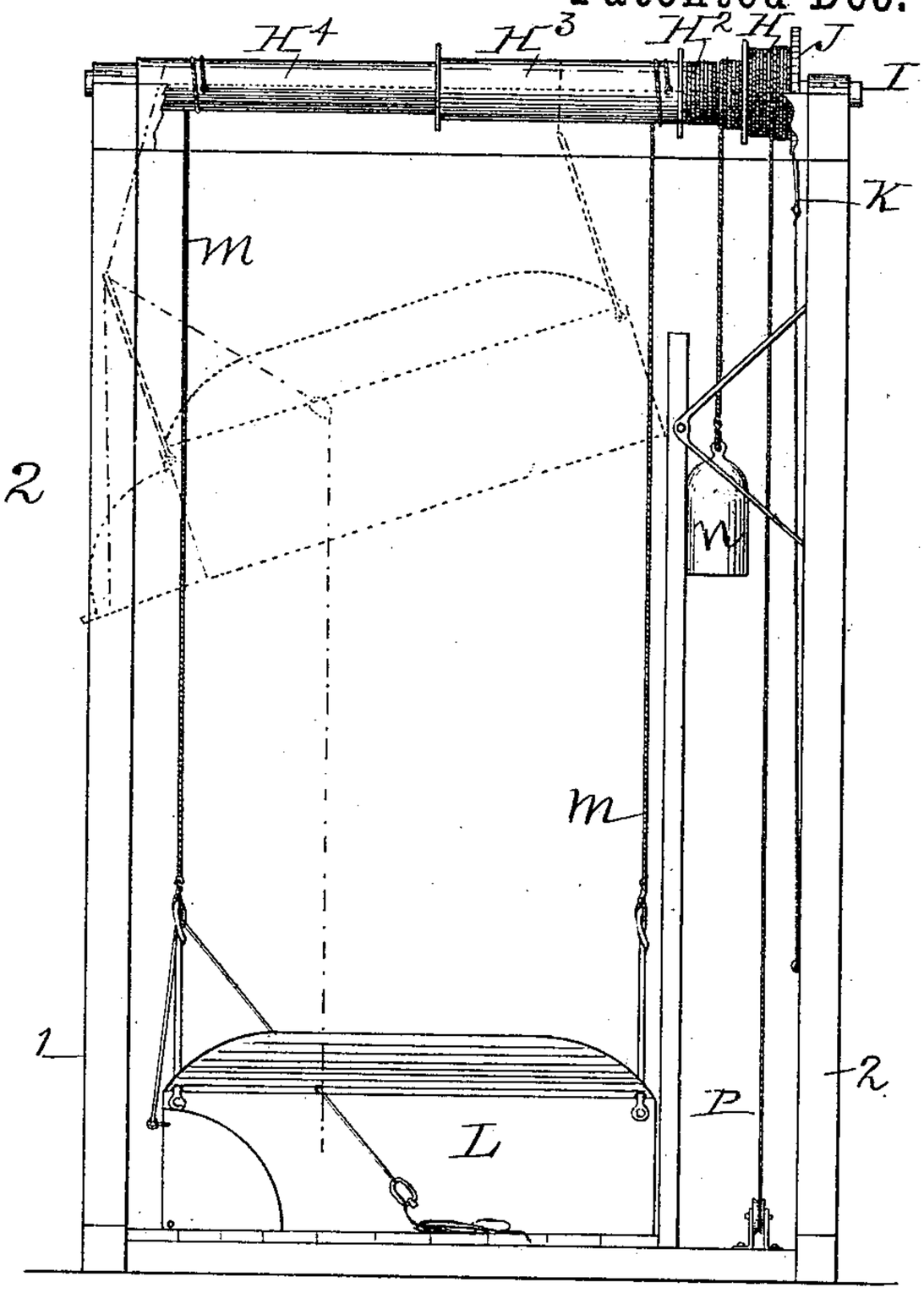
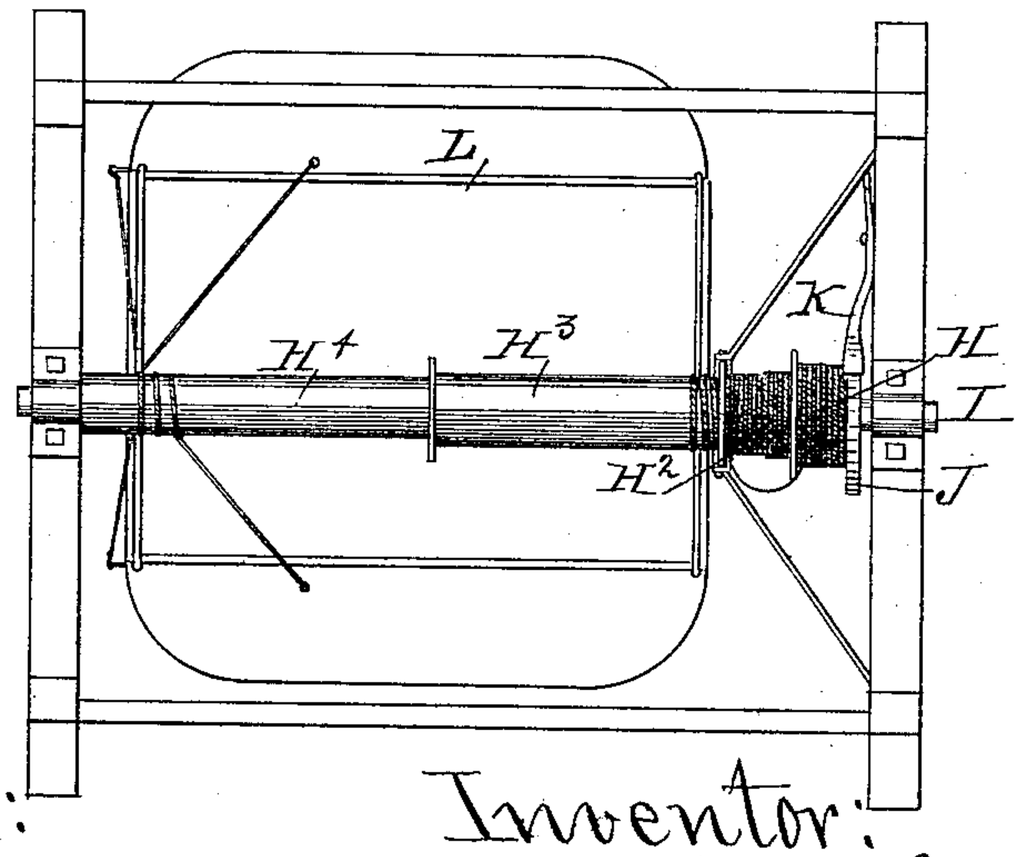


Fig. 3



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UNITED STATES PATENT OFFICE.

AMOS L. GRINNELL, OF CAMPBELL, IOWA.

PORTABLE PLATFORM DUMP AND ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 332,654, dated December 15, 1885.

Application filed August 24, 1885. Serial No. 175,117. (No model.)

To all whom it may concern:

Be it known that I, AMOS L. GRINNELL, of Campbell, in the county of Polk and State of Iowa, have invented a Portable Platform Dump and Elevator for Cribbing Corn, &c., of which the following is a specification.

My object is to save time and labor in unloading from wagons or cars corn, potatoes, coal, or any material that is handled in bulk and that is to be elevated or stored away in a crib or bin.

My invention consists in the construction and combination of a portable inclined-platform wagon-dump, a portable elevator, and a rope-fastening device, as hereinafter fully set forth, in such a manner that a loaded wagon can be advanced upon the platform and its contents dumped into a box, and a rope then attached to the wagon, so that the elevator-box and its contents will be hoisted as the wagon is moved from the platform, the rope automatically detached from the wagon, and the contents of the elevated box emptied into a crib or bin by simply pulling a cord to unlatch the hinged end of the elevated box.

Figure 1 of my accompanying drawings is a side view of my complete apparatus and a wagon in position on the inclined platform. Fig. 2 is a side elevation, and Fig. 3 a top view, of my elevator. Jointly considered, these figures clearly illustrate the construction and operation of my complete invention.

A represents a platform that inclines downward in opposite directions. It is made by framing square pieces of lumber together and covering the top of the frame with boards or planks in such a manner that horses and loaded wagons can be placed upon it to dump the contents of a wagon-box from its rear end.

B represents a crank-shaft pivoted to the lower end of one of the inclines of the platform in such a manner that it will turn forward and lie flat upon the platform as the wheels of a wagon come in contact therewith and pass over it.

C is an arm that is fixed to the shaft B in such a manner that a weight, D, on the end of the shaft will reverse the motion of the shaft when the wheels have passed over it and turn it up to arrest the backward motion of the wagon as required to retain the wagon stationary on the incline, while the end-gate at the rear of the wagon-box is removed and the contents of the box allowed to empty into a receptacle underneath the end of the wagon-box.

Nos. 1 2 3 4 are the corner-posts of an elevator-frame, G, that is adapted to be placed aside of a corn-crib or building into which the contents of a wagon-box are to be placed.

H, H^2, H^3, and H^4 are drums of different diameters fixed to a shaft, I, that has its bearings attached to the cross-pieces at the top of the elevator-frame G.

J is a ratchet-wheel on the end of the shaft I.

K is a pawl pivoted to the frame to engage the wheel J.

L is a box adapted to rest upon the floor in the elevator-frame to receive the contents of a wagon.

M M are ropes or chains attached to the ends of the box L and to the drums H^3 and H^4 in such a manner that when the drums are jointly revolved the box will be elevated by the ropes and brought into an inclined position, as indicated by dotted lines in Fig. 2, and as required to discharge the contents of the box into a crib, bin, or building, by simply pulling a cord to unlatch the end of the box to allow the contents to slide out from the inclined bottom of the box.

N represents a weight connected with the drum H^2 by means of a rope, for the purpose of balancing the empty box L and preventing it from descending too fast, when it is being lowered, by simply pulling a cord on the end of the pawl K to release the pawl from the wheel J, and to thereby free the shaft I, so it can revolve and unwind the ropes *m* from the drums H^3 and H^4.

P is a rope attached to the drum H, for the purpose of hoisting the loaded box L as the wagon is advanced over the inclined platform A.

R is a directing-pulley attached to the lower end of the frame, over which pulley the rope P is passed.

S represents a rope-fastening device that is adapted to secure the end of the rope to the hub or axle of the wagon, and to release it automatically when the box L is elevated. It is composed of a bar, S^2, to which is pivoted a

shorter bar or leg, S^3, to which leg is fixed a pin, S^4, and a metal hook, S^5, that is pivoted to the upper end of the long bar S^2, and has a bifurcated lower end adapted to engage or latch to the pin S^4, as shown in Fig. 1.

V is a block fixed to the platform A in such a manner and position that the end of the leg S^3 will come in contact therewith as the wagon is advanced, and its position reversed or changed sufficiently to unlatch the end of the hook as required to release the hook from the axle and the rope from the wagon when it is drawn out sufficiently to elevate the box L and its contents as it uncoils from the drums H, and thereby revolve the drums H^3 and H^4 to lift the box by means of the ropes *m*.

From the foregoing description of the construction and function of each part of my apparatus the unitary actions of all the parts and the practical operation and utility of my complete invention will be readily understood by farmers and persons familiar with hoisting machinery.

I claim as my invention—

1. An elevator-frame having a revolving horizontal shaft at its top, to which shaft are attached a drum and rope for operating jointly two drums of different diameters fixed to the same shaft, in the manner set forth, for the purposes specified.

2. The rope-fastening device S S^2 S^3 S^4 S^5, in combination with a rope and drum in an elevator, to operate in the manner set forth, for the purposes specified.

3. A wagon dump and elevator composed of the following elements, to wit: an inclined platform, an elevator-frame, a horizontal shaft, a drum and rope and rope-fastening device adapted to be connected with a wagon, two drums of unequal diameter connected with the ends of a box by means of ropes, and a ratchet and pawl, substantially as shown and described, for the purposes specified.

AMOS L. GRINNELL.

Witnesses:
J. M. ST. JOHN,
THOMAS G. ORWIG.