

No. 674,238.

Patented May 14, 1901.

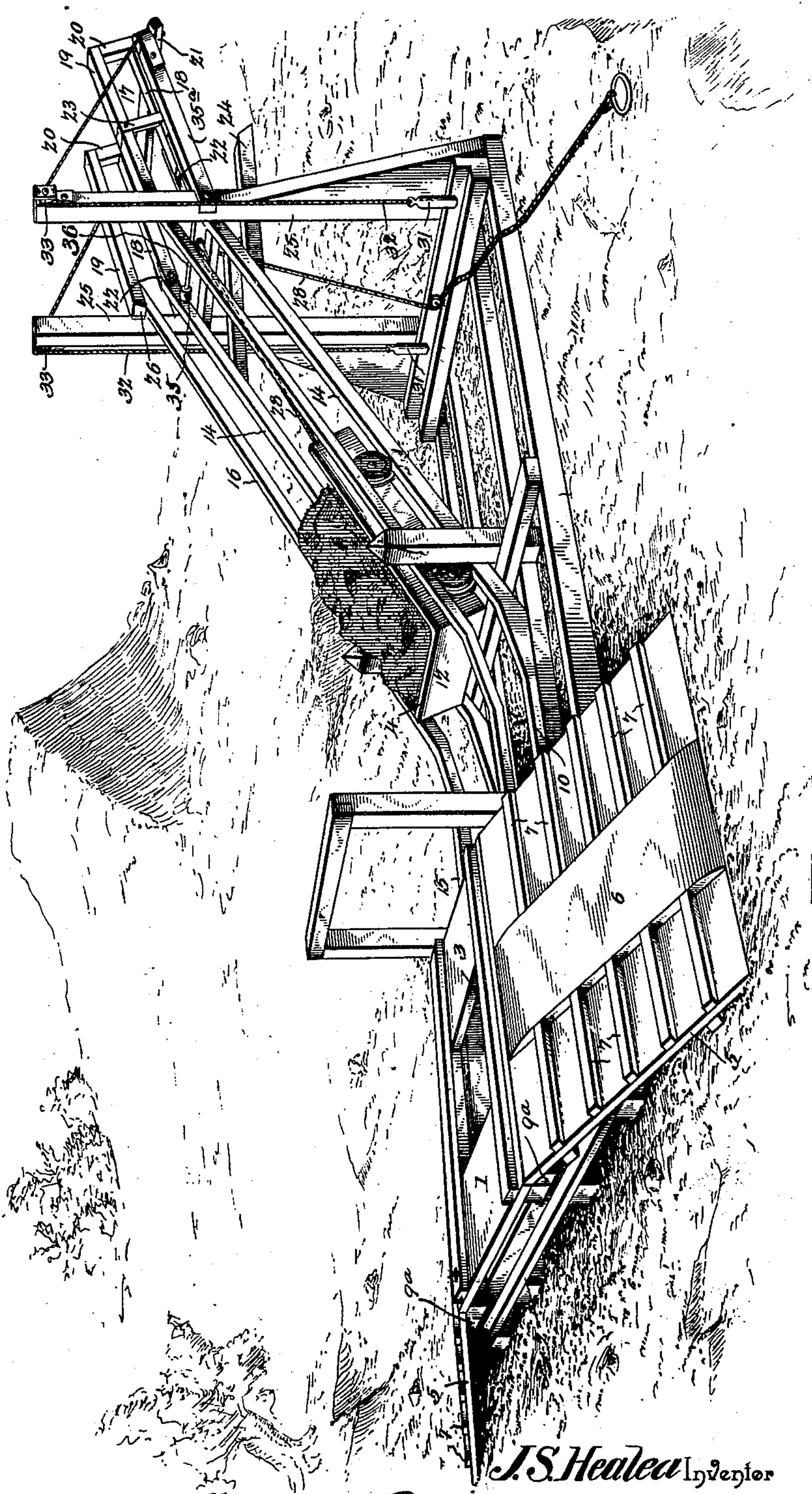
J. S. HEALEA.

COMBINED ELEVATOR AND DUMP.

(Application filed Dec. 27, 1900.)

(No Model.)

2 Sheets—Sheet 1.



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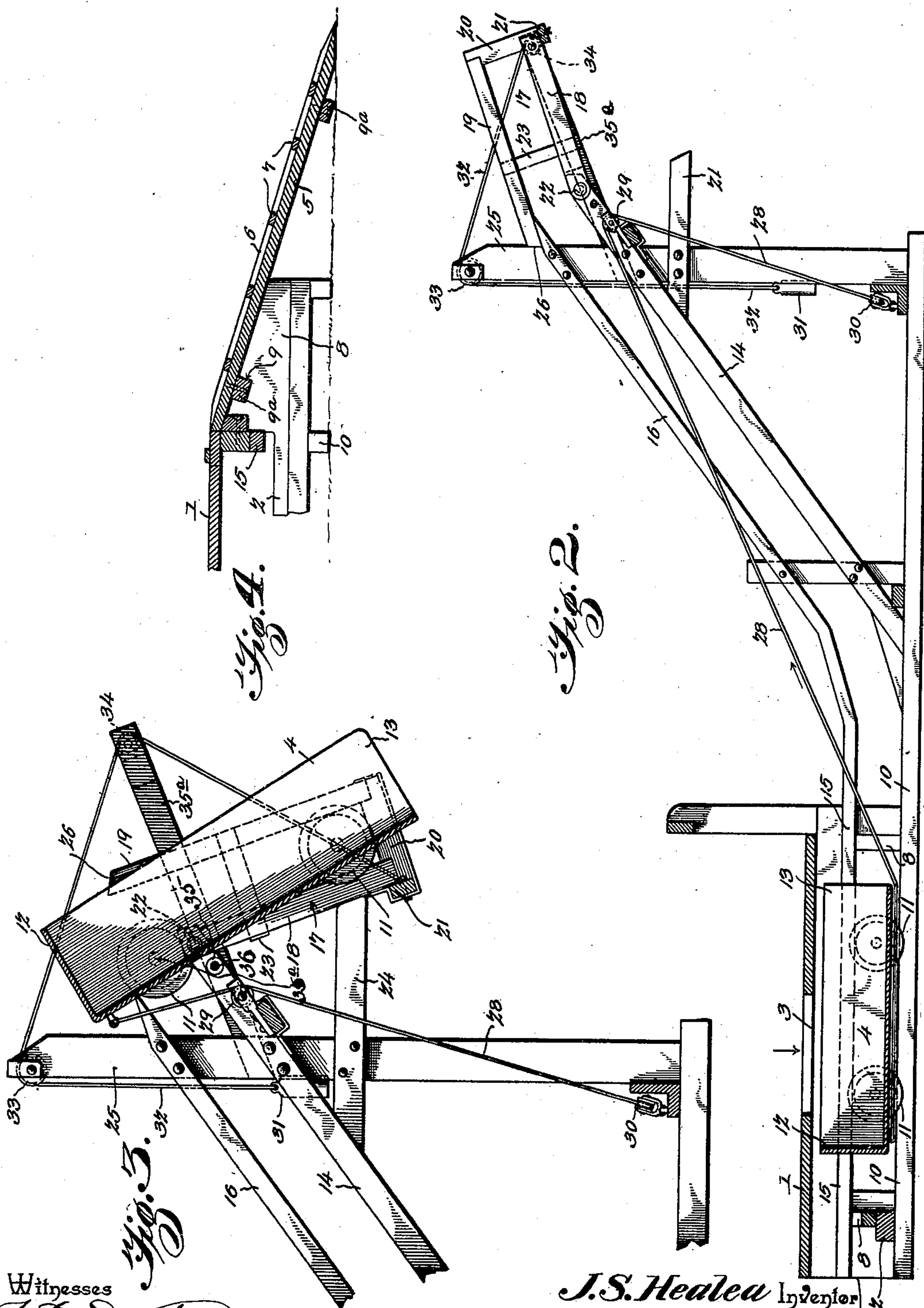
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UNITED STATES PATENT OFFICE.

JOSEPH S. HEALEA, OF CRAIG, NEBRASKA.

COMBINED ELEVATOR AND DUMP.

SPECIFICATION forming part of Letters Patent No. 674,238, dated May 14, 1901.

Application filed December 27, 1900. Serial No. 41,264. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH S. HEALEA, a citizen of the United States, residing at Craig, in the county of Burt and State of Nebraska, have invented a new and useful Combined Elevator and Dump, of which the following is a specification.

The invention relates to improvements in combined elevators and dumps.

10 The object of the present invention is to improve the construction of combined elevators and dumps and to provide a simple and comparatively inexpensive one-designed particularly for use in connection with a road-scraper, rake, or analogous device and adapted to receive material from such scraper or manure-fork and capable of elevating and dumping the same for loading it into a wagon.

15 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.

20 In the drawings, Figure 1 is a perspective view of a combined elevator and dump constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is an enlarged sectional view illustrating the manner of dumping the car. 25 Fig. 4 is a detail sectional view illustrating the manner of mounting the removable inclines.

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

35 1 designates a horizontal platform supported above the ground by a suitable framework 2 and provided with a central opening 3 to permit earth, manure, or other material hauled up to the platform 1 to be dumped or discharged into a car 4, adapted to be arranged beneath the platform 1. In order to enable a load of material to be readily drawn upward to the elevated platform 2, a pair of oppositely-disposed inclines 5 is provided, and these inclines, which are detachably mounted on the framework, as illustrated in Fig. 4 of the accompanying drawings, are provided with central smooth portions 6 to receive a 40 scraper or fork and have transverse cleats 7,

arranged at intervals at opposite sides of the central smooth portion to prevent a team from slipping. The framework is provided at opposite sides with supporting-bars 8, provided with inclined upper edges and having notches 55 9 for the reception of transverse bars 9^a, arranged at the lower faces of the inclines 5, near the upper edges thereof. By this construction the inclines, which are preferably removable, are detachably interlocked with the framework, which may be hauled from one place to another.

The framework is provided with horizontal rails 10, extending beneath the elevated platform 1 and receiving the wheels 11 of the car 65 4, which is adapted, as illustrated in Fig. 2 of the accompanying drawings, to be arranged beneath the opening 3 to receive the material to be elevated. The rear end 12 of the car is closed and the front end 13 is open, and the said car is adapted to be hauled up an inclined track mounted on the framework and consisting of opposite inclined rails 14. The car-wheels are flanged, and in order to prevent them from accidentally leaving the rails 75 the framework is provided with upper guards or rails 15 and 16, located above and arranged parallel with the said rails 10 and 14. The rails and the elevated platform are supported by suitable posts and uprights; but the framework may be constructed in any suitable manner to secure the necessary strength and stability, and it is provided with a broad base, as clearly shown in Fig. 1 of the accompanying drawings. The base consists of suitable 80 longitudinal sills which are connected at intervals by transverse bars or beams.

The car which is hauled up the inclined track by the means hereinafter described is carried partially upon a dumping-frame 17, 90 consisting of lower rails 18, upper guards or rails 19, stop-bars 20, and a suitable connecting-bar 21. The stop-bars are located at the outer ends of the upper and lower rails, and the lower rails 18 are provided at their inner 95 ends with side plates arranged in pairs and receiving the adjacent ends of the inclined rails 14 and pivoted to the same by pintles 22, whereby the dumping-frame is adapted to swing downward from the position illustrated 100

in Fig. 2 of the accompanying drawings to that shown in Fig. 3 to arrange the car in an inclined position for dumping its contents into a wagon-body. The dumping-frame is shorter than the car and is slightly less than the distance between the wheels to cause the rear wheels to rest upon the upper ends of the inclined rails 14 when the car is dumped, as illustrated in Fig. 3, whereby the hinge connections between the dumping-frame and the track are relieved of strain. The upper and lower rails of the dumping-frame are connected between their ends by metal bars or braces 23 and the downward movement of the dumping-frame is limited by arms 24, consisting of bars secured to rear uprights 25 and braced against the bottom rails 14 of the inclined track. The upward movement of the dumping-frame is limited by the inner ends of the upper rails or guards 19 engaging the upper inclined rails or guards 16, which are provided with beveled ends 26. When the car is run upon the dumping-frame, its front wheels engage the stop-bars at the outer ends of the upper and lower rails 18 and 19, and the weight of the car and its contents swings the dumping-frame downward to the position shown in Fig. 3. A wagon or other vehicle is adapted to be driven beneath the dumping-frame to receive the contents of the car, which is drawn upward by a hoisting rope or cable 28, extending beneath and secured to the car at the rear end thereof and arranged on upper and lower guide-pulleys 29 and 30, located at the back of the framework, as clearly shown in Fig. 2. The lower guide-pulley 30 is mounted in a pivoted or hinged block to permit the rope or cable to extend from the framework in any direction, and the other end of the rope or cable is provided with a ring or other suitable clevis for attaching a whiffletree to enable a horse or other draft-animal to be hitched to the hoisting rope or cable for drawing the car up the inclined track. The car will descend by gravity and automatically return to its initial position beneath the elevated platform when the dumping-frame is swung upward and the hoisting rope or cable is slackened.

The dumping-frame is counterbalanced by weights 31, attached to the lower ends of ropes or cables 32, passing over guide-pulleys 33 and 34, located, respectively, at the upper ends of the uprights 25 and at the outer ends of inclined rearwardly-extending arms 35^a. The arms 35^a are secured to the uprights adjacent to the inclined rails 14; but they may be attached to any other portion of the framework, and the outer ends of the ropes or cables 32 are secured to the ends of the transverse connecting-bar of the dumping-frame. The flexible connections which are attached to the dumping-frame are adapted to be pulled upon by the operator to swing the dumping-frame upward to its initial position. When the car is in an inclined position, as shown in Fig. 3 of the accompanying draw-

ings, the rear wheels are located at the upper ends of the inclined rails 14, and the body of the car is adapted to rest against stops 35, consisting of antifriction-wheels mounted on a transverse rod 36, which extends across and connects the rails 14. The stops prevent the car from moving backward on the inclined rails when the parts are arranged as shown in Fig. 3.

The framework may be constructed sufficiently light to permit it to be hauled from one place to another, and it is adapted to readily receive earth or other material from a road-scraper, manure-fork, or the like, and it is capable of enabling such material to be readily dumped into a wagon or other vehicle.

What I claim is—

1. An apparatus of the class described comprising a framework, an inclined track, inclined guard-rails located above the track, a car having front and rear wheels, and a dumping-frame having upper and lower rails and provided with stops, said dumping-frame being of a length less than the distance between the wheels of the car, whereby when the car is dumped, the rear wheels are caused to remain on and be supported by the inclined track to relieve the dumping-frame of strain, substantially as described.

2. An apparatus of the class described, comprising a framework having an inclined track, a car having front and rear wheels, a pivoted dumping-frame, said dumping-frame being of a length less than the distance between the wheels of the car, whereby the rear wheels are caused to remain on and be supported by the track of the framework, and a stop arranged at the outer end of the dumping-frame, substantially as described.

3. An apparatus of the class described comprising a framework, an elevated platform having an opening, inclines extending to the platform, the upper and lower horizontal and inclined rails, the dumping-frame provided with upper and lower rails and hingedly connected with the framework, the lower stop-arms arranged to limit the downward swing of the dumping-frame, a car, a hoisting rope or cable connected with the car, and flexible connections provided with weights and attached to the dumping-frame, substantially as described.

4. An apparatus of the class described comprising a framework, having inclined upper and lower rails, a car, a dumping-frame having upper and lower rails and pivotally connected with the framework, the upper rails of the dumping-frame being arranged to engage the upper rails of the framework, and means for limiting the downward movement of the dumping-frame, substantially as described.

5. An apparatus comprising a framework having an inclined track, a car having front and rear wheels, a pivoted dumping-frame, said dumping-frame being of a length less

than the distance between the wheels of the
car, whereby the rear wheels are caused to re-
main on the track of the framework, and anti-
friction - wheels arranged adjacent to the
5 dumping-frame and adapted to receive the car
when the latter is in an inclined position, sub-
stantially as and for the purpose described.

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

JOSEPH S. HEALEA.

Witnesses:

GEO. N. MINIER, Jr.,

E. J. MARTIN.