

(No Model.)

2 Sheets—Sheet 1.

C. L. YOUNG.
PORTABLE GRAIN DUMP.

No. 510,225.

Patented Dec. 5, 1893.

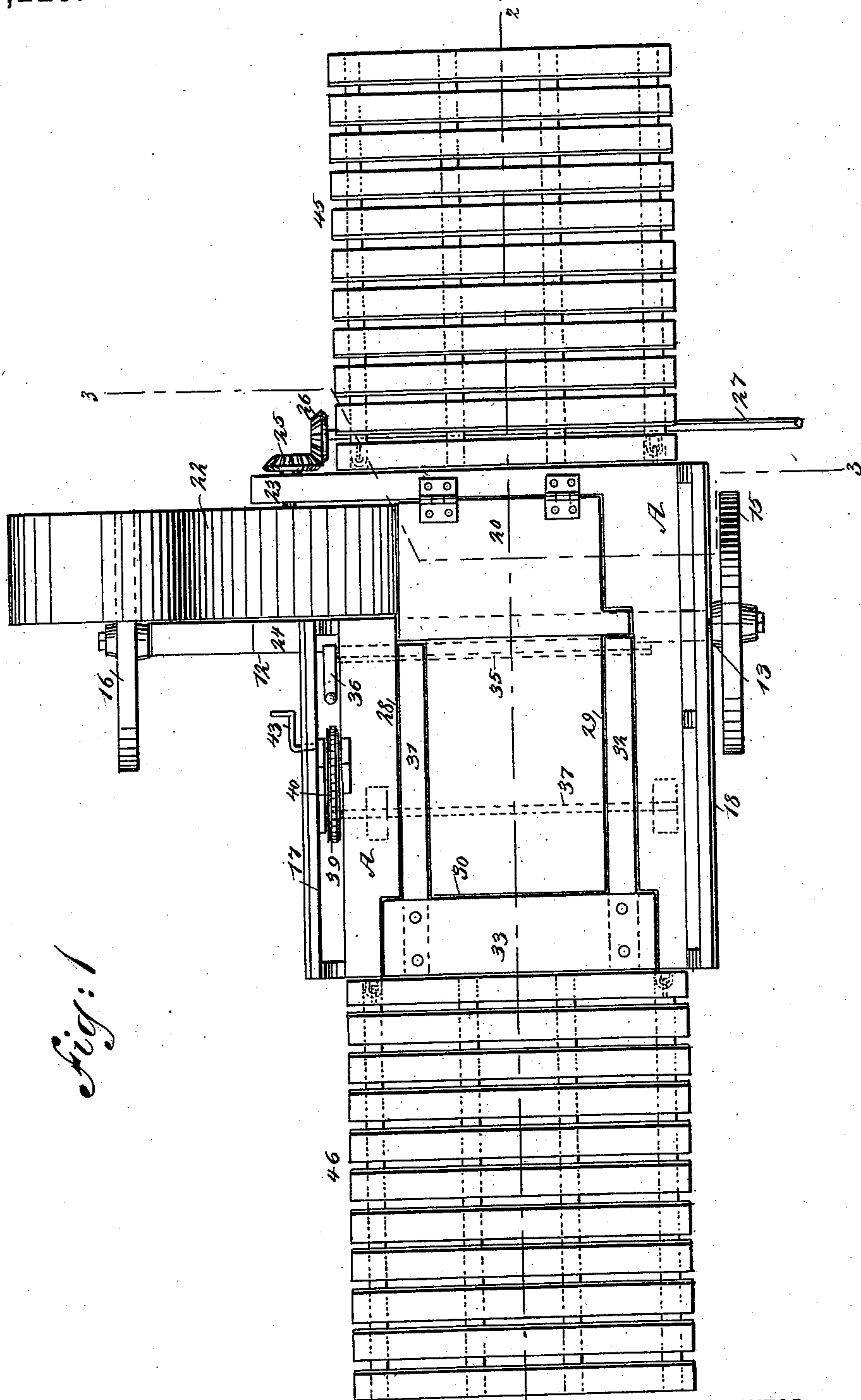


Fig. 1

WITNESSES:

Chas. Nida.

C. Sedgwick

INVENTOR

C. L. Young

BY

Munn & Co

ATTORNEYS.

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Fig. 2.

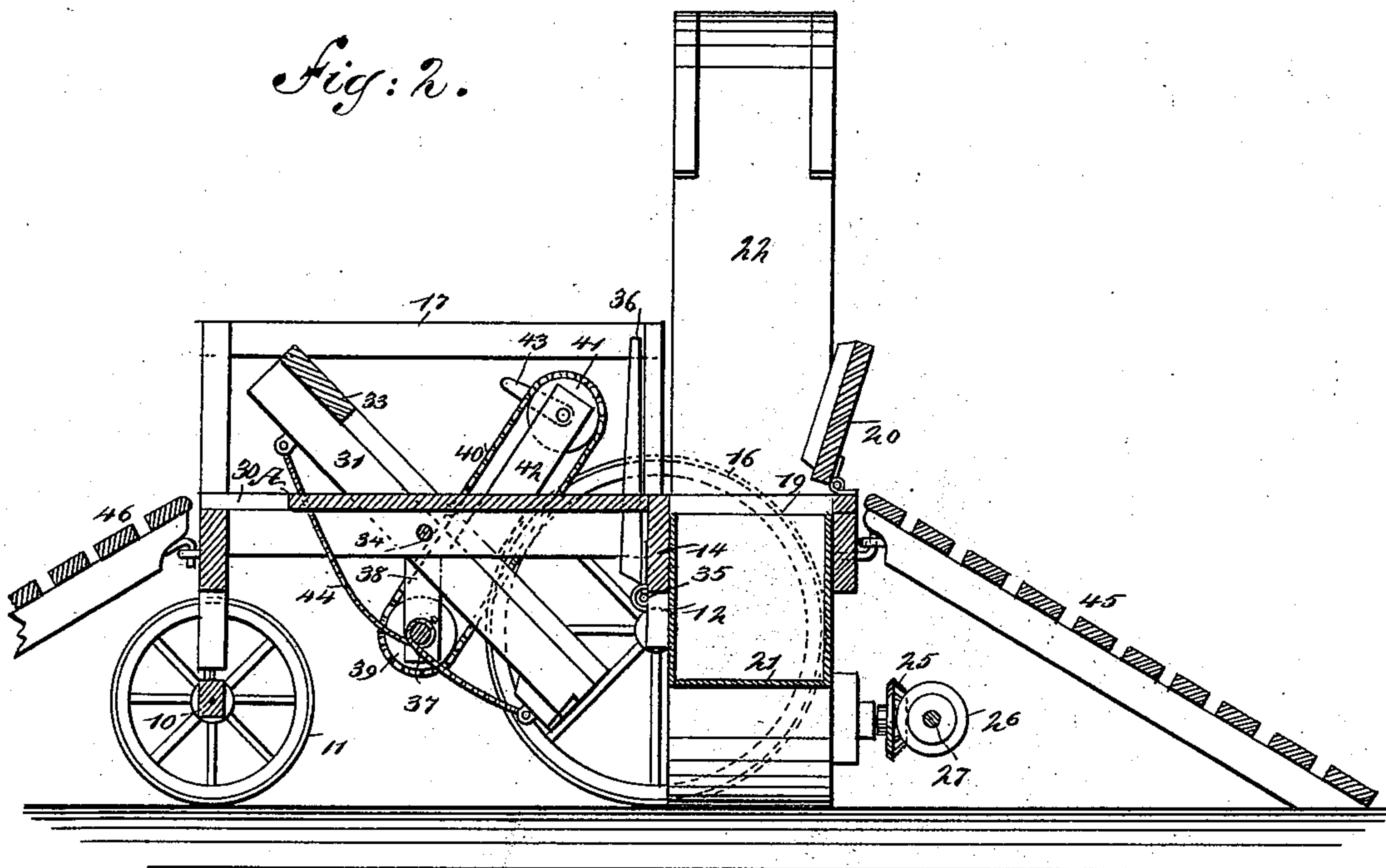
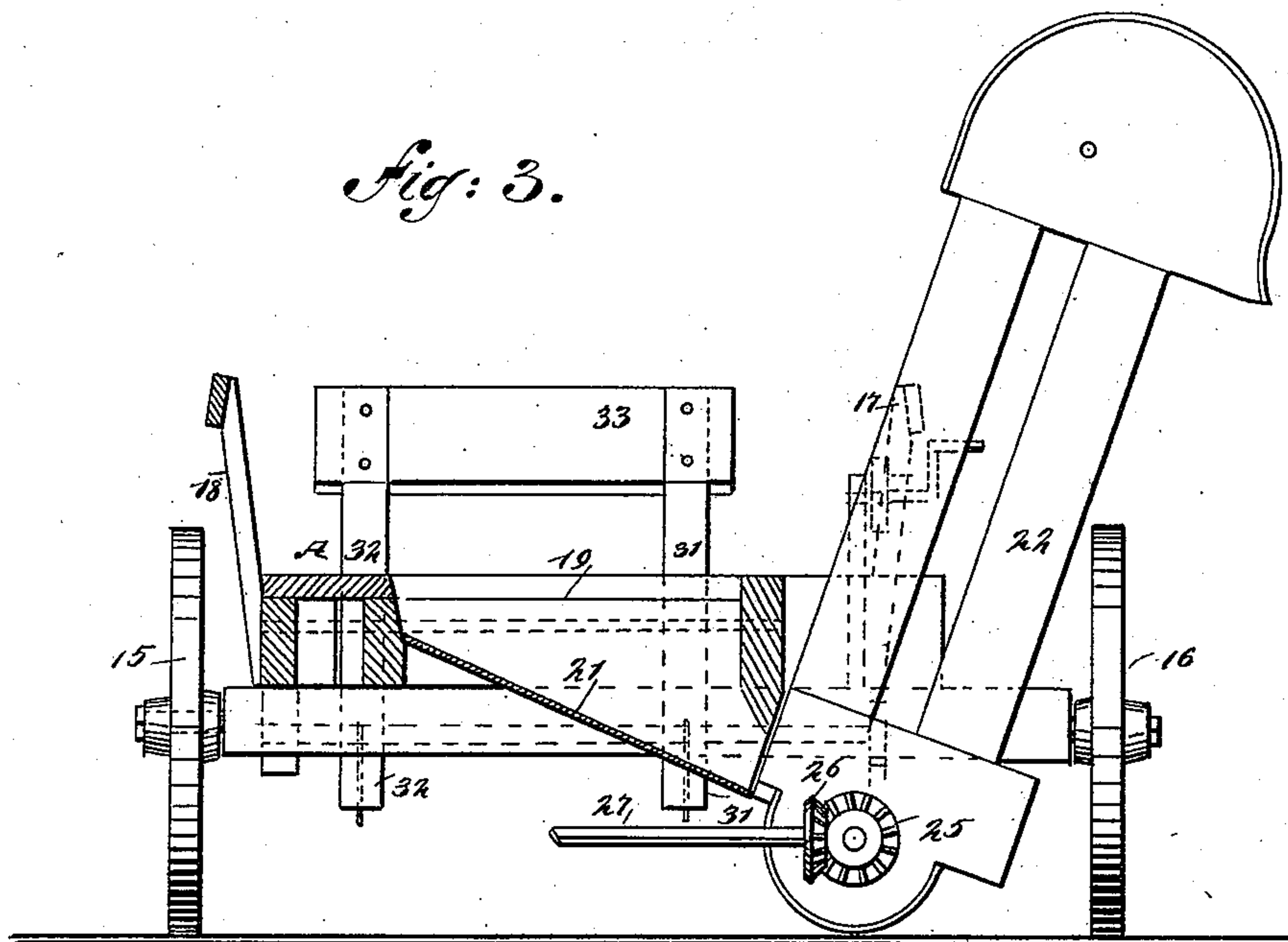


Fig. 3.



WITNESSES:

Chas. Viola.
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UNITED STATES PATENT OFFICE.

CHARLES LESLIE YOUNG, OF IMOGENE, IOWA.

PORTABLE GRAIN-DUMP.

SPECIFICATION forming part of Letters Patent No. 510,225, dated December 5, 1893.

Application filed March 13, 1893. Serial No. 465,759. (No model.)

To all whom it may concern:

Be it known that I, CHARLES LESLIE YOUNG, of Imogene, in the county of Fremont and State of Iowa, have invented a new and Improved Portable Grain-Dump, of which the following is a full, clear, and exact description.

My invention relates to an improvement in portable grain dumps, and it has for its object to provide a dump which may be readily transported from place to place, and which will in a measure partake of the form of a wagon.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the machine. Fig. 2 is a section taken longitudinally on the line 2—2 of Fig. 1; and Fig. 3 is a transverse section through the machine, taken essentially on the line 3—3 of Fig. 1.

In carrying out the invention a bed A, of any approved shape, preferably rectangular, is mounted upon a forward axle 10 carrying supporting wheels 11, and upon two rear axles 12 and 13, which axles are preferably of angular construction, as shown in Figs. 1 and 2, and are secured to the ends of a cross beam 14, located near the end of the bed and forming a portion thereof. The left-hand axle is so placed that the supporting wheel 15 mounted thereon will be quite close to the bed, while the right-hand axle 12 extends such a distance beyond the side of the bed that its supporting wheel 16 will be removed some distance from the bed, as shown in Fig. 1. The bed is preferably provided with two side rails 17 and 18, while the front and rear of the bed are unobstructed. Near what may be termed the rear end of the bed a pit or opening 19, is made, which may be covered, when not required for use, by means of a lid 20, and when the lid is in place it is preferably flush with the upper surface of the pit.

Within the pit or opening 19 a hopper or chute 21, is secured, which inclines downwardly in direction of the right-hand side of the bed, the lower end of the hopper or chute being open, as shown in Fig. 3, and this chute is adapted to receive the grain or other material dumped and to deliver it to the ground, or to an elevator or conveyer 22, of any approved construction removably located in front of the lower end of the chute or hopper, as shown in Fig. 3, the bed being provided with horizontally projecting beams 23 and 24 at its right-hand side, between which the elevator may be secured or steadied.

The elevator or conveyer may be driven in any suitable or approved manner. In the drawings the elevating mechanism is shown as being driven by means of a beveled gear 25, attached to its lower drum shaft, meshing with a like gear 26, secured to a shaft 27, leading for example and as shown in Fig. 1, to the left hand side of the machine at which point the shaft may be turned by hand or by means of applied power of any description.

In front of the cover 20, located over the hopper 21, two longitudinal openings are produced in the bed, one at each side of its center, which openings extend through from top to bottom, and are designated in the drawings as 28 and 29. These openings at their forward ends intersect or lead into a transverse depression 30, also formed in the bed, but not extending entirely through it. Within each of the openings 28 and 29 a balance or dumping beam is located, the said beams being designated in the drawings as 31 and 32, and when they are in a horizontal position they are flush with the upper face of the bed; and at their forward ends the balance or dump beams are connected by a cross bar 33, which when the beams are in their horizontal position fits neatly within the pit recess 30. The beams may be pivoted in any suitable or approved manner; usually, however, each one is provided with an independent pivot pin 34 passing through it and through adjacent strengthening beams located upon the bottom of the bed, as shown in Fig. 2. When the dumping or balance beams are in their horizontal po-

sition they may be so held by causing a lock bar 35, shown in positive lines in Fig. 2 and in dotted lines in Fig. 1, to engage with the rear ends of the beams at their under faces, the said locking bar being hinged upon one of the under beams of the bed, and it is moved to a vertical or practically to a horizontal position through the medium of a lever 36, secured preferably to one end of the bar and located preferably at the right hand side of the machine. The lever usually extends upward between the bed and right-hand rail 17.

Beneath the central portion of the bed a shaft 37, is journaled in suitable hangers 38, and this shaft, ordinarily at its right-hand end, has secured upon it a sprocket wheel 39 which is connected by a chain 40 with a second sprocket wheel 41 journaled in or upon a standard 42, which is projected upward from the right-hand side of the bed, usually in a rearwardly direction; and the shaft upon which the upper sprocket wheel 41, is mounted, is ordinarily provided with a crank arm 43, whereby it may be rotated, and consequently a rotary movement will be imparted to the lower shaft 37, which latter shaft may be termed a dumping shaft, as through the medium of this shaft the balance or dumping beams 31 and 32 are carried from a horizontal to an inclined position and vice versa; and this is accomplished through the medium of cables 44, which at one end are secured to the forward end of each dumping or balance beam and then coiled around the dumping shaft, and their opposite ends are attached to the rear ends of the same beams, as shown in Fig. 2, the chains or cables being permanently attached to the dumping shaft. Thus, by turning the crank 43 in one direction the chains will be so wound upon the dumping shaft as to carry the dumping beams from the horizontal position shown in Fig. 1 to the inclined or dumping position shown in Figs. 2 and 3, while when reverse movement is given to the crank arm the beams will be carried from their inclined to their horizontal position. When the dumping beams are in their horizontal position and the cover 20 is closed, and the locking bar 35, is brought beneath the beams, the upper surface of the bed will be as unbroken and solid as though it were constructed as an ordinary floor.

Platforms 45 and 46 are removably connected with the ends of the bed, the said platforms resting at their lower ends upon the ground, so that a team may be driven up one platform to the bed and from the bed down the other platform to the ground. These platforms may be attached to the bed in any approved manner, one means being shown in Fig. 2, in which either the bed or the platform is provided with eyes or with staples. When the platform has eyes secured to it the bed carries the staples, and vice versa.

In the operation of this machine a loaded wagon is carried up one platform and is driven over the bed until the wheels of the wagon rest upon the dumping or balance beams 31 and 32, the horses at that time being upon the opposite platform. The locking bar is then disengaged from the dumping beams and the crank 43, is manipulated to carry the beams to a dumping or inclined position, whereupon the contents of the wagon will be spilled or dumped into the hopper, 21 the lid 20 having been previously raised, and will pass from the hopper to the ground, or any receptacle placed to receive the load, or the load will be conveyed from the hopper to an elevator or conveyer 22, when such is employed. The load having been dumped the crank arm 43, is manipulated in a reverse direction and the dumping beams are restored to their horizontal position and locked therein. The team and wagon may then be driven off down the platform upon which the team has been standing, making way for the next team which will come up the opposite platform.

This machine is constructed somewhat as a wagon, and may be readily transported from place to place, so that the grain may be elevated, for example, as it is dumped upon the machine, into the barn, crib or other structure in which it is to be stored, or may be readily transferred to another vehicle.

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

1. In a portable dump, the combination with a bed mounted on wheels and provided in its rear with an opening closed by a lid, two longitudinal openings in front of the opening closed by the lid and a transverse opening into which the longitudinal openings lead, of dumping beams pivoted in the longitudinal openings of the bed and provided with a cross bar connecting their forward ends, a transverse shaft below the beams and provided with a sprocket wheel a chain wound around the shaft and having its ends secured to the ends of the dumping beams, a sprocket wheel mounted above the shaft and provided with a crank, and a chain passing around the said sprocket wheels, substantially as described.

2. In a portable dump, the combination with a bed mounted on wheels, of dumping beams pivoted in openings in the bed, a shaft below the beams, a chain wound on the shaft and having its ends connected with the ends of the dumping beams, means for operating the shaft, a locking bar hinged to the bed, and a lever connected with the said bar for moving it to a vertical or horizontal position, substantially as described.

3. In a portable dump, the combination with a bed having in its rear part an opening closed by a lid, and longitudinal openings in front of the opening closed by the lid,

front and rear axles, the rear axle extending
at one side, and wheels upon the axles, of
dumping beams mounted in the longitudinal
openings of the bed, a shaft below the beams
5 a chain wound upon the shaft and having its
ends connected with the beams, means for
operating the shaft, a locking bar below the
beams, a chute below the opening of the bed

closed by the lid, and an elevator carried by
the bed at the side on which the rear axle is 10
extended, substantially as herein shown and
described.

CHARLES LESLIE YOUNG.

Witnesses:

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J. K. GWYNN.