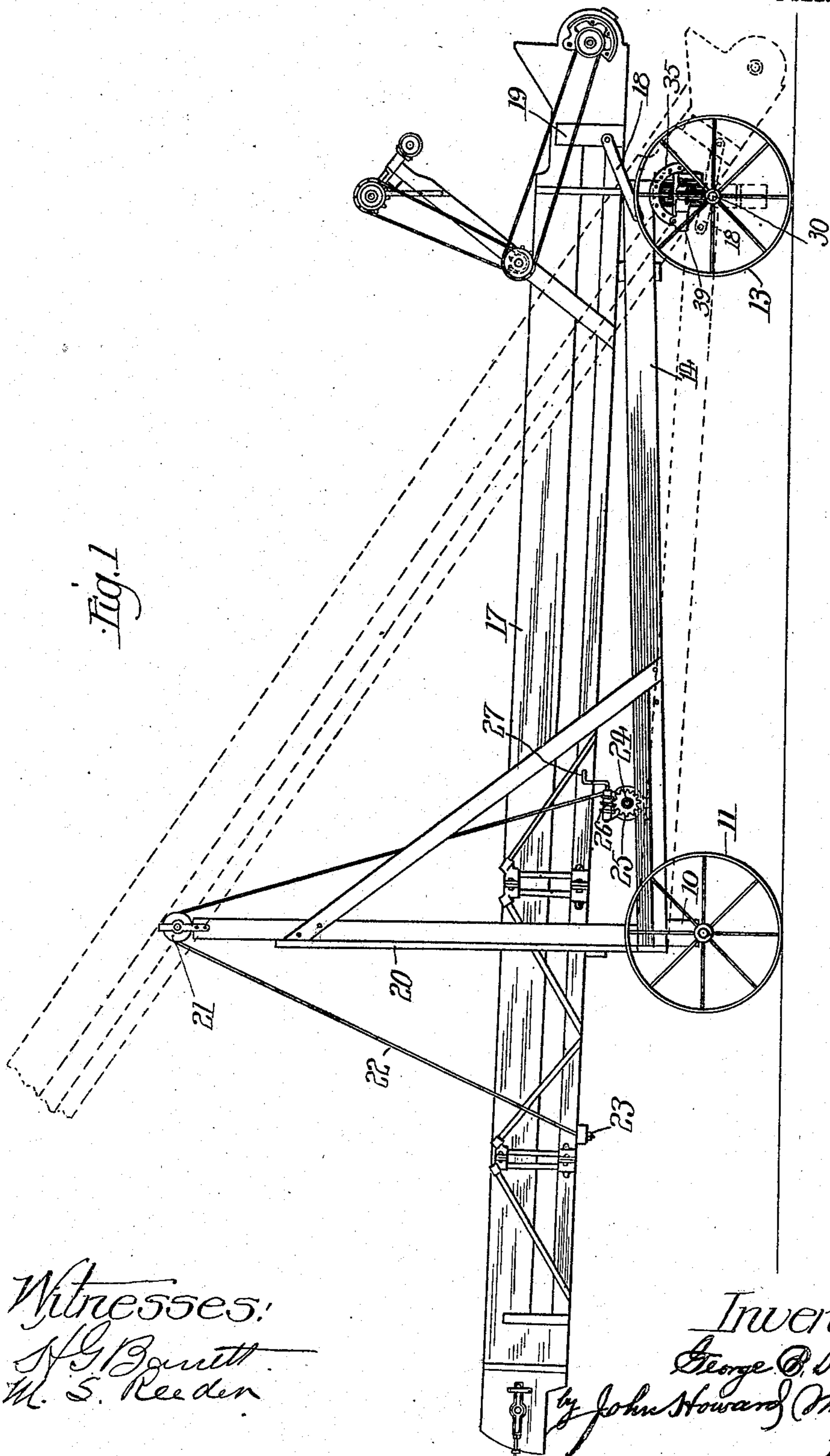


G. B. KOONTZ.
 PORTABLE ELEVATOR.
 APPLICATION FILED MAY 27, 1907.

936,641.

Patented Oct. 12, 1909.
 2 SHEETS—SHEET 1.



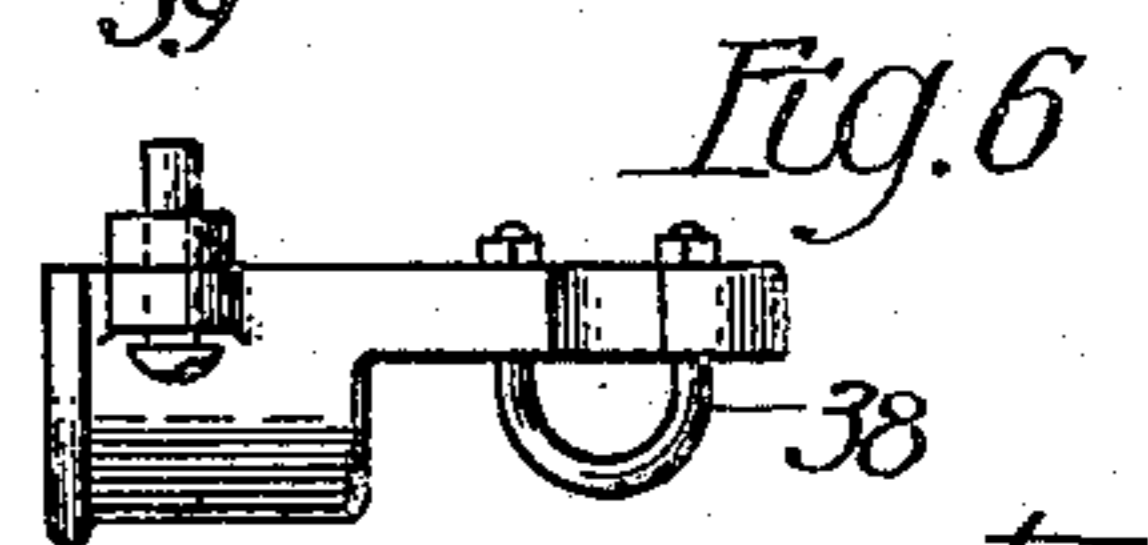
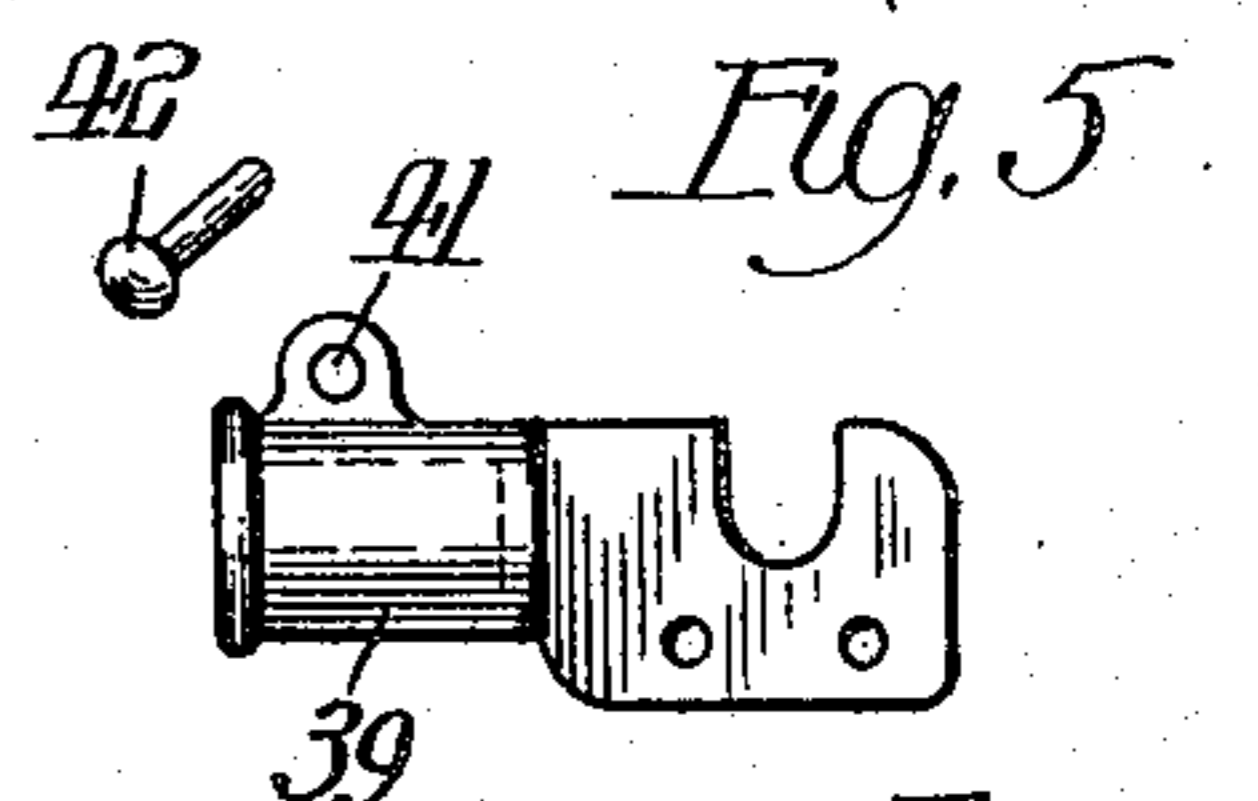
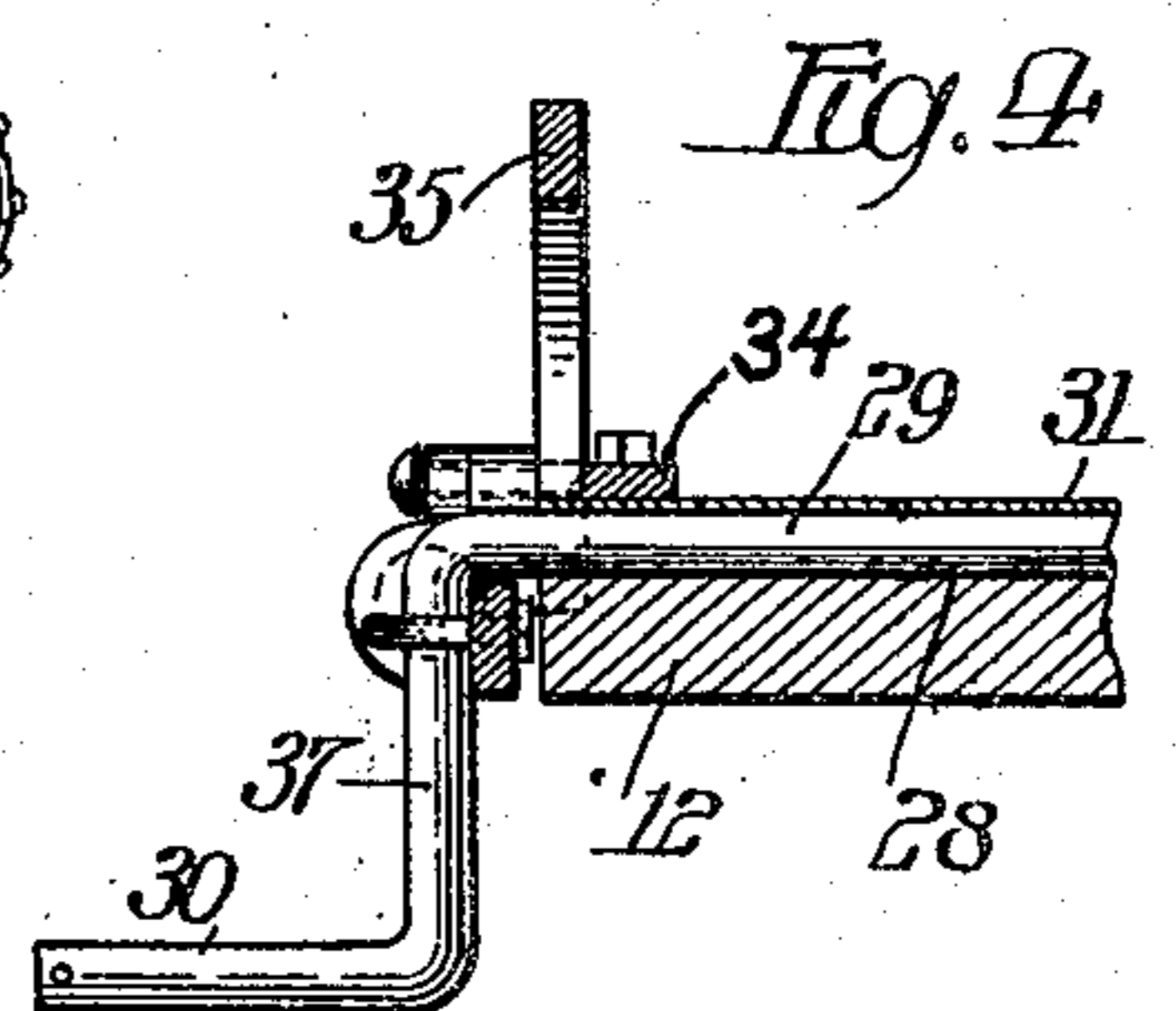
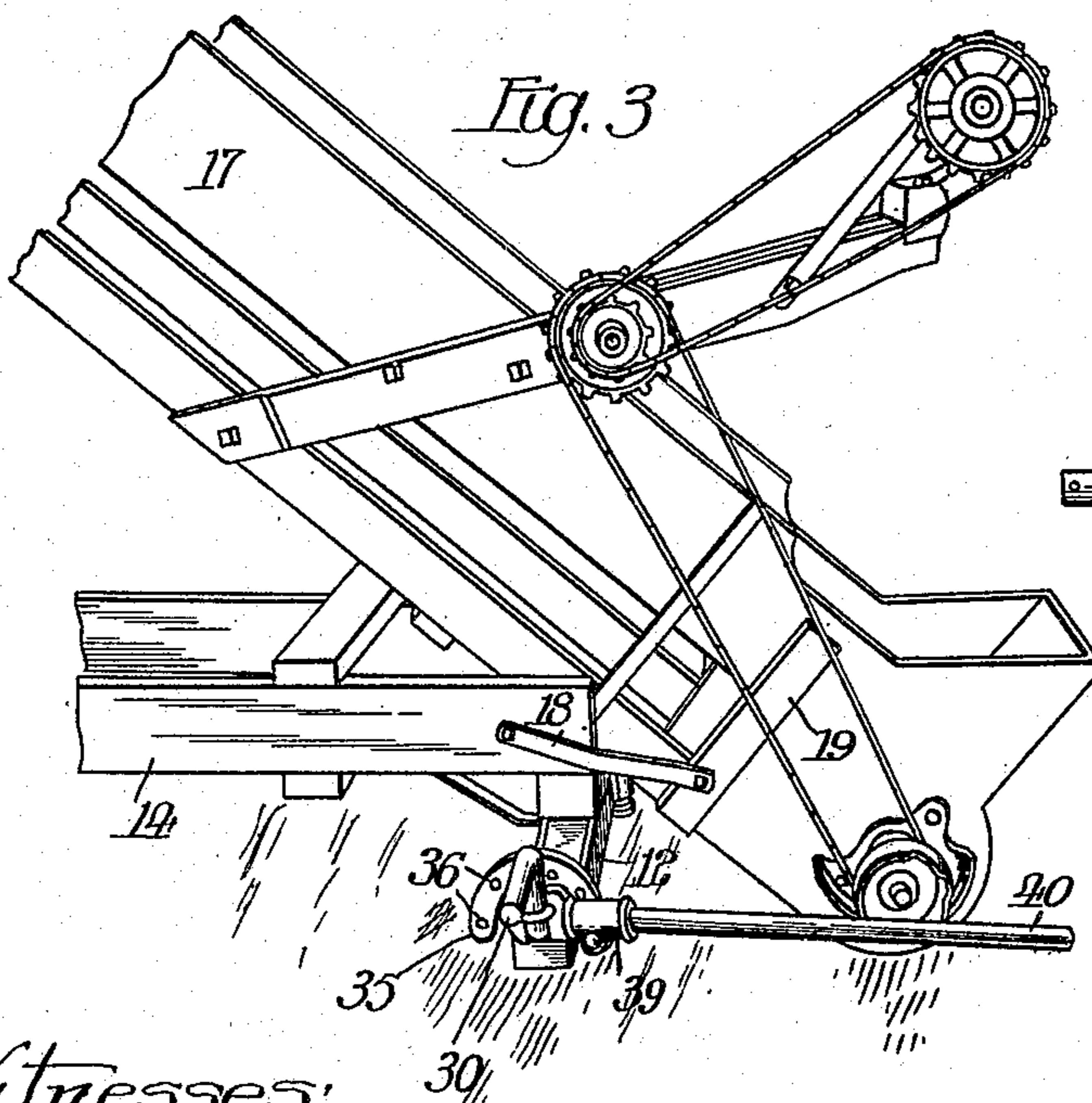
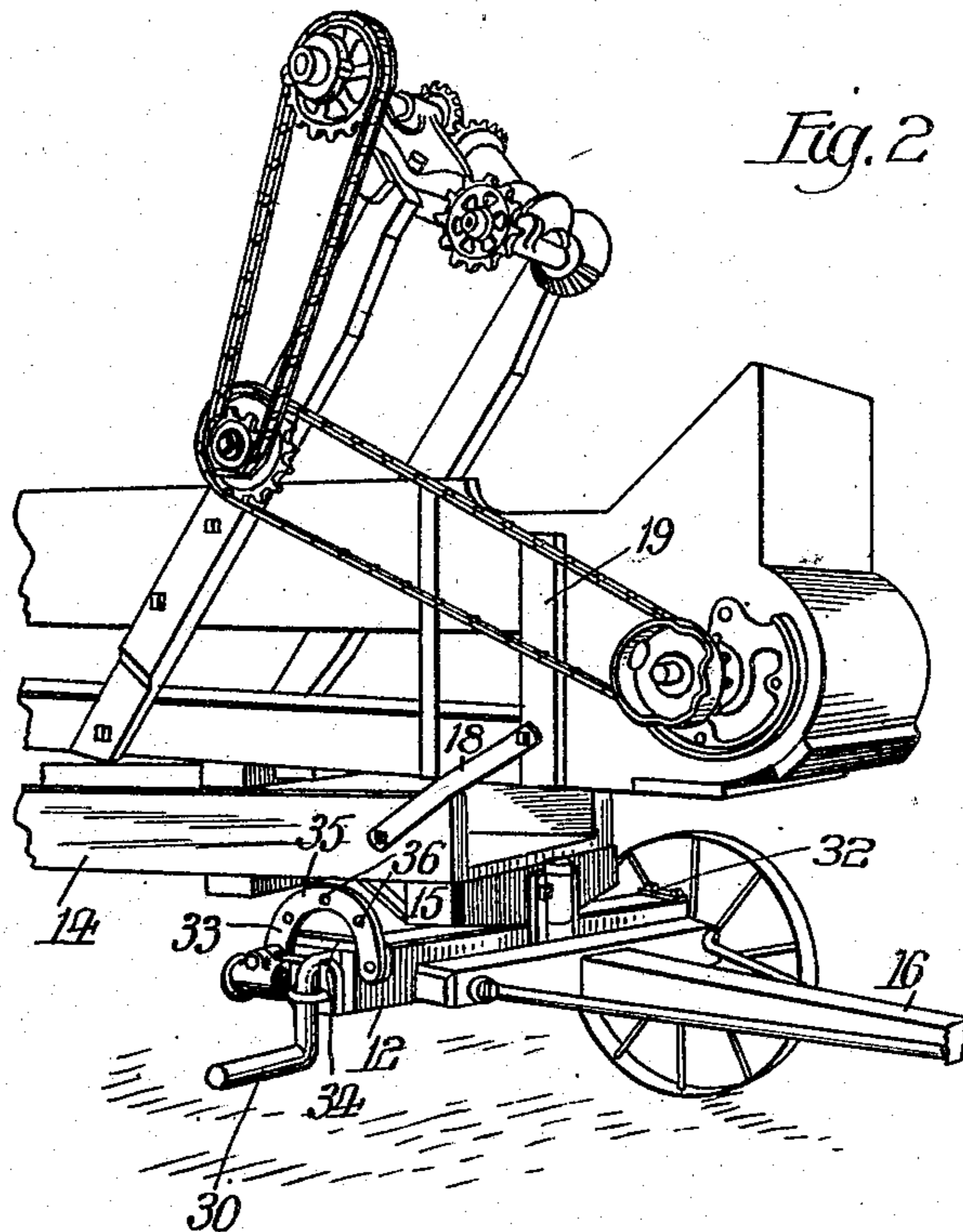
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Inventor.
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 by John Howard McCloy
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Witnesses:
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George B. Koontz,
 by John Howard (McClary)
 His Attorney

UNITED STATES PATENT OFFICE.

GEORGE B. KOONTZ, OF STREATOR, ILLINOIS, ASSIGNOR TO KING & HAMILTON COMPANY, OF OTTAWA, ILLINOIS, A CORPORATION OF ILLINOIS.

PORTABLE ELEVATOR.

936,641.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed May 27, 1907. Serial No. 375,764.

To all whom it may concern:

Be it known that I, GEORGE B. KOONTZ, a citizen of the United States, and resident of Streator, in the county of Lasalle and State of Illinois, have invented certain new and useful Improvements in Portable Elevators, of which the following is a full, clear, and exact specification.

My invention is concerned with a portable elevator, and more especially the truck by which it is carried, and its connections thereto, by which, when the elevator is to be used, the hopper or receiving end can be lowered to the ground, so that the grain can be delivered thereto most conveniently.

To illustrate my invention, I annex hereto two sheets of drawings, in which the same reference characters are used to designate identical parts in all the figures, of which,—
Figure 1 is a side elevation showing the elevator down and ready for transportation in full lines, and raised and ready for use in dotted lines; Fig. 2 is a perspective view of the receiving end of the elevator in its position for transporting; Fig. 3 is a similar view, with it in its position for use, one of the truck wheels being omitted in both figures to show more clearly the construction of the parts; Fig. 4 is a detail in vertical section through one end of the front truck sill; and Figs. 5 and 6 are a side elevation and top plan view, respectively, of the socket for the operating handle.

In the form shown, the transverse sill 10 at one end of the truck is provided with axles for the rear truck wheels 11, and is of any ordinary construction, whereas the bolster sill 12 for the front truck wheels 13 is of a special construction to be described. These two sills are connected by the longitudinal sills 14, and these sills may be rigidly connected to the transverse sills 10, but are preferably secured to the intermediate transverse sill 15, which sill is swiveled on the bolster sills 12 in any desired manner. For the purposes of transportation, a tongue 16 is detachably secured to the sill 12 in any desired manner, so that it can be removed when the elevator is to be used.

The elevator consists of the open trough 17, which may be of any desired construction, and which is secured to the front end of the truck by means of the links 18, which are pivoted to the longitudinal sills 14 and to the pieces 19 on the trough, as will be

clearly apparent from Figs. 2 and 3. As a convenient means for elevating the trough to the position shown in dotted lines in Fig. 1, I may provide the standards 20 carrying the sheaves 21 at their upper ends, over which pass the ropes or cables 22 secured to the trough at 23, and having their other ends secured to the winding shaft 24, which is provided with the worm gear pinion 25, which is engaged by the worm 26, so that by rotating the handle 27, the trough can be lifted without difficulty.

The sill 12 is preferably provided with a channel 28 extending the length of it, and in this channel is journaled an axle rod 29, which has the eccentric ends 30 which form the axles for the truck wheels 13. The top of the sill 12, and, of course, the channel 28, are preferably covered by the strip 31 of sheet-metal secured to the sill. At one end, the strip 31 is bolted in place by the strap 32, while at the other end is secured a casting 33, which consists of the cross piece 34 and the semicircular portion 35, which is provided with recesses or apertures 36 located therein at suitable intervals. The crank arm 37 has bolted thereto, by the clip 38, the socket piece 39, which is adapted to receive the end of the lever or handle 40 by which the apparatus is manipulated. It also has the perforated ear 41, through which a pin 42 may be passed into one of the apertures 36 to secure the parts in any desired position of adjustment.

The operation of the apparatus will be readily apparent: While it is being transported, the parts are as shown in full lines in Fig. 1 and as seen in Fig. 2, except that, of course, the wheel omitted in Fig. 2 for clearness is in place. When it is desired to operate the elevator, the truck is stopped at the proper place and the tongue 16 is removed. The lever 40 is then inserted in the socket and the pin 42 withdrawn, after which the lever is turned in a clockwise direction until the receiving end of the elevator is lowered as much as may be desired, when the pin 42 is inserted in the desired aperture 36. It will be readily apparent that, inasmuch as the position of the wheels is not changed, the swinging of the handle and the rotation of the shaft 29 about its crank portions 30 as a center will cause the bolster sill 12 to be swung forward and downward to bring the parts into the posi-

tion shown in Fig. 3. When the elevator is to be moved, the operation is reversed. It will also be apparent, from Figs. 2 and 3, that the connection formed between the trough and the longitudinal sills by the links 18 permit of the lower end of the trough being lowered very materially as its other end is elevated, without resorting to the use of the eccentric axle, and that I might employ this link connection for this purpose independently of the eccentric axle construction.

While I have shown and described my invention as embodied in the specific details which I at present consider best adapted to carry out its purposes, it will be understood that it is capable of some modifications, and that I do not desire to be limited in the interpretation of the following claims except as may be necessitated by the state of the prior art.

What I claim as new, and desire to secure by Letters Patent of the United States, is:

1. In an elevating apparatus, the combination with the longitudinal sills, of the transverse sills attached to the ends thereof, a bolster sill swiveled to one of said transverse sills, the conveyer trough, and the links pivotally mounted at both ends connecting the trough to the longitudinal sills, said links when the trough is horizontal extending entirely above their point of attachment to the sills, so that as the free end of the trough is raised the receiving end will be lowered through the action of the links.

2. In an elevating apparatus, the combination with the longitudinal sills, of the transverse sills attached to the ends thereof, a bolster sill swiveled to one of said transverse sills, the conveyer trough, pivotal connections between the trough and the longitudinal sills, an axle rod having eccentric ends upon which the wheels are journaled mounted to rotate in the bolster sill, and means for rotating said rod and securing it in any desired angular position.

3. In an elevating apparatus, the combination with the longitudinal sills, of the transverse sills attached to the ends thereof, the bolster sill swiveled to one of said transverse sills, the conveyer trough, pivotal connections between the trough and the longi-

tudinal sills, an axle rod having eccentric ends upon which the wheels are journaled, mounted to rotate in the bolster sill, and means for rotating said rod and securing it in any desired angular position, consisting of a semicircular segment provided with apertures secured to the bolster sill, an apertured arm secured to the axle rod adjacent the segment, and a pin to enter the aperture in the arm and any one of the apertures in the segment.

4. In an elevating apparatus, the combination with the longitudinal sills, of the transverse sills attached to the ends thereof, the bolster sill swiveled to one of said transverse sills, the conveyer trough, the links connecting the trough to the longitudinal sills so that as the free end of the trough is raised the receiving end will be lowered through the action of the links, an axle rod having eccentric ends upon which the wheels are journaled, mounted to rotate in the bolster sill, and means for rotating said rod and securing it in any desired angular position.

5. In an elevating apparatus, the combination with the longitudinal sills, of the transverse sills attached to the ends thereof, the bolster sill swiveled to one of said transverse sills, the conveyer trough, the links connecting the trough to the longitudinal sills so that as the free end of the trough is raised the receiving end will be lowered through the action of the links, an axle rod having eccentric ends upon which the wheels are journaled, mounted to rotate in the bolster sill, and means for rotating said rod and securing it in any desired angular position, consisting of a semicircular segment provided with apertures secured to the bolster sill, an apertured arm secured to the axle rod adjacent the segment, and a pin to enter the aperture in the arm and any one of the apertures in the segment.

In witness whereof, I have hereunto set my hand and affixed my seal, this 20th day of May A. D. 1907.

GEORGE B. KOONTZ. [L. S.]

Witnesses:

SARAH H. PADGETT,
CLARENCE GRIGGS.