

No. 680,331.

Patented Aug. 13, 1901.

G. W. JOHNSON.

GRAIN DUMP AND ELEVATOR.

(Application filed May 18, 1901.)

(No Model.)

3 Sheets—Sheet 1.

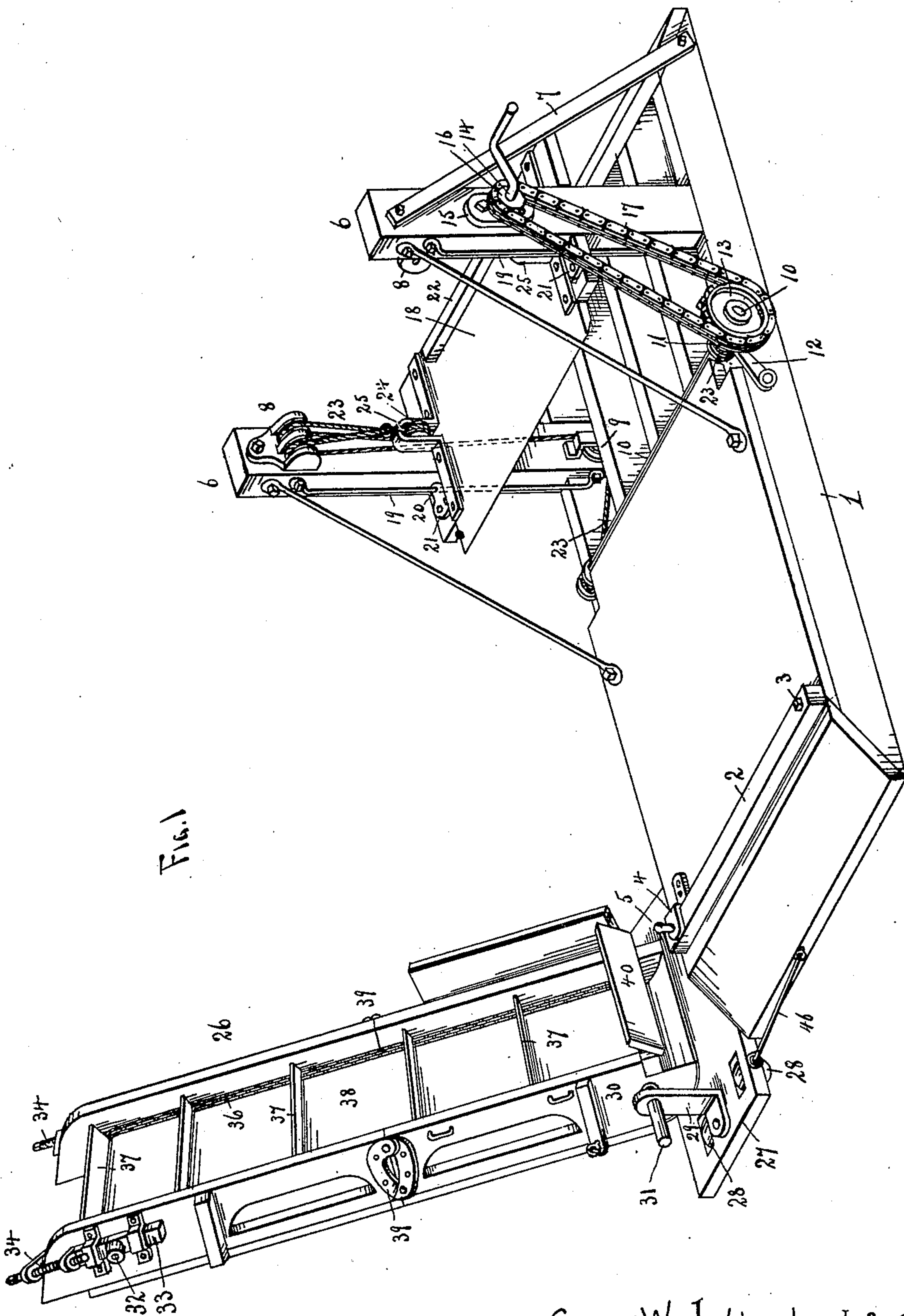


Fig. 1

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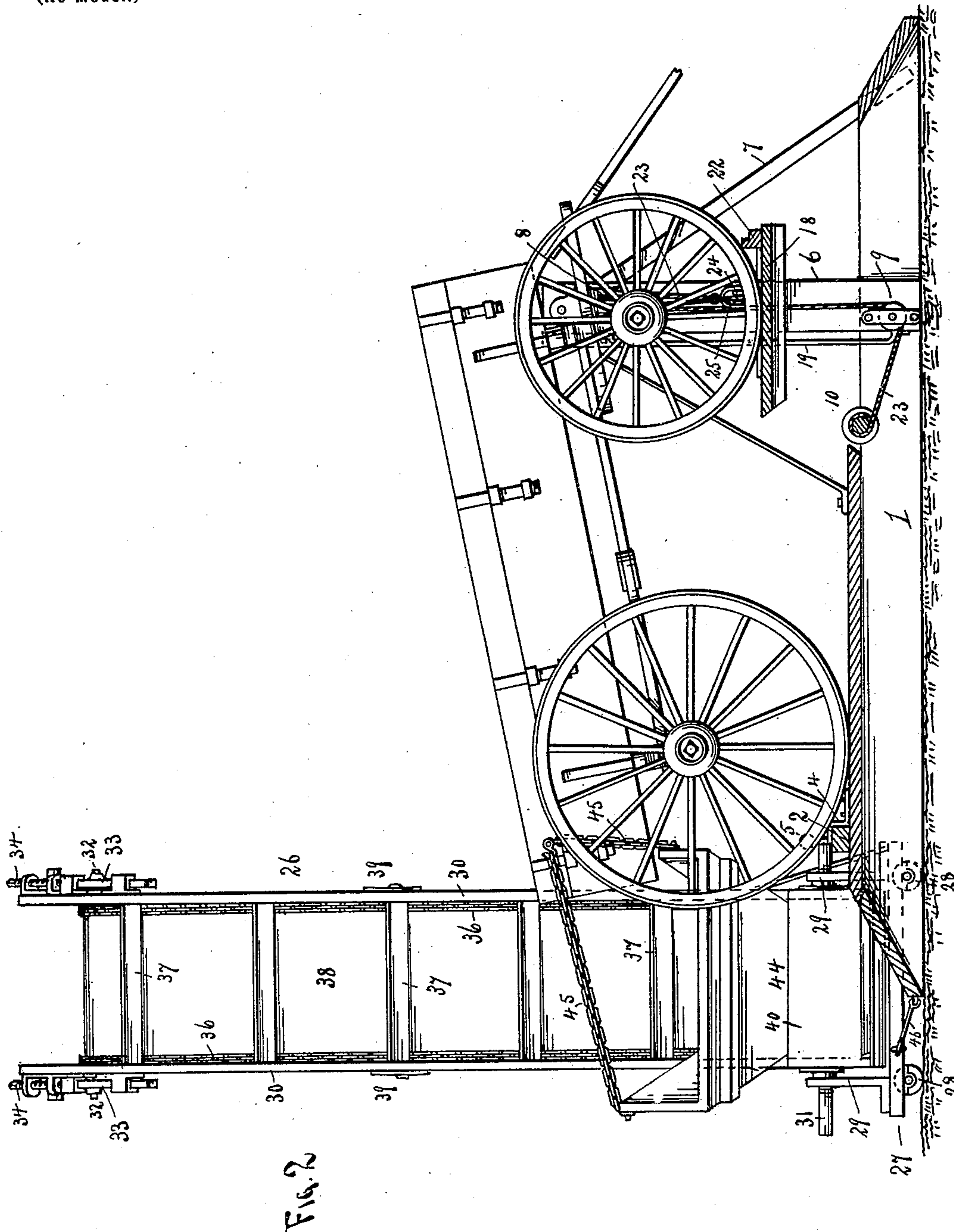
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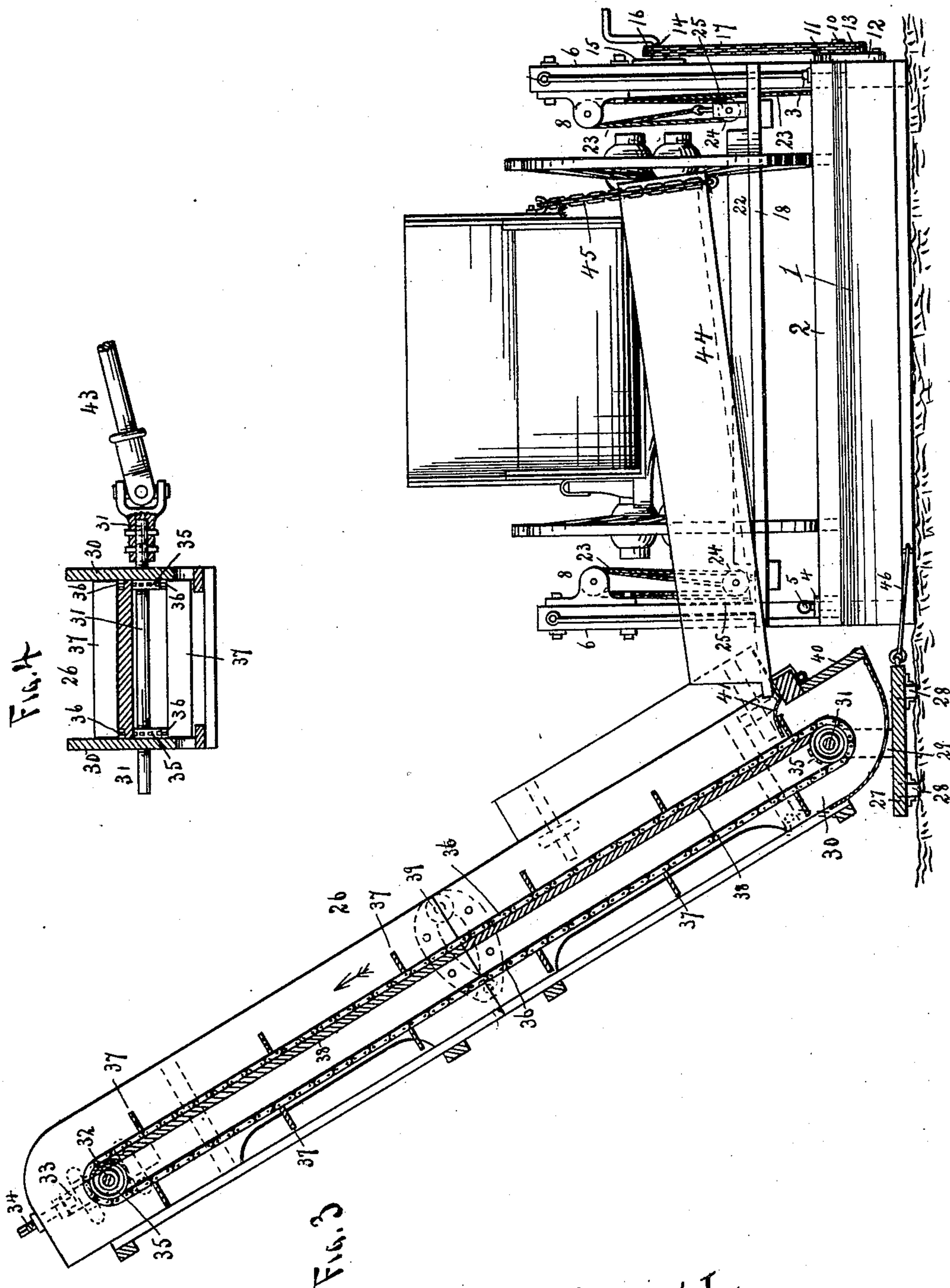
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UNITED STATES PATENT OFFICE.

GEORGE W. JOHNSON, OF PIPER CITY, ILLINOIS.

GRAIN-DUMP AND ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 680,331, dated August 13, 1901.

Application filed May 18, 1901. Serial No. 60,913. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. JOHNSON, a citizen of the United States, residing at Piper City, in the county of Ford and State of Illinois, have invented a new and useful Grain Dump and Elevator, of which the following is a specification.

My invention is an improved combined grain dump and elevator, by means of which grain may be dumped from a wagon and elevated to a bin or other suitable receptacle; and it consists in the peculiar construction and combination of devices hereinafter fully set forth and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a combined grain dump and elevator constructed in accordance with my invention. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a rear elevation of the dumping-platform and a sectional view of the elevator. Fig. 4 is a detail transverse sectional view of the elevator, showing the tumbling-rod connected to the power-shaft thereof.

In the embodiment of my invention I provide a portable platform 1, onto and from which a loaded wagon may be driven. On one end of the platform, which I will term the "rear" end thereof, is a chock-bar 2, which is pivoted at one end on the platform by a bolt 3. The free end of said chock-bar may be secured when said chock-bar is in the position shown in the drawings by a keeper 4 and a removable pin 5, the latter being inserted in registering openings in said keeper, chock-bar, and platform. From the side beams of the platform, near the front end thereof, rise a pair of standards 6. The same are secured by braces 7 and are provided on their opposing inner sides at their upper ends with double sheaves or blocks 8 and near their lower ends with single blocks or sheaves 9. A winch 10 is journaled in suitable bearings on the platform and is provided with a ratchet-wheel 11, which is engaged by a pawl 12. At one end of the said winch is a sprocket-wheel 13. A crank-shaft 14 is journaled in a bearing 15 on the outer side of one of the standards 6, near the upper end thereof. Said crank-shaft, which is adapted to be rotated manually, has a

sprocket-wheel 16, which revolves therewith. An endless sprocket-chain 17 connects the sprocket-wheels 13 and 16 and conveys power from the hand-crank to the winch. A dump-platform 18 is disposed between the standards 6, has its ends guided thereon, and is adapted to be raised and lowered. The said standards are each provided on one side with a vertical guide-rod 19, the said guide-rods passing through openings 20 in plates 21, which are bolted on the ends of said dump-platform 18. The latter is provided at its front side with a chock-bar 22. Cords or ropes 23 are attached to and adapted to be wound upon and unwound from the winch. The said cords or ropes pass around the sheaves 9, the double sheaves 8, and sheaves 24, which are carried by the dump-platform 18, and their outer ends are hooked to the keepers 25 on said dump-platform in which said sheaves 24 are mounted. It will be understood from the foregoing that the dump-platform 18 may be readily raised and lowered by turning the hand-crank 14.

An elevator 26 is mounted on a platform 27, which is provided with suitable supporting wheels or rollers 28, whereby it may be readily moved from one point to another. On the said platform 27 are vertical standards 29. The trunk 30 of the elevator has in its lower end a power-shaft 31, which is journaled in bearings in the sides of the trunk and is mounted in bearings in the standards 29. Thereby the elevator-trunk is pivotally mounted on the platform 27, so that the free outer end of the elevator-trunk may be raised and lowered and disposed so that the elevator will discharge into a grain-bin or other receptacle. The shaft 32, near the outer end of the elevator-trunk, is journaled in bearings 33, which are adjustable by means of screws 34. The said shafts 31 32 are provided with the usual sprocket-wheels 35, which are connected together by endless sprocket-chains 36. Said sprocket-chains are connected together by transversely-disposed flights 37, which operate on bottom boards 38 in the elevator-trunk and serve to convey the grain upward thereon, as will be understood. The elevator-trunk is composed of two sections which are hinged together, as at 39, and

thereby the said elevator-trunk may be folded and compactly disposed when not in use. At the lower end of the elevator-trunk, on the upper side thereof, is a hinged door 40, by means of which such grain as accumulates in the lower end of the elevator-trunk may be discharged therefrom. A valve 41, which is made of flexible material, such as leather or the like, is connected to a cross-bar 42, that connects the sides of the elevator-trunk, and said valve bears on the chains 36, the flights passing under said valve in succession. Power is conveyed to the shaft 31 from any suitable source of power, as a steam-engine or a horse-power machine. In Fig. 4 of the drawings I show a tumbling-rod 43 of the usual construction attached to one end of shaft 31.

In connection with my improved dump and elevator I employ a chute 44 of suitable construction and dimensions and the outer end of which is adapted to be attached to a wagon-bed by chains 45, so as to dispose the said chute in an inclined position under the rear end of the wagon-bed when the wagon has been driven onto the platform 1. The said chute is disposed in operative relation with the elevator and discharges into the same, as shown in Figs. 2 and 3.

In operation when a loaded wagon has been driven onto the platform 1, the dump-platform 18 having been previously lowered and the chock-bar 2 disposed out of the way of the wagon, the chock-bar 2 is disposed in position to chock the rear wheels of the wagon, the front wheels of the latter being on the dump-platform 18. Said dump-platform 18 is then raised, thereby raising the front end of the wagon and inclining the bed thereof. The chute having been attached to the wagon-bed, as shown in Figs. 2 and 3, and disposed in operative relation to the elevator, the grain from the wagon-bed is poured into the chute and by the latter discharged into the lower end of the elevator-trunk as rapidly as the same is carried up by the elevator and discharged into the bin or other receptacle.

In the drawings I have shown hook-bars 46

connecting the platform 27 to the dump-platform.

Having thus described my invention, I claim—

1. A frame having a platform onto which a wagon may be driven, a vertically-movable dump-platform at one end of said wagon-platform, standards between which said dump-platform is disposed and by which it is guided, a winch below said wagon-platform, a hand-crank mounted on one of said standards, sprocket-wheels and an endless chain connecting said hand-crank to said winch, sheaves on said standards, above and below said dump-platform, and cords or ropes attached to said winch, engaging said sheaves and attached to said dump-platform, substantially as described.

2. A frame having a platform onto which a wagon may be driven, a chock-bar 2 at one end of said platform, one end of said chock-bar being pivoted thereon and a keeper and locking-pin to secure the free end of said chock-bar on said platform, the latter being provided with a vertically-movable dump-section 18 and means to raise and lower the same, for the purpose set forth, substantially as described.

3. In combination with a platform onto which a wagon may be driven and having a dump-platform at one end and means to raise and lower said dump-platform, an elevator on one side of the said platform, and a chute, the latter being adapted to be disposed transversely over the platform and provided with means whereby it may be suspended under the rear end of the wagon-bed and supported thereby, said chute receiving the load from the wagon, as the latter is tilted by the raising of the dump-platform, and discharging into said elevator, substantially as described.

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

GEORGE W. JOHNSON.

Witnesses:

JOSEPH K. MONTELIUS,
W. H. KEWLEY.