

986,717.

O. JOHNSON.
SHOCK GATHERER AND LOADER.
APPLICATION FILED MAR. 5, 1909.

Patented Mar. 14, 1911.

3 SHEETS—SHEET 1.

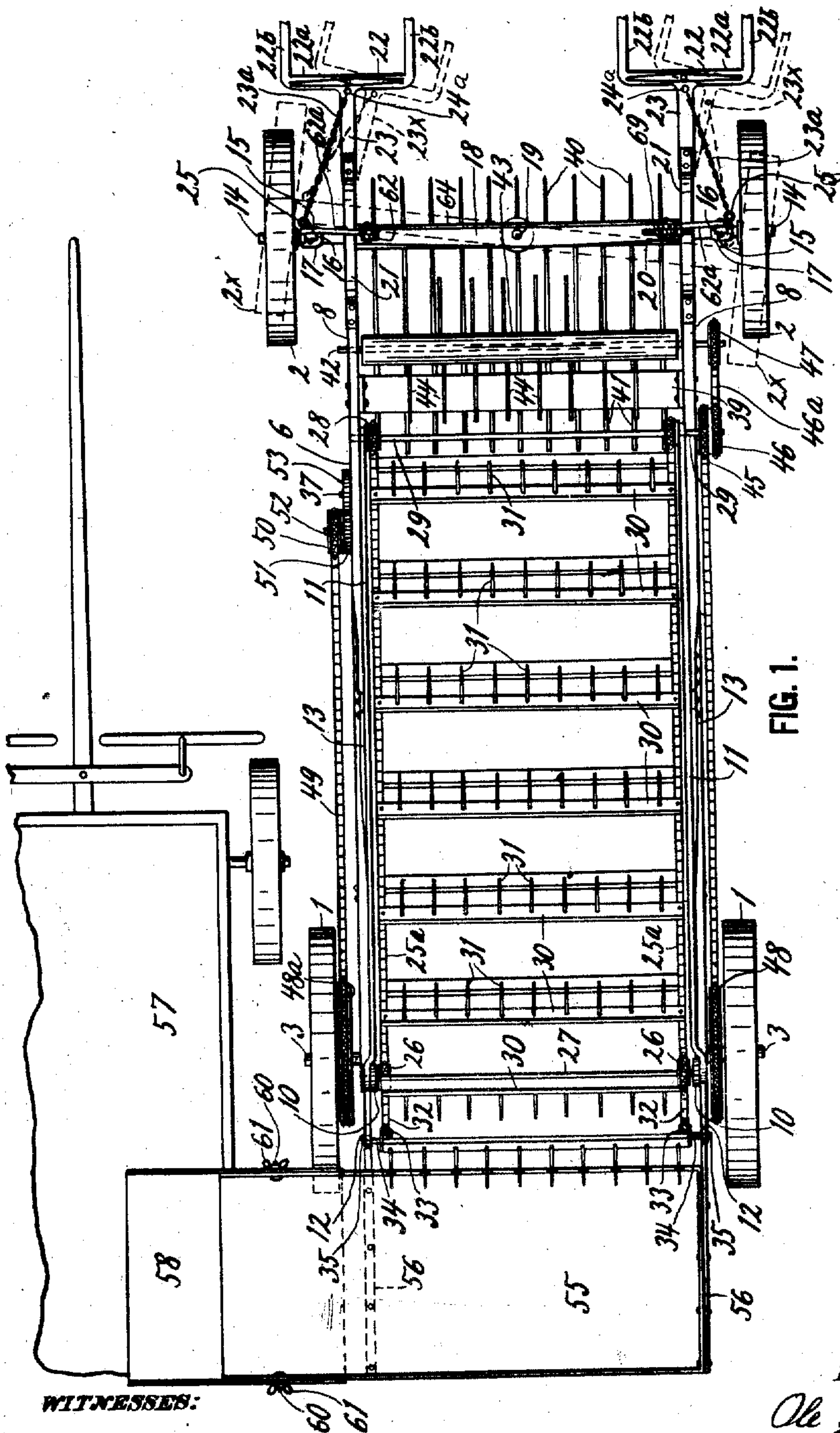


FIG. 1.

WITNESSES:

D. E. Carlson.
E. H. Erickson.

INVENTOR:

Ole Johnson
BY HIS ATTORNEY:
A. M. Carlson.

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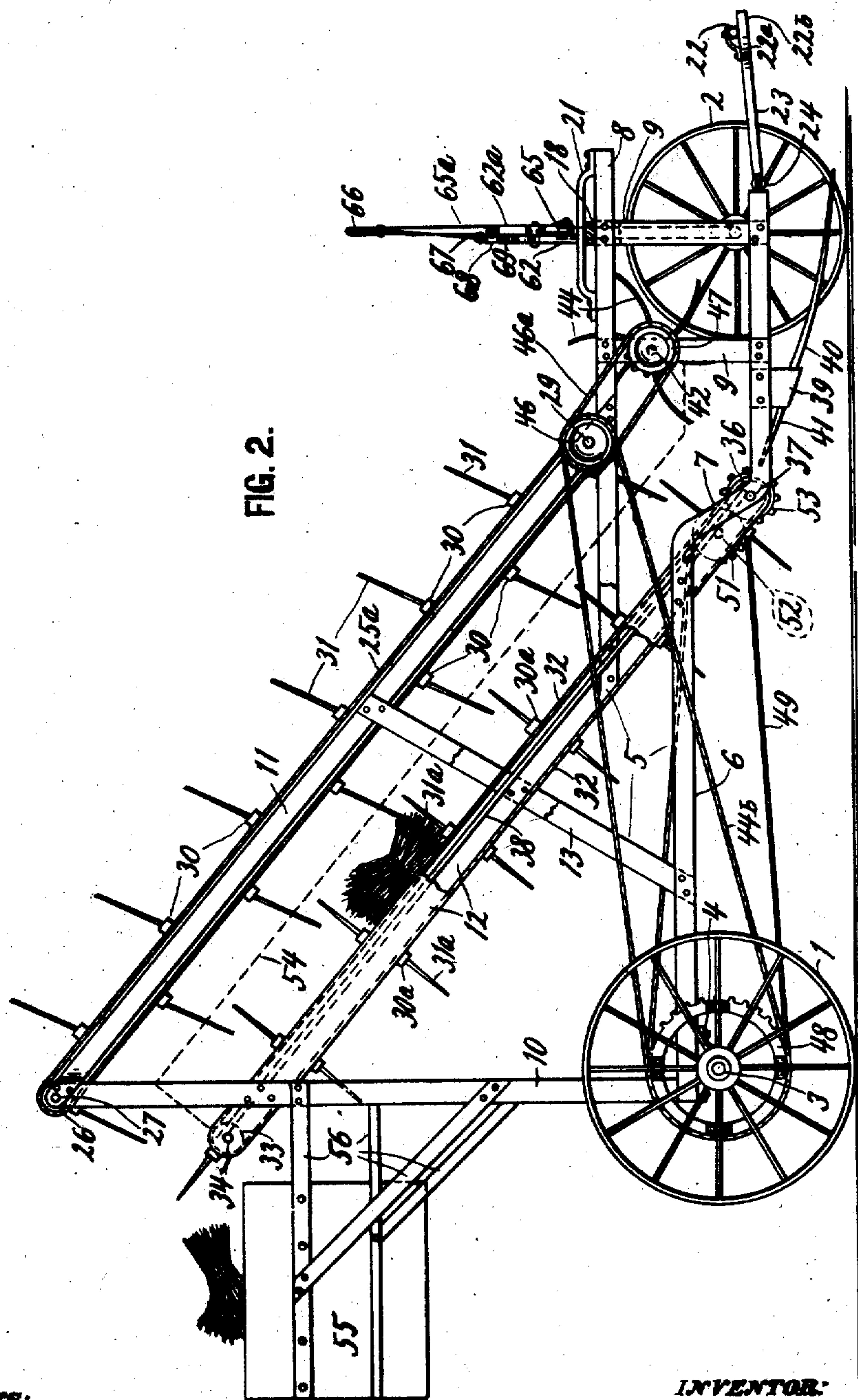


FIG. 2.

WITNESSES:

D. E. Carlson.
E. H. Erickson.

INVENTOR:

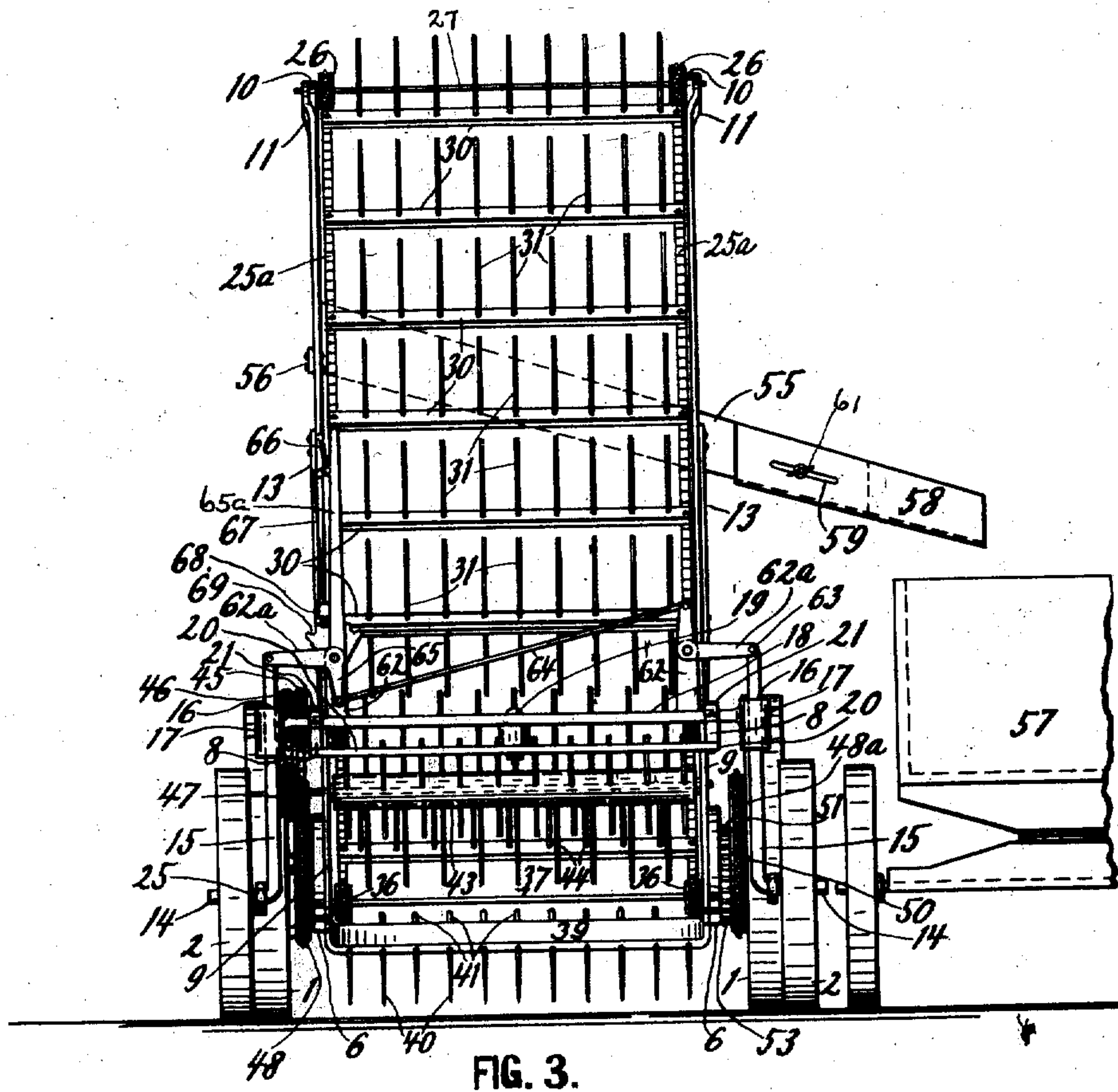
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UNITED STATES PATENT OFFICE.

OLE JOHNSON, OF CLEAR LAKE, SOUTH DAKOTA.

SHOCK GATHERER AND LOADER.

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Specification of Letters Patent.

Patented Mar. 14, 1911

Application filed March 5, 1909. Serial No. 481,546.

To all whom it may concern:

Be it known that I, OLE JOHNSON, a citizen of the United States, residing at Clear Lake, in the county of Deuel and State of South Dakota, have invented a new and useful Shock Gatherer and Loader, of which the following is a specification.

My invention relates to machines for gathering up grain shocks from the field and loading them into wagons; and the object is to provide a strong, simple and effective machine of said class operated by the supporting wheels and having no delicate mechanism apt to get out of order. This and other objects I attain by the novel construction and arrangement of parts illustrated in the accompanying drawing in which—

Figure 1 is a top or plan view of my shock-loading machine, and a portion of a wagon to be loaded. Fig. 2 shows a right hand side elevation of Fig. 1 with the wagon removed and one of the front wheels of the loader removed. Fig. 3 is a front elevation of Fig. 1 with the draft means removed.

Referring to the drawing by reference numerals, 1 designates the rear supporting wheels and 2 the front supporting wheels of the machine. The rear wheels are secured on the ends of an axle 3 journaled in the boxes 4 journaled to the rear part of the frame work 5.

The main frame consists of two lower horizontal, longitudinally extending bars 6 offset downwardly near the front, as at 7, for purpose to be later described, an upper set of horizontal bars 8 extending longitudinally above the bars 6 from the front to a point about half way to the rear of the machine; vertical braces 9 between said two sets of longitudinally extending bars, two vertical rear posts 10, an upper set of forwardly and downwardly inclined bars 11 extending from the upper end of posts 10 and having their lower ends fastened in the bars 8 near the front of the machine, a lower set of forwardly inclined frame bars 12 extending from the posts 10 and having their lower ends secured in the frame bars 6 near the front of the machine. 13 are braces near the middle of the frame to give it steadiness.

In the hub of each front wheel is jour-

naled the horizontal arm of stub axle 14 of an L-shaped bar 15, having its vertical arm angular in cross section and extending through and above an angular hole 16 in the enlarged end portion 17 of a horizontal cross bar 18, which is pivotally connected at 19 with the rigid cross bar 20 of the frame. The bar 18 is guided horizontally in the yokes 21 secured each to one of the bars 8.

The whole device is drawn by horses one pulling in each of the swingle-trees 22, each of which is pivotally mounted on the rear cross piece 22^a of thills 22^b. Each of said cross pieces has a rearwardly extending rigid arm 23 pivotally connected to the front end of the frame bar 6 (as at 24 in Fig. 2) thus enabling the horses to hold back when the device is moving down hill.

To provide for lateral turning I secure on each side one end of a chain 23^a to the cross bar 22^a, as at 24^a in Fig. 1, and the other end is secured to an eye 25 fastened on the bar 15. Thus for example when the machine is to be turned to the right the thills on bifurcated poles will assume the positions shown in dotted lines. In turning to this position the chain on the left side pole will pull the wheels to the positions 2^a and the right side chain will be slack although the horse on that side is free to pull just as hard as the other one by means of the pole. This action will be just reversed in turning to the left.

Turning now to the working mechanisms and their operations it will be understood that there are one upper and one lower, parallel, endless conveyers. The upper conveyer consists of two endless chains 25^a (one on each side) passing over the upper sprockets 26, which are secured on shaft 27 journaled in the upper ends of the bars 10 and 11, the chains also passing over sprockets 28 secured on shaft 29 journaled in the lower end of the bars 11. At regular intervals cleats or cross bars 30 are extended across from one chain to the other and secured thereto, each of said cross bars having outwardly extending tines 31 by which to help convey the shocks.

The lower conveyer is similar to the upper one, having endless chains 32, upper sprockets 33, on shaft 34, mounted in the upper ends of bars 12; the lower sprockets 36 are

fixed on a shaft 37 journaled in bars 6 at or near the offset, also cross bars 30 and lines 31 thereon. The lower conveyer has a bottom 38. Near the front end of the lower conveyer I provide a flat cross bar 39 extending between the bars 6. In the front edge of said cross bar are fixed forwardly and downwardly projecting lines 40 having their lower ends normally close to the ground. The offset 7 in the bars 6 brings said bars and the cross piece 39 close to the ground, thereby avoiding objectionable slanting of the lines toward the ground. Said lines 40 form a wide fork or rake adapted to pick the shocks off the ground. Rearwardly extending lines 41 extend from the bar 39 and they are so arranged as to be between and not come in contact with the lines 31 of the adjacent conveyer when it is in motion. Journaled in the bar 9 (see Fig. 2) is a shaft 42 carrying a revolving rotary rake 43 having arms 44 adapted to move the shocks on the fork backward and into contact with the conveyers.

The upper conveyer is operated by a chain 44 running from the sprocket 48 fixed on one of the rear ground wheels 1 and engaging a sprocket 45 fixed on the shaft 29. Said shaft 29 also carries another sprocket 46 operating a chain 46 that runs over a sprocket 47 on shaft 42 of the rotary rake, thus providing for the operation of that also. The above mechanism will cause the lower run of the upper endless conveyer to move upwardly and help move the bundles of the shock in that direction. The lower conveyer is operated by another large sprocket wheel 48 fixed on the other rear ground wheel 1 and a chain 49 engaging a sprocket 50 which revolves with a gear 51 on a stud 52 secured in the frame bar 6. Said gear meshes with a gear wheel 53 fixed on the lower shaft of the lower conveyer, which is thus moved with its upper run upwardly, carrying the bundles bodily with it along the floor 38, the upper conveyer coacting with it to hold and convey the bundles.

The dotted lines 54 in Fig. 2 indicate the upper edges of side guards which may be provided at each side of the machine to prevent the shocks from falling out at either side of the machine.

The device operates as follows: The man in charge of the machine, who has a seat (not shown) at any convenient place on the machine, drives across the field, where the grain shocks are standing, in such a way that the horses pass on each side of the shock, thus allowing it to be taken up by the fork 40. Then the shock comes in contact with the actuator arms 44, which move it backward so it gets caught by the lines 31 of the lower conveyer and is carried up-

wardly to the rear of the machine assisted by the downwardly projecting lines 31 of the upper conveyer. When the shock has been carried to the end of the conveyer it drops into a transversely disposed slanting chute 55, which is secured to the frame by braces 56. From the outer and lower end of said chute, which extends laterally beyond the machine, the shocks drop into a wagon 57 driven alongside the machine. The chute may be provided with an extension 58, having in its sides slots 59 (see Fig. 3), through each of which extends a short bolt 60 having a thumb nut 61, thereby making the extension adjustable to any desired length, and when the chute is not in use the extension may be retracted or folded upon the chute. The machine may often be driven from one place to another in idle condition and for such occasions it may be provided with any suitable clutch mechanism (not shown) to throw the driving ground wheels out of operative gearing with the conveyers. For raising the front fork from a position near the ground I provide the following mechanism. Near each end of the pivoted front cross bar 18 and just inside of the yoke 21 is provided a rigid post 62, in the upper end of which is pivoted an L-shaped lever 62, having its horizontal arm pivoted at its outer end to the upper end of the bar 15, as at 63 in Fig. 3. The vertical arm of one lever is connected by a rod 64 with the downwardly extended arm 65 of the other L-shaped lever, and the latter lever is provided with a hand lever 65, having the finger piece 66, wire 67 and spring latch 68 engaging the teeth of the segmental top portion 69 of the post 62. Thus by manipulating said lever the frame may be raised or lowered at will. The rod 64 insures a corresponding movement on the other side of the frame.

Having thus described my invention what I claim is:

In a shock loader, a main frame, a pair of rear wheels and a pair of front wheels supporting the frame, a fork projecting from the front end of the frame near the ground, a rotatable reel consisting of a shaft mounted in the frame above the fork and having radial arms arranged to move the shocks rearwardly over the fork, an inclined endless conveyer in rear of the fork for conveying the shocks or bundles thereof to the rear end of the frame, and an inclined chute for conveying the bundles laterally from the machine, means forming operative connection between one of the rear supporting wheels and the conveyer, means forming operative connection between the reel and one of the rear supporting wheels, and means for hitching draft animals to the machine for moving it, a second endless con-

veyer mounted in the frame above and parallel to the first mentioned conveyer and co-acting with the latter in moving the shocks to the chute, and means operatively connecting the second conveyer with the rear supporting wheel opposite from that driving the first conveyer.

In testimony whereof I affix my signature, in presence of two witnesses.

OLE JOHNSON.

Witnesses:

J. A. THRONSON,
CHAS. H. GILE.