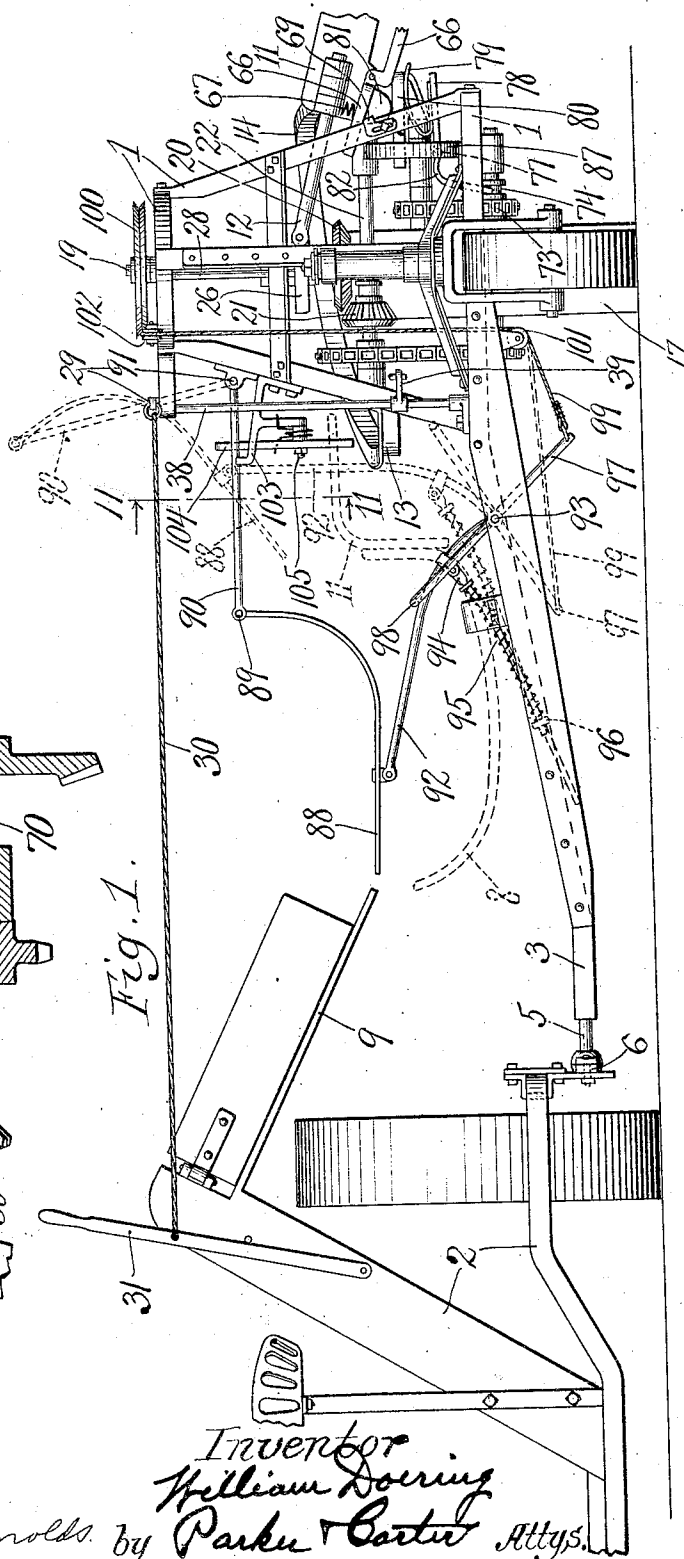
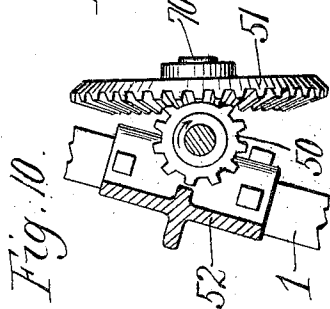
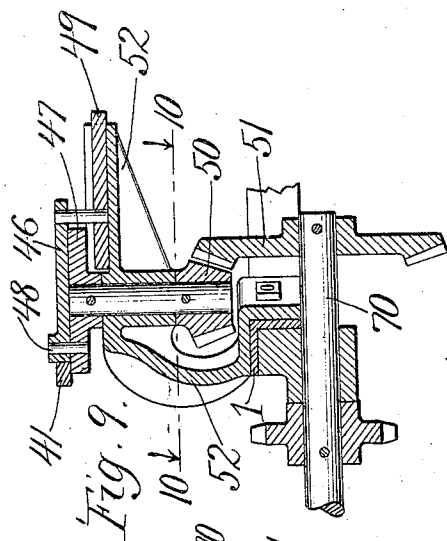
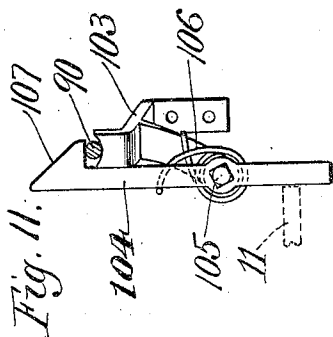


Patented Mar. 25, 1913.

6 SHEETS—SHEET 1.

1,056,891.



Witnesses,
Edward T. Wray.

Edna K. Reynolds. by

Inventor
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W. DOERING.
GRAIN SHOCKING DEVICE.
APPLICATION FILED MAY 18, 1907.

Patented Mar. 25, 1913.

6 SHEETS—SHEET 2.

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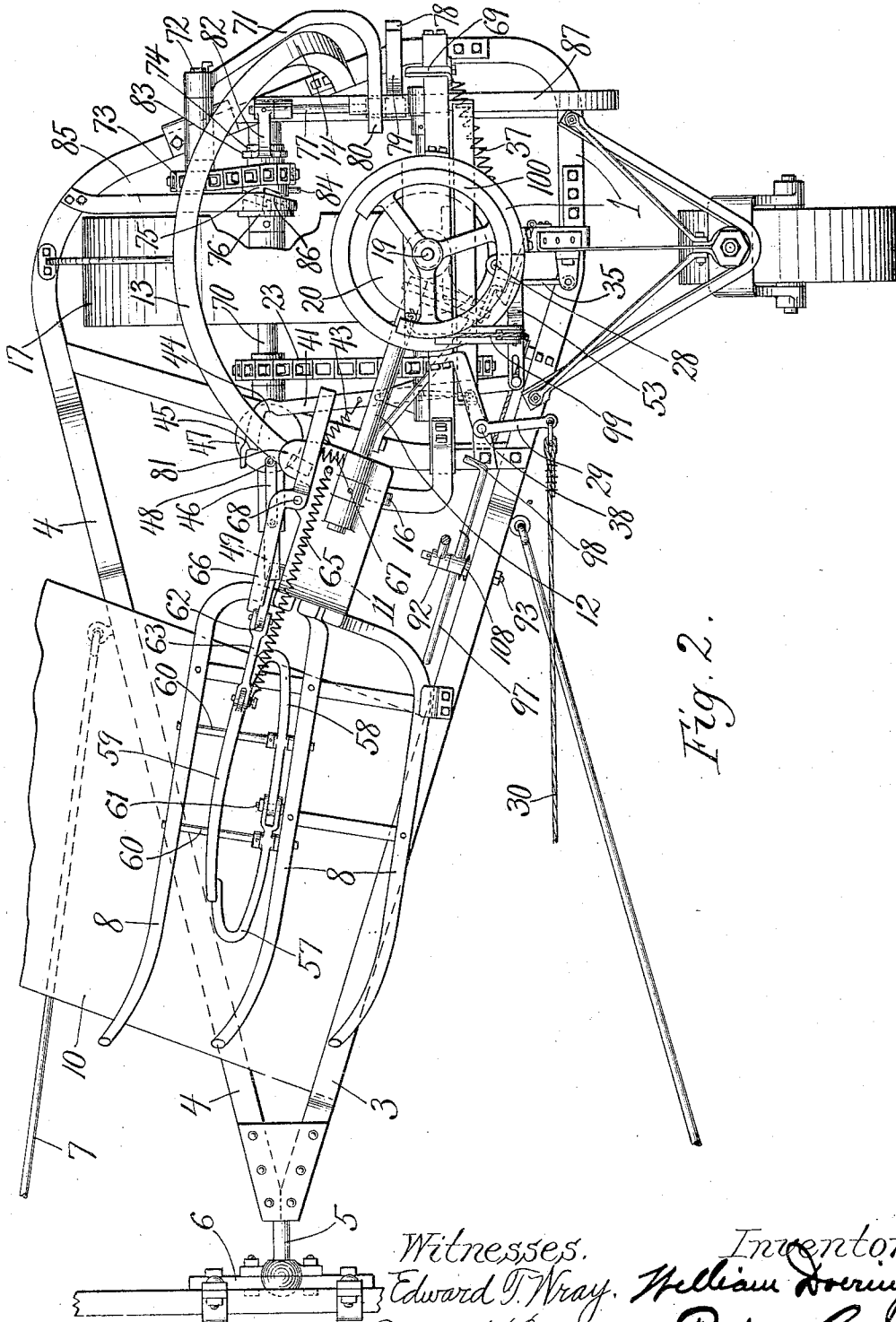


Fig. 2.

Witnesses.
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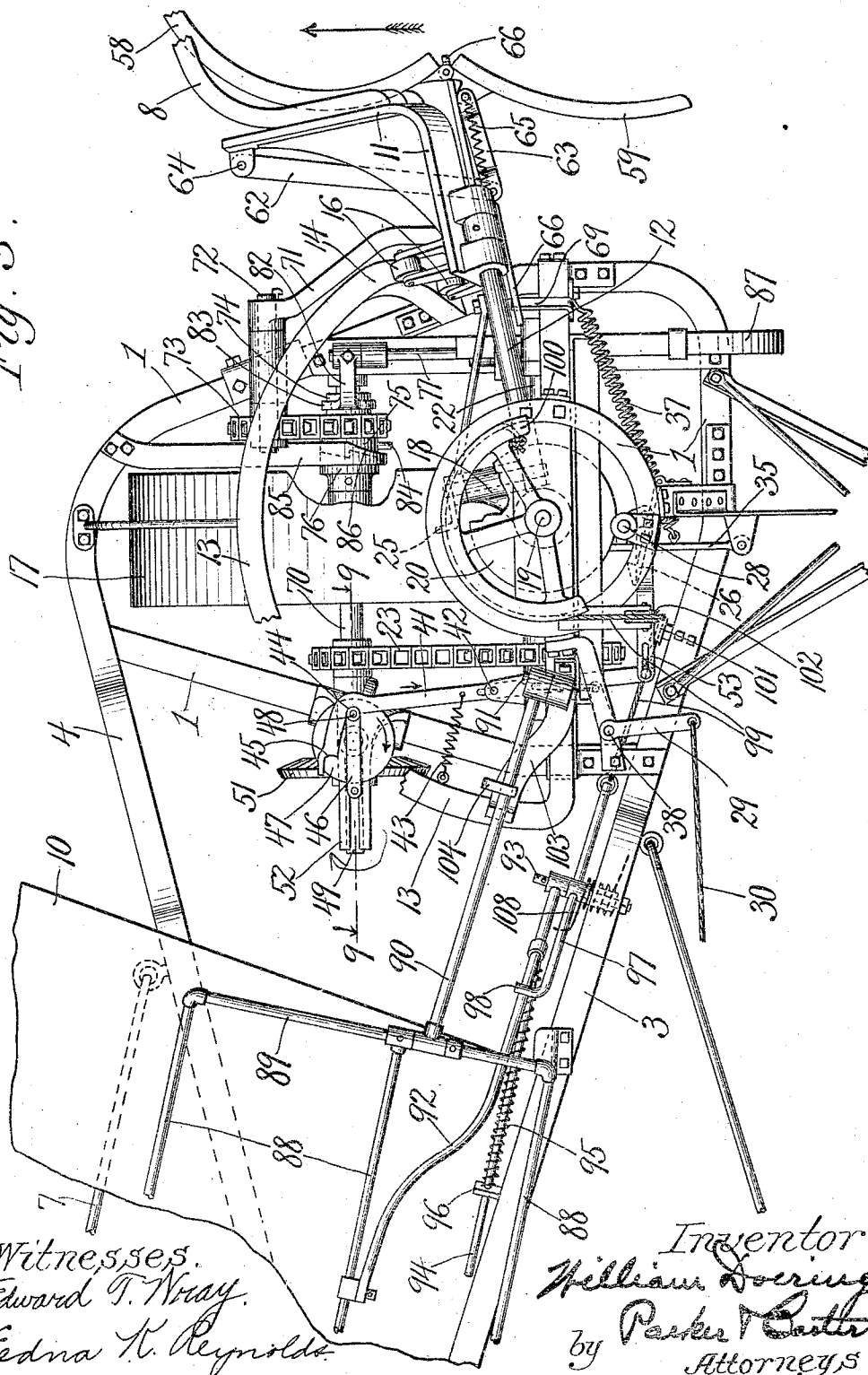
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6 SHEETS-SHEET 3.

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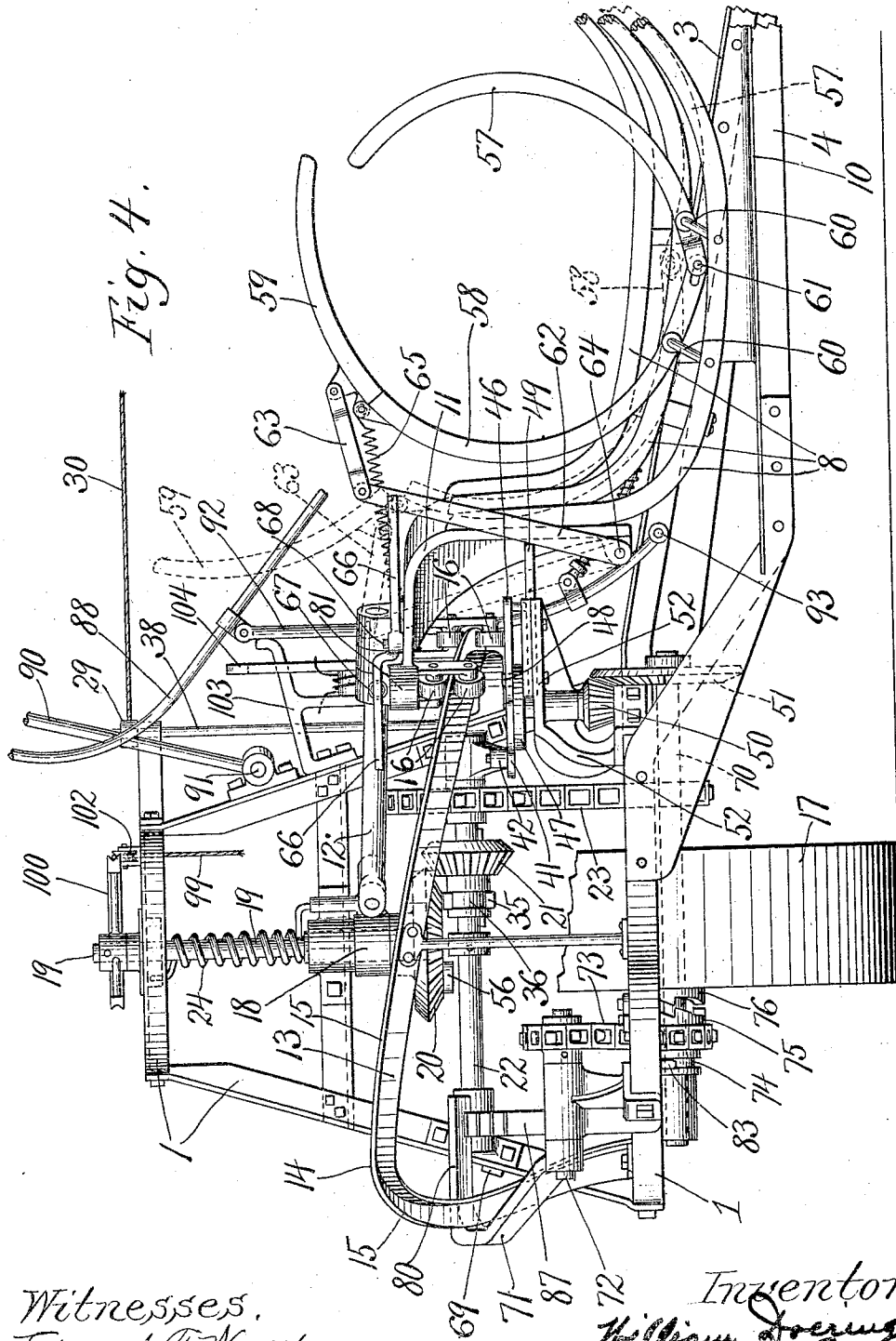
Fig. 3.



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1,056,891.



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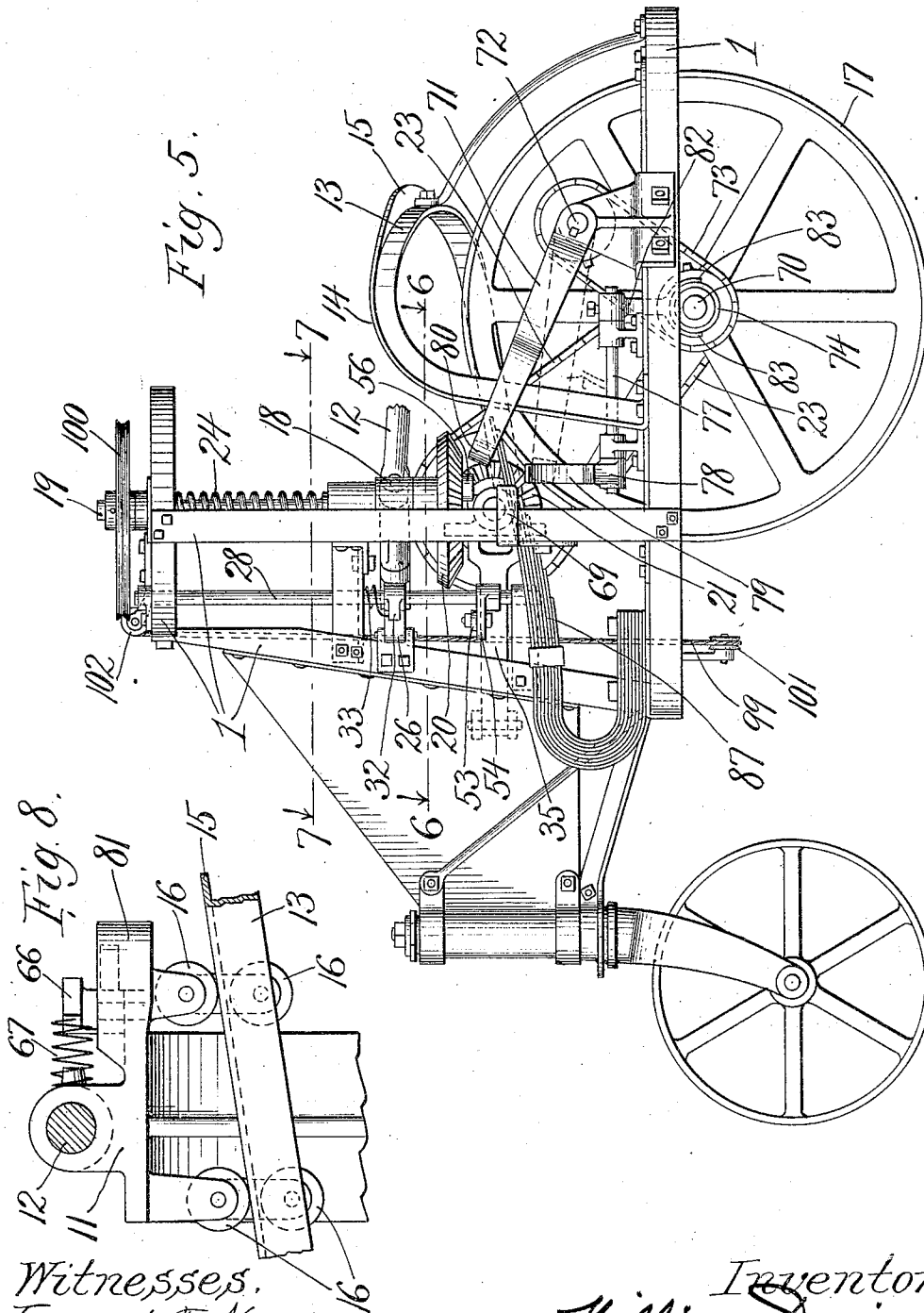
GRAIN SHOOKING DEVICE.

APPLICATION FILED MAY 18, 1907.

Patented Mar. 25, 1913.

6 SHEETS—SHEET 5.

1,056,891.



Witnesses.
Edward T. Wray.
Edna K. Reynolds.

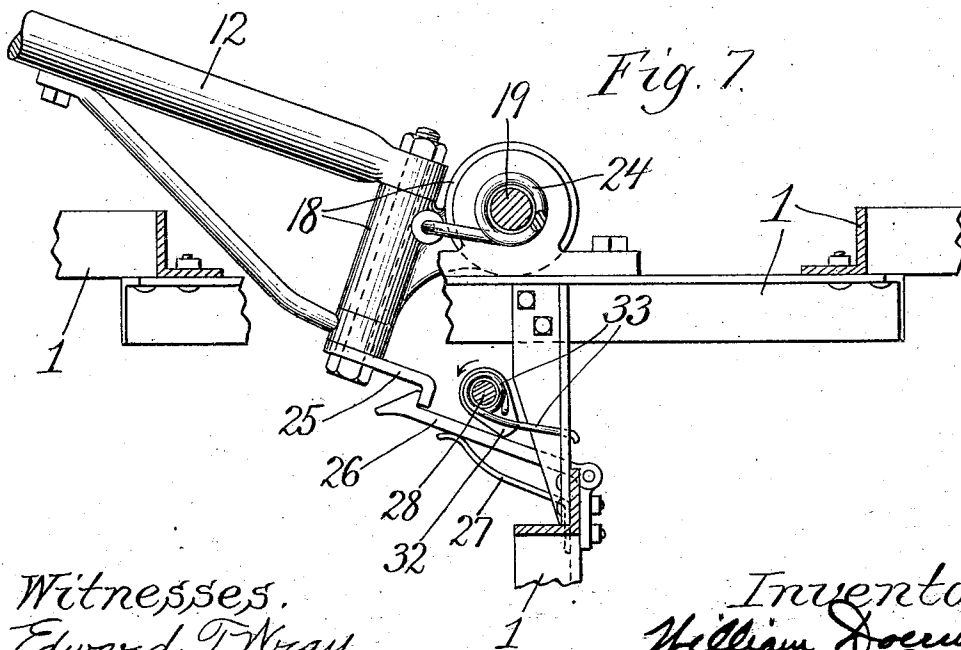
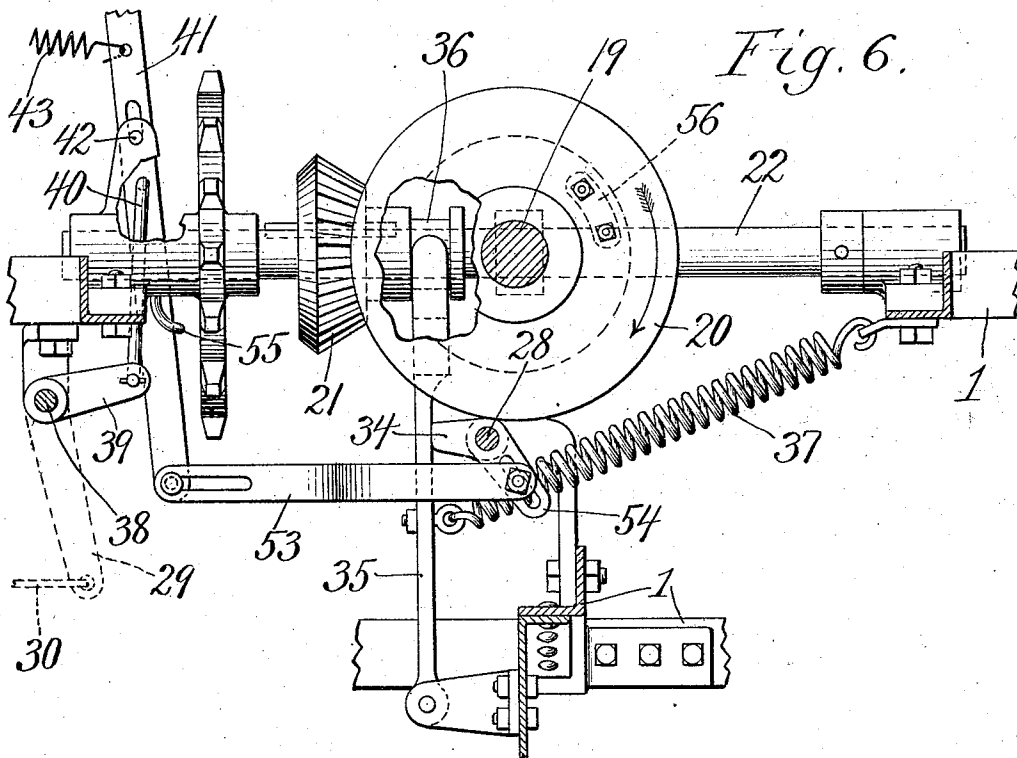
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GRAIN SHOCKING DEVICE.
APPLICATION FILED MAY 18, 1907.

Patented Mar. 25, 1913.

6 SHEETS—SHEET 6.

1,056,891.



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UNITED STATES PATENT OFFICE.

WILLIAM DOERING, OF NAPPANEE, INDIANA.

GRAIN-SHOCKING DEVICE.

1,056,891.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed May 18, 1907. Serial No. 374,441.

To all whom it may concern:

Be it known that I, WILLIAM DOERING, a citizen of the United States, residing at Nappanee, in the county of Elkhart and State of Indiana, have invented a certain new and useful Improvement in Grain-Shocking Devices, of which the following is a specification.

This invention relates to devices for shocking grain or the like, and has for its object the production of a new and improved device of this description.

Referring to the accompanying drawings, Figure 1 is a view showing a device embodying my invention attached to a harvesting machine, parts being omitted; Fig. 2 is a plan view of the shocking device; Fig. 3 is a view similar to Fig. 2 showing the grain receiving device in its discharge position; Fig. 4 is a front elevation of the device shown in Fig. 2; Fig. 5 is a side elevation of the device shown in Fig. 2; Fig. 6 is a sectional view taken on line 6—6 of Fig. 5; Fig. 7 is a sectional view taken on line 7—7 of Fig. 5; Fig. 8 is a view showing the engagement of the arm of the grain receiving device with the guiding device; Fig. 9 is a sectional view taken on line 9—9 of Fig. 3; Fig. 10 is a sectional view taken on line 10—10 of Fig. 9; Fig. 11 is a sectional view with parts omitted taken on line 11—11 of Fig. 1.

Like characters refer to like parts throughout the several figures.

One of the objects of my invention is to provide a device for the purpose of shocking grain.

Referring to the drawings wherein I have shown for purposes of explanation one form of device embodying my invention, the mechanism is mounted upon a suitable frame 1, which may be of any suitable description.

In Fig. 1 the device is shown connected in proper relation to a binder 2 so that the bundles of grain from said binder will be delivered to the shocker. This connection may be made in any desired manner. As herein shown two arms 3 and 4, (see Fig. 2), are connected to the frame 1, and are joined to a connecting piece 5 which is movably attached to a holding piece 6 connected with the binder. This connection is preferably by a ball and socket joint so as to per-

mit relative movement of the binder and the shocker, due to the unevenness of the surface over which the machines travel. A brace rod 7 is connected with the arm 4 and with the binder. A receiving device 8 for receiving the grain is located so that when in its initial position it will receive the grain from the discharge 9 of the harvester. This receiving device may be arranged in any desired manner, and as herein shown consists of a series of fingers preferably positioned to receive the upper ends of the grain or bundles, the butts or lower ends thereof preferably resting upon a platform 10 fastened to the frame. The receiving device has a two-part support consisting of the part 11 and the arm 12, the part 11 being rotatably or movably mounted upon the arm 12 so that the fingers may be moved from a horizontal to a vertical position under predetermined conditions. The support for the receiving device is supported by a guiding device 13 along which it drives from its initial to its discharge position. As illustrated in Figs. 1 and 2 this guiding device rises from the initial position of the receiving device to the point 14, which is the highest point. The guiding device then changes direction as shown in Fig. 5, and is connected to the frame. The connection of the support for the receiving device to the guiding device may be arranged in any desired manner. As herein shown (Figs. 4 and 8) the guiding device is provided with a laterally projecting part or flange 15, and the part 11 of the support is provided with engaging parts which engage both sides of this flange. As shown in Fig. 8 these engaging parts consist of wheels 16 for the purpose of reducing friction. In view of this construction of the guiding device and the connection of the support for the receiving device thereto, it will be seen that when the receiving device reaches the point 14 and passes down the inclined part of the guide the receiving device will be turned from its horizontal to its vertical or discharge position.

Some suitable means is provided for moving the receiving device to its discharge position. As herein shown the receiving device is connected with the driving wheel 17 of the machine. The arm 12 is connected to connecting piece 18 attached to the shaft

19 so as to rotate therewith. This shaft is mounted upon the frame and is provided with a beveled gear 20 adapted to engage a gear 21 on the shaft 22 which shaft is operatively connected with the driving wheel 17 by the chain 23. A spring 24 is connected at one end to the frame 1 and at the other end to the connecting piece 18, and hence to the receiving device 8. This spring helps to move the receiving device to its discharge position, and therefore acts as a brake when the receiving device is being returned to its initial position to take off the shock of the blow due to this return.

The support for the receiving device is provided with a latch or lock by means of which it is locked in its initial position. This latch or lock is shown clearly in Fig. 7, and comprises two engaging or interlocking parts 25 and 26. The interlocking part or latch 26 is normally held in engagement with the part 25 by the spring 27. When it is desired to move the receiving device to its discharge position the interlocking parts are disconnected and the gears 20 and 21 are connected together. Some suitable means is provided for this purpose. As herein shown a shaft or rod 38 is rotatably mounted upon the frame and is provided with an arm 29 (see Fig. 2) which is connected by a connecting piece 30, which runs to a lever or other suitable handle device 31 in position to be operated by the operator of the harvester. It will be seen that by moving this handle 31 the rod 38 will be rotated. The rod 38 is provided with an arm 39 which is connected by connecting piece 40 with the sliding member 41 connected to the frame at 42 so as to be free both to slide and to move about the point 42. This sliding member (see Fig. 3) is connected to the frame by a spring 43 and is bent at the end or so formed as to be provided with two engaging faces 44, 45. The engaging face 44 in its initial position engages a part or link 46 pivotally connected with a disk 47 by the pivot or wrist pin 48. The link 46 is connected with the bolt 49 which operates the clamping mechanism for the shock hereinafter described. The disk 47 is connected with the mutilated gear 50 adapted under predetermined conditions to engage the gear 51. The gear 50 and associated parts are connected to a bracket 52 which is connected to the frame 1. The mutilated portion of the gear 50 is opposite the gear 51 (see Fig. 10) when the parts are in their initial position. When the rod 38 is rotated it moves the sliding member 41 in the direction of the arrow (Fig. 3). This produces a partial rotation of the disk 47 and the gear 50 so as to bring the teeth of the gear 50 into engagement with the teeth of the gear 51. The gear 51 is connected with the driving mechanism in any desired manner. As herein shown the shaft 70 is connected with the main driving wheel, being in this instance a part of the axle thereof. After the mutilated gear engages the gear 51 the disk 47 is rotated by the shaft 70 in the direction of the arrow, Fig. 3. The sliding member 41 at this stage is released by the operator and moves back to its initial position, as shown in Fig. 3, and remains in this position until the link 46 makes a half revolution, whereupon the end thereof engages the engaging face 45. The further rotation of the disk moves the sliding member 41 about its pivot 42. The sliding member 41 is connected by link 53 with the projection 54 on the rod or shaft 28, and this movement thereof rotates the rod or shaft 28. The link 53 has a slotted connection with the sliding member 41, and with the part 54 so that the shaft 28 can be returned to the position shown in Fig. 6 without affecting the position of the sliding member 41. As the disk 47 continues to rotate the link 46 becomes disengaged from the sliding member, after the shaft 28 has been properly moved, and said member is returned to its initial position by the spring 43, it being stopped in its initial position by a suitable stop 55. The rod 28 is provided with a projection, cam or eccentric portion 32 which engages the latch or interlocking part 26 (see Fig. 7). It will be seen that when the shaft is rotated it will move this part 26 and disengage the receiving device. A spring 33 is connected with the rod 28 and with a fixed part of the frame so as to return the rod to its initial position when it is released, as hereinafter described. The rod 28 is also provided with a projection or cam part 34 (see Fig. 6) which engages the gear shifting device 35 provided at its ends with projections which fit in a groove 36 on the hub of the gear 21. This gear is slidably mounted on the shaft 22. When the rod 28 is in its initial position the projection 34 engages the gear shifting device 35 and holds it out of mesh with the gear 20. When the rod is rotated and the receiving device released, the cam 34 releases the gear shifting device and it is moved by the spring 37 so as to bring the gear 21 into engagement with the gear 20, thus simultaneously with the release of the receiving device connecting it with the driving mechanism. These gears are kept in engagement until the receiving device reaches its discharge position, in view of the fact that the spring 37 pulls the gear shifting device against the projection 34 when in its angular position with such force as to prevent the spring 33 from returning the shaft 28 to its initial position, as shown in Fig. 6. When the receiving device reaches its discharge position a projection 56 on the gear 20 (see Figs. 5 and 6)

engages the gear shifting arm 35 and moves the gear 21 out of mesh with the gear 20. The shaft 28 is then returned by spring 33 to its initial position so as to cause the projection 34 to hold said arm in its initial position.

Associated with the receiving device 8 is a gripping device for gripping the grain so as to hold it in proper relation until it can be deposited upon the ground. This gripping device is arranged to grip the grain by an encircling gripping movement like the closing of the hand as distinguished from the closing of a pair of pliers. The circular gripping action binds the bundles together like a flexible band, such as a rope, and thus secures the proper clamping and holding action with a comparatively small pressure. As herein illustrated there is provided a series of gripping portions 57, 58, 59 hinged together. The portions 57 and 58 are fastened to the receiving device in any suitable manner, as, for example, by means of the rods 60. These portions are pivotally connected together at 61, one portion being preferably slotted as shown in Fig. 4. Associated with the portion 59 is an operating lever 62 connected therewith by the link 63. This lever is pivotally connected to the frame at 64. A spring 65 normally tends to hold the parts open in the position shown in dotted lines in Fig. 4. The parts are moved to their closed or gripping position by the bolt 49 actuated by the link 46 and disk 47. When the disk 47 is rotated, as before described, the bolt 49 is projected and engages the lever 62, so as to move it and the portions 57, 58, and 59 to the gripping position. When moved to this position and before the return of the bolt by the further rotation of the disk 47, a pivoted arm 66 engages the lever 62 so as to hold the parts in their gripping position. The portion of the bracket 52 upon which the bolt is mounted is preferably provided with a suitable brace to hold the parts more rigidly in position. The pivoted arm moves with the receiving device, and is pivoted to the supporting part 11 for said receiving device. A spring 67 normally presses said arm outwardly, thus tending to rotate it about its pivot 68 and force it toward the lever 62. This pivoted arm is preferably notched at the end so that when the lever 62 sliding along it comes opposite the notch the spring will move the arm so as to hold the lever against retraction.

After the parts of the gripping device are moved to their gripping position the receiving device is moved along the guiding device 13 by the rotation of the shaft 19 as previously described. When the support for the receiving device reaches the point 14 on the guiding device the further movement thereof causes the part 11 to rotate about

the part 12, and turn the receiving device from a horizontal to a vertical position, the parts then being in their discharge position. When in this position the pivoted arm 66 strikes an engaging device 69 (see Figs. 1 and 2) which moves the pivoted arm to one side and permits the spring 65 to instantly open the gripping device so as to release the grain. The gripping device and the receiving device are in the position shown in Fig. 3. In view of the fact that the machine is moving in the direction of the arrow in said figure, it will be seen that there is nothing back of the shock which would tend to topple it over, and hence even if the parts were left in this position the shock would in no manner be disturbed by the onward movement of the machine. After the shock is discharged it is returned to its initial position. This return is accomplished by connecting it with the driving wheel when in this position. The returning mechanism comprises an arm 71 in position to be struck by the support of the receiving device, or some part associated therewith. This arm 71 is connected to a shaft 72 mounted in a suitable bearing on the frame, and operatively connected in any desired manner, as by means of the chain 73, with a sleeve 74 loosely mounted on the driving shaft. This sleeve is provided with a clutch member 75 adapted to engage a clutch member 76 rotating with the driving shaft. Means is provided for connecting these clutch members when the receiving device reaches its discharge position. As herein shown a shaft 77 is mounted upon suitable bearings and is provided at one end with a lever arm 78 to which is attached a spring 79 which is engaged by the bent end 80 of the lever 71, the bent end 80 of said lever being in turn engaged by the projection 81 on the supporting part 11 for the receiving device. The shaft 77 is provided at the other end with an arm 82 which is provided at the end with a fork 83 working in a groove in the sleeve 74. It will thus be seen that when the receiving device strikes the lever 71 and said lever strikes the spring 79 and the arm 78, the shaft 77 is rotated so as to move the fork 83 to force the two clutch members 75 and 76 into engagement. This connects the arm 71 directly with the driving shaft and causes a rotation of the shaft 72. The arm 71 is thus lifted up carrying with it the receiving device. When the receiving device reaches the point 14 the clutch members are disengaged and it is then freed and moves down the inclined guide to its initial position.

The freeing of the clutch members may be accomplished in any desired manner. As herein shown, the clutch member 75 is provided with a pin or projection 84. A fixed part 85 is provided with a beveled face 86 arranged so that the pin 84 engages said beveled

eled face when the lever 71 has been lifted sufficiently and this engagement causes the sleeve 74 to slide along the shaft and the clutch members to become disengaged, the parts then being ready to again return the receiving device. Some means is preferably provided to take up the blow of the receiving device as it drops, as it were, to its discharge position. As herein shown a spring 87 is fastened to the frame and projects in the path of the bent portion 80 of the arm 71. This spring also holds the arm 71 in position to receive the receiving device.

While the receiving device is being moved to its discharge position some means should be provided for retaining the grain that may be discharged from the harvester before the receiving device returns. As herein shown there is illustrated one form of retaining device which consists of a series of fingers 88 upon which the grain is received. These fingers are connected to a cross piece 89 which is movably connected with an arm 90 pivoted at 91 (Fig. 1) to the frame. Attached to one of the fingers 88 is a supporting part 92 which is pivoted at 93 to the frame. Connected with this supporting part is a rod 94 surrounded by a spring 95, said rod passing through an opening in a guiding piece 96 which limits the movement of the spring but permits the movement of the rod. A controlling part 97 is also pivoted at 93 and is provided with a bent portion 98 which engages the supporting piece 92 (see Figs. 1 and 3). This controlling part is connected by a cord or other suitable flexible connection 99 with a grooved wheel 100, fastened to the end of the shaft 19. This cord passes over suitable pulleys 101 and 102 for the purpose of changing its direction. When this shaft 19 is rotated during the process of moving the receiving device to its discharge position the cord or flexible connection 99 is wound upon the grooved wheel 100 and moves the controlling part 97 so that the bent end 98 engages the part 92, the further movement thereof forcing the parts from the position shown in dotted lines in Fig. 1 to the position shown in full lines, the spring 95 being thereby compressed. When in this position the arm 90 rests upon the support 103, and is held in this position against the force of the spring 95 by the pivoted holding piece 104 (see Fig. 11). This holding piece is pivoted at 105 and is provided with a spring 106 which tends to move it to its holding position. It is also provided with a beveled face 107 which is engaged by the arm 90 as it moves down to its operative position, such engagement moving the holding piece 104 to one side, said holding piece being moved back by the spring after the arm has passed. When in this position the retaining device retains the grain discharged from the harvester. When the receiving de-

vice moves from its discharge position to its initial position and the fingers 8 come under the retaining device the part 11 of the support for the receiving device, or some part associated therewith, strikes the lower end of the holding piece 104 and moves it to one side so as to release the arm 90. The spring 95 then acts to move the parts of the retaining device to the position shown in dotted lines in Fig. 1, the grain sliding from the fingers 88 upon the fingers 8 of the receiving device. The spring 108 (Fig. 3) tends to move the parts to take up the slack in the cord or cable 99. A stop 109 on the frame 3 stops the receiving device when it reaches its initial position, and it may also be used to hold it down while the gripping device is being operated.

Briefly described the operation of the apparatus herein shown is as follows: When sufficient grain or bundles of grain are received in the receiving device the operator moves the lever 31. This movement through the intervening mechanism hereinbefore described causes the mutilated gear 50 to engage the gear 51 and the disk 47 is rotated so as to move the bolt 49 against the lever 62 and move the gripping device to its gripping position. The further movement of said disk acts through the intervening mechanism to move the gears 20 and 21 into engagement, thus causing a rotation of the shaft 19. This moves the receiving device and the gripping device along the guideway to the point 14, whereupon the receiving device is tilted to a vertical position, the gripping device released by the engagement of the pivoted lever 66, and the engaging piece 69, and the several parts of the gripping device suddenly moved out of the way. The shock of grain is then deposited upon the ground. The further movement of the receiving device causes a movement of the shaft 77 so as to throw the clutch members 75 and 76 into engagement. The receiving device is thus connected with the driving wheel and the driving shaft through the arm 71, and said arm is lifted so as to lift the receiving device back up onto the guiding device. The clutch members are then automatically released and the receiving device slides by gravity down the incline of the guiding device to its initial position. The movement of the shaft 19 which causes the receiving device to move to its discharge position through the grooved wheel 100 and the cord or rope 99, controlling device 97 and associated parts, moves the retaining device to its operative position so as to catch and hold any grain that may be discharged from the harvester. When the receiving device returns to its initial position it releases the retaining device by engaging the lever 104, and said retaining device is moved to its inoperative position by

the spring 95, thus discharging the grain retained by it upon the receiving device. It will thus be seen that in this construction the operator gives the initial movement, and this initial movement need only be sufficient to produce a sliding of the sliding member 41 so as to move the mutilated gear 50 to a position where its teeth will engage the gear 51. The operator can then release the lever and the rest of the work is done by the driving mechanism. This driving mechanism operates the gripping device, moves the receiving device to its discharge position, returns it to its initial position, moves the retaining device to its operative position, and then to its inoperative position so as to deposit the material retained by it upon the receiving device. It will further be seen that the gripping is done before the receiving device is moved, and that the complete cycle of operation is automatic.

I claim:

1. A grain shocking device comprising a movable receiving device for the grain, an automatically actuated gripping device associated therewith and adapted to grip the grain by an encircling gripping movement and means controlled from a distant point for actuating said gripping device before the receiving device is removed from its receiving position.

2. A grain shocking device comprising a movable receiving device for the grain, a gripping device associated therewith and adapted to grip the grain by an encircling gripping movement, and means separate from said receiving device for moving said gripping device to its gripping position before the receiving device is moved from its initial position.

3. A grain shocking device comprising a movable receiving device for the grain, a gripping device associated therewith comprising a plurality of parts hinged together end to end so as to form a jointed gripping device having an encircling gripping movement, and means for automatically moving said parts so as to cause them to encircle and grip the grain said means actuated independent of the movement of said receiving device.

4. A grain shocking device comprising a movable receiving device for the grain, a gripping device associated therewith comprising a plurality of curved parts pivotally connected together end to end so as to form a jointed gripping device the device arranged with two free ends and means independent of the movement of said receiving device for moving said ends relatively so as to grip the grain.

5. A grain shocking device comprising a receiving device for the grain, a gripping device associated therewith and adapted when actuated to grip the grain, an actuat-

ing mechanism for moving the receiving device to its discharge position, and means for bringing the gripping device to its gripping position before the actuating mechanism for the receiving device is set in operation.

6. A grain shocking device comprising a receiving device for the grain adapted to be moved to a discharge position, a gripping device associated therewith and adapted when actuated to grip the grain to hold it in position, means for successively connecting the gripping device and the receiving device with a driving wheel so as to actuate them.

7. A grain shocking device comprising a receiving device for the grain, a gripping device connected to the receiving device so as to move therewith for gripping the grain and holding it in position, a driving mechanism for actuating the gripping device and moving the receiving device to its discharge position, means for successively connecting the gripping device and the receiving device with said driving mechanism, and a hand-actuated device for producing the initial movement of this connection.

8. A grain shocking device comprising a receiving device for the grain, a gripping device associated therewith for gripping the grain, a power driven device for actuating the gripping device before the receiving device is operated, driving mechanism for moving the grain receiving device to its discharge position, a connection between the power driven device for the gripping device and the actuating mechanism for the receiving device adapted to be set in operation, after the power driven mechanism has been in operation for a predetermined time, to start the driving mechanism for the receiving device.

9. A grain shocking device comprising a receiving device for the grain, a gripping device associated therewith for gripping the grain, a power driven device for actuating the gripping device before the receiving device is moved from its initial position, driving mechanism for moving the grain receiving device to its discharge position, a connection between the power driven device for the gripping device and the actuating mechanism for the receiving device adapted to be set in operation, after the power driven mechanism has been in operation for a predetermined time, to start the driving mechanism for the receiving device, and a hand-operated mechanism for producing the initial movement of the device for actuating the gripping device.

10. A grain shocking device comprising a receiving device for the grain, a gripping device for gripping the grain and holding it in position, separate driving mechanism for said devices, and means for automatically connecting the driving mechanism of

the gripping device with the driving mechanism of the receiving device after the gripping device has been actuated.

11. A grain shocking device comprising a frame, a receiving device for the grain movably mounted upon said frame, a driving mechanism on the frame, two means for connecting the driving mechanism with the receiving device, one adapted to connect the receiving device with the driving mechanism when in its initial position, and the other adapted to connect the receiving device with the driving mechanism when the receiving device is in its discharge position.

12. A grain shocking device comprising a frame, a receiving device for the grain movably mounted on said frame, a driving mechanism on said frame, means for connecting the receiving device with the driving mechanism so as to move the receiving device to its discharge position, an automatically actuated disconnecting device for disconnecting the receiving device with the driving mechanism as it approaches its discharge position, and a separate means for engaging the receiving device at a different point and connecting the receiving device with the driving mechanism to move it from its discharge position.

13. A grain shocking device comprising a receiving device for the grain adapted to be moved to a discharge position, a gripping device associated therewith for gripping the grain to hold it in position, a retaining device adapted to be moved into position to receive the grain while the receiving device is being moved to its discharge position, a driving mechanism associated with said devices, a hand device for starting the operation of said devices, and means for automatically carrying said devices through their cycle of operation after the initial action is given by the hand device.

14. A grain shocking device comprising a receiving device for the grain, mechanism for moving the receiving device laterally to a discharge position at one side of the point when the grain is received upon it, a retaining device for retaining the grain while the receiving device is out of its initial position, means for connecting the retaining device with the mechanism which moves the receiving device so as to move said retaining device to its operative position.

15. A grain shocking device comprising a receiving device for the grain, mechanism for moving the receiving device to a discharge position, a retaining device for retaining the grain while the receiving device is out of its initial position, means for connecting the retaining device with the mechanism which moves the receiving device so as to move said retaining device to its operative position, an independent actuating device for returning the retaining device to

its inoperative position, and means for bringing said latter mechanism into action when the receiving device is in position to receive the grain held by the retaining device.

16. A grain shocking device comprising a receiving device for the grain, means for locking the receiving device in its initial position, an actuating mechanism adapted to be connected to and disconnected from the receiving device, and a mechanism for unlocking the receiving device and connecting it with the actuating mechanism.

17. A grain shocking device comprising a receiving device for the grain, a support therefor, a guiding device along which said support is moved while moving the receiving device from its initial to its discharge position, a connecting mechanism associated with the receiving device and adapted to connect the support thereof with the driving wheel of the machine, a second connection separate from the first connection and adapted to connect the support of the receiving device with the driving wheel, and means for automatically breaking one of said connections and making the other connection.

18. A grain shocking device comprising a receiving device for the grain open at the top, a gripping device associated therewith and made up of a plurality of parts hinged together, an actuating device for said gripping mechanism to move it to its gripping position, means for moving the receiving device about a pivotal point to its discharge position, means for moving said gripping mechanism so as to release the grain and for moving the gripping mechanism out of the way of the grain after it is discharged so that there will be nothing back of the shock to disturb it as the machine moves forward.

19. A grain shocking device comprising a receiving device for the grain, a gripping device associated therewith comprising three parts pivotally connected together end to end so as to form a jointed gripping device, and means for moving the three parts relatively to produce an encircling gripping movement and cause them to grip the grain.

20. A grain shocking device comprising a frame, a driving wheel therefor, a movable receiving device for the grain, a gripping device associated therewith and adapted to grip the grain by an encircling gripping movement, separate connections between the driving wheel and said receiving device and gripping device whereby they are both automatically actuated.

21. A grain shocking device comprising a movable receiving device for the grain, a gripping device associated therewith and adapted to grip the grain by an encircling gripping movement, mechanism independent

of the movement of the receiving device controlled from a distant point for actuating said gripping device while the grain shocking device is traveling forward.

5 22. A grain shocking device comprising a movable receiving device for the grain, a gripping device associated therewith and adapted to grip the grain by an encircling gripping movement, mechanism separate
10 from said receiving device for moving said

gripping device to its gripping position before the receiving device is moved from its initial position, said mechanism connected with the driving wheel of the grain shocking device so as to be operated therefrom. 15

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."