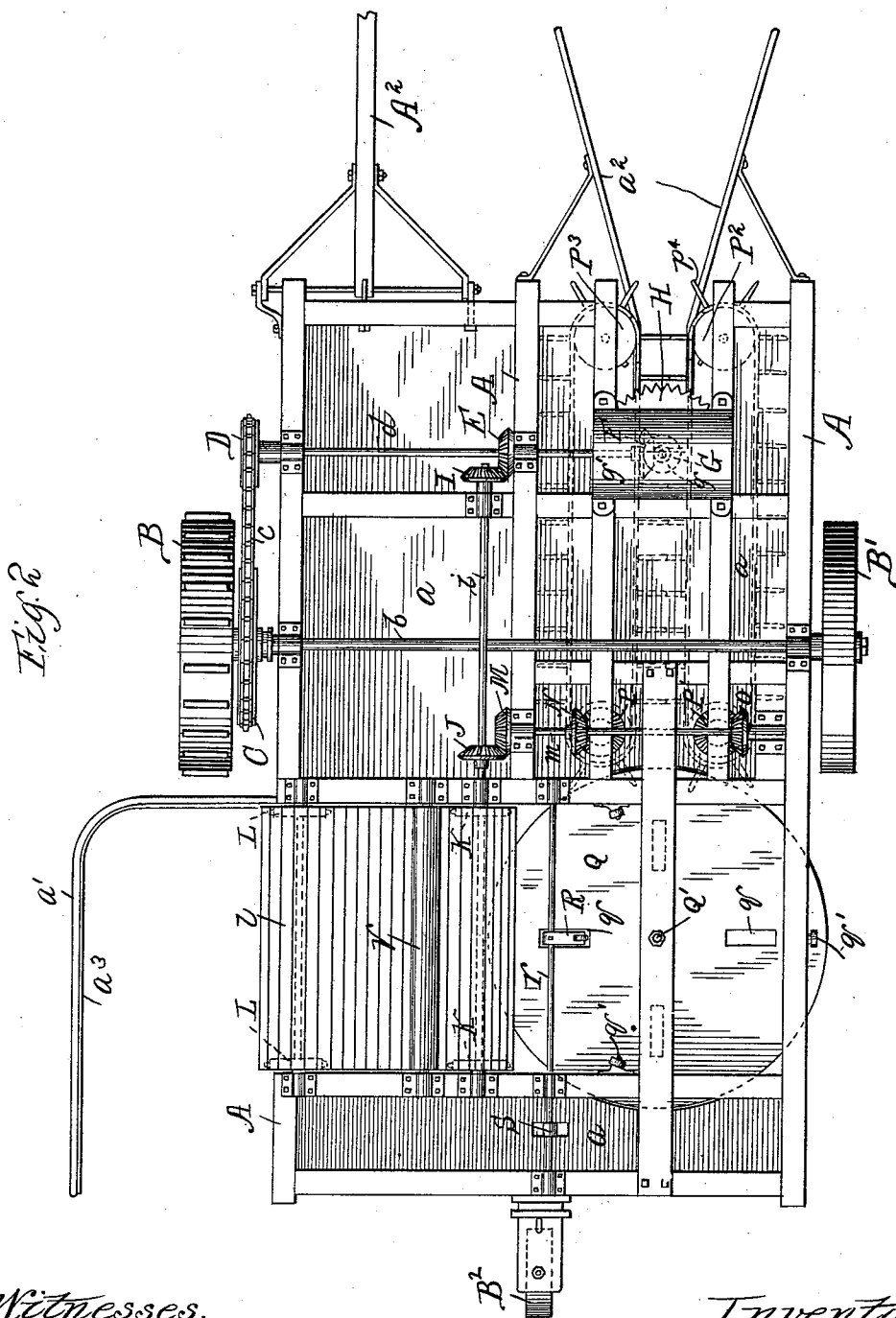


J. DABLE.
CORN HARVESTER.

No. 564,571.

Patented July 21, 1896.



Witnesses.
S^r M. Rheum.
Harry White.

by

Inventor
John Dable
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Atty.

(No Model.)

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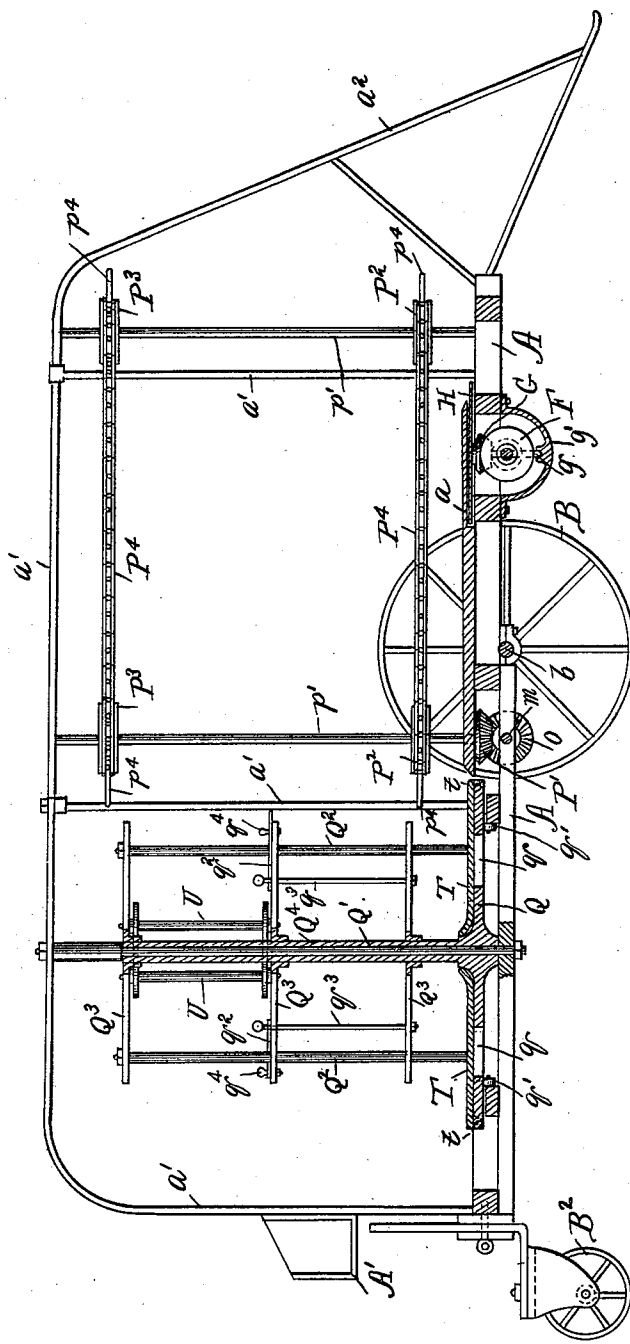
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Fig. 3.



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Fig. 4.

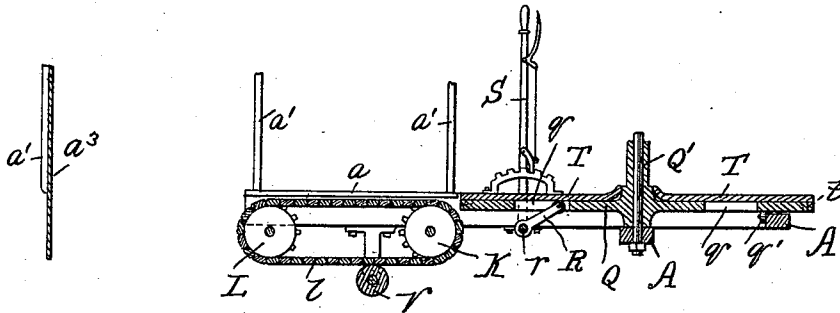


Fig. 5.

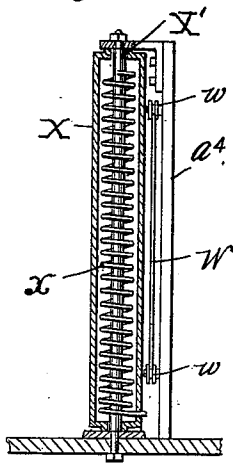


Fig. 6.

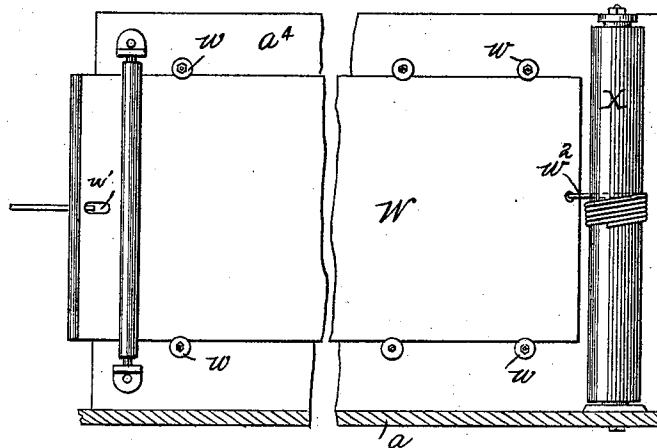


Fig. 7.

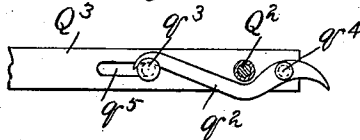
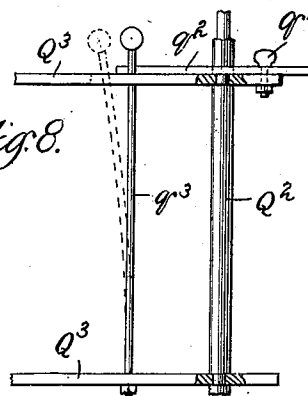


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOHN DABLE, OF CHICAGO, ILLINOIS.

CORN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 564,571, dated July 21, 1896.

Application filed July 13, 1895. Serial No. 555,862. (No model.)

To all whom it may concern:

Be it known that I, JOHN DABLE, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have
5 invented certain new and useful Improvements in Corn-Harvesters, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a top or plan view. Fig. 2 is a
10 bottom view. Fig. 3 is a longitudinal vertical section taken on line 3 3 of Fig. 1. Fig. 4 is a vertical cross-section taken on line 4 4 of Fig. 1. Fig. 5 is a detail, being an end view of the sliding door adapted to be brought in
15 front of one of the compartments of the shocking-table, and showing also, and partly in section, the means by which the door is retained in its normal position. Fig. 6 is a detail, being a side view of the devices represented in
20 Fig. 5. Figs. 7 and 8 are details of the devices for retaining the sliding door in front of a compartment of the shocking-table and releasing it to permit it to be drawn back into its normal position.

25 This invention relates to corn-harvesters of the character shown and described in my former Letters Patent No. 513,673, dated January 30, 1894, and has for its objects to improve in several respects the construction
30 and operation of the machine set forth in said patent, which objects I accomplish as illustrated in the drawings and as hereinafter specified.

35 Those things which I believe to be new will be set forth in the claims.

In the drawings, A indicates the frame of the machine.

A' indicates a suitable tool-box secured, as shown, upon the rear of the machine.

40 A² represents the tongue of the machine.

B B' represent the carrying-wheels, mounted upon an axle *b*.

B² is a caster-wheel at the rear end of the machine.

45 C represents a sprocket-wheel secured to the hub of the wheel B.

D represents another sprocket-wheel secured upon the end of a shaft *d*, suitably journaled in bearings secured to the main
50 frame. A driving-chain *c* extends around said sprocket-wheels C and D.

E is a bevel-gear secured upon said shaft *d*, which meshes with a bevel-gear I secured upon the end of a longitudinal shaft *i*, the rear end of which shaft *i* is provided with another bevel-gear J, that meshes with a bevel-gear M, secured upon the end of a cross-shaft
55 *m*, which last-named shaft is also furnished with two other bevel-gears N and O, which respectively mesh with bevel-gears P and P',
60 secured upon the lower ends of two vertical shafts *p* and *p'*. These two shafts *p* and *p'* are secured and turn in bearings in the floor *a* and the top *a'* of the frame of the machine.

P² and P³ represent sprocket-wheels, one
65 secured upon the lower and upper end, respectively, of each vertical shaft *p'*.

P⁴ represents chains extending around the last-named sprocket-wheels, two pairs of such chains, as shown, being employed, one pair at
70 the top of the machine and the other pair below the upper pair and near the floor of the machine. The sprocket-wheels of one pair are at a sufficient distance from those of the opposite pair to permit of the passage of corn-
75 stalks between them from the front toward the rear of the machine. As shown, each of these sprocket-chains is provided with laterally-projecting teeth *p⁴* of a length sufficient to extend to or slightly beyond the center of
80 the cornstalk - passage. This construction enables the cornstalks to be positively moved toward the rear end of the machine in substantially a vertical position, with but little, if any, friction other than that produced by
85 the butts of said stalks in moving on the floor of the machine.

Upon the inner end of the driving-shaft *d* is secured a bevel-gear F, which meshes with another gear G, that is secured on a short vertical shaft, to the upper end of which a circular
90 saw H is secured, which saw is for the purpose of cutting the standing stalks as the machine moves forward.

g' is a boxing of any suitable construction,
95 and provided with a suitable seat *g* for the shaft that carries the saw H.

K K (see Fig. 2) represent two sprocket-wheels secured upon the rear half of the longitudinal shaft *i*. L L represent two other
100 sprocket-wheels secured to a short shaft suitably journaled in the main frame and lying

parallel with and a short distance from the shaft *i*. Over these two last-named shafts and the sprocket-wheels secured to them is placed an endless traveling bed *l*, which may be made in any well-known manner, adapted to be actuated by the engagement therewith of the sprocket-wheels K and L. I prefer to use a traveling bed made up of a series of wooden rollers, as shown and described in my said former patent, in which case the sprocket-wheels would engage directly with the said wooden rollers, and thereby cause the bed as a whole to be properly driven. It is evident, however, that a canvas carrier provided with link-chains at its sides for the sprocket-wheels to engage with could be effectively employed. V represents a roller parallel with and between the said last-named shafts and loosely mounted in the main frame of the machine. The office of this roller is to prevent undue sagging of the traveling bed.

Q represents a circular shocking-platform, through the center of which passes a rod Q', which rod extends up and through the upper portion *a'* of the frame, its lower end projecting through the bottom of the frame and being secured by nuts on its ends, as shown.

T are four plates, each resting on the platform Q and hinged at their forward edges to the edge of the platform Q.

Q¹ is a tube resting on the hub or central portion of the platform Q and surrounding the rod Q', and being capable of being turned on such rod as a pivot.

Q³ represents a set of four arms extending radially from the tube Q¹, to which they are firmly secured. As shown, there are three sets of these radial arms, the arms of the various sets being in line vertically, and so held and braced by four vertical rods Q², and extending up from the platform Q and through the ends of said arms Q³. These sets of four arms form four compartments, into which the cornstalks are successively received. Each of these compartments for cornstalks is provided with a spool U, upon which binding twine or wire is to be wound for use in binding together the stalks in shocks. As shown, each spool U is secured between an upper and middle arm Q³, and is located close to the tube Q¹, so as not to obstruct the compartment within which it is located to such an extent as to prevent the formation of a full-sized shock of cornstalks.

S is a locking-lever rigidly secured at its lower end to a rock-shaft *r* journaled in the under part of the main frame, which shaft *r* beneath the shocking-platform Q is provided with a crank R, which, when the lever S is operated, is projected up through one of four slots *g* in said platform and comes in contact with one of the hinged plates T near the free end of said plate, thereby causing the said plate to be tilted and causing any shock of cornstalks thereon to be slid off. It is desirable to provide the contacting end of the

crank R with an antifriction-roller, as shown.

*a*¹ is a vertical frame extending longitudinally of the machine and a short distance to one side of one set of chains P¹.

W is a sliding door, of sheet metal or other suitable material, supported by antifriction and guide rollers *w* attached to one side of the frame *a*¹, as clearly shown in Figs. 1, 5, and 6. Near the forward end of this frame *a*¹ is mounted a hollow cylinder X, within which is a coiled spring *x* surrounding a central rod X', (see Fig. 5,) one end of the coiled spring being secured to the rod and the other end to the cylinder.

*w*² is a cord or other flexible connection between the forward end of the door W and the upright cylinder X. Pivoted in laterally-projecting ears near the rear end of the frame *a*¹ is a vertical roller, as shown in Fig. 6, to aid in keeping the door W in place while the latter is being moved forward or back.

As shown, each arm Q³ of the central set of arms has pivoted near its forward end a hook *q*², the pivot *q*¹ passing through the hook near its point. The rear end of the hook is adapted to be engaged by a rod *q*³ of spring material, the lower end of which is secured in one of the arms Q³ of the lower set of such arms, and its upper end passing through a longitudinal slot *q*⁵ of the arm *q*³ to which the hook *q*² is pivoted. Each of these hooks *q*² is adapted to engage in succession with and move the door W, such engagement being effected by the entrance of the point of the hook into a short slot *w'*, near the rear edge of the door.

The operation is as follows: As the machine is drawn forward the cornstalks that are embraced between the forward-projecting parts *a*² are cut off close to the ground by the saw H and are caught at both their lower and upper ends by the laterally-projecting teeth on the belts P¹, which convey them in a substantially vertical position to the rear end and deposit them in one of the compartments formed, as before explained, by the radial arms Q³, the operation up to this point being automatic, as will be readily understood from the description of the arrangement of the various gear-wheels, shafts, &c. As the cornstalks are passed into one of the said compartments the butts rest upon the hinged plate T, which is at the bottom of each compartment. The shocking-platform is then given a quarter turn by the operator at the rear end of the machine, which will bring the compartment just filled with cornstalks around in proper position to enable him to tie or bind the same together in a suitable shock, the cord or wire on the spool in that compartment being available for that purpose. As the operator starts to make the quarter turn mentioned, the point of the hook *q*¹ on one of the arms Q³ will catch in the slot or eye *w'* of the door W and cause such door to be drawn along with it and ef-

fectually close the front of such compartment, so that no cornstalks can escape therefrom. When the door is no longer needed as a guard, the operator, by springing back the rod q^3 , will cause the hook q^2 to be released from engagement with the door W, which, by reason of the spring x , will rotate the cylinder X, winding up on it the flexible connection w^2 , and, of course, drawing back the door W to its normal position on the forward part of the machine. The next operation on the part of the attendant is to discharge the recently-formed shock, which is accomplished by moving the lever S, and through it rocking the rock-shaft r , which causes the crank R to be projected through the slot g immediately above and come in contact with the plate T on which the shock is resting. This plate T is turned up by means of the pressure of the crank until it stands at a sufficient incline to cause the shock to slide down it and onto the traveling bed l , which bed carries it and deposits it in an upright position upon the ground. During the operation of tying and discharging the shock the next succeeding compartment is being filled with cornstalks in the same manner as described for the first, and when so filled is, by another quarter turn of the platform, brought into position to be operated on by the attendant, its contents being guarded by the door W, as was the preceding filled compartment, and the door returned as before. Such will be all the succeeding operations.

While the machine is of the same general character as that set forth in my said Letters Patent No. 513,673, yet it is quite superior to said patented machine in operation, owing to the improvements in the mechanism for carrying the stalks back to the shocking-table and in the provision of an automatically-operating door for positively retaining the cornstalks within the compartment in which they have been deposited from the time the table is moved to bring that filled compartment toward the operator until he is ready to manipulate the contents thereof.

That which I claim as my invention, and desire to secure by Letters Patent, is—

1. In a corn-harvester, the combination with a movable shocking-platform, and devices for depositing cornstalks thereon, of a sliding door detachably engaged by and movable with said shocking-platform and adapted to retain the cornstalks deposited thereon, and means for withdrawing the door out of contact with said platform, substantially as specified.

2. In a corn-harvester, the combination with a movable shocking-platform, and devices for depositing cornstalks thereon, of a sliding door adapted to be engaged by and moved with said shocking-platform for the purpose of retaining the cornstalks on said platform, substantially as specified.

3. In a corn-harvester, the combination

with a rotatable shocking-platform, and devices for depositing cornstalks thereon, of a sliding door detachably engaged by and movable with said shocking-platform and adapted to retain the cornstalks deposited thereon, and means for withdrawing the door out of contact with said platform, substantially as specified.

4. In a corn-harvester, the combination with a rotatable shocking-platform, carrying a series of compartments each adapted to receive cornstalks, and devices for depositing cornstalks in said compartments, of a sliding door adapted to be detachably engaged by said platform and moved in front of such compartments successively as said platform is rotated, and means for withdrawing the door out of contact with said platform, and entirely from over the same substantially as specified.

5. In a corn-harvester, the combination with a rotatable shocking-platform provided with a series of compartments each adapted to receive cornstalks, and devices for automatically depositing cornstalks in said compartments, of a sliding door adapted to be detachably engaged by said platform and thereby moved in front of said compartments successively as said platform is rotated, and means for withdrawing the said sliding door out of contact with and entirely from over the said platform, substantially as specified.

6. In a corn-harvester, the combination with a rotatable shocking-platform carrying a series of compartments each adapted to receive cornstalks, and devices for depositing cornstalks in said compartments, of a sliding door having a slot or eye in one end, and hooks carried by the shocking-platform and adapted on rotation of said platform to successively engage the slot or eye in the sliding door and move said door in front of each of said compartments, substantially as specified.

7. In a corn-harvester, the combination with a rotatable shocking-platform, and devices for depositing cornstalks thereon, of a sliding door detachably engaged by and movable with said shocking-platform and adapted to retain the cornstalks deposited thereon, and devices for returning said door to its normal position out of contact with and entirely from over said platform, substantially as specified.

8. In a corn-harvester, the combination with a rotatable shocking-platform, a framework carried thereby consisting of a central standard, radial arms and supports for said arms, and devices for feeding material onto said platform, of a sliding door, devices carried by said arms and adapted to detachably engage and move said door as the platform is rotated, whereby the sliding door is caused to retain the cornstalks on said platform, and mechanism for withdrawing said door out of contact with and entirely from over said platform, substantially as specified.

9. In a corn-harvester, the combination with a rotatable shocking-platform, a framework carried thereby consisting of a central standard, radial arms and supports for said arms, and devices for feeding material onto said platform, of a movable door, a hook pivoted on one of said radial arms and having its point adapted to engage with an eye in said door, and a spring-rod for holding said hook in engagement and releasing the same, substantially as specified.

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Witnesses:

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H. A. PIATT.