

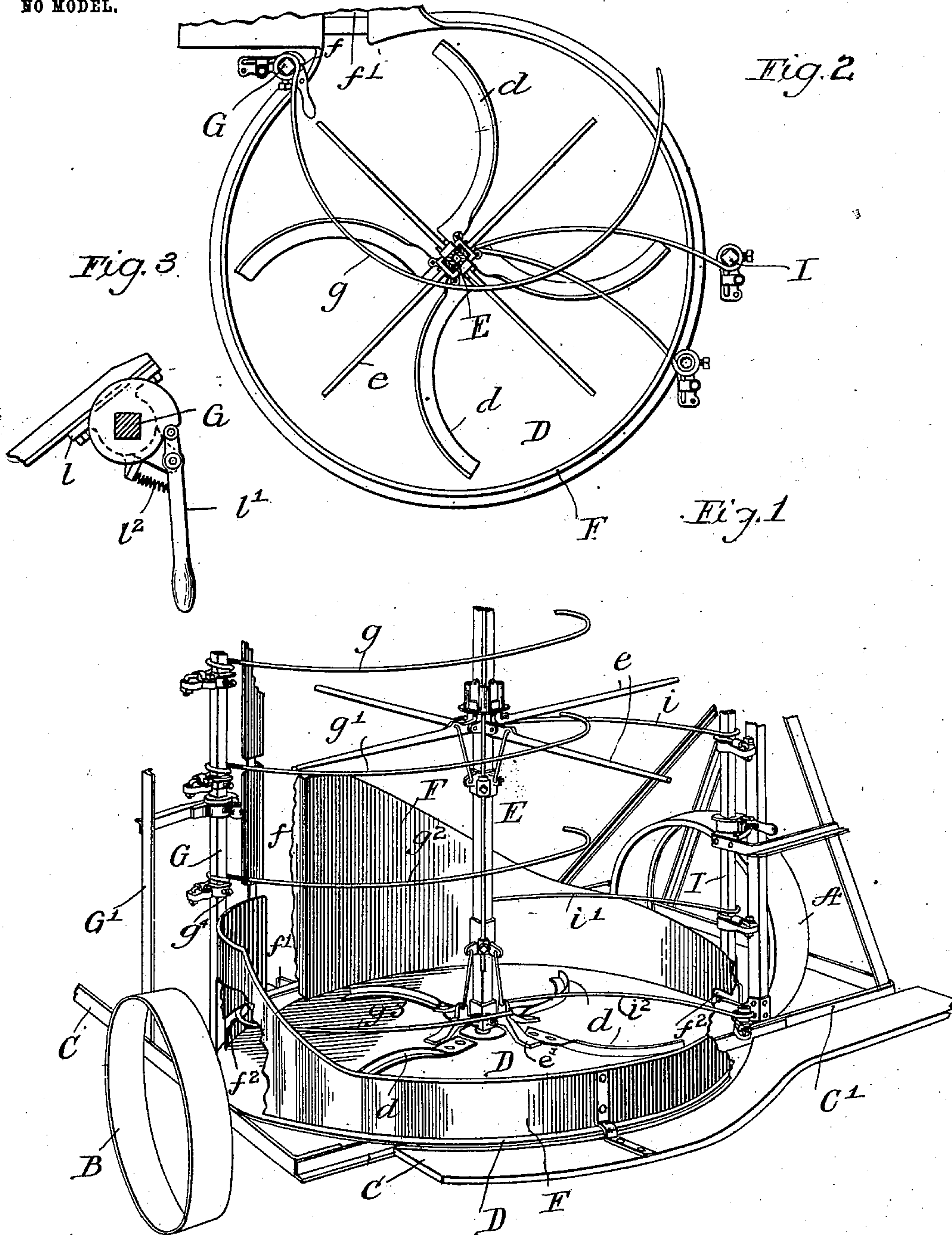
No. 723,623.

PATENTED MAR. 24, 1903.

J. M. SHIVELY.
CORN SHOCKER.

APPLICATION FILED JAN. 17, 1902.

NO MODEL.



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CORN-SHOCKER.

SPECIFICATION forming part of Letters Patent No. 723,623, dated March 24, 1903.

Application filed January 17, 1902. Serial No. 90,133. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH M. SHIVELY, of Alfred, in the county of Douglas and State of Kansas, have invented certain new and useful Improvements in Corn-Shockers, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a rear perspective view; Fig. 2, a plan view of the table and springs, and Fig. 3 a detail of the locking device.

This invention relates to corn-harvesters of the type shown, described, and claimed in the patent granted to me, No. 559,754, dated May 5, 1896; and it consists in the construction hereinafter described and claimed providing a stationary circular inclosure having a stalk-passage leading thereto, said inclosure located immediately above the rotating shock-forming table and adapted to confine the butts of the stalks while the shock is being formed, and thus prevent them from spreading, and in other improvements which will be fully described and claimed.

In the drawings, A is the main supporting-wheel, and B the grain-side supporting-wheel.

The parts lettered C constitute the main frame, to which the wheels may be considered to be attached.

D is the rotary table, having the radial ribs *d*.

E is the shock-forming standard, having the radial arms *e*.

F represents the walls of the circular inclosure for confining the butts of the stalks and preventing trash that may be left on the table from escaping, and *f* the opening through which the stalks are brought to the table after being severed by the cutting apparatus *f'*. Upon the main frame is the rocking standard G, preferably made of square pipe, upon which I secure the springs *g*, *g'*, and *g*². By the use of the set-screws *g*⁴ shown the vertical height of the springs may be regulated. Said rocking standard is located at one side of the stalk passage-way near the cutting apparatus and is capable of being rocked. It is sustained by bearings secured to the post G', reaching upward from the main frame.

I is a standard secured to the main frame, also capable of being rocked, upon which the

springs *i* and *i'* are secured. The springs *g*, *g'*, and *g*² and the springs *i* and *i'* are normally adapted to lie close to the shock-forming standard and be there locked, but, being resilient, to yield while the shock is being formed. The standard G is adapted to be locked from rotation in order to maintain the springs in that position; but it is set free by the locking device shown in Fig. 3. This locking device consists of the single-tooth ratchet secured to the rocking standard G, around which the springs *g*, *g'*, and *g*² are wound and secured. Reaching from the post G' is the arm *l*, in which the standard G is pivoted. To the end of this arm is the pawl *l'*, normally held in engagement by the spring *l*². When it is desired to set the springs free, the pawl is disengaged. The springs *i* and *i'* are held in position by a similar locking device, but reversed, so as to operate oppositely. The springs *g*³ and *i*² are fixed to the framework. It is not necessary to swing them away, as it is those above them, for the reason that they are so near the butts of the stalks that upon a little upward movement of the shock the said stalks are lifted above them.

The operation of the invention is as follows: The corn advanced upon is engaged by the cutting apparatus and directed rearward by the usual devices, which may be of the kind shown in the above-mentioned patent granted to me. The butts of the stalks move onto the rotary table, and the tops are supported by the arms *e*. The rotation of the table carries the stalks thus received backward between the shock-forming standard E and the springs *g*, *g'*, *g*², and *g*³, thus forcing the stalks toward a central position on the rotary table. In order that they may be maintained in such positions, the springs *i* and *i'* upon the opposite side of the shock-forming standard engage them both at top and bottom, and the mass is thus held in compact form until by its growth the shock is fully completed. At the time the shock has grown to nearly its full size the springs cannot encircle the shock fully. It is at this interval that the wall F becomes particularly useful, for any straggling stalks that would otherwise escape from the edge of the table are held in position. In order that the fixed

springs g^3 and i' may be secured outside of the inclosure and operate within, the slots f^2 and f^2 are made, and through them these springs pass. By having the inclosing wall stationary and providing the opening F the stalks may be passed directly backward without having to be forced over anything like a ledge, as would be the case if the inclosing wall were on the rotary table itself. If on the said table it could not be of sufficient height to serve its purpose, for often a stalk will be held up somewhat by contact with other stalks. I lower the inclosure at the rear part of the machine, so as to avoid the necessity as much as possible of raising the shock high when swinging it to the rear, which would otherwise involve much more labor than necessary on the part of the operator. In order that the operator may pass from side to side of the machine to unlock the shaft G and the spring i , I provide the footboard C'. This standard also enables him to stand on it when passing the twine around the completed shock. I curve the rays d , as shown in Fig. 1. The springs g and i are necessarily curved in the opposite direction. The result of this is that the slight resisting action of the springs, particularly g^3 , is such that the stalks between the latter and the said rays are more easily forced inward by the spring than if the rays were straight.

The shock-lifting device will form the subject-matter of another application filed February 20, 1902. For the present purposes the lifting-crane of my patent above referred to may be considered as applicable to the invention.

The gathering devices I use are not considered in this application, as they form the subject-matter of that above referred to. They serve only the purpose of bringing the stalks to the cutting apparatus, and as I place my cutting apparatus immediately in front of the rotating table I produce a machine much simpler than others, as by so doing the stalks when severed are permitted to fall directly into the space between the arms e and the series of springs opposing the said arms, as g , g' , and g^2 .

It will be observed that the rotary table is so low that the butts of the stalks may be moved from the cutting apparatus directly to place on it. e' represents arms secured to the lower end of the shock-forming post, that lie flatly on the table while the shock is forming and aid in lifting the shock from the table. The springs g^3 and i' force the butts of the stalks inward, so these arms become in part supports for the shock while being lifted.

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

1. In a corn-shocker, a cutting device, a constantly-rotating shock-forming table, said cutting device located immediately forward of the said shock-forming table, and a constantly-rotating shock-forming standard supported thereon, in combination with a sta-

tionary inclosing wall, said wall having a passage-way through it for the entrance of the stalks of corn, substantially as described. 70

2. In a corn-shocker, a cutting device, a constantly-rotating shock-forming table having the radial arms d secured thereto, a constantly-rotating shock-forming standard having radial arms, as e , in combination with a stationary inclosing wall, said wall having a passage-way through it for the entrance of the stalks, substantially as described. 75

3. In a corn-shocker, the combination of the rotary table having an inclosing wall, the shock-forming standard, one or more movably-supported springs, as g , the locking device to hold them in contact with the forming shock, substantially as described. 80

4. In a corn-shocker, the combination of the rotary table having an inclosing wall, the shock-forming standard, one or more movably-supported springs, as g , the locking device to hold them in contact with the forming shock, and the fixed spring g^3 , substantially as described. 85

5. In a corn-shocker, the combination of the rotary table having an inclosing wall, the shock-forming standard, one or more springs, as g , the pivoted spring-support whereby the springs may be removed from contact with the shock, and the fixed spring i^2 , substantially as described. 90

6. In a corn-shocker, the combination of the rotary table having an inclosing wall, the shock-forming standard, one or more springs, as g , the pivoted spring-support whereby the springs may be removed from contact with the shock, and the fixed springs g^3 and i^2 , substantially as described. 100

7. In a corn-shocker, the combination of the rotary table, the shock-forming standard, one or more springs, as g , the pivoted spring support and lock whereby the said springs are adapted to be swung to working position and there locked, substantially as described. 105

8. In a corn-shocker, the combination of the rotary table, the shock-forming standard, one or more springs, as g , the pivoted spring support and lock whereby the said springs are adapted to be swung to working position and there locked, and the fixed spring g^3 , substantially as described. 110

9. In a corn-shocker, the combination of the rotary table, the shock-forming standard, one or more springs, as g , the pivoted spring support and lock whereby the said springs are adapted to be swung to working position and there locked, and the fixed spring i^2 , substantially as described. 115

10. In a corn-shocker, the combination of the rotary table, the shock-forming standard, one or more springs, as g , the pivoted spring support and lock whereby said springs are adapted to be swung to working position and there locked, and the fixed springs g^3 and i^2 , substantially as described. 120

11. In a corn-shocker, the rotary table having the curved radial arms secured to its

upper surface, a shock-forming standard having the arms *e* and removable from the said table, and the springs *g*³ and *i*² immediately above the said table, all combined substantially as described.

12. In a corn-shocker, the combination of the rotary table, the shock-forming devices, springs, the spring-sustaining standards *G* and *I*, said standards being provided with releasably - locking devices whereby the

springs may be set free by the operator and the platform *C*, all combined substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH M. SHIVELY.

Witnesses:

L. S. STEELE,
JACOB HOUSE.