

No. 734,973.

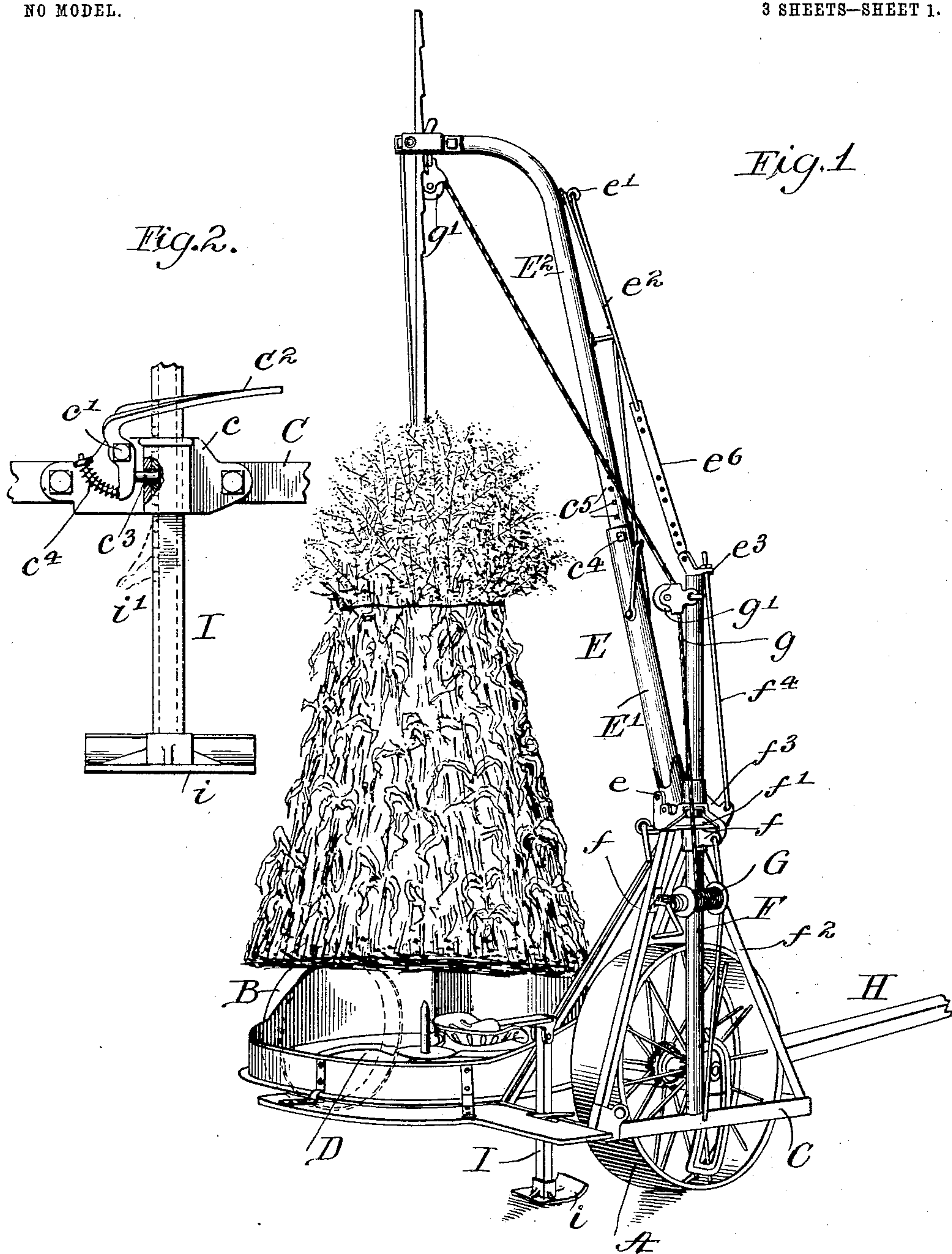
PATENTED JULY 28, 1903.

J. M. SHIVELY.
CORN SHOCKER.

APPLICATION FILED FEB. 20, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



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C. W. Smith

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3 SHEETS—SHEET 2.

Fig. 5

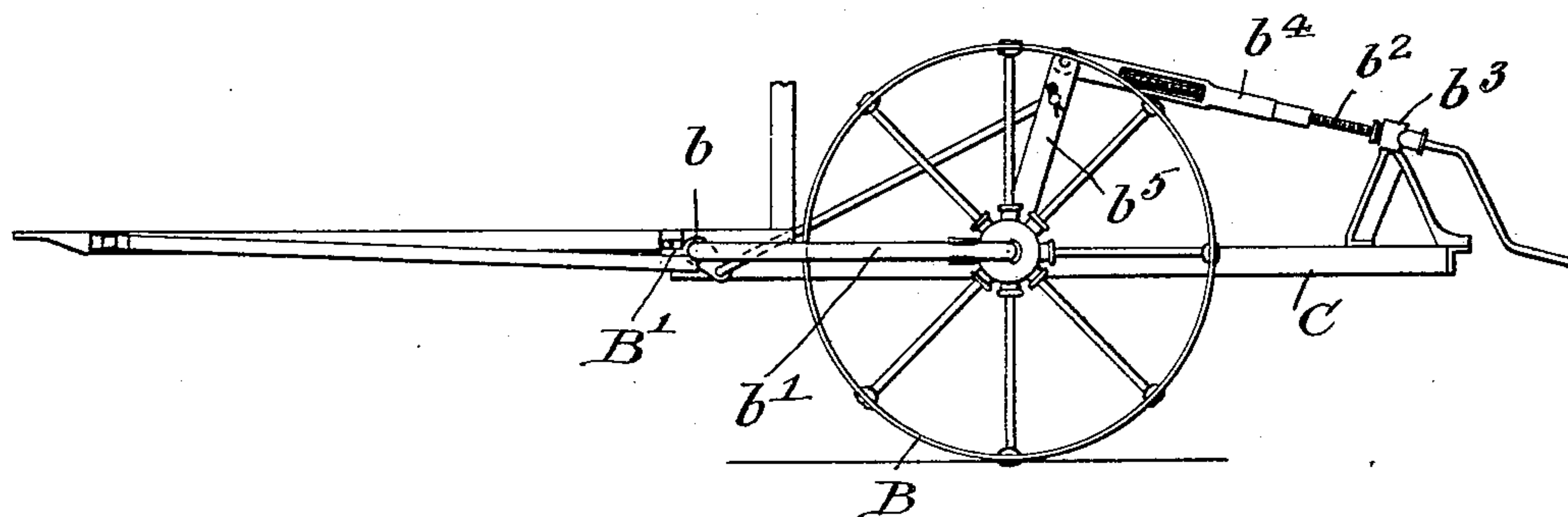


Fig. 6

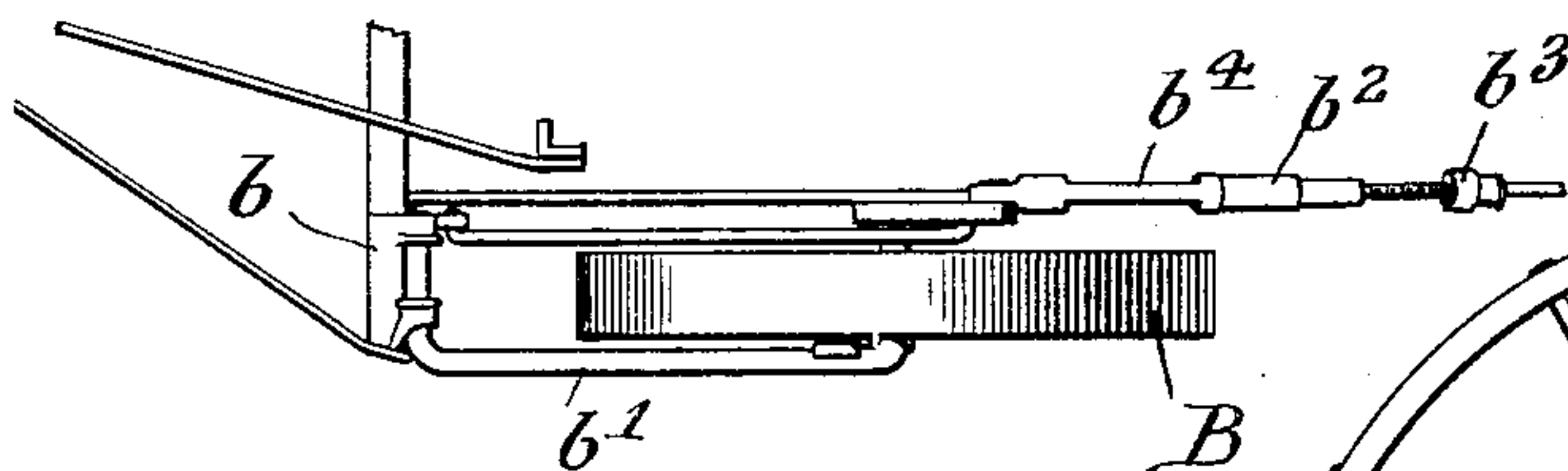


Fig. 3.

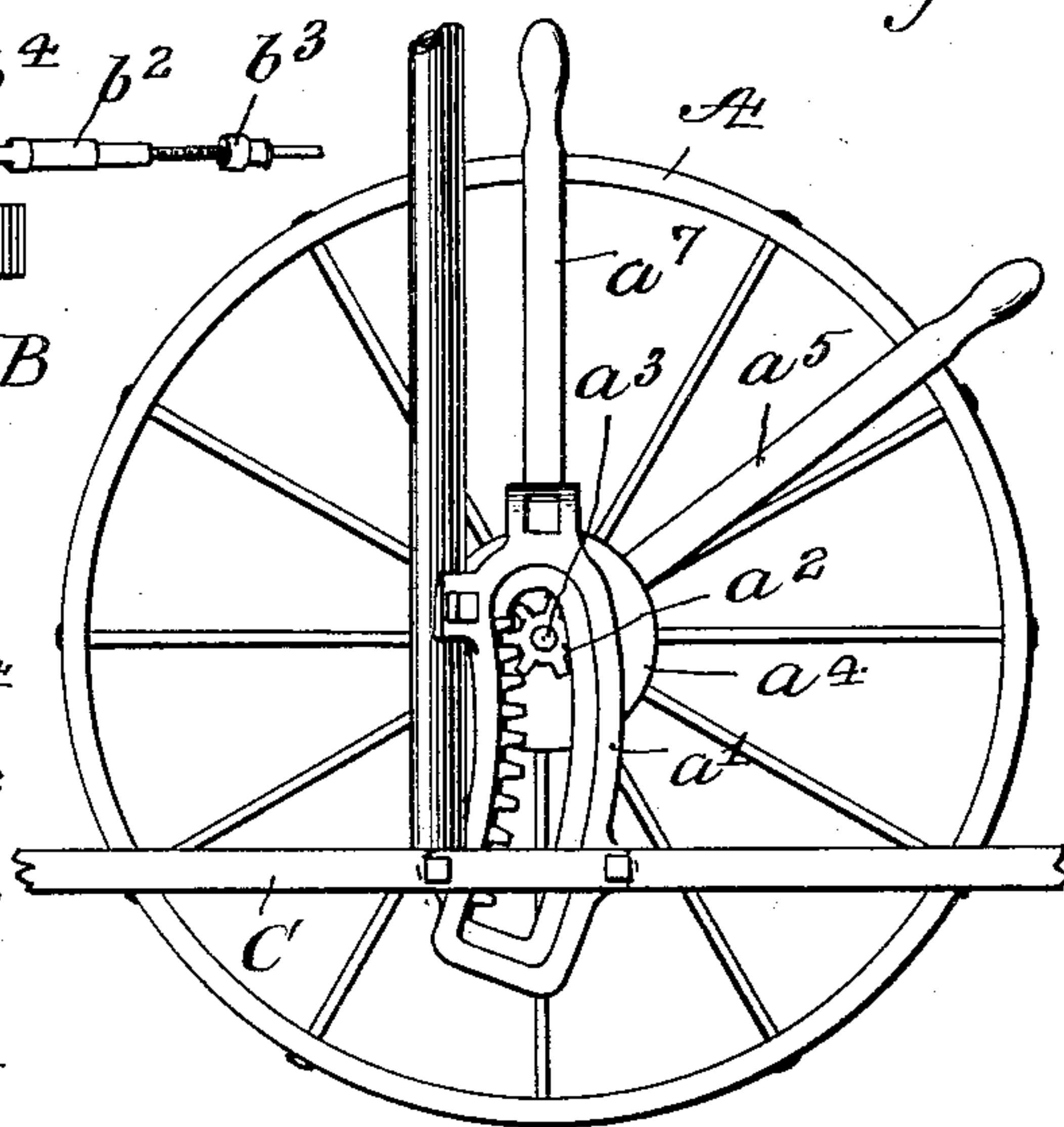
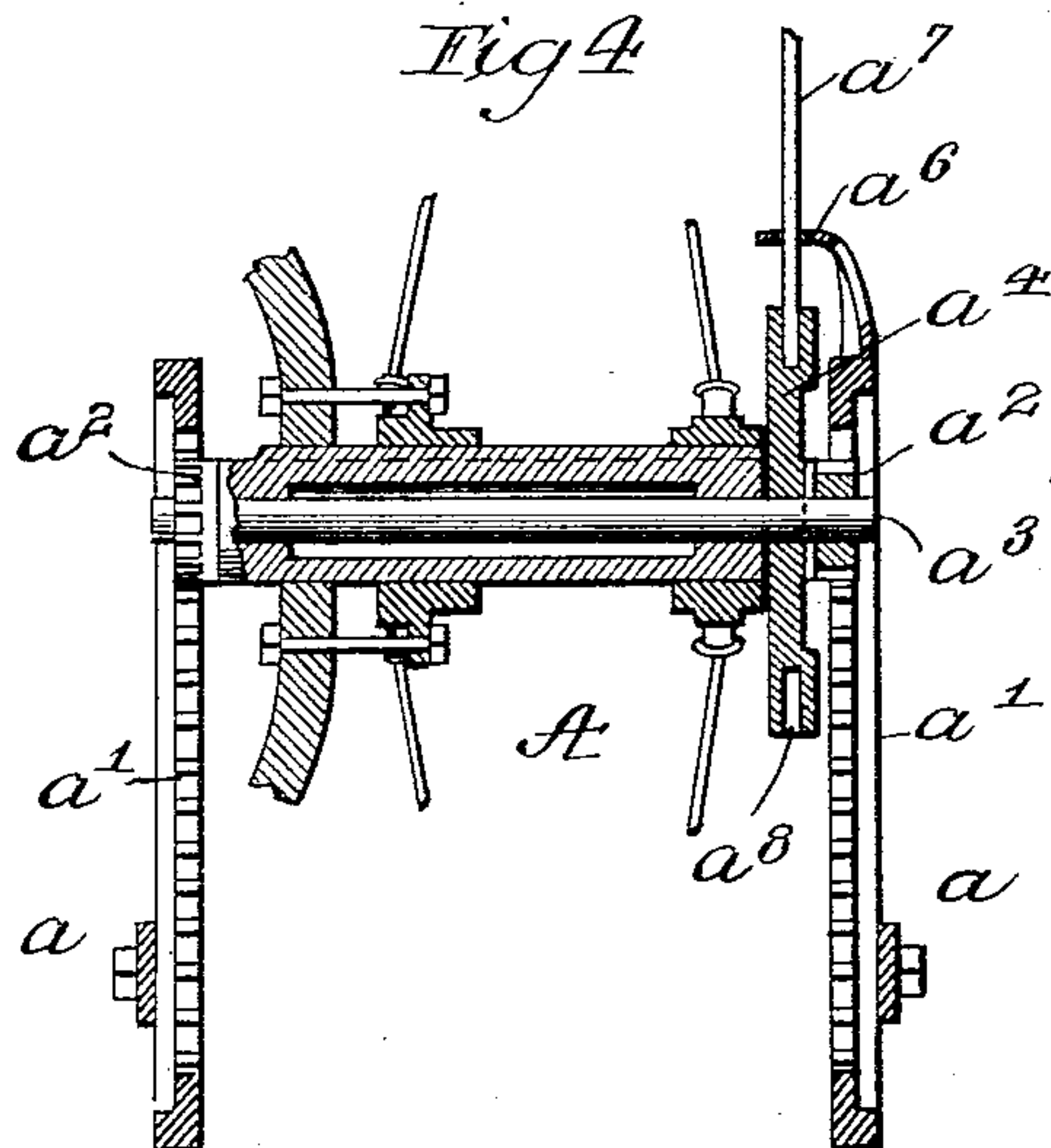


Fig. 4



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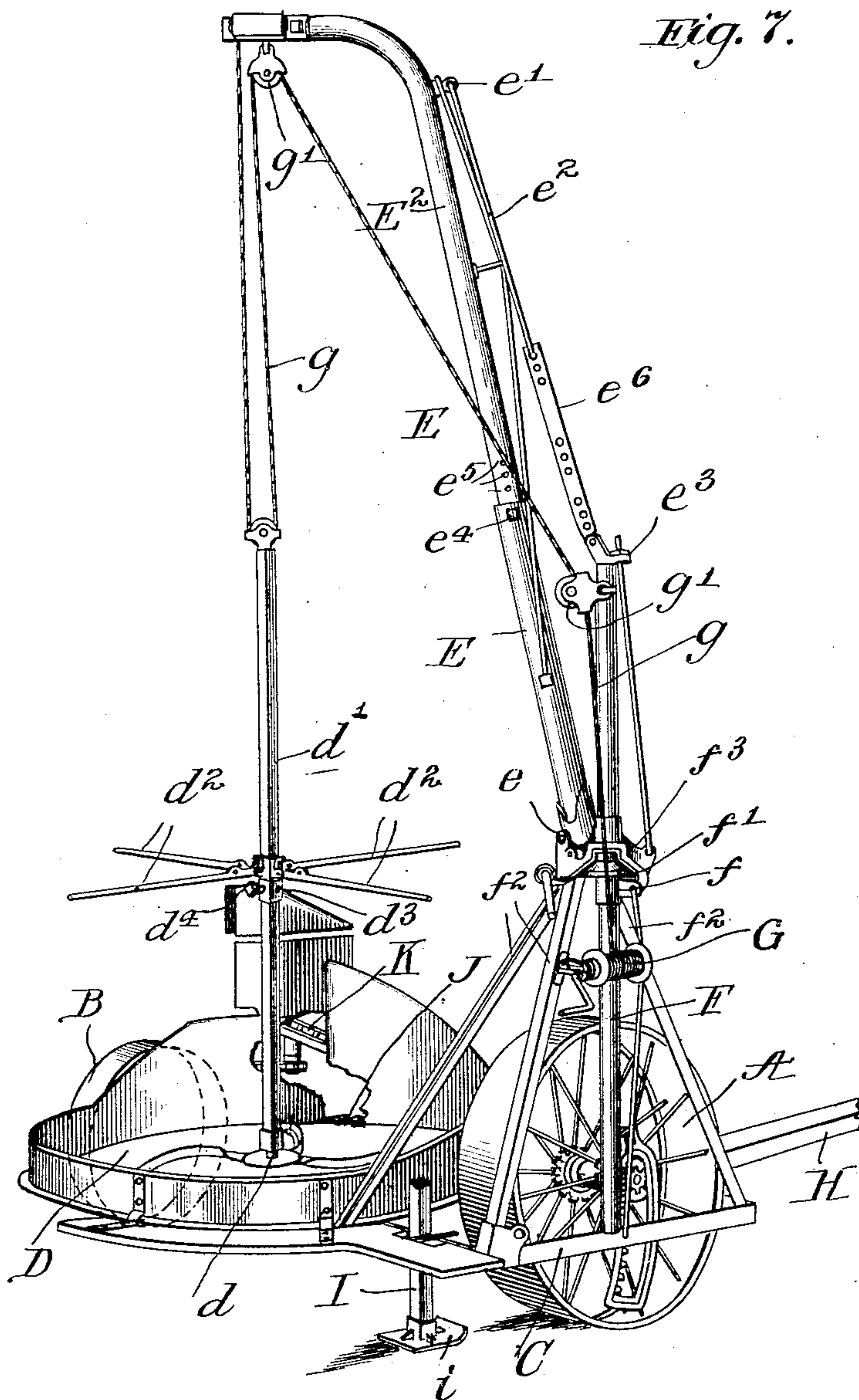
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NO MODEL.

3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

JOSEPH M. SHIVELY, OF ALFRED, KANSAS, ASSIGNOR TO DEERING HARVESTER COMPANY.

CORN-SHOCKER.

SPECIFICATION forming part of Letters Patent No. 734,973, dated July 28, 1903.

Application filed February 20, 1902. Serial No. 94,938. (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 perspective view of my present improvement on the corn-harvester shown and described in the patent granted to me, No. 559,754, dated May 5, 1896. Fig. 2 is a detail of that part having to do with preventing the disturbance of the poise of the machine when the shock is being raised and swung rearwardly. Figs. 3 and 4 show the means for controlling the height of the stubble end of my machine. Figs. 5 and 6 show the means for controlling the height of the grain end of the machine, and Fig. 7 is a perspective view of the preferred form of stalk-support.

In the class of corn-shockers in which the shock is lifted away the center of gravity of the machine is disturbed when the shock is swung from the shock-forming table, and consequently the balance of the machine seriously disturbed, as a shock often weighs several hundred pounds.

In the drawings, A is the main supporting-wheel of my machine, and B the grain-side supporting-wheel of the same. C is a portion of the main frame, which is suitably supported upon the two wheels in the usual manner.

D is the table on which the shock is formed.

In so far as the present invention is concerned the shock may be formed manually, but I prefer to form it automatically in substantially the manner shown and described in the patent granted to me above referred to—that is, upon a rotary table having a removable post around which the shock is formed.

E is a lifting-crane mounted upon the main frame C, provided with a rope and means for engaging the shock, which means in this case is from preference the post which supports the stalk-sustaining devices as stated. The crane and its parts will form the subject-matter of other applications and need not be described further than to point out that it is extensible in its position to any desired height.

Suffice it to say that this crane is adapted to swing on the post F in the following manner: Secured to the post is the sleeve f , which has the flange f' , to which suitable bars f^2 are secured, which form braces. Adapted to turn on the post F immediately above and resting on the flange f' is the casting f^3 , in which is pivoted at e the main arm E of the crane. Upon the crane, reaching from the point e' , is the brace e^2 , which hooks loosely into an eye in the casting e^3 on the top of the post F. Being hooked loosely in this hole and the casting f^3 being free to turn, the crane can be swung from the position shown to any position rearwardly. This may be accomplished by taking hold of the shock or by turning the crane by any means. The crane is made extensible in the following manner:

The part E' is a strong pipe, and the part E^2 is a smaller pipe adapted to slide therein.

e^4 is a bolt which passes through the pipe E' and through any of the holes e^5 in the pipe E^2 . By removal of the bolt e^4 the pipe E^2 may be raised or lowered, as desired. It is necessary, of course, that the brace e^2 be made extensible. This I accomplish by connecting it to the top of the post F by means of the flat bar e^6 , having a series of holes into which the brace e^2 can hook.

f^4 is a brace extending from the casting e^3 upon the top of the post F downward to the casting f^3 . Its purpose is merely to stiffen the crane and is not essential to this invention.

G is a windlass secured to the braces that sustain the crane, around which is the rope g , the latter passing over the sheaves g' and down to the shock, its purpose being to lift the shock from the table.

H is the draft-tongue, which when the machine is in its normal position rests in the neck-yoke of the team, as usual. The shock is formed centrally of the table, and the table is placed in such position between the wheels that whatever its weight, due to the growth of the shock, the center of gravity of the machine is not disturbed. In order to prevent the machine from tipping over backward when the shock is lifted preparatory to swinging to the rear, I provide a vertically-adjustable post I, adapted to rest on the ground and be locked relatively to the main frame, as

shown in Figs. 1 and 2. Upon the lower end of this post I secure the foot *i*, so that it may not be thrust into the ground by the weight it is required to sustain.

5 Upon the bar C, at the rear of the main wheel, is secured the sleeve *c*. To this at *c'* is pivoted the lever *c²*, which is provided with the catch *c³*, adapted to enter any of the holes *i'* in the post I. From preference this post
10 is made of square pipe and the holes are merely drilled in it. For convenience I place the seat upon this post. The latch devices for this post are in such position as to be easily controlled by the foot of the operator.
15 The spring *c⁴* forces a catch into the holes *i'* in the post I when the pressure of the foot of the operator is removed from the lever *c²*. In its normal position—that is, while the shock is being formed—the bar I is raised so that
20 the foot thereof is some distance from the ground, but as soon as the shock is formed the operator presses the lever *c²*, which unlocks the post and permits it to fall to the ground, where it becomes locked by the catch
25 *c³* reengaging a new hole in the post. He then swings the shock rearwardly to the extent desired and drops it by releasing the windlass or otherwise. Particularly in that
30 class of corn-shockers where a rotary shock-forming table is used is it desirable that the table be substantially level at the time the shock is being lifted therefrom. If the machine be running upon level ground, the post I will fall to a definite position always,
35 but if the machine is going uphill, with the table level, then the post I will drop farther. In consequence of this variation in the position to which the post drops I make it long and provide it with many holes.

40 The main supporting-wheel A is supported between the bars of the frame at *a a* by means of brackets *a' a'*, extending upwardly in the main.

a² a² are pinions firmly secured to the axle
45 *a³*, upon which the wheel rotates.

a⁴ is a disk upon the stubble-side hanger *a'*, which is as one piece with the stubble axle-pinion *a²*. This disk is provided with sockets *a⁸*. Upon the upper end of the stubble-side
50 hanger *a'* is an inwardly-curved arm *a⁶*, provided with a slot through which the bar *a⁷* may pass.

a⁵ is a bar adapted to be thrust into the sockets *a⁸* and by it rotate the axle to any
55 desired position. The axle is held by the bar *a⁷*, which is permitted to drop into any one of the sockets *a⁸* that may be immediately below it.

B' is the finger-bar. Upon it is the casting
60 *b*, having the socket to receive the axle *b'*. Extending upwardly from the axle is the arm *b⁵*, suitably braced to the casting *b*.

b² is a screw supported in the bracket *b³*, which is bolted to the main frame and threaded into the sleeve *b⁴*, which is connected to
65 the arm *b⁵*. By turning the crank of the screw the platform may be raised or lowered

relative to the wheel. This means for raising and lowering the grain end of the machine forms no part of this invention, as it is well
70 known and need not be described minutely.

I secure the cutting apparatus to the main frame in the usual manner and from preference place the shock-forming table upon the
75 same frame. For present purposes it is not necessary that the shock-forming table be adjustable in its height from the ground, but it is easier to so make it and raise and lower it as the cutting apparatus is raised and lowered.

d is a vertical pin upon the table D, and *d'*
80 is a standard which forms a support for the arms *d²*, which may be hinged in the manner shown in the patent granted to me August 27, 1901, No. 681,517.

d³ is a sleeve surrounding the post *d'* and
85 is adapted to be held at any desired height by the set-screw *d⁴*, which, passing through the wall of the sleeve, presses against the pipe.

J is the cutting apparatus, and K the gathering-chains. By the adjustment of the cutting
90 apparatus relative to the stalks being cut, whether high or low, by adjustment of the stalk-support relative to the cutting apparatus, and also by adjustment of the crane in
95 especially tall or short corn I am able to accomplish better results than otherwise, for if the stalk-support were low tall stalks would not be sustained, but would fall over because
100 of the center of gravity being higher than the support against which they would lean. By having the crane extensible I am also able to place it high, so as to elevate the shock high enough to be swung to a wagon.

I prefer to place the driver's seat L upon
105 the post *l*, pivoting it thereto at *l'*.

For fuller description of the cutting and gathering devices reference may be had to my application for a patent for corn-shocker filed
February 20, 1902, Serial No. 94,937.

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

1. In a corn-shocker, the combination of the main frame, a shock-forming table, a post
115 mounted on the stubble side of said frame and having a rearwardly-swinging crane-arm overhanging the table, means for lifting the shock from the table and supporting it from the arm while the latter swings rearwardly to deposit it on the ground, and an auxiliary support for the machine located in rear of
120 the post so as to prevent the weight of the shock as it moves rearward from tipping the machine over backward.

2. In a corn-shocker, the combination of the main frame, a shock-forming table, a post
125 mounted on the stubble side of said frame and having a rearwardly-swinging crane-arm overhanging the table, means for lifting the shock from the table and supporting it from the arm while the latter swings rearwardly
130 to deposit it on the ground, an auxiliary support for the machine located in rear of the post so as to prevent the weight of the shock as it moves rearward from tipping the machine

over backward, and means for locking the support in an operative or an inoperative position.

3. In a corn-shocker, the combination of a
5 platform to receive the cut stalks, adjustable in height from the ground, a removable post located centrally on the platform and around which the shock is formed, supporting-arms for the upper part of the shock adjustable
10 vertically on the post, a vertical standard at one side of the platform, a crane supported on said standard so as to overhang the platform and be adjustable in height relative

thereto, and means for lifting the shock and its supporting arms and post from the plat- 15 form, said means being carried by the crane and being operable in all the different adjustments of the post and crane.

In witness whereof I have signed my name to this specification in the presence of two 20 subscribing witnesses.

JOSEPH M. SHIVELY.

Witnesses:

LEWIS S. STEELE,
JAS. W. SMITH.