

(No Model.)

J. M. W. LONG.
SEEDER.

No. 545,703.

Patented Sept. 3, 1895.

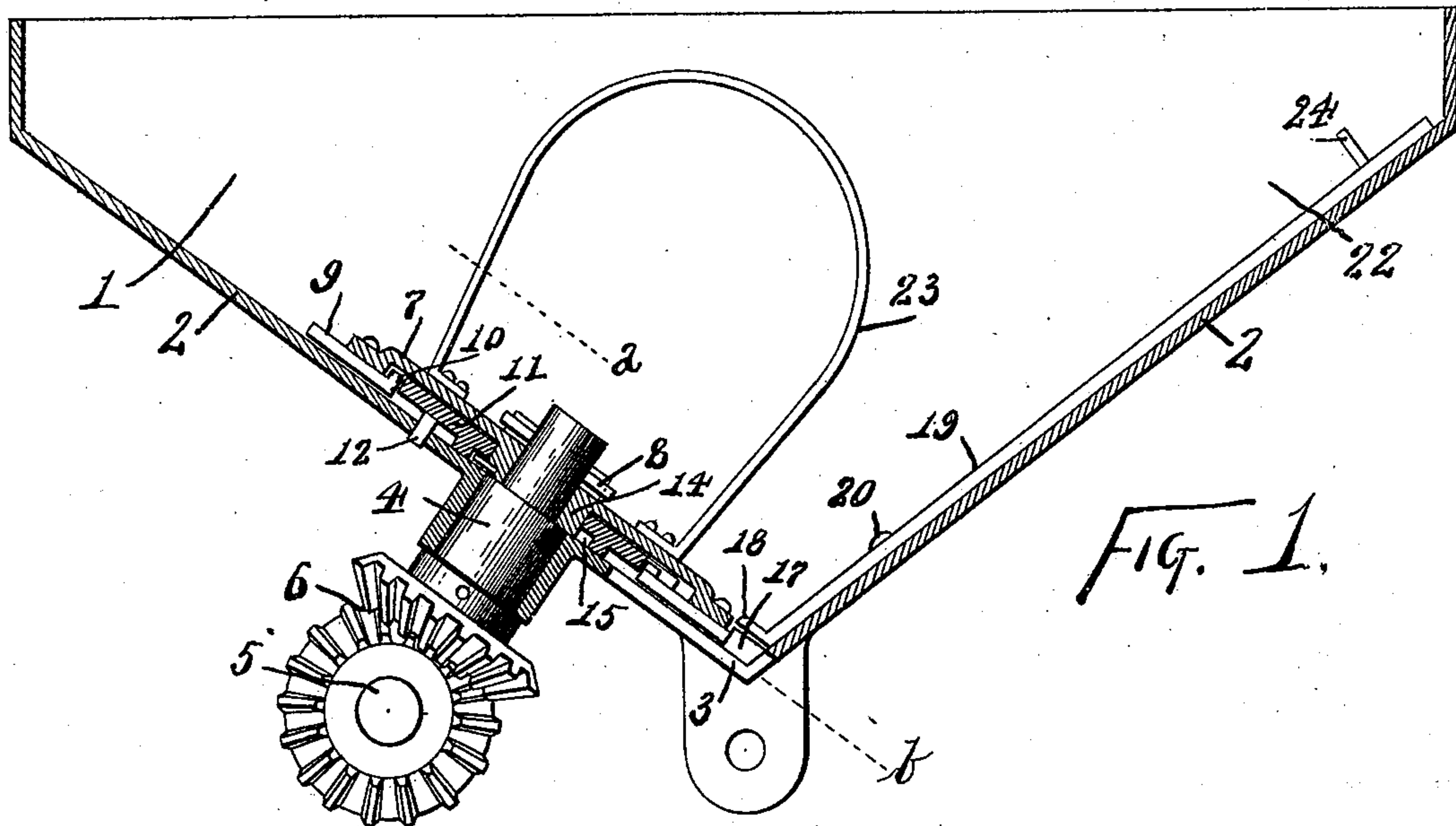


Fig. 1.

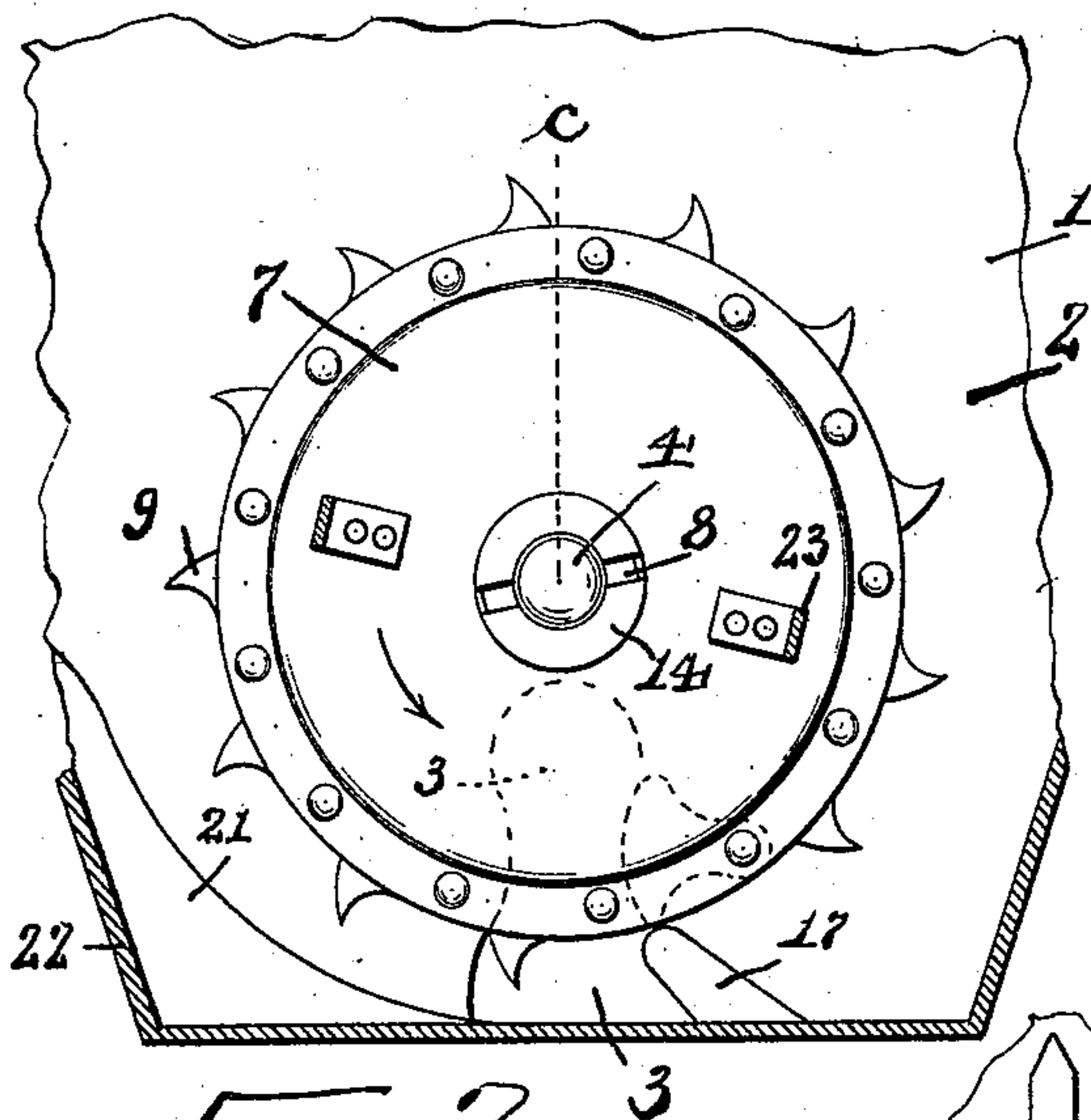


Fig. 2.

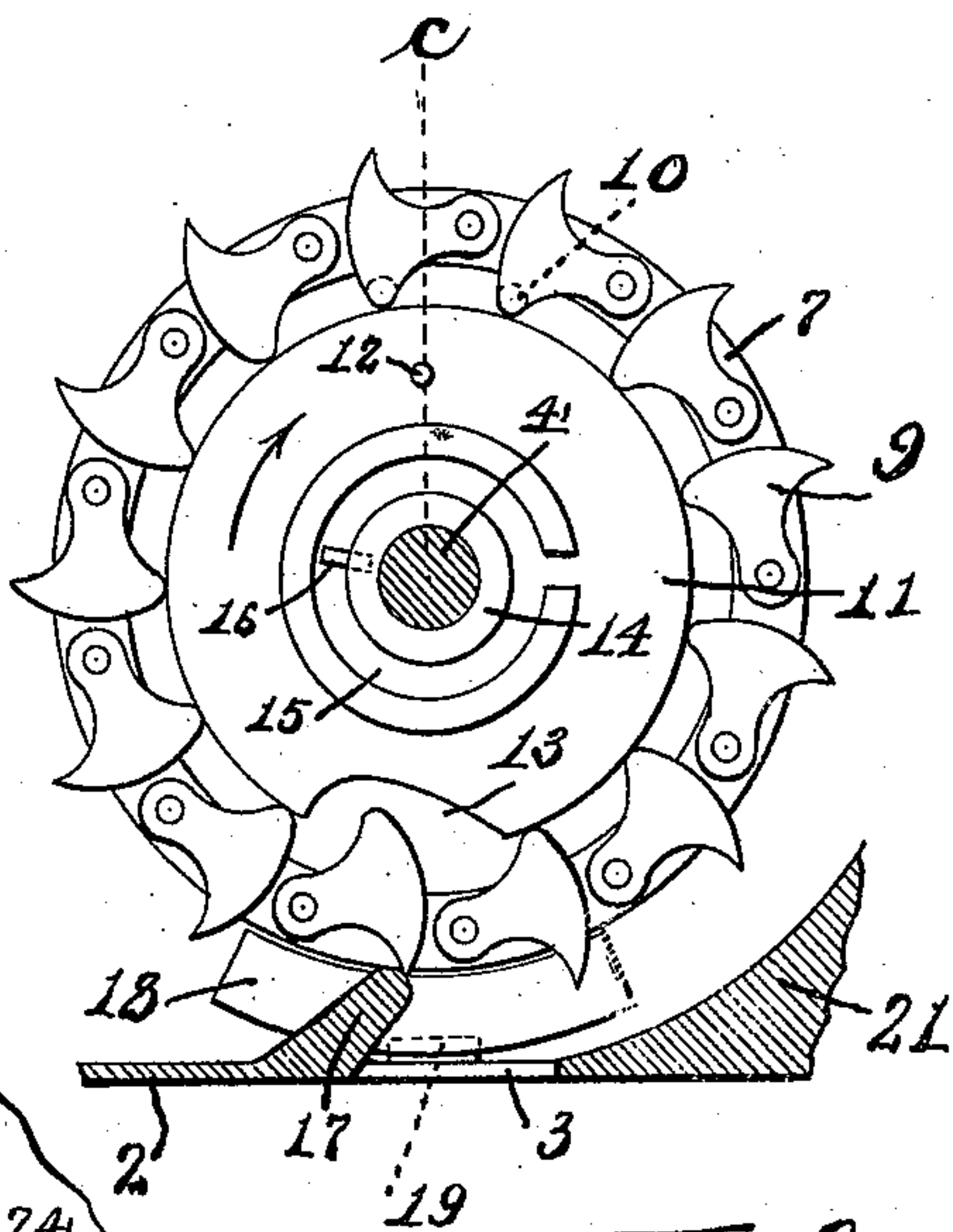


Fig. 3.

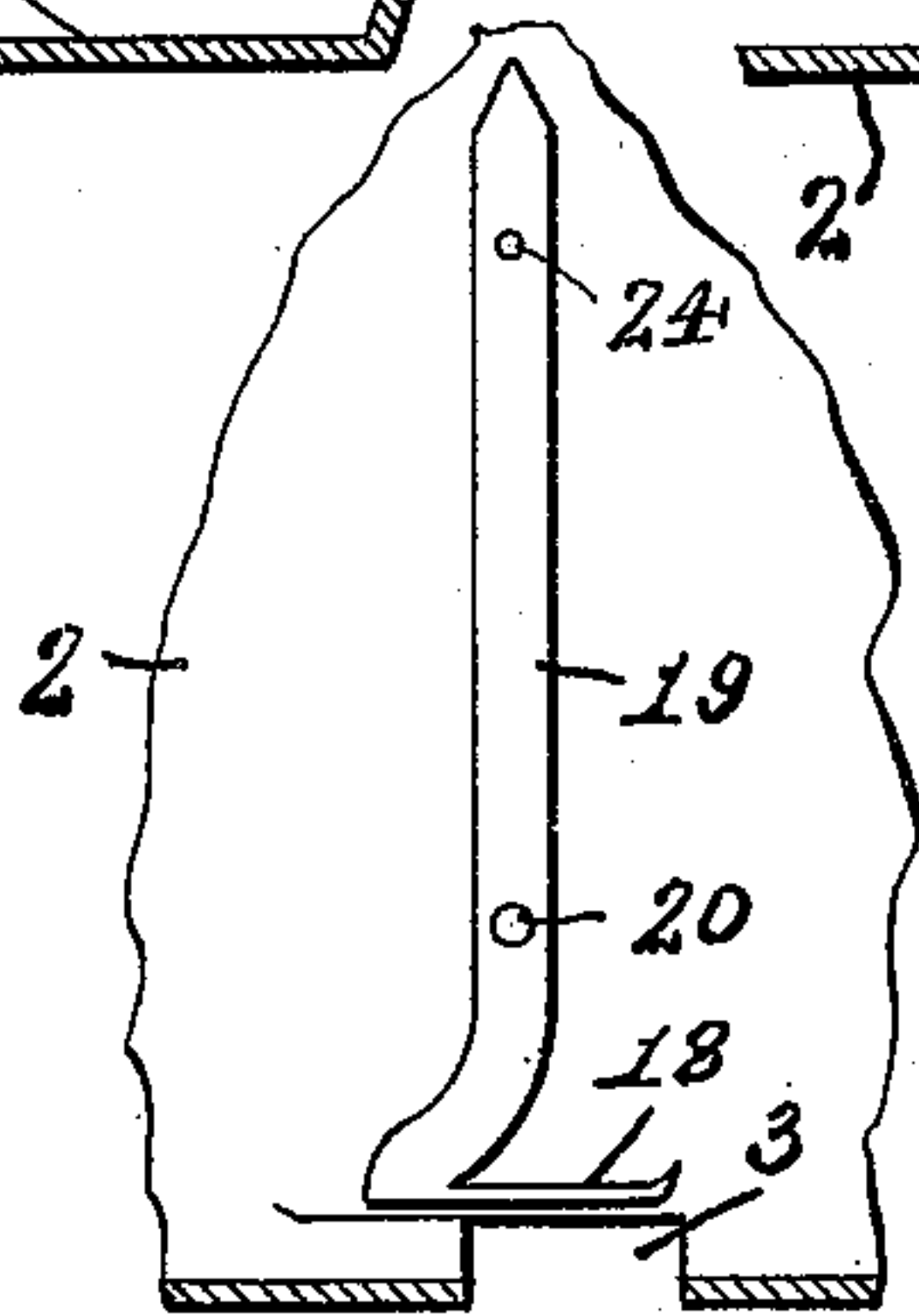


Fig. 4.

Witnesses:
E. R. Shipley.
G. H. See.

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UNITED STATES PATENT OFFICE.

JOHN M. W. LONG, OF HAMILTON, OHIO, ASSIGNOR TO THE LONG & ALLSTATTER COMPANY, OF SAME PLACE.

SEEDER.

SPECIFICATION forming part of Letters Patent No. 545,703, dated September 3, 1895.

Application filed June 29, 1895. Serial No. 554,451. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. W. LONG, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Seed-ers, of which the following is a specification.

This invention pertains to seeding-machines, and will be found of special value in connection with cotton-seed. As the improvement relates to the seed-wheel and its immediate accessories, I do not illustrate or describe the general machine structure, but leave it to be understood that such structure is to be of ordinary type of implement carrying a hopper and mechanism for rotating a seed-wheel within the hopper.

My improvement will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a vertical section of the hopper and seed-wheel, in the plane of line *c* of Figs. 2 and 3; Fig. 2, a plan of the seed-wheel, the hopper and bail appearing in section in the plane of line *a* of Fig. 1; Fig. 3, a view of the under face of the seed-wheel, hopper portions appearing in section in the plane of line *b* of Fig. 1; Fig. 4, a plan of the adjusting-lever for regulating the quantity of seed discharged.

In the drawings, 1 indicates an ordinary seed-hopper; 2, its converging front and rear walls; 3, an opening at the base of these walls for the discharge of seed from the hopper; 4, a spindle journaled in the front wall of the hopper to drive the seed-plate; 5, usual transmitting-shaft receiving motion from one of the ground wheels of the machine; 6, gearing for transmitting motion from shaft 5 to spindle 4; 7, a disk lying against the inner face of the front wall of the hopper and secured to and turning with spindle 4, the lower portion of the periphery of this disk coming over the discharge-opening 3; 8, a pin through spindle 4 in a notch in the hub of disk 7, this pin serving to keep disk 7 down to its place and to cause it to turn with the spindle; 9, a circular series of teeth loosely pivoted to disk 7 and lying between that disk and the rear wall of the hopper, these teeth projecting outwardly beyond the periphery of disk 7, so that the disk becomes provided with a circle of peripheral teeth; 10, pins projecting up-

wardly from the heels of teeth 9 and engaging within a concentric circular recess in the under face of disk 7, these pins thus preventing teeth 9 from turning outwardly an abnormal distance; 11, a disk disposed under disk 7 and arranged concentrically with it by fitting loosely upon the lower hub of disk 7, the periphery of disk 11 engaging within the circle of pins 10 on the teeth, so that these pins are disposed in an annular groove, which prevents the teeth from turning upon their pivots; 12, a dowel-pin in disk 11, engaging a hole in the hopper-wall to prevent the rotation of disk 11; 13, a notch in the lower portion of the periphery of disk 11, which notch, when reached by the teeth in succession, will permit the teeth to retreat inwardly until their points no longer project outwardly beyond the periphery of disk 7, which carries the teeth; 14, the lower hub of disk 7, being the hub on which disk 11 fits; 15, an annular groove around hub 14 of disk 7, within the hub of disk 11; 16, a pin tightly inserted in hub 14 and projecting radially into annular groove 15, the outer wall of which is gapped to permit the insertion of pin 16, this pin serving to loosely tie disk 7 to disk 11; 17, one side wall of opening 3 in the base of the seed-box, being that one of the walls toward which the teeth move at the discharge-hole, as indicated by the arrow in Fig. 2, this wall having a thickness or height from the front wall of the hopper somewhat in excess of the thickness of teeth 9, this wall forming a fixed obstruction to each passing tooth at the feed-opening; 18, a shed-plate covering over the discharge-opening and over wall 17 and extending sidewise between each side margin of opening 3; 19, a regulating-lever pivoted to the rear wall of the seed-box, shed-plate 18 forming an angular foot to this lever; 20, the pivot of this lever, tight enough to hold the lever in adjusted position; 21, the thickening of the front wall of the hopper at the front lower portion of the seed-wheel, this wall portion having about the same thickness as wall 17 and having a curvature substantially concentric with the seed-wheel; 22, the side walls of the hopper, and 23 a bail secured to disk 7 and serving as a handle and as a seed-agitator.

As the seed-wheel turns, the bail 23 agitates

the seed and aids it in flowing to the base of the hopper. By removing pin 8 and lifting on bail 23 the entire seed-wheel, involving disk 7, its teeth 9, and stationary plate 11, may be removed as one structure.

Looking at Fig. 2, the seed-wheel turns in the direction of the arrow and the teeth carry the seed to discharge-opening 3, where the seed will drop out to the discharge-spout. Cotton-seed tends to cling in cells formed between the teeth, thus interfering with the continuity and regularity of seeding. It will be observed in Fig. 2 that wall 17 acts as a positive wiper or scraper which forces the seed to leave the cell, each tooth in turn retreating inwardly to permit scraping-wall 17 to do its work upon the seed. Notch 13 in stationary disk 11 permits the retreat of the tooth, and when wall 17 has been passed, then disk 11 forces the tooth outwardly again to normal position.

The space between the inner surface of wall 21 and the seed-wheel forms the channel through which the teeth carry the seed to the discharge-opening. This channel, at the discharge-opening, is roofed over by shed-plate 18 on lever 19, and the height at which the entry end of this plate stands from the front wall of the hopper determines the vertical thickness of this channel and the quantity of seed carried through the channel by the teeth. By tipping lever 19 a trifle the height of the entry end of plate 18 may be adjusted to adjust the amount of seed discharged.

I claim as my invention—

1. In a seeder, the combination, substantially as set forth, with a hopper having a discharge opening, of a seed-wheel having a series of pivoted teeth projecting outwardly, a

concentric stationary disk to maintain said teeth in position of outward projection and having a notch to permit their retreat as they pass the discharge opening, and an obstruction at the discharge opening in the path of said teeth and serving to clear the periphery of the seed-wheel at the discharge opening.

2. In a seeder, the combination, substantially as set forth, of a hopper having a discharge opening, a toothed seed-wheel arranged to carry seed between its teeth to said opening, and a shed-plate over said teeth at said discharge opening and pivoted for adjustment of its entry end to and from the upper side face of said teeth.

3. In a seeder, the combination, substantially as set forth, with a hopper having a discharge opening, a spindle mounted therein and projecting therein to turn a seed wheel, a disk removably secured to the inner end of said spindle, a series of teeth pivoted at the periphery of said disk, and a disk mounted on the hub of the first mentioned disk and doweled to the hopper so as to be incapable of rotation and having its periphery engaging said pivoted teeth and having a notch at said discharge opening to permit the retreat of the teeth as they pass the discharge opening.

4. In a seeder, the combination, substantially as set forth, of a hopper having a discharge opening, a spindle mounted therein to drive a seed-wheel, a toothed seed-wheel removably secured to the inner end of the spindle, and a bail secured to one face of the seed-wheel to serve as an agitator and as a handle.

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Witnesses:

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