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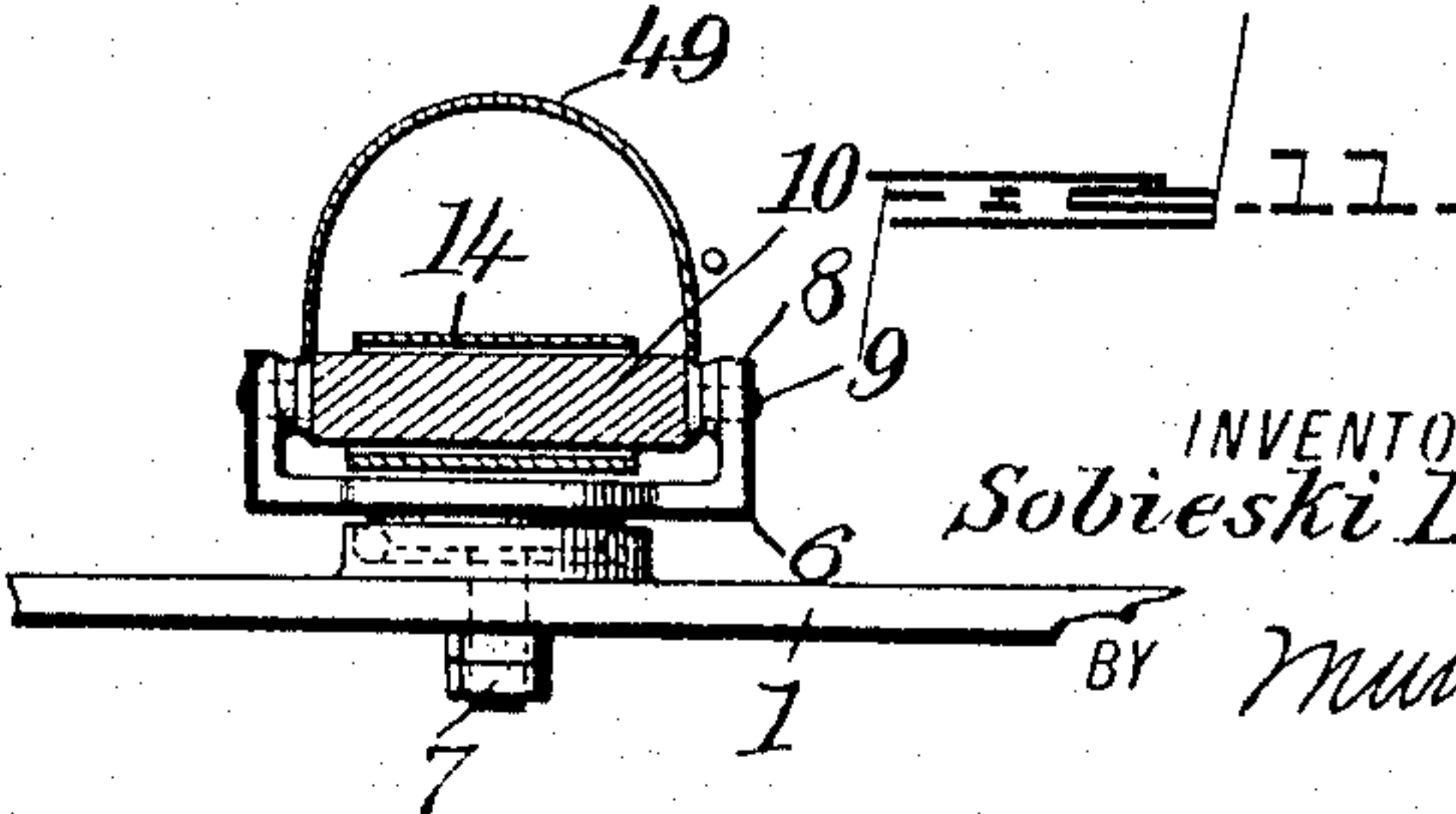
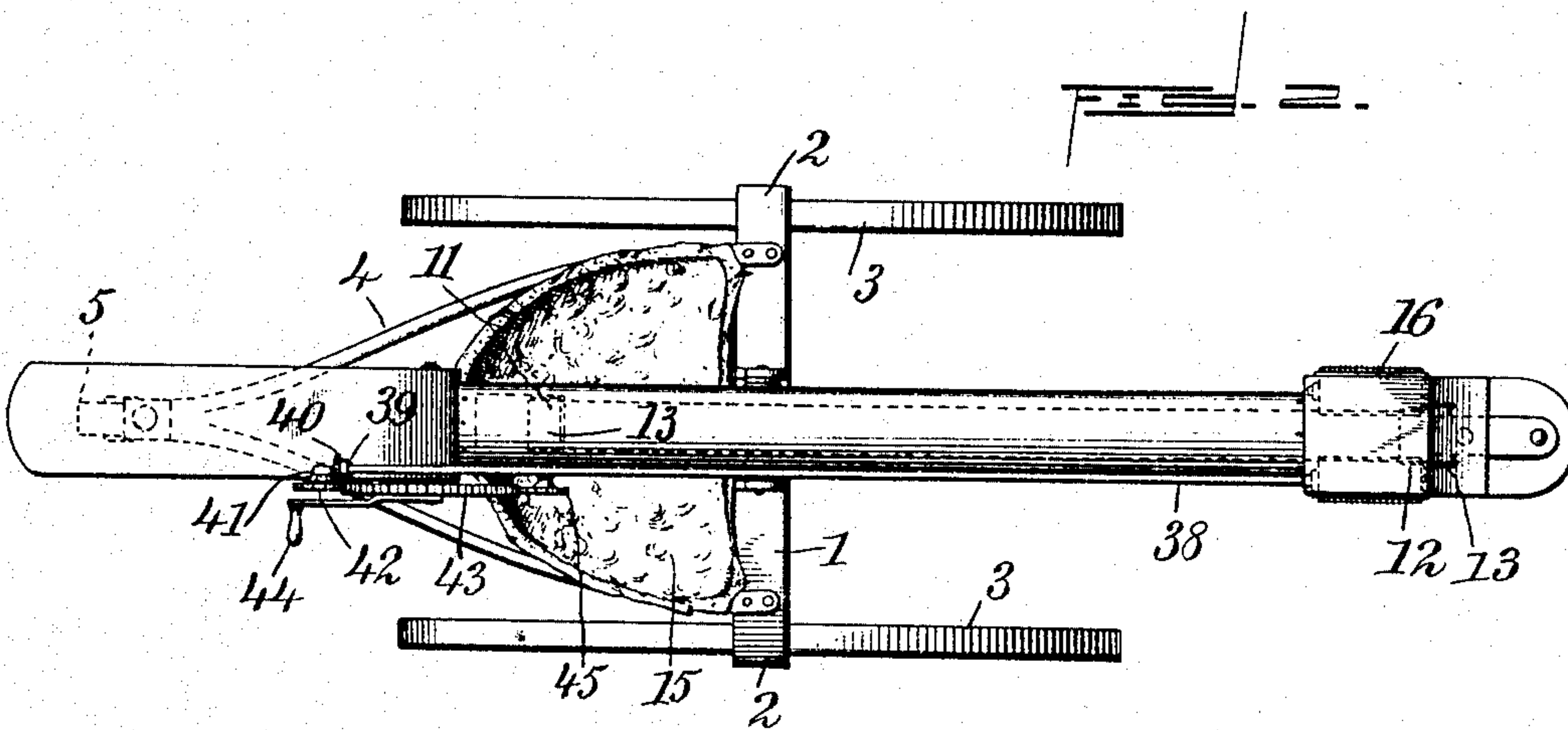
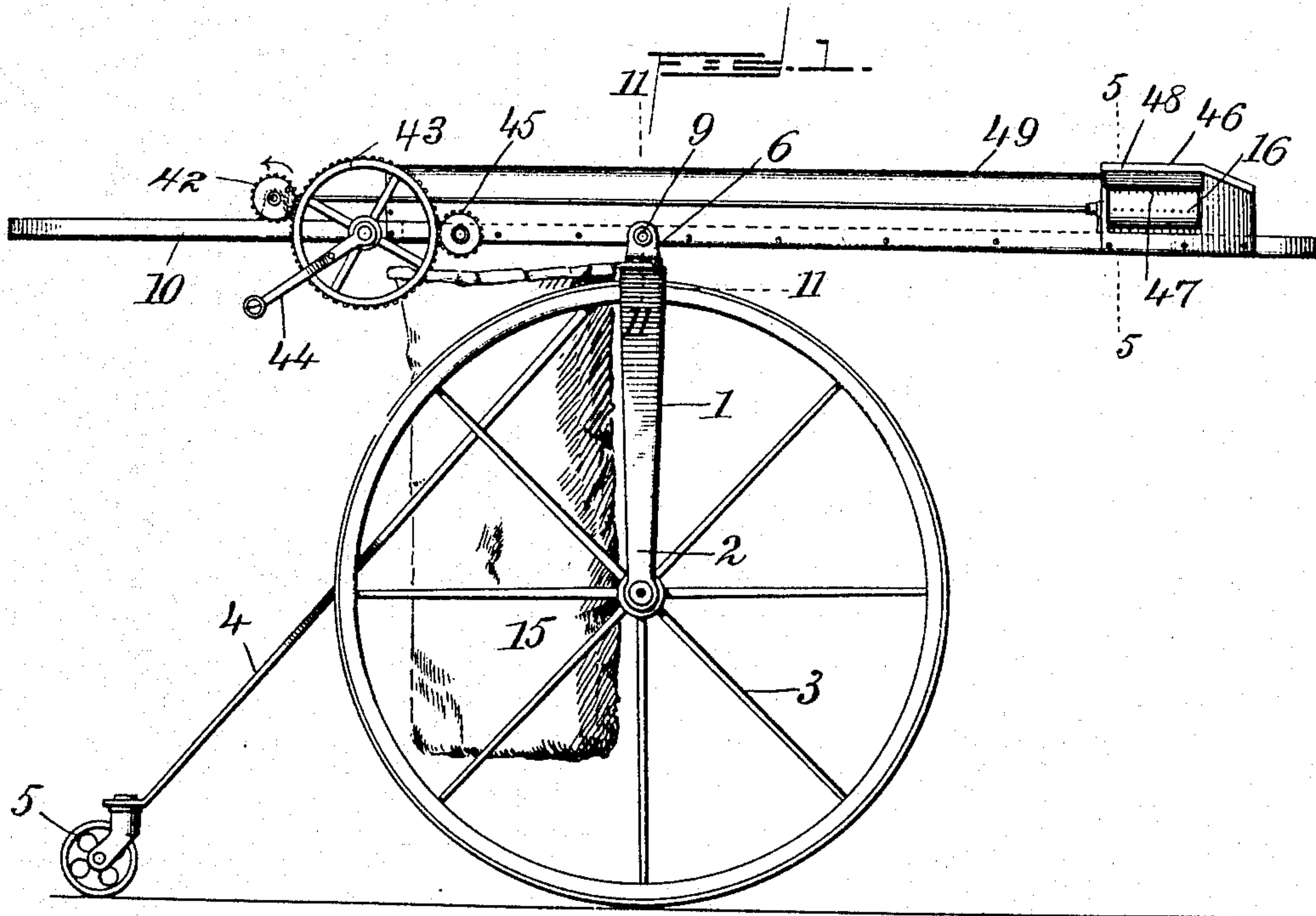
No. 788,238.

PATENTED APR. 25, 1905.

S. L. BOND.  
COTTON PICKER.

APPLICATION FILED JULY 23, 1904.

3 SHEETS—SHEET 1.



WITNESSES:

*L. Sanford Hancock*  
*J. D. Ammen*

INVENTOR  
*Sobieski L. Bond.*

BY *M. M. M.*

ATTORNEYS

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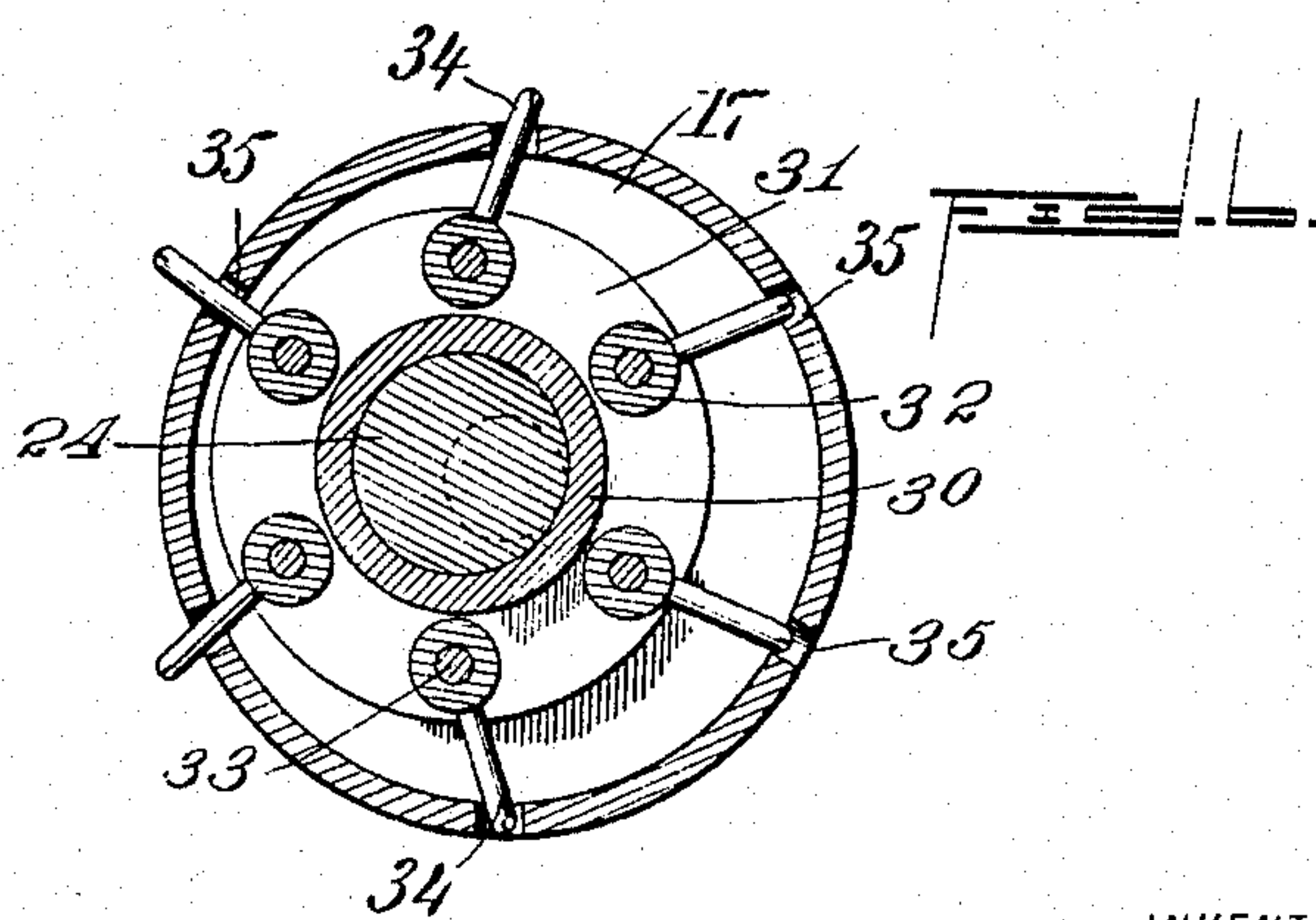
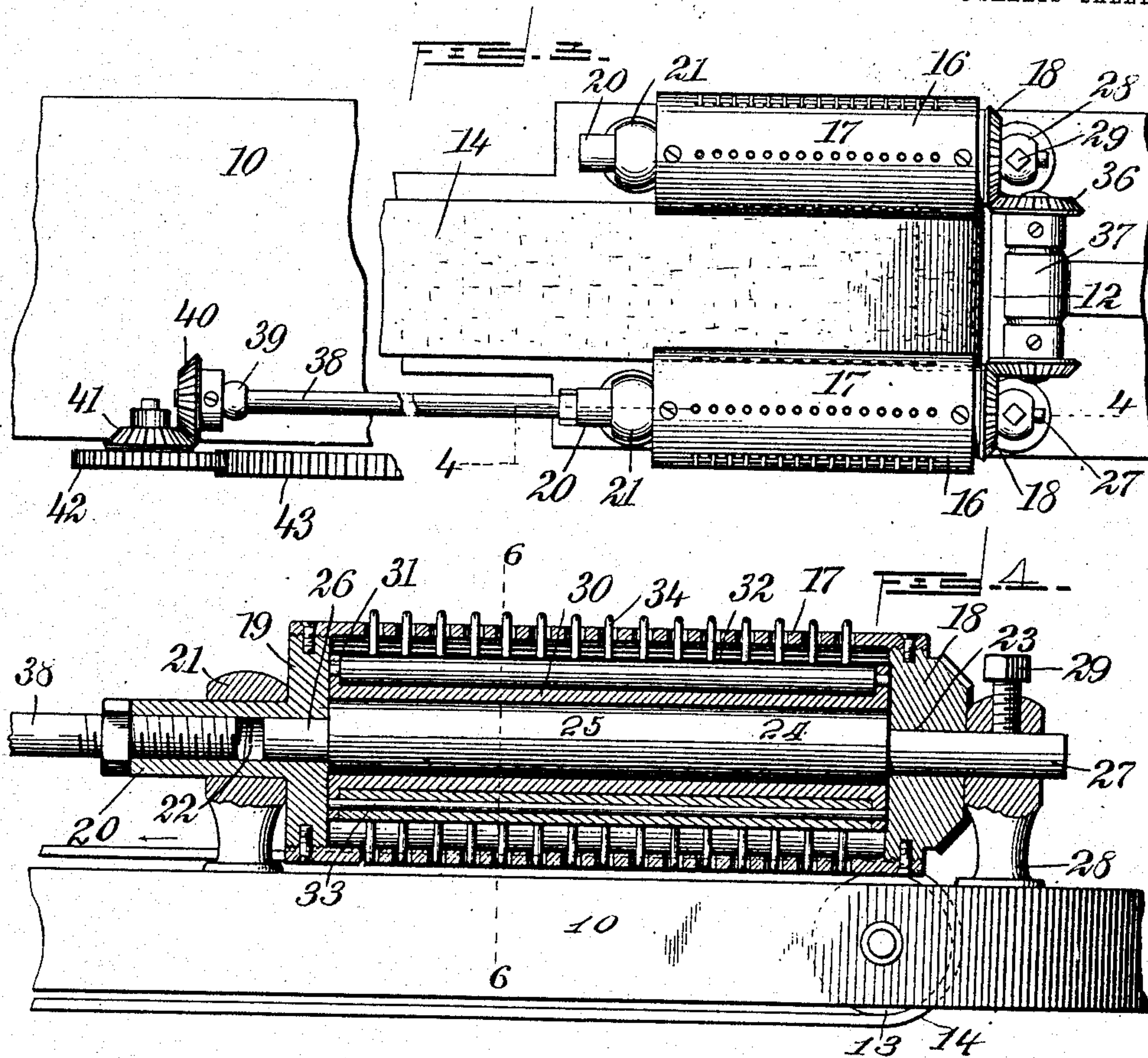
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3 SHEETS—SHEET 2.



WITNESSES:

*L. Gifford Handy*  
*J. D. Conner*

INVENTOR  
*Sobieski L. Bond.*

BY *Mumford*  
ATTORNEYS



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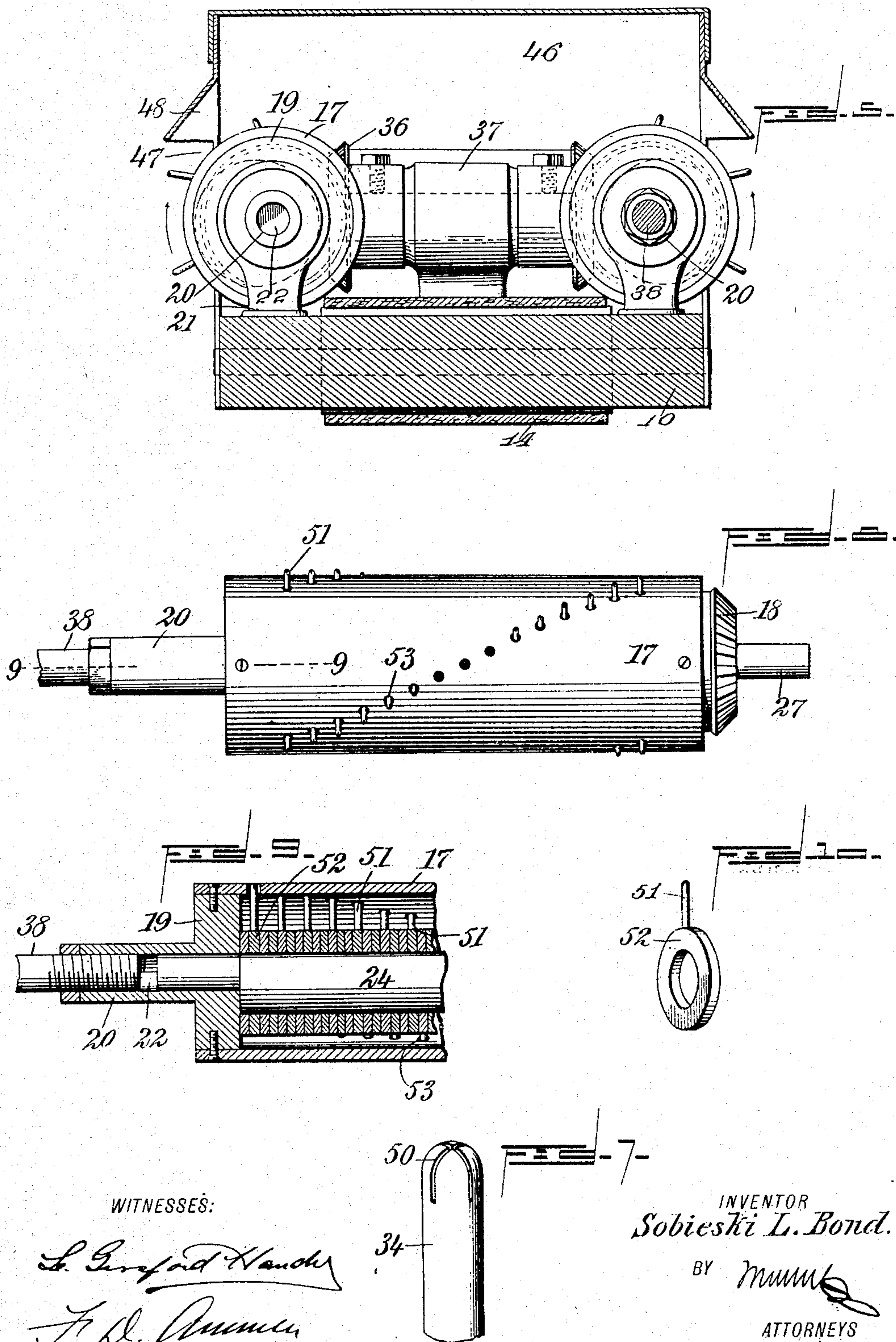
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3 SHEETS—SHEET 3.



WITNESSES:

*L. G. Ford*  
*J. R. Bond*

INVENTOR  
*Sobieski L. Bond.*  
BY *M. M. M.*  
ATTORNEYS



## UNITED STATES PATENT OFFICE.

SOBIESKI LOUIS BOND, OF CHARLESTON, SOUTH CAROLINA.

## COTTON-PICKER.

SPECIFICATION forming part of Letters Patent No. 788,238, dated April 25, 1905.

Application filed July 23, 1904. Serial No. 217,809.

*To all whom it may concern:*

Be it known that I, SOBIESKI LOUIS BOND, a citizen of the United States, and a resident of Charleston, in the county of Charleston and State of South Carolina, have invented a new and Improved Cotton-Picker, of which the following is a full, clear, and exact description.

My invention relates to cotton-pickers; and its object is to produce a simple device of its class which is provided with improved means for picking the cotton and delivering the same into a receptacle. The device is expected to be pushed along by a plantation hand and can be completely controlled by one person.

The invention consists of the construction and combination of parts, to be more fully described hereinafter and definitely set forth in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the machine. Fig. 2 is a plan. Fig. 3 is a plan of portions of the mechanism, the same being broken away, as will appear. This view is upon an enlarged scale. Fig. 4 is a vertical longitudinal section taken substantially on the line 4 4 of Fig. 3 passing through the axis of one of my picker-cylinders. In this view a table upon which the picker-cylinders are mounted is shown in side elevation. Fig. 5 is a vertical section taken substantially on the line 5 5 of Fig. 1, this view being taken upon an enlarged scale, as will appear. Fig. 6 is a transverse section taken substantially on the line 6 6 of Fig. 4 and passing through a picker-cylinder. Fig. 7 is a perspective showing in detail one of the picker-teeth carried by the cylinders. Fig. 8 is a side elevation showing a modified construction of the picker-cylinders. Fig. 9 is a longitudinal section taken substantially on the line 9 9 of Fig. 8, showing a portion of one end of a picker-cylinder and the manner of mounting the teeth therein. Fig. 10 is a perspective view illustrating more in detail the manner of mounting the teeth in the modified form of cylinder shown in Fig. 8. Fig. 11 is a vertical section taken substantially on the line 11 11 of Fig. 1.

Referring more particularly to the parts, 1 represents the frame of the implement, which consists, as shown, of a yoke presenting depending arms 2, to which wheels 3 are attached, adapted to support the implement and roll upon the ground. This frame, which is supported in an upright position by means of a rear fork 4, which extends rearwardly and downwardly, carries a caster-wheel 5, as indicated. At the middle portion of the yoke 1 a bracket 6 is rotatively mounted by means of a downwardly-extending pintle 7. This bracket constitutes a fork, the arms 8 whereof extend upwardly and receive rotatively trunnions 9, which support therebetween an elongated table or board 10.

At a suitable point to the rear of the bracket 6 the table 10 is provided with an opening 11, and a similar opening 12 is formed at the forward portion of the table. Adjacent, respectively, to these openings rollers 13 are mounted, and over these rollers an endless belt 14 passes. This belt is adapted to be driven in a manner which will be described more fully hereinafter, so that its upper run moves rearwardly upon the table or platform. It is intended to deliver the picked cotton to a suitable receptacle, such as a bag 15, which is supported upon the frame in any suitable manner just below the table, as indicated.

At the forward extremity of the table 10 and on the upper side thereof there are mounted a pair of picker-cylinders 16, the same having horizontal axes of rotation disposed longitudinally with respect to the table. The axes of rotation of these cylinders are parallel, and the cylinders are disposed, respectively, at the sides of the belt 14, referred to above. In this construction (referring especially to Fig. 4) each of the cylinders 16 comprises an outer shell 17 of cylindrical form, the outer extremity of which is closed by a head 18, constituting a bevel gear-wheel, the purpose of which will appear hereinafter. Rear heads 19 are carried in the shells 17, and these heads are formed, preferably, with integral trunnions 20, which are rotatively mounted in suitable bearings 21. These trunnions 20 are provided with central bores 22, which are in alignment with similar bores 23, which are for



ally with the shell and which pass through the outer heads 18. In the interior of the shell 17 there is mounted an adjusting-bar 24, which has a cylindrical body 25 and comprises 5 eccentrically-placed reduced extremities or shanks 26 and 27, the former of which is rotatively mounted in the bore 22, while the latter passes through the bore 23. Each of the shanks 27 is mounted in suitable bearings 28, 10 which are similar to the bearings 21, already described; but these bearings are equipped with set-screws 29, which are adapted to clamp the adjusting-bars in any angular position, as will be readily understood.

15 Upon the body 25 of the adjusting-bar 24 there is rotatively mounted a sleeve 30, and this sleeve is provided with flanges 31 at its extremities, which abut against the inner faces of the heads 18 and 19, as indicated. These 20 flanges afford means for mounting longitudinally-disposed tooth-shafts 32, having shafts 33 passing through them longitudinally, as shown, for this purpose. In the tooth-headers are mounted a plurality of short arms or teeth 25 34, and these teeth project, as shown most clearly in Fig. 6, in the corresponding openings 35, formed in the shell 17, as indicated. These openings are very much larger in diameter than the teeth, permitting considerable 30 freedom of movement, as will be readily understood.

Arrangement is made for transmitting a uniform rotation between the two cylinders 16. For this purpose bevel gear-wheels 36 35 are provided, rigidly carried by the same arbor, rotatively mounted in a suitable bracket 37 at the forward end of the table, and these bevel-gears mesh, respectively, with the bevel-gears 18. Obviously the cylinders will rotate 40 in opposite directions.

In order to impart a rotary movement to the cylinders, one of them, preferably the one at the right, is threaded in the bore 22 thereof, facilitating the attachment of a shaft 38, which 45 shaft extends longitudinally of the table toward its rear and is rotatively mounted near the rear of the table upon a suitable bracket 39. Beyond this bracket it carries rigidly a bevel gear-wheel 40, which meshes with a corresponding bevel gear-wheel 41, the same being 50 rigidly attached to a pinion 42, meshing with the main gear-wheel 43. This main gear-wheel 43 is adapted to be continuously rotated by the operator of the implement by means of a suitable crank 44. This main 55 gear-wheel also affords means for continuously driving the belt 14. To this end the rearmost of the rollers 13 carries rigidly a pinion 45, which meshes with the forward 60 side of the main gear-wheel, as shown most clearly in Fig. 1.

The cylinders 16, together with their contiguous parts, are completely inclosed in a casing or hood 46, which is provided on its 65 sides with feed-openings 47, protected by

cowls or vizors 48, formed above them, as shown, the same inclining upwardly and inwardly. Uniting with the rear side of this hood 46 there is a cover 49, the same having 70 substantially the form in cross-section shown in Fig. 11 being disposed longitudinally with respect to the table and attached to the upper face thereof so as to inclose the upper run of the belt 14.

The extremities of the teeth 34 are preferably provided with slits or recesses 50, the 75 same lying in planes at right angles to each other and passing through the axis of the teeth. These slits or recesses are intended to facilitate the separation of the lint. 80

In the preferred form of the cylinders the teeth 34 are attached along a straight line, and the openings 35 in the shell are correspondingly placed.

In Figs. 8 to 10 there is illustrated a modified construction for the cylinders in which 85 the teeth 51 are attached in sets upon collars or rings 52, said rings being loosely mounted upon the body of the adjusting eccentric bar 24. There is preferably one tooth in connection 90 with each collar, and in this form of the device the openings 53, formed in the shell, are preferably disposed along helical lines, as indicated in Fig. 8. In other respects this modified form is identical with the 95 preferred form.

The mode of operation of the implement will now be described: It being understood that the implement would be pushed along by its operator, the crank 44 will be continuously 100 rotated in the forward direction. This would operate to rotate the cylinders 16, respectively, in the direction of the arrows adjacent to them in Fig. 5. The eccentric adjusting-bar 24 having been previously adjusted into the desired position, the cotton would be introduced 105 into the feed-openings 47 beneath the cowls 48 and would be carried upwardly by the revolving protruding teeth, which would operate to pick the same and advance the cotton 110 into the interior of the hood 46. By reason of the eccentricity of the adjusting-bar the teeth would operate to advance and withdraw themselves in the openings 35 as the cylinders 115 rotated, and the adjustment would be such that the teeth would project a maximum amount on the outer faces and upper faces of the cylinders, withdrawing themselves inwardly as they approached the inner and lower 120 portion of their revolution. Upon this arrangement the teeth would operate to deposit the cotton upon the upper run of the endless belt 14. The upper run of the belt is moved rearwardly, as indicated by the arrow in Fig. 4. The mechanism for moving this belt has 125 been fully described above. Passing to the rear, the cotton carried by the belt is precipitated through the opening 11 and falls into the receptacle 15, as will be readily understood. The set-screws 29 enable the axis of 130



eccentricity of the adjusting-bars 24 to be adjusted as desired.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

- 5 1. In a cotton-picker, in combination, a frame, wheels supporting the same, a table making a substantially universal joint with said frame, and pickers carried by said table.
- 10 2. In a cotton-picker in combination, a frame mounted upon wheels, a swivel-head mounted in said frame, an elongated table carried by said swivel-head, having a horizontal axis of rotation thereupon, picking-cylinders disposed longitudinally of said table and dis-  
15 posed apart, a conveyer-belt mounted upon said table between said picker-cylinders and leading rearwardly therefrom, a receptacle adapted to receive the cotton from said conveyer-belt, and means for driving said conveyer-belt and actuating said picker-cylinders.
- 20 3. In a cotton-picker in combination, a freely-mounted portable table, a pair of oppositely-disposed picker-cylinders carried thereby, a belt carried by said table between said picker-cylinders, means for transmitting rotary movement between said cylinders, and means for actuating said belt and rotating one of said picker-cylinders.
- 25 4. In a cotton-picker in combination, a table, a pair of oppositely-disposed picker-cylinders mounted upon said table, a hood incasing same, a covered way leading from said picker-cylinders and communicating with the interior of said hood, an endless belt, said table having openings through which said belt passes, the upper run of said belt passing through said covered way, means for actuating said cylinders and said belt, and means  
30 for supporting a receptacle to receive cotton from said belt.
- 35 5. In a cotton-picker in combination, a table, a pair of oppositely-disposed picker-cylinders mounted thereupon and disposed apart, gear-wheels carried at adjacent extremities of said picker-cylinders, said gear-wheels affording means for transmitting movement between said cylinders, a shaft mounted upon said table and connecting with the extremity of one  
40 of said cylinders remote from said gear-wheels, a conveyer-belt disposed between said cylinders, and means for driving said belt and said shaft.
- 45 6. In a cotton-picker in combination, a table, a pair of oppositely-disposed picker-cylinders, means for transmitting a uniform rotation between said cylinders, opposite in direction, said cylinders being disposed apart, a conveyer-belt mounted upon said table between said picker-cylinders, a shaft leading substantially in the same direction as said belt and connecting with the axle of one of said cylinders, and means for continuously driving said belt and said shaft.
- 50 7. In a cotton-picker in combination, a ta-

ble, a pair of opposite picker-cylinders carried by said table and disposed apart, bevel gear-wheels carried by the adjacent extremities of said cylinders, other bevel gear-wheels affording means for transmitting movement 70 between said cylinders and meshing with said first bevel-gears, an endless belt carried by said table and lying between said picker-cylinders, a shaft extending in the same direction with said belt and connecting with the axle 75 of one of said cylinders, a roller from which the remote extremity of said belt passes, a crank adapted to rotate said roller, and a bevel-gear adapted to transmit movement from said crank to said shaft. 80

8. A cotton-picker comprising in combination, a rotatable shell having openings through the wall thereof, an eccentric bar mounted in said shell, a sleeve mounted upon said eccentric bar and within said shell, and a plurality 85 of teeth carried loosely by said sleeve and projecting through said openings.

9. A cotton-picker comprising in combination, a rotatable shell having a plurality of openings in the wall thereof, an eccentric bar 90 mounted within said shell, a sleeve mounted upon said bar, tooth-shafts loosely mounted upon said sleeve, and a plurality of teeth the extremities whereof attach in said tooth-shafts, said teeth projecting through said 95 openings.

10. A cotton-picker comprising in combination, a rotatable shell having a plurality of alining openings, an eccentric bar mounted in said shell, a sleeve loosely carried by said bar, 100 a plurality of tooth-shafts carried rotatively by said sleeve, and a plurality of teeth attaching to said tooth-shafts and projecting through said openings.

11. A cotton-picker comprising in combination, a bracket, a second bracket, a cylinder 105 rotatively mounted therebetween and having a trunnion rotatively mounted in said first bracket, said cylinder having a head terminating against the face of said second bracket, said head having an opening therethrough, an eccentric bar mounted within said cylinder and projecting through said opening, means for fixing the projecting extremity of said eccentric bar in said second bracket, said cylinder 110 having a plurality of openings in the wall thereof, a plurality of teeth projecting from the interior of said cylinder through said openings, and means for mounting said teeth in gangs upon said eccentric bar. 120

12. A cotton-picker comprising in combination, a bracket, a second bracket, a cylinder 125 rotatively mounted therebetween, said cylinder having a head terminating against the face of said second bracket and another head having a trunnion rotatively mounted in said first bracket, said trunnion and the head opposite the same having alining bores passing there-through, an eccentric bar mounted within said cylinder, the extremities whereof lie in said 130



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bores, means for attaching said bar rigidly in said second bracket, said cylinder having a plurality of openings in the wall thereof, a plurality of teeth projecting through said openings, and means for mounting said teeth upon said bar.

13. In a cotton-picker in combination, a picker-cylinder, teeth projecting therefrom and having transverse intersecting slits in the

extremities thereof, and means for rotating said cylinder.

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

SOBIESKI LOUIS BOND.

Witnesses:

JOSEPH O. LADD,  
H. H. PUCKHABER.