

No. 843,294.

PATENTED FEB. 5, 1907.

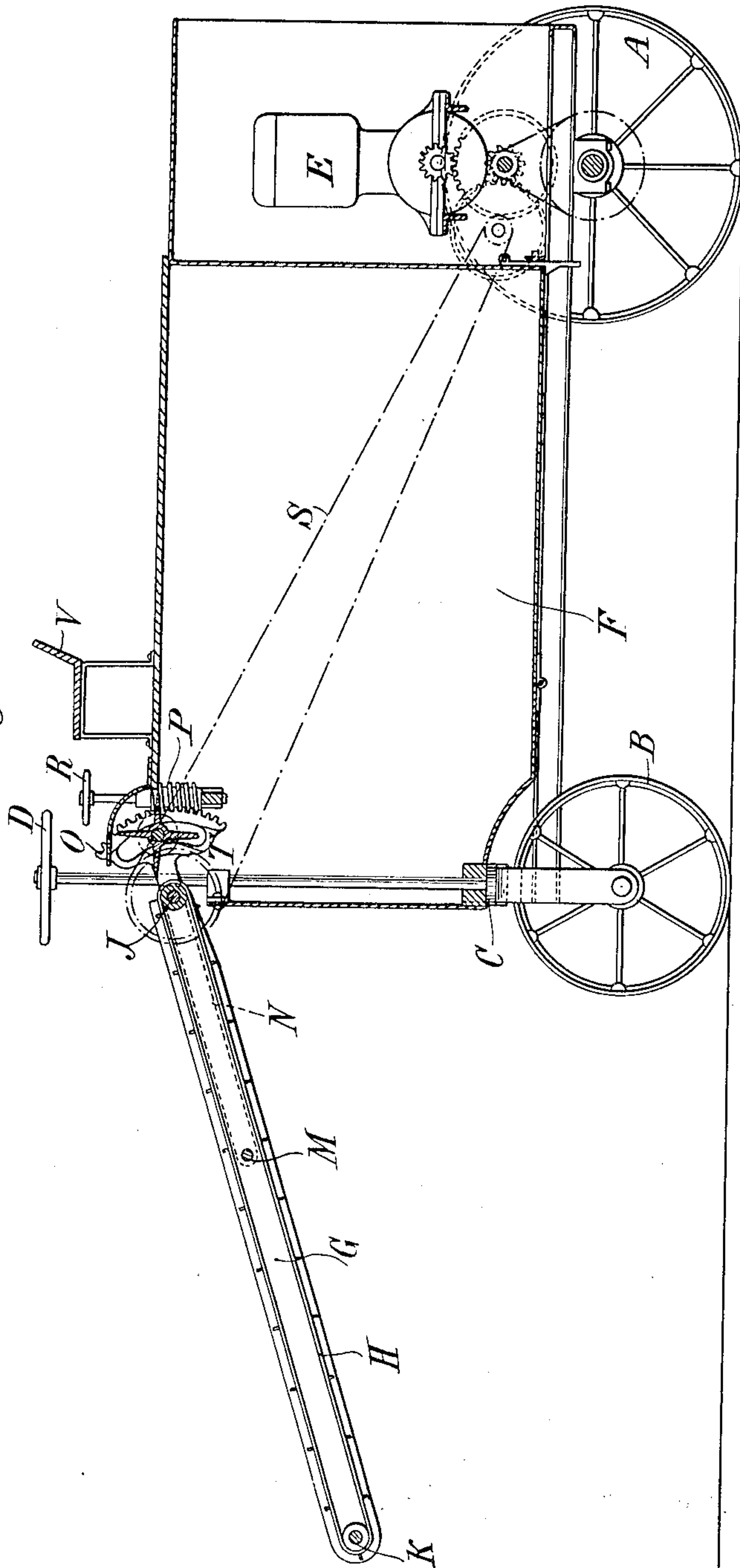
J. F. O'SHAUGHNESSY.

APPARATUS FOR GATHERING COTTON.

APPLICATION FILED AUG. 18, 1905. RENEWED JULY 11, 1906.

3 SHEETS—SHEET 1.

Fig. 1



Witnesses
Raphaël better
Edward K Miller

James F. O'Shaughnessy
Inventor
By Broxon Derby & Hopkins
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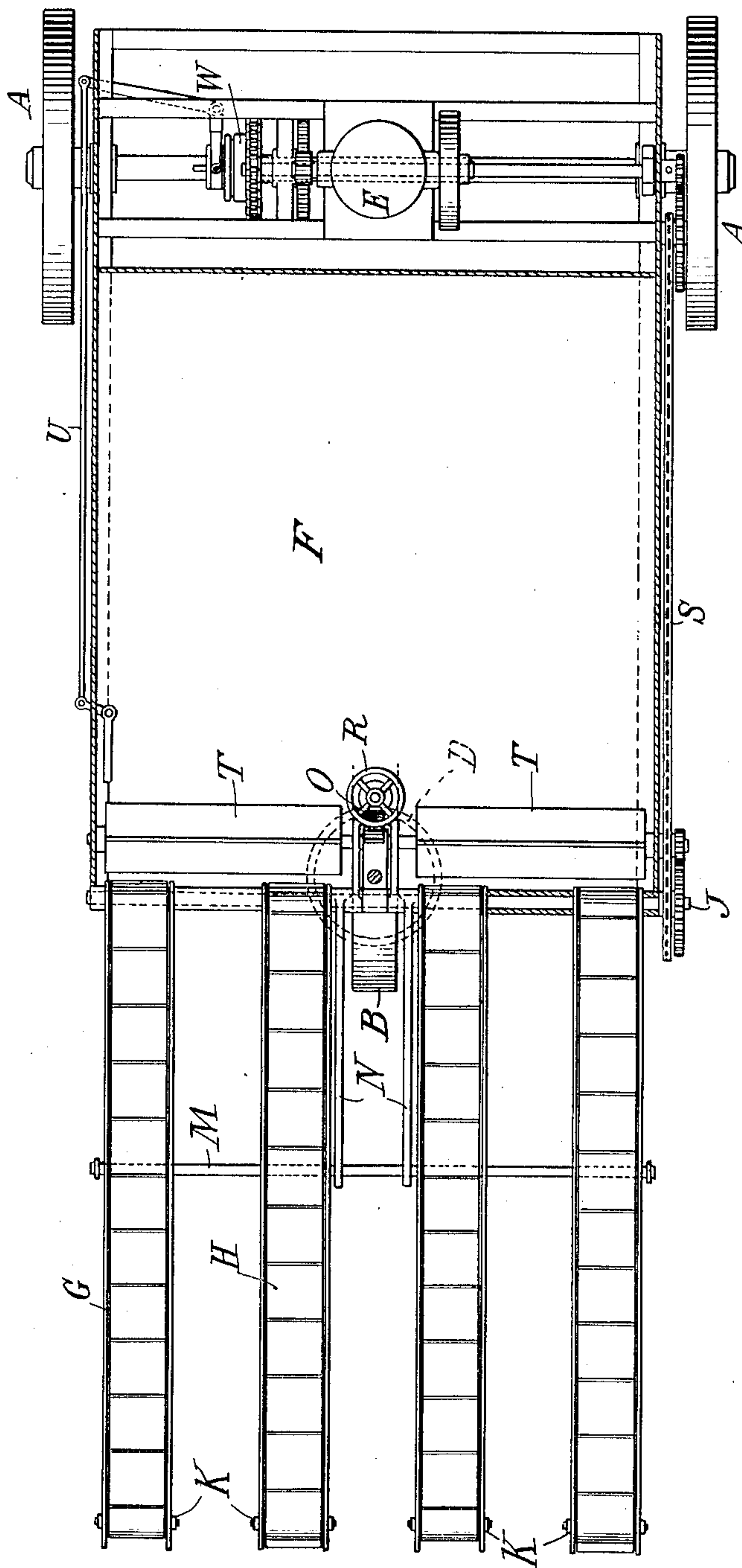
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3 SHEETS—SHEET 2.

Fig. 2



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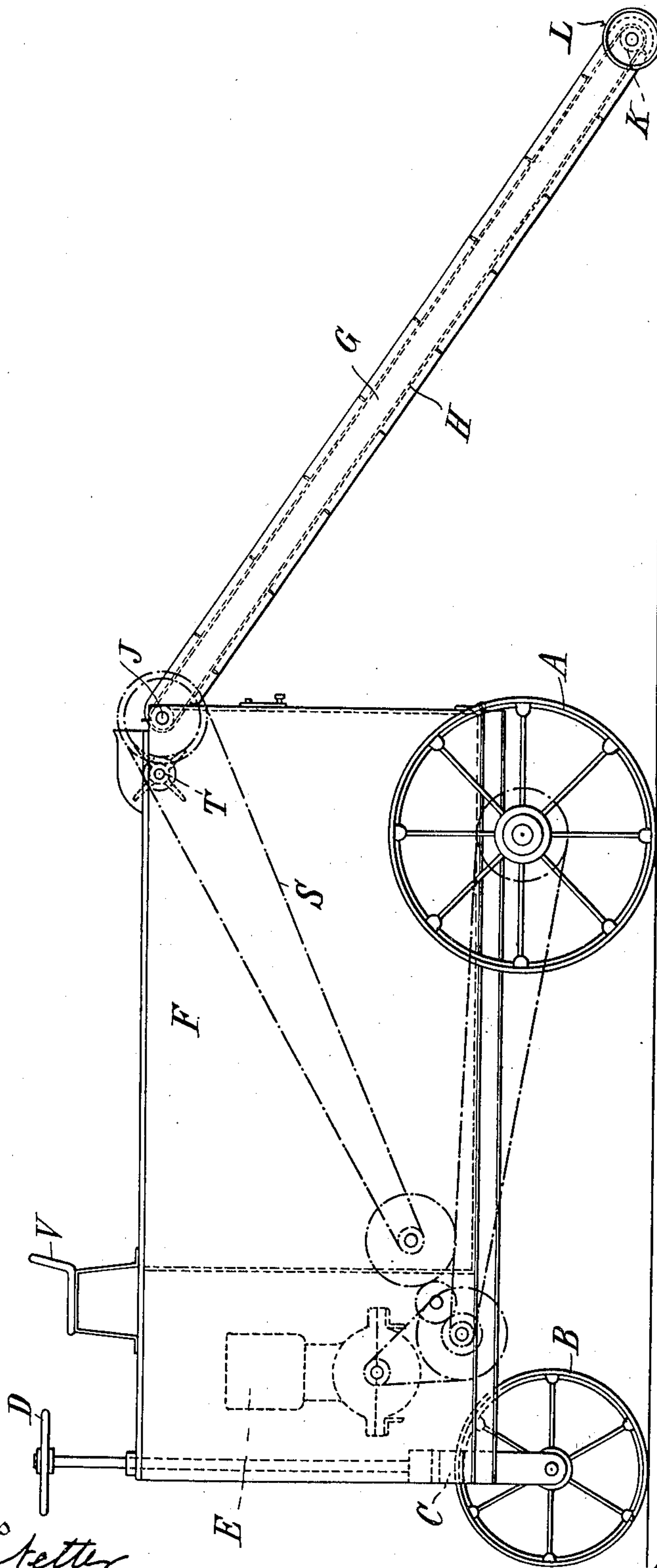
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3 SHEETS—SHEET 3.

Fig. 3



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UNITED STATES PATENT OFFICE.

JAMES F. O'SHAUGHNESSY, OF NEW YORK, N. Y.

APPARATUS FOR GATHERING COTTON.

No. 843,294.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed August 18, 1905. Renewed July 11, 1906. Serial No. 325,617.

To all whom it may concern:

Be it known that I, JAMES F. O'SHAUGHNESSY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Apparatus for Gathering Cotton, of which the following is a specification.

This invention relates to apparatus for gathering cotton.

10 The object of the invention is to provide a machine which is simple in construction, economical in manufacture, and efficient in operation for receiving the cotton picked manually, whereby the cotton picker or operator
15 is relieved of the labor of transporting the cotton picked by him and of the physical wear and strain of repeatedly bending and straightening his body during the operation of picking or gathering the cotton, while at
20 the same time he is free to employ both hands with which to pick the cotton.

A further object is to provide a machine or apparatus of the character referred to where-
in provision is made of carriers or elevators
25 adapted to receive the cotton as picked or gathered from the hands of the individual who picks or gathers the cotton and to transport and deliver the same into a suitable receptacle which is progressed through the field
30 in pace with the picker.

A further object is to provide an apparatus of the class referred to and which is adapted to be moved through the field, on which are mounted carriers extending freely therefrom
35 and into convenient relation with respect to the picker and by which the cotton delivered thereto by the hands of the picker is elevated and delivered into a receiving-receptacle.

Other objects of the invention will appear
40 more fully hereinafter.

The invention consists, substantially, in the construction, combination, location, and relative arrangement of parts, all as will be more fully hereinafter set forth, as shown in the
45 accompanying drawings, and finally pointed out in the appended claims.

Referring to the accompanying drawings and to the various views and reference-signs appearing thereon, Figure 1 is a view in central longitudinal section of a form of apparatus embodying the principles of my invention.
50 Fig. 2 is a top plan view of the same. Fig. 3 is a view in side elevation of another form of apparatus embodying the principles of my invention.
55

The same part is designated by the same

reference-sign wherever it occurs throughout the several views.

In the operation of picking or gathering cotton manually, as ordinarily practiced
60 throughout cotton-growing sections, the picker is usually equipped with a bag to receive the cotton from his hands as he picks it, the bag being suspended from his shoulder by a strap or otherwise and hanging by his
65 side. As thus equipped the picker proceeds through the field and along a row of cotton and picks or gathers the cotton by hand from the open bolls and transfers it to the bag. As he proceeds with his work he is required
70 repeatedly to stoop or bend down to gather the cotton, especially that portion which grows close to the ground or which has fallen to the ground, and then to straighten up again in order to transfer the cotton so picked
75 to the bag. In addition he is required to support the increasing weight of the bag as it becomes filled. By reason of thus repeatedly bending and straightening his body and of being required to support the increas-
80 ing weight of the bag the picker is subjected to a physical wear and strain which renders the work of harvesting the cotton crop not only arduous and toilsome, but also slow, tedious, and expensive.
85

It is among the special purposes of my present invention to provide an apparatus by the use of which the picker is not only relieved of the burden and toil of carrying and supporting the cotton as gathered and
90 picked by him, but is also relieved of the necessity of repeatedly stooping or bending over and then straightening up and which imposes the physical wear and strain on the body incident to the work of picking cotton
95 manually.

It is also among the special purposes of my invention to provide means whereby the cotton-picker is enabled to employ freely and untrammelled both his hands to pick or
100 gather the cotton.

In carrying out my invention I employ a vehicle adapted to be moved through the field and provided with a suitable receptacle to receive the picked cotton and to transport
105 the same and also provided with one or more frames extending from the body of the vehicle and upon each of which is mounted a carrier upon which the cotton picked or gathered by the picker is deposited manually and by
110 which such cotton so deposited is elevated or carried to and deposited in the receptacle.

It is obvious that these objects may be attained in a wide variety of constructions and arrangements of devices. While therefore I have shown and will now describe various forms and arrangements adapted to the accomplishment of my objects and purposes, I do not desire to be limited or restricted to the exact construction nor to the details thereof herein shown and described.

In the particular forms which I have selected for the purpose of illustrating my invention and the best forms in which I at present contemplate carrying my invention into practice I employ a vehicle which may be of any desired type or construction in the details thereof and which is supported on wheels A B, the wheel B being preferably arranged at the front end of the vehicle to serve as a guide or steering wheel therefor and to which is connected a steering-fork C, having a steering hand-wheel D, by which such fork and guide-wheel may be properly directed. It is obvious that many other forms of steering mechanisms are equally well adapted for use in connection with my invention, and therefore I do not desire to be limited or restricted in this respect.

The vehicle may be moved, propelled, drawn, or advanced through the field in any suitable or convenient manner. In the particular form which I have selected for illustration, but to which my invention is not to be limited or restricted, I employ a vehicle of the traction type, and hence the wheels A are shown as traction-wheels of ordinary type, and I mount upon the vehicle in any suitable or convenient location a motor (indicated at E) and suitably gear the motor-shaft to the axle upon which the traction-wheels A are mounted.

In order to provide a suitable receptacle to receive and contain the cotton as picked or gathered and delivered thereto, I form the body of the vehicle with a chamber F of a capacity to meet the requirements and into which the cotton is to be delivered and from which the accumulated load of cotton may be removed in any suitable or convenient manner—as, for instance, through a trap or door in the bottom of such chamber.

In practice I propose to support the body of the vehicle at such a height above the surface of the ground as to enable the same to move or to be advanced through a cotton-field without danger of breaking down or injuring the cotton-stalks or the unopened bolls and with the traction and guide wheels running between rows of the cotton-stalks.

Pivotally supported upon and extending freely from the end of the vehicle—the front end as in Figs. 1 and 2 and the rear end as in Fig. 3—are a plurality of frames G, upon each of which is mounted to operate endwise thereof an endless belt, band, or carrier H.

In the particular exemplification shown I

suitably journal a transverse shaft J in bearings carried by the vehicle and mount pulleys upon said shaft, over which pulleys operate and from which are driven the carrier belts or bands H, said belts or bands also operating over cooperating guide-pulleys K, carried in the outer free ends of the frames G. These frames G are arranged a suitable and convenient distance apart to accommodate a row of cotton-stalks between adjacent frames and are hinged or pivoted concentric with or upon shaft J, so as to rock or swing in a vertical plane. The outer or free ends of the frames G may, if desired, be supported upon guides, as rollers L, adapted to rest upon the ground. Provision may be made for rocking or swinging the frames G and the carriers thereon vertically or in vertical planes in order to change the inclination thereof relative to the ground, as may be required according to the conditions as to the height of the cotton-stalks or the like in the field. Many specifically-different constructions may be devised for accomplishing this object. In the particular form shown, to which, however, my invention is in no manner to be limited or restricted, I arrange a shaft or rod M to pass transversely through the frames G at a convenient point intermediate their ends, and to said shaft or rod I connect an arm N, said arm being pivotally mounted on shaft J and provided on the opposite side of its pivot with a segment-gear O, with which meshes a worm P, having an operating wheel or handle R. By suitably manipulating this wheel or handle the segment-gear is rocked and the frames G swung vertically about their pivotal axis.

Rotation may be imparted from the motor to the shaft J by any suitable means or convenient arrangement of gearing. As illustrative of an operative embodiment I have indicated a simple form of chain-drive S for accomplishing this purpose. If desired, the carriers H may be provided with cross slats or cleats, and in practice I propose to arrange the carriers to operate between side plates on the frames G, thereby forming, in effect, movable bottoms of channels.

In the operation of the apparatus the pickers are stationed alongside of and between the frames G, and, employing both hands in the work of picking or gathering the opened cotton from the bolls, the cotton thus picked or gathered is deposited upon the carrier of the adjacent frame and by such carrier elevated or transported to and delivered into the receptacle, the shaft J being preferably journaled adjacent the upper edge of the receptacle. If desired and in order to insure the delivery of the cotton from the carriers into the receptacle, doffers T may be employed for such purpose, though I do not regard this as an essential feature. Where doffers are employed, they may be driven in

any convenient manner from the shaft J. If desired, and in order to throw the carriers out of operation without arresting the motor or the traction-wheels, a clutch (indicated at 5 W) may be employed, and means may be provided for controlling the clutch from a point convenient to the seat V for the driver—as, for instance, the connections U.

In the practical operation of the apparatus 10 of my invention the vehicle is advanced through the field and along the rows of cotton-stalks as rapidly as may be desired or convenient for the pickers, who, stationed adjacent the frames G and between them, the latter 15 straddling the rows, employ both hands to pick or gather the cotton and to deposit the same upon the carrier-belts. In this manner the necessity for repeatedly straightening up after bending over is avoided, since the 20 picked cotton may be deposited upon the carriers without the pickers straightening up, and as the pickers are unhampered and are free to employ both hands at the same time it is obvious that the daily picking capacity of 25 each individual is greatly increased and less time is required to cover a given area than is possible with the methods of manual picking commonly employed. Moreover, since the most toilsome and arduous part of the man- 30 ual work of picking or harvesting the cotton is done away with, boys, women, and girls can also be employed during the cotton-harvesting season. It will be understood that a number of pickers may be employed with 35 each machine, depending upon the number of frames G and carriers associated therewith.

The form shown in Fig. 3, wherein the frames G trail behind the vehicle instead of projecting or extending in advance or front 40 of it, is considered the most appropriate arrangement, for the reason, among others, that whatever of loose dried leaves or twigs there may be on the stalks, which might otherwise be dislodged by the vehicle, the frames G, or 45 the pickers as the machine progresses through the field and become deposited upon the conveyers or carriers and delivered along with the cotton into the receptacle, are shaken down or dislodged before the frames G reach 50 them in the case where the said frames trail behind the vehicle.

It is to be observed that I do not seek to effect an automatic picking or gathering of the cotton, but only to lighten the labor and 55 burden of picking or gathering cotton manually, whereby the capacity of the individual and the speed of operation are increased.

Having now set forth the object and nature of my invention and various forms of 60 construction embodying the principles thereof and having explained such constructions, their purpose, function, and mode of operation, I desire to be distinctly understood that my invention is not to be limited in scope to 65 the specific details of construction and ar-

rangements shown and described, as many variations therefrom and alterations and changes in the details thereof may readily occur to persons skilled in the art and still fall within the spirit and scope of my inven- 70 tion; but

What I do claim as new and useful and of my own invention, and desire to secure by Letters Patent, is—

1. In an apparatus for gathering cotton, a 75 vehicle having a receptacle, frames extending freely from the end of the vehicle and spaced apart to accommodate a row of cotton-stalks therebetween, carriers mounted on said frames and delivering to said receptacle, and 80 means for actuating said carriers.

2. In an apparatus for gathering cotton, a vehicle having a receptacle, frames movably mounted upon said vehicle and spaced apart to accommodate a row of cotton-stalks there- 85 between, carriers operating upon said frames and means for actuating said carriers.

3. In an apparatus for gathering cotton, a vehicle having a receptacle, carriers supported at the rear end of said vehicles and 90 extending rearwardly from said end, said carriers being spaced apart to accommodate a row of cotton-stalks therebetween and delivering to said receptacle, and means for actuating said carriers. 95

4. In an apparatus for gathering cotton, a vehicle having a receptacle, carriers trailing freely from the rear end of said vehicle said carriers being spaced apart to accommodate 100 a row of cotton-stalks therebetween and delivering to said receptacle, and means for actuating said carriers.

5. In an apparatus for gathering cotton a vehicle having a receptacle, carriers connected at one end to the rear end of said ve- 105 hicle and freely trailing rearwardly from said rear end, said carriers being spaced apart to accommodate a row of cotton-stalks therebetween and delivering to said receptacle, means for supporting the free ends of 110 said carriers and means for actuating said carriers.

6. In an apparatus for gathering cotton a vehicle having a receptacle, a motor mounted on said vehicle, one or more carriers having 115 connection at one end to said vehicle and extending freely therefrom, said carriers delivering to said receptacle, and means driven by the motor for actuating said carriers.

7. In an apparatus for gathering cotton, a 120 vehicle having a receptacle, traction-wheels upon which said vehicle is supported, a motor mounted on said vehicle and geared to said traction-wheels, carriers mounted on said vehicle and extending freely therefrom, 125 said carriers delivering to said receptacle, and gearing also actuated by said motor for operating said carriers.

8. In an apparatus for gathering cotton, a vehicle having a receptacle, frames con- 130

5 nected at one end to said vehicle and extending therefrom, said frames being separated from each other to accommodate a row of cotton-stalks therebetween, carrier-belts operating on said frames and delivering to said receptacle, and means for actuating said belts.

In witness whereof I have hereunto set my hand, this 14th day of August, 1905, in the presence of the subscribing witnesses.

JAMES F. O'SHAUGHNESSY.

Witnesses:

H. W. WITTENBERG,
S. E. DARBY.