

(Model.)

3 Sheets—Sheet 1.

R. K. CHARLES.
COTTON HARVESTER.

No. 314,365.

Patented Mar. 24, 1885.

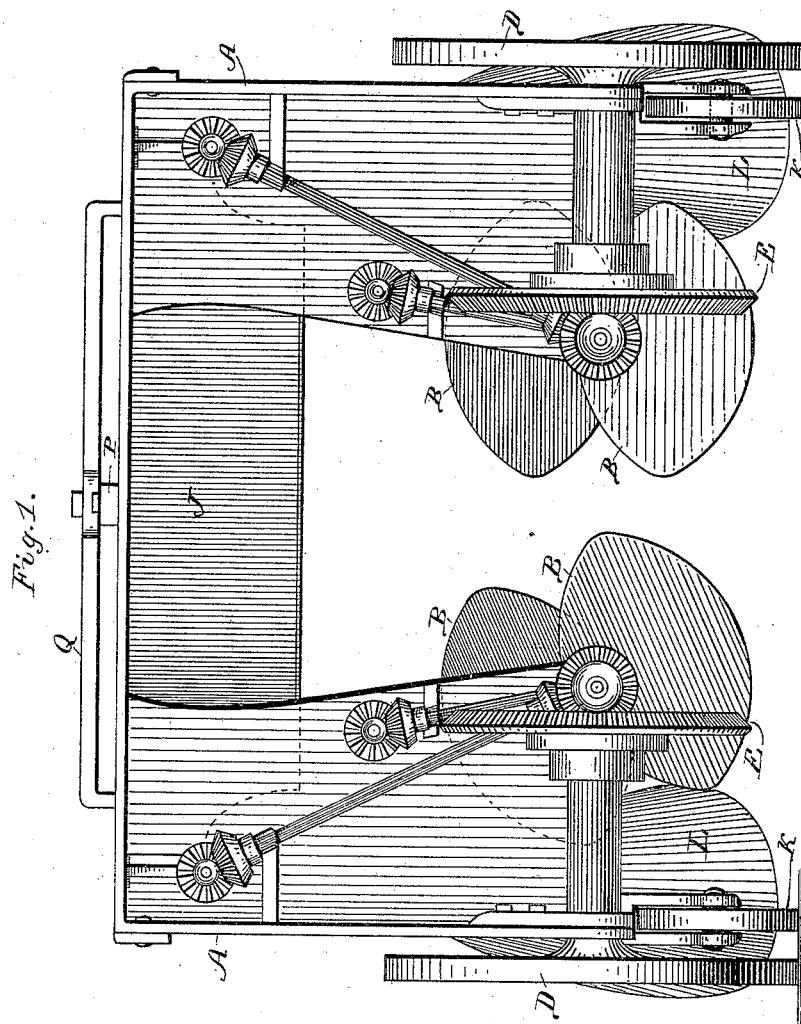


Fig. 1.

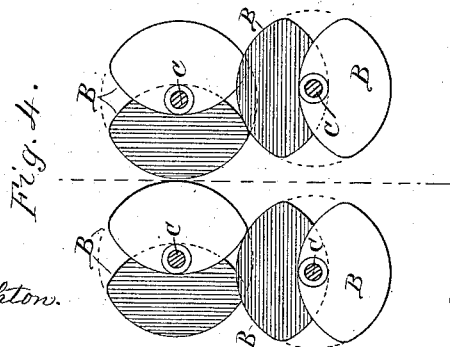


Fig. 4.

WITNESSES:

Thos. Houghton.

John Keimon

INVENTOR:

Robt. K. Charles

BY *Mum & Co*

ATTORNEYS.

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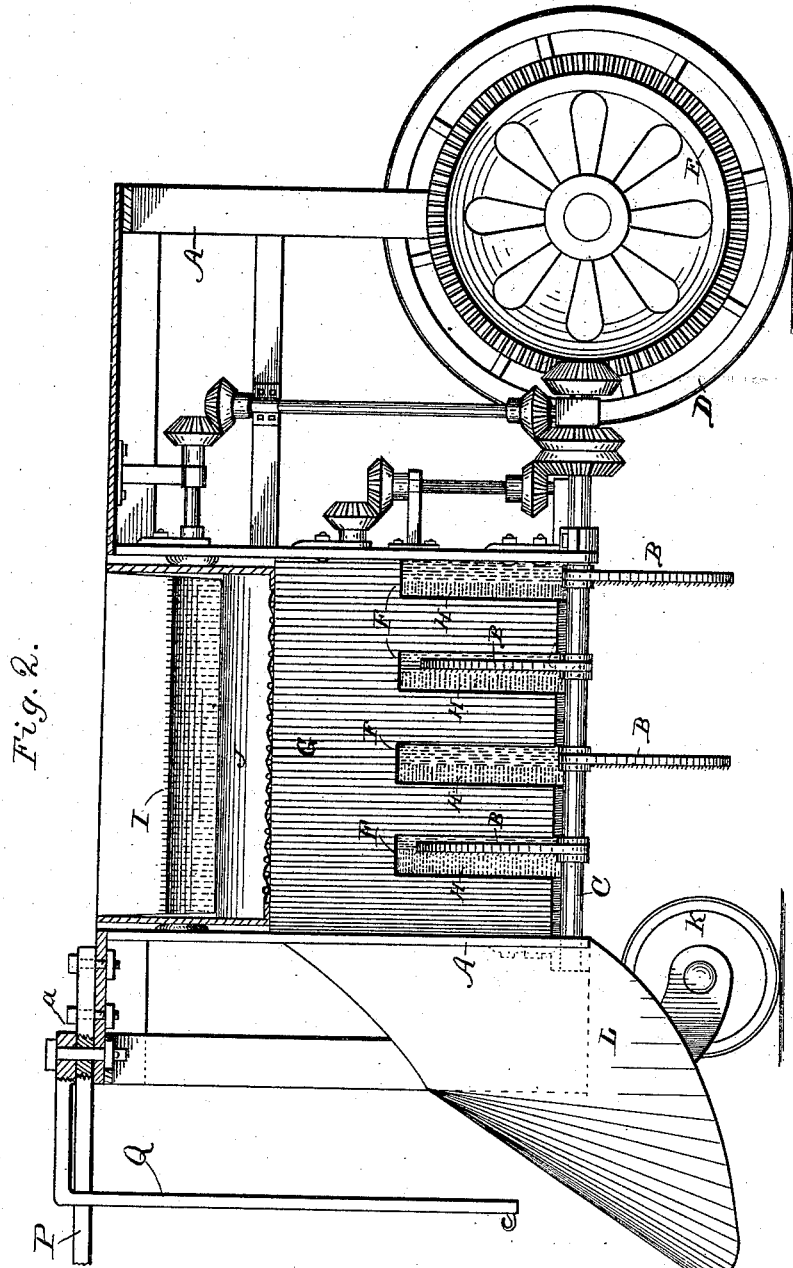


Fig. 2.

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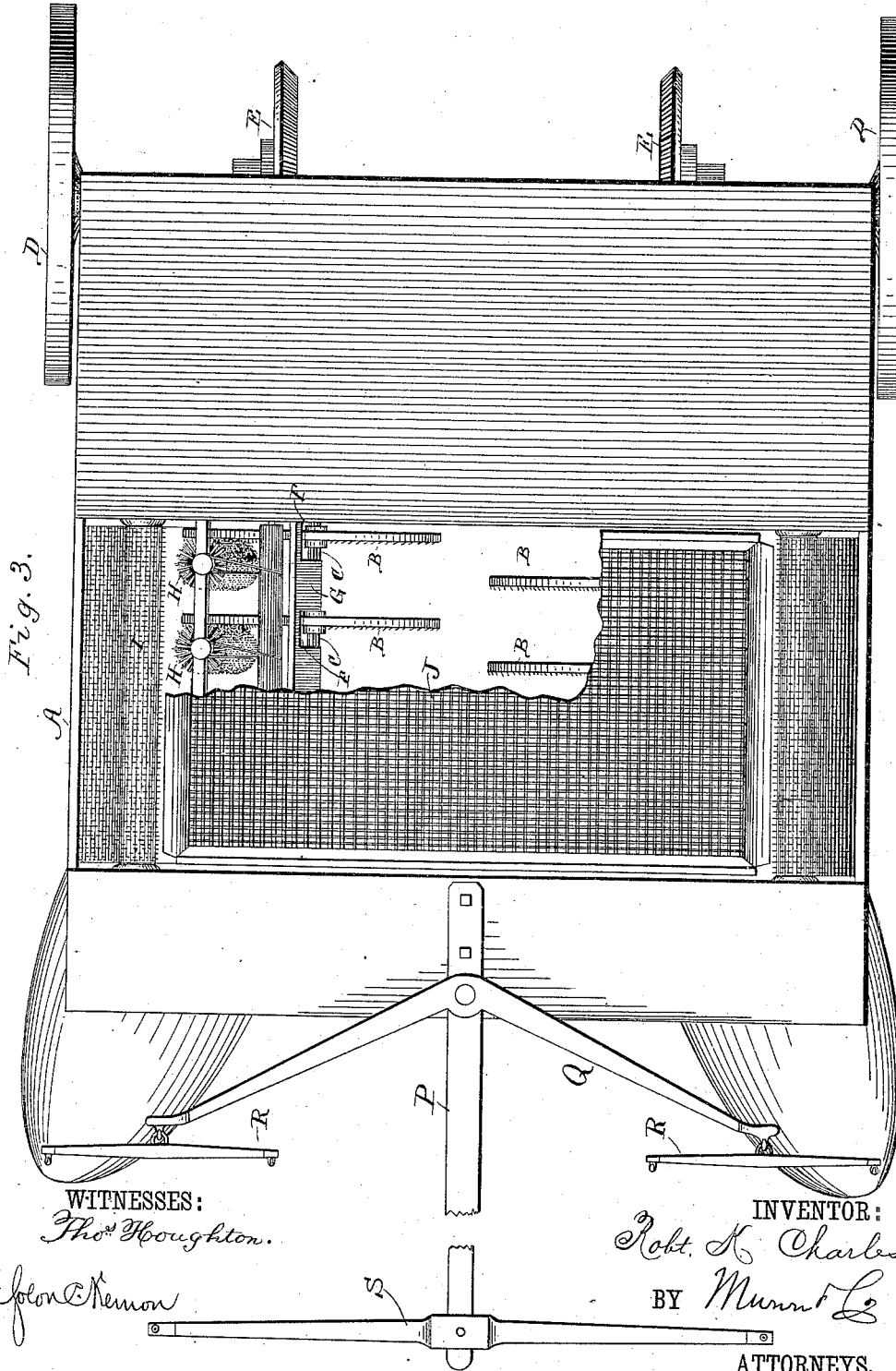
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Patented Mar. 24, 1885.



UNITED STATES PATENT OFFICE.

ROBERT KELSO CHARLES, OF DARLINGTON, SOUTH CAROLINA.

COTTON-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 314,365, dated March 24, 1885.

Application filed March 12, 1884. (Mod. 1.)

To all whom it may concern:

Be it known that I, ROBERT KELSO CHARLES, a citizen of the United States, residing at Darlington, in the county of Darlington and State of South Carolina, have invented certain new and useful Improvements in Cotton-Harvesters, of which the following is a description.

This invention relates to that class of cotton-harvesters which are drawn on wheels astride the cotton-row to gather the seed-cotton from the pods; and it has for its object to gather the cotton from the growing plants with the least possible damage to them, and to automatically deliver the cotton into a receptacle carried on the machine.

To this end my invention consists in the construction and combination of parts forming a cotton-harvester, hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a rear elevation of my invention. Fig. 2 is a central longitudinal vertical section showing that portion of the machine beyond the section. Fig. 3 is a plan view with a portion broken away; and Fig. 4 is a section of the picker-shafts, showing two pickers on each.

A represents the frame of the machine. The machine is double. There is a right portion and a left portion, each forming a complete self-operating machine, and the two are connected or paired together by the top cross-bars or yoke portion of the frame, so as to run astride a cotton-row, each part of the machine reaching in among the cotton branches on its side of the row to pick the lint or seed-cotton. To accomplish this, a series of gibbous-shaped plates, B, are mounted on a pair of longitudinal shafts, C, which are journaled in the frame and are revolved by the main drive-wheels D, acting through beveled gears E, turning the picker-shafts C about five revolutions to one revolution of the drive-wheel. The plates are bounded by two convex arcs of a circle, and are rounded at the ends to enable them to part their way among the cotton branches while revolving, and to enable them to crowd any limbs which may chance to lie across the apertures F up out of their path. Each of the plates B is perforated near one

edge to receive the shaft C, upon which the plates are fixed to project alternately on opposite sides thereof to balance each other, and their motion is across the path of the machine and upward through the cotton. The front face of each plate is armed with a great many picking-teeth set like card-teeth to hook in the direction of their motion to pick the cotton. By the revolution of these plates or pickers the seed-cotton is carried through the apertures F in the wall G of the brush-box, and is there stripped from the pickers by rapidly-revolving brushes H. The cotton thus accumulates in the brush-box against the foot of a revolving toothed apron or belt, I, and is carried up by the belt and thrown into a removable receptacle, J, where it remains until unloaded by hand.

The brushes H and the belt I are each revolved by suitable trains of gears and shafts connecting with the main drive-wheels D.

The forward end of the machine is supported upon two caster-wheels, K, in front of which I place sheet-iron guards L, to turn the limbs of the cotton-plants out of their paths, said guards converging to the passage between the two parts of the machine to bring the cotton to the pickers. When more than one pair of pickers are provided to the machine, the second pair is placed above the first or lower pair, as in Fig. 4, and so on to adapt the machine to cotton of any height, and the plates of the lower pair of pickers are intended to approach within about four inches of each other. The plates of the upper pair of pickers are intended to touch a central vertical plane, in order that they may reach entirely across through the row of cotton-plants. The picker-plates of the upper pair will in each instance pass between the picker-plates of the next lower pair to a distance of about four inches, to prevent branches being drawn in among them.

The team-pole P is attached to the frame of the machine at the center *a* of the forward cross bar and extends forward over the tops of the cotton-plants, and carries a yoke, S, above the necks of the team, by which they may guide the machine.

Q is the double-tree or pivoted cross-bar,

to which the single-trees R are attached. The double-tree Q is pivoted to the frame at a, and bends down, like a yoke, to the proper level for attaching the team.

5 The proportionate sizes of the various gear-wheels and the main drive-wheels will be such as to give the speed to the different parts, as in similar devices already known.

10 The receptacle J is made of wire-cloth supported on a frame, to allow sand and dirt to be jarred out of the picked cotton.

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

15 1. The combination of a rotary shaft, a series of gibbous-shaped plates secured near their edges on said shaft and projecting alternately in opposite directions, picking-teeth on one face of each of said plates, and means, substantially as described, for removing the
20 cotton-lint from said teeth, as and for the purpose specified.

2. The combination of the drive-wheels D, the shaft C, the gibbous-shaped plates B thereon, the intermediate gearing, as described, the
25 wall G, having apertures F, through which the plates B rotate, the brushes H, and their actuating-gears, substantially as and for the purpose specified.

3. The combination of the drive-wheels D,

the shafts C, the gibbous-shaped plates B, the
30 wall G, having apertures F, the brushes H, and the toothed belt I, operating as and for the purpose specified.

4. The combination of two drive-wheels, D, the shafts C, the gibbous-shaped plates B, the
35 walls G, having apertures F, the brushes H, the toothed belts I, and the receptacle J, removably fixed over the center of the machine to receive the cotton-lint delivered by the two
40 belts, substantially as shown and described.

5. The combination, in a double or straddle-row cotton-harvester, of a team-pole secured to the center of the forward cross-bar of the frame and extended forward above the
45 cotton-plants, and a neck-yoke on the forward end of said pole adapted to be carried above the necks of the team, as and for the purpose specified.

6. The combination, in a double or straddle-row cotton-harvester, of a double-tree pivoted
50 on the middle of the top of the forward cross-bar of the frame and extending down at both sides of the frame, and means for attaching a team thereto, as and for the purpose specified.

ROBERT KELSO CHARLES.

Witnesses:

HENRY E. P. SANDERS,
C. D. EVANS.