No. 647,818. Patented Apr. 17, 1900.

W. J. DYER.

COTTON PICKER.

(Application filed July 21, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

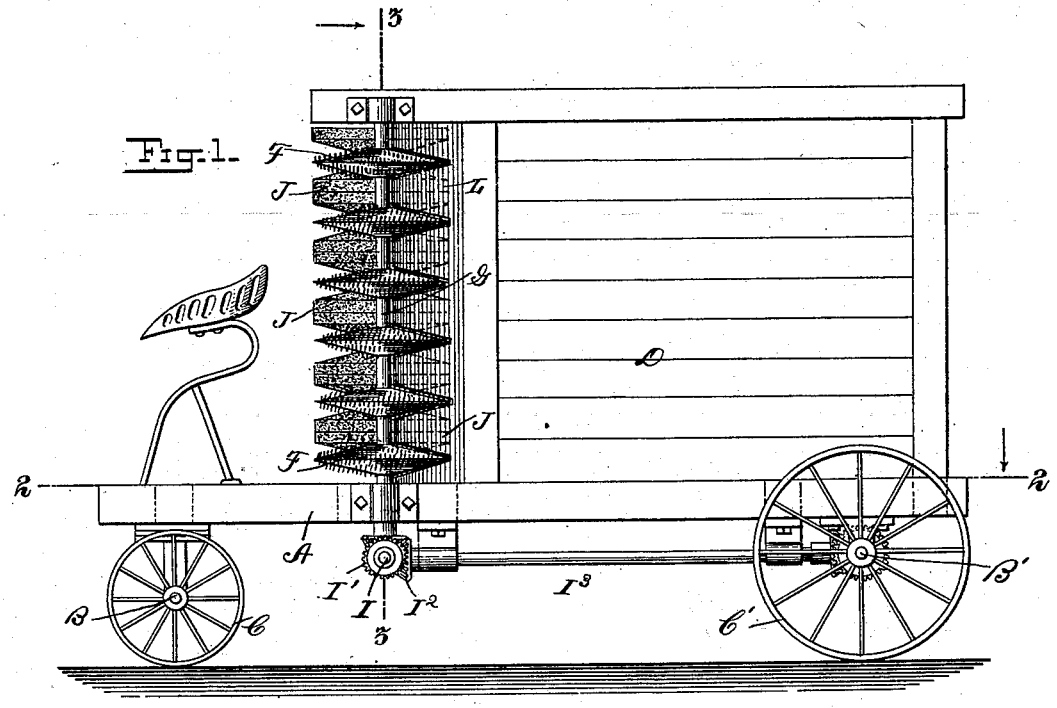

Fig. 2.

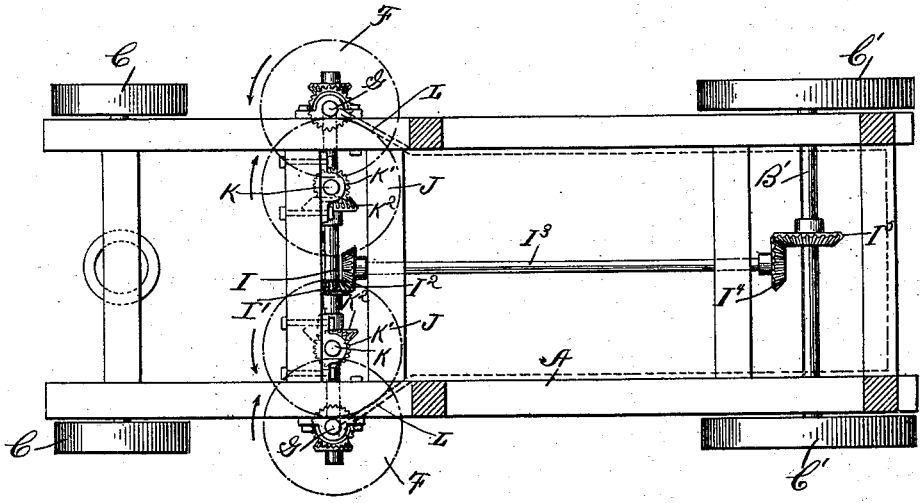

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Fig. 3.

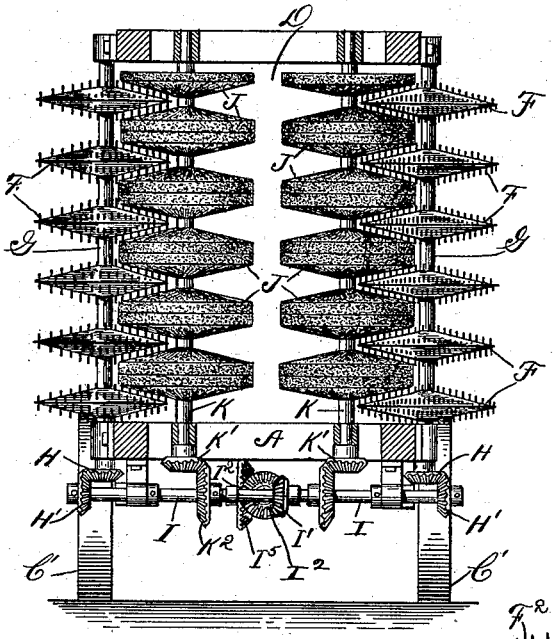


Fig. 5.

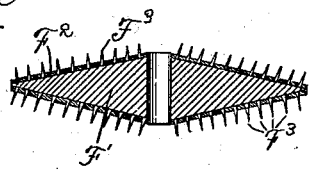
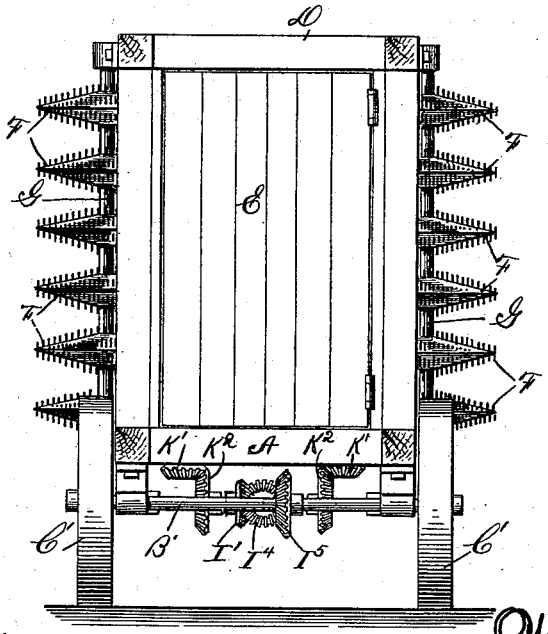


Fig. 4.



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WILLIAM JOHNSON DYER, OF SHREVEPORT, LOUISIANA.

COTTON-PICKER.

SPECIFICATION forming part of Letters Patent No. 647,818, dated April 17, 1900.

Application filed July 21, 1899. Serial No. 724,658. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM JOHNSON DYER, of Shreveport, in the parish of Caddo and State of Louisiana, have invented a new and Improved Cotton-Picker, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved cotton-picker which is simple and durable in construction and arranged to insure a clean and thorough removal of the bolls from the cotton bushes or plants whether the latter are high or low and without danger of tearing or otherwise injuring the fibers of the lint or the growing plant.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claim.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement. Fig. 2 is a sectional plan view of the same on the line 2 2 in Fig. 1. Fig. 3 is a transverse section of the same on the line 3 3 in Fig. 1. Fig. 4 is a rear end elevation of the improvement, and Fig. 5 is an enlarged sectional view of one of the pickers.

The improved cotton-picker is mounted on a vehicle having a frame A, connected at its front end by a fifth-wheel device with the front axle B, carrying the front wheel C, and on the rear end of said frame A is journaled the rear axle B′, carrying the rear traction-wheels C′.

On the rear portion of the frame A is mounted a box D for receiving the lint after removal from the cotton-bolls, as hereinafter more fully described, the front end of the box D being open and the rear end normally closed by a suitable door E, opened from time to time to permit the removal of the accumulated cotton. In the front of the box D are arranged two sets of cotton-pickers F, made circular in shape and projecting with their outer edges a distance beyond the sides of the box D of the frame A, as is plainly indicated in the drawings, so that said pickers can readily pass in between the branches of the cotton-plants to remove the bolls therefrom for final delivery to the box D.

The pickers F on each side of the machine are secured on a vertically-disposed shaft G, journaled in suitable bearings on the frame A, and on the lower end of each shaft G is secured a bevel gear-wheel H, in mesh with a bevel gear-wheel H′, secured on a transverse shaft I, journaled in suitable bearings attached to the under side of the frame A. On the shaft I is secured a bevel gear-wheel I′, in mesh with a bevel gear-wheel I^2, secured on the forward end of a longitudinally-extending shaft I^3, likewise journaled to the under side of the frame A. On the rear end of the shaft I^3 is secured a bevel gear-wheel I^4, in mesh with a bevel gear-wheel I^5, attached to the rear revolving axle B′, so that when the machine is drawn forward over the ground the traction-wheels C′ cause a rotation of the axle B′, and the rotary motion thereof is transmitted by the bevel gear-wheels I^5 and I^4 to the shaft I^3, which in turn transmits its rotary motion by the gear-wheels I^2 and I′ to the shaft I. The rotary motion of the latter is transmitted by the gear-wheels H′ H to the shafts G, carrying the pickers F, so that the pickers on each side of the machine are simultaneously rotated as the machine is drawn between two rows of cotton-plants, so that the cotton lint is picked from adjacent sides of the two rows.

As shown in the drawings, the pickers F on a shaft G are placed a suitable distance apart, and each picker is provided with a solid core or center F′, having its top and bottom diverging from the outer edge toward the center of the picker, the said top and bottom being covered by a leather or other covering F^2 and having picking devices F^3 in the form of teeth extending outward from said coverings. (See Fig. 5.)

When the pickers, constructed in the manner described, are rotated while the machine is drawn forward, it is evident that the outer sides of said pickers readily pass between the branches of the bushes, and the picking devices F^3 easily come in contact with the lint and remove it from the bolls. The cotton lint thus removed from the bolls by the pickers is carried by the latter inward to be removed

from the pickers by revoluble circular brushes J, secured on vertically-disposed shafts K, journaled in suitable bearings in the frame A.

Each shaft K is provided at its lower end with a bevel-pinion K′, in mesh with a bevel gear-wheel K^2, secured on the shaft I, so that when the latter is rotated, as previously explained, a rotary motion is given by the bevel gear-wheels K^2 and the pinions K′ to the shafts K and the sets of brushes or sweepers J, mounted on said shafts and extending with their beveled tops and bottoms between adjacent pickers F, close to the outer ends of the teeth thereof, so as to readily remove the lint and carry it inward by the revolving pickers.

The peripheral faces of the revoluble brushes or sweepers J extend close to the shafts G, carrying the pickers, so that the lint is all removed from the faces of the pickers without danger of clogging, and said lint is delivered by the brushes to the box D, in which it can accumulate. The gearing for the shafts G and K is so proportioned that the shafts G rotate at a lower speed than the brushes J to cause a ready removal of the lint from the pickers when the machine is in use.

In order to prevent the lint from flying sidewise and outward from the brushes and to prevent clogging of the brushes and pickers by the lint, I provide the angularly-disposed flanges L on the forward ends of the sides of the box D, the flanges extending to the picker-shafts, with cut-out portions for the passage of the pickers. The flanges are preferably of canvas; but other material may be employed.

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

The herein-described cotton-picking machine, comprising the wheel-supported box open at its front end, vertical shafts journaled at the sides of the box at the open end, a series of spaced-apart picking-disks secured on each shaft and each formed with a solid core whose top and bottom diverge from the edge toward the center and are provided with picking-teeth, two vertical shafts journaled in the open end of the box between the picker-shafts, a series of spaced-apart brushes on each of said latter shafts and having beveled tops and bottoms conforming to the pickers and side edges corresponding to the spaces between the latter, pinions on the lower ends of all the shafts, a transverse shaft having beveled gear-wheels meshing with the pinions, the gear-wheels being so proportioned with respect to the pinions that the picker-shafts will rotate at a lower rate of speed than the brush-shafts, and gearing connecting said transverse shaft with the traction-axle of the picking-machine, as set forth.

WILLIAM JOHNSON DYER.

Witnesses:
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