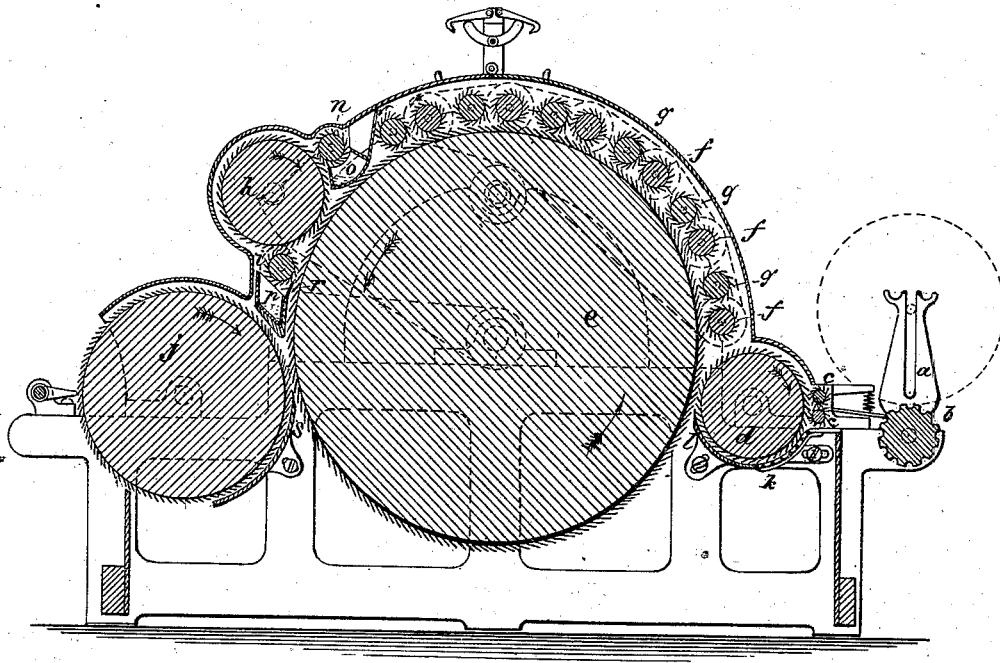


R. F. BARKER.
Carding-Engine.

No. 215,501.

Patented May 20, 1879.



WITNESSES
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UNITED STATES PATENT OFFICE.

ROBERT F. BARKER, OF NEW YORK, N. Y., ASSIGNOR TO HORACE L. CORTELYON, OF SAME PLACE.

IMPROVEMENT IN CARDING-ENGINES.

Specification forming part of Letters Patent No. **215,501**, dated May 20, 1879; application filed July 31, 1878.

To all whom it may concern:

Be it known that I, ROBERT F. BARKER, of the city, county, and State of New York, have invented certain new and useful Improvements in Carding-Engines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming a part of this specification, in which the figure represents a central longitudinal section of a carding-engine embodying my invention.

This invention relates to certain improvements upon the carding-engine for which Letters Patent of the United States were granted May 29, 1877, No. 191,395, and subsequently assigned to Horace L. Cortelyon, of New York city; and in order that others may understand and use the same, I will first proceed to describe the construction, function, and relative arrangement of the several parts, and subsequently point out in the claims the novel features thereof.

In the drawing, *a* represents the fiddle-stand, with the lap-roll shown in dotted lines; *b*, the supporting-roll upon which the lap-roll rests; *c c*, the feed-rolls; *d*, the taker-in roll; *e*, the main cylinder; *f f f*, the combing-rolls; *g g g*, the comb-cleaner rolls; *h*, the raising-cylinder; *i*, the impurity-roll, and *j* the doffer, all relatively arranged and operating in substantially the manner indicated in the Letters Patent referred to. *k* is an adjustable grating arranged beneath the taker-in roll *d*, to permit the seed and other impurities to pass through the same.

The upper edges of the transverse bars composing this grating are beveled or sharpened, as shown, to form seed-knives, and which are intended to facilitate the extraction of the seed and other impurities from the fiber as it passes between the grating and taker-in roll.

The concave plate *l*, forming an extension of the grating, serves to protect the taker-in roll from the blast of air produced by the high surface-speed of the main cylinder, without which the fiber would be forced between the card-clothing of the taker-in roll, and the main cylinder would fail to relieve the taker-in roll, and a portion of the fiber would consequently be returned to the feed-rolls, and thus prevent

the free action of the card-clothing. This plate *l* is extended upward between the taker-in roll and the main cylinder to the highest point that will permit clearance of the adjacent rotating parts, its edge being reduced or pointed, as shown, so that the material will not accumulate thereon.

The combing-rolls *f f f* rotate in the same direction as the main cylinder, but at a slower rate of speed.

The comb-cleaner rolls *g g g* are constructed of the same diameter and arranged alternately with the combing-rolls, and rotate in the same direction; but the clothing is "keened" in the opposite direction, as shown.

By the action of these devices the fiber is raised from the main cylinder to a point nearly opposite the axis of the combing-rolls, and is then removed and returned to the main cylinder by the alternate comb-cleaner rolls, each pair of the respective rolls repeating the operation, and by these successive operations the fiber is straightened, and all leaf and impurities but feebly retained.

The raising-cylinder *h* and the impurity-roll *i* are arranged and operate in conjunction with the main cylinder in substantially the manner described in the Letters Patent referred to; but in the present instance I have introduced what I term a "dispensing" or "burr" roll, *n*, arranged to subsequently act upon the raising-cylinder *h* to complete the separating process, and whereby the surface of the raising-cylinder is returned to the main cylinder clean and clear.

Receptacles *o p* are arranged to receive the impurities from the dispensing or burr roll *n* and impurity-roll *i*. The receptacles are preferably made removable, so that they may be conveniently emptied of the collected refuse, and the opening may be contracted, and guard or deflecting plates added to effectually direct and retain the refuse matter therein.

Upon the inner side of the receptacle *p* the adjustable knife *r* is attached, and which performs the same function as in the Letters Patent referred to, the main cylinder drawing the fiber over its edge and straightening the same, and in this condition it leaves the cylinder and is taken off by the doffer.

Between the main cylinder and the doffer I have introduced a curved plate, *s*, which protects the fiber from the action of the current of air produced by the surface-speed of the main cylinder. The upper edge of this plate is sharpened, as shown, in order that the loose leaves which sometimes adhere to the under side of the fiber will be removed.

The surface of the main cylinder, after passing the upper edge of the plate *s*, is in perfect condition to repeat its functions, the fiber having been entirely removed and passed to the front of the doffer straight, even, and free from impurities.

The peculiar form and arrangement of the grating and guard plates herein shown I do not claim as new; but,

Having thus fully described my improve-

ments, and such general organization of a carding-engine that others skilled in the art may apply the same, what I claim, and desire to secure by these Letters Patent, is—

1. A carding-engine provided with alternate combing and cleaning rolls, a raising-cylinder, an impurity-roll, and a dispensing or burr roll, all arranged to operate in connection with the main cylinder, substantially as specified.

2. The combination of the raising-cylinder *h*, the impurity-roll *i*, and the dispensing or burr roll *n*, substantially as described.

In testimony that I claim the foregoing as my invention I hereunto affix my name.

ROBERT F. BARKER.

Witnesses:

GEORGE OWEN,
M. C. LOWDEN.