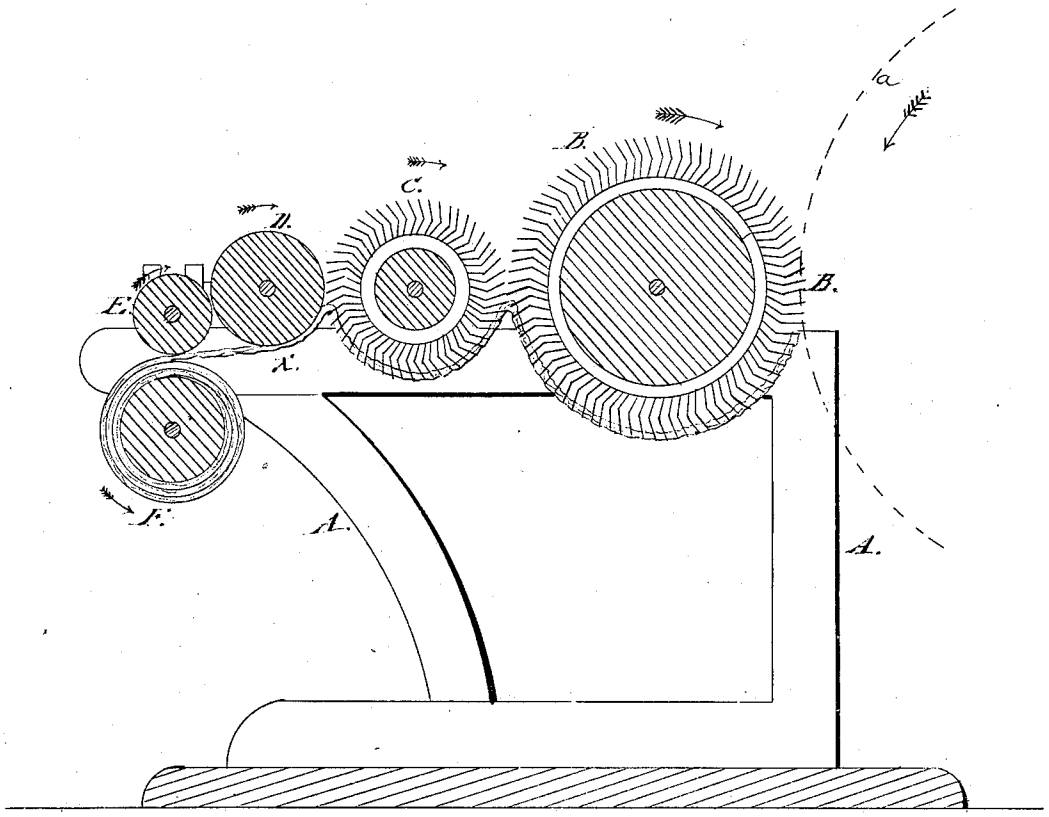
Lord & Hutton.

Doffing Apps for Carding Engine.

No. 46,120. Patented Jan. 31, 1865.



Witnesses;
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UNITED STATES PATENT OFFICE.

RISHTON LORD AND LEVI HUTTON, OF RITTENHOUSE, PA.

IMPROVEMENT IN DOFFING APPARATUS FOR CARDING-ENGINES.

Specification forming part of Letters Patent No. **46,120**, dated January 31, 1865.

To all whom it may concern:

Be it know that we, RISHTON LORD and LEVI HUTTON, both of Rittenhouse, county of Philadelphia and State of Pennsylvania, have invented an Improved Doffing Apparatus for Carding-Engines; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

Our invention consists of two carded rollers and a plain roller combined with a carding-engine, and arranged and operating, as set forth hereinafter, so as to obtain a woolen lap without the aid of the usual reciprocating comb, and by a continuous stripping process, which enables us to produce a more uniform lap, while the elaborate mechanism required for operating a comb is dispensed with and the usual wear and distortion of the wires of the carded roller avoided.

In order to enable others skilled in the art to make and use our invention, we will now proceed to describe its construction and operation.

The figure in the accompanying drawing represents a sectional view of our improved doffing apparatus for carding-engines.

A is the front portion of the frame-work of a carding-engine, on which the "doffing" cylinder B is caused to revolve in the direction of the arrow, this cylinder being covered with the usual cards, consisting of leather bands, in which are inserted wires bent to the form represented in the drawing, these wires being in contact with the main card-cylinder, which is represented by the dotted line *a*, and which revolves in the direction pointed out by the arrow.

C is what we term the "doffing-roller," which is also clothed with cards, the wires of which are bent in the manner shown, and are in contact with the wires of the doffing cylinder B.

D is the clearing-roller, having a plain surface; E, the lap pressing-roller, and F the lap-drum, all of which revolve in the direction pointed out by their arrows.

In ordinary carding-engines a reciprocating comb is used for stripping the lap of wool from the doffing-roller. The action of this comb on the carded doffing-roller is necessarily at intervals—that is to say, it strips the wool from the cards during its downward movement only. The comb also demands for its proper operation expensive mechanical adjuncts. The main objection to the use of the ordinary comb, however, is its destructive effects on the carded roller, the wires of which are soon so bent and twisted as to detract from their efficiency.

Our invention has been designed with the view of stripping the lap from the carded rollers without the aid of the usual comb. The wool collected from the main cylinder *a* by the cards of the doffing-cylinder B is stripped from the latter, and collected by the wires of the doffing-roller C, from which it is stripped in the form of an even and regular lap *x* by the plain roller D, the lap being compressed by the pressure-roller E against the drum F, round which the lap is wound until a sufficient quantity, indicated by the ringing of a bell or other signal, is obtained, when the drum with its accumulated lap is removed and replaced by another.

It should be understood that the rollers B, C, and F are caused to revolve by any suitable system of gearing from the main driving shaft of the engine, the roller B revolving at a greater speed than the others; the roller E, however, is caused to revolve without the aid of gearing through contact with the moving lap *x*.

We have ascertained by practical tests that the woolen lap collected by carded rollers, and stripped from the same in the manner described is more uniform than that stripped from the doffing-cylinder by the usual reciprocating comb, the stripping process accomplished by the latter being intermittent, whereas in our improvement it is continuous. At the same time we dispense with the usual elaborate mechanism required for operating the comb and prevent the wear and distortion of the wires of the carded doffing-roller.

We claim as our invention and desire to secure by Letters Patent—

The carded-cylinder B, carded roller C, and plain stripping or clearing roller D, when combined with a carding-engine, and arranged and operating as and for the purpose herein set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

RISHTON LORD.
LEVI HUTTON.

Witnesses:
CHARLES E. FOSTER,
JOHN WHITE.