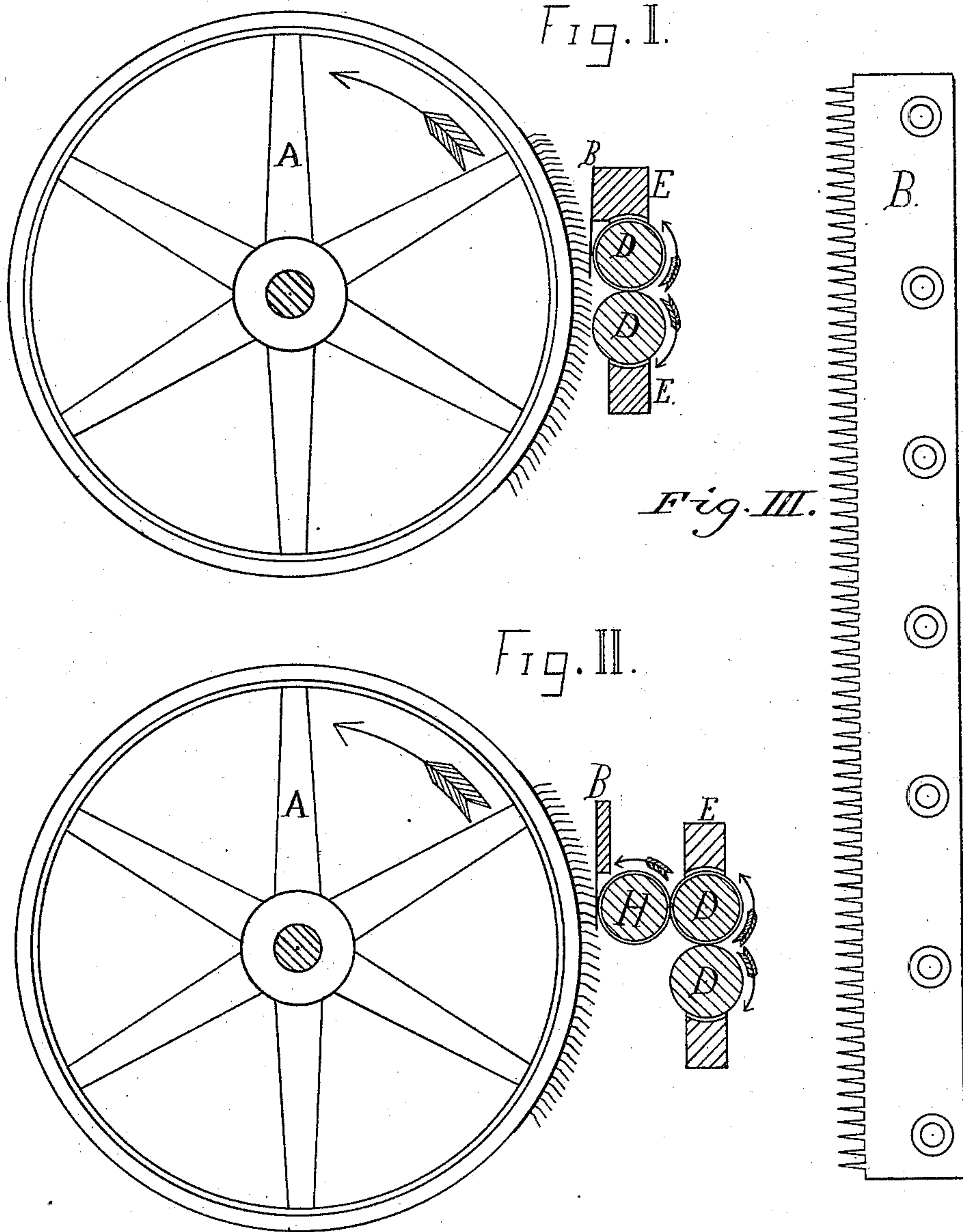


(No Model.)

J. SHINN.
CARDING MACHINE.

No. 299,280.

Patented May 27, 1884.



WITNESSES.

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JOHN SHINN, OF PHILADELPHIA, PENNSYLVANIA.

CARDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 299,280, dated May 27, 1884.

Application filed June 25, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN SHINN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Carding-Machines, of which the following is a specification.

My invention belongs to machinery for carding fibers, vegetable or animal. It relates to that part of the machine for removing or "doffing" the fibers from that part of the machine known as the "doffer-cylinder." Previous to my invention the fibers have been removed from the doffer-cylinder either by a comb having a reciprocating motion, or by two rollers, as is shown and described in Patent No. 24,092, May 24, 1859. A reciprocating comb is objectionable when it is desired to run the doffer-cylinder at such a speed as will deliver a light "sliver," and at the same time deliver the quantity of fibers the machine is capable of carding. Doffing-rollers, as shown in Patent No. 24,092, May 24, 1859, while being capable of doffing and delivering the sliver at any speed and in quantity that the machine will card, have not come into general use for the reason that they are not reliable. The objections are that, when the "feed" has stopped for any reason, when started up, the rollers fail to catch the fibers at the start, and in some cases press the fibers into the wire on the doffer-cylinder, causing trouble and in some cases injury to the wire on the doffer-cylinder.

My invention consists in the combination, with the doffer-cylinder and doffing or delivery rollers, of a stationary comb to insure the removal of the fibers from the wire or teeth thereof, so that they may be caught and delivered by the rollers, as will be hereinafter described, referring to the annexed drawings.

Figure I is an end view of a doffer-cylinder and a sectional end view of two doffing or delivery rollers, cleaners, and my stationary comb. Fig. II is a sectional end view, showing a modification of the arrangement of the comb and doffing-rollers. Fig. III is a view of the comb.

Similar letters of reference refer to like parts.

A represents the doffer-cylinder; B, the comb; D D, the doffing or delivering rollers, and E E the cleaners or clearers.

The comb B is made of steel, in form the same as now used for reciprocating combs. The comb B is fixed stationary to the top cleaner, E, as shown in Fig. 1. In Fig. 2 it is fixed to a bar of wood or iron. (Shown in section.) The comb B is set so that the teeth of the comb will lightly press the card-wire or teeth on the doffer-cylinder. The top roller D is covered with flannel and leather. The bottom roller D is a plain iron one.

The cleaners E E are made of wood. That part which touches the rollers is covered with woolen flannel.

Fig. II shows a modified arrangement of the rollers. H is a doffer or carrier roller, and is covered the same as the top roller D.

The operation of my improvement is as follows: The doffer-cylinder A and rollers D D are driven by gears or bands, as is usual on cards that are doffed by rollers. They move in direction indicated by the arrows. The rollers D D should be speeded to deliver the sliver faster than the doffer A—say one in ten—that is, for ten inches of sliver delivered by the doffer A the rollers D D will deliver eleven inches, giving the rollers "draft." The above-described gears and draft are no part of my invention; but they were found to work well in operating the doffing-rollers in Patent No. 24,092, of May 24, 1859.

The comb B is set so that the fibers on the wire of the doffer-cylinder will be caught on the teeth of the comb, and as they accumulate thereon will be drawn between the rollers D D, and delivered in a thin sliver, with the fibers all straight, and not wavy, as with the reciprocating comb.

The object of the cleaners is to clean the rollers and prevent them from lapping, in a manner as is well known in cotton carding and drawing machinery.

My improvement may be applied to wool-condenser cards, and when so used the cleaners E E may not be required, as the rub-roll-

ers will keep the doffing-rollers clean and prevent lapping, as is now done with the doffing-roller on wool-condenser cards.

I claim—

- 5 1. In a doffing device for a fiber-carding machine, the combination of a doffer-cylinder, A, stationary comb B, rollers D D, and cleaners E E, substantially as set forth.

2. In a doffing device for a fiber-carding machine, the combination of a doffer-cylinder, 10 A, stationary comb B, and rollers D D, substantially as described.

JOHN SHINN.

Witnesses:

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O. M. FAGLEY.