(No Model.)

M. H. COFFIN.

CARDING MACHINE.

No. 597,314. Patented Jan. 11, 1898.

Fig. 1

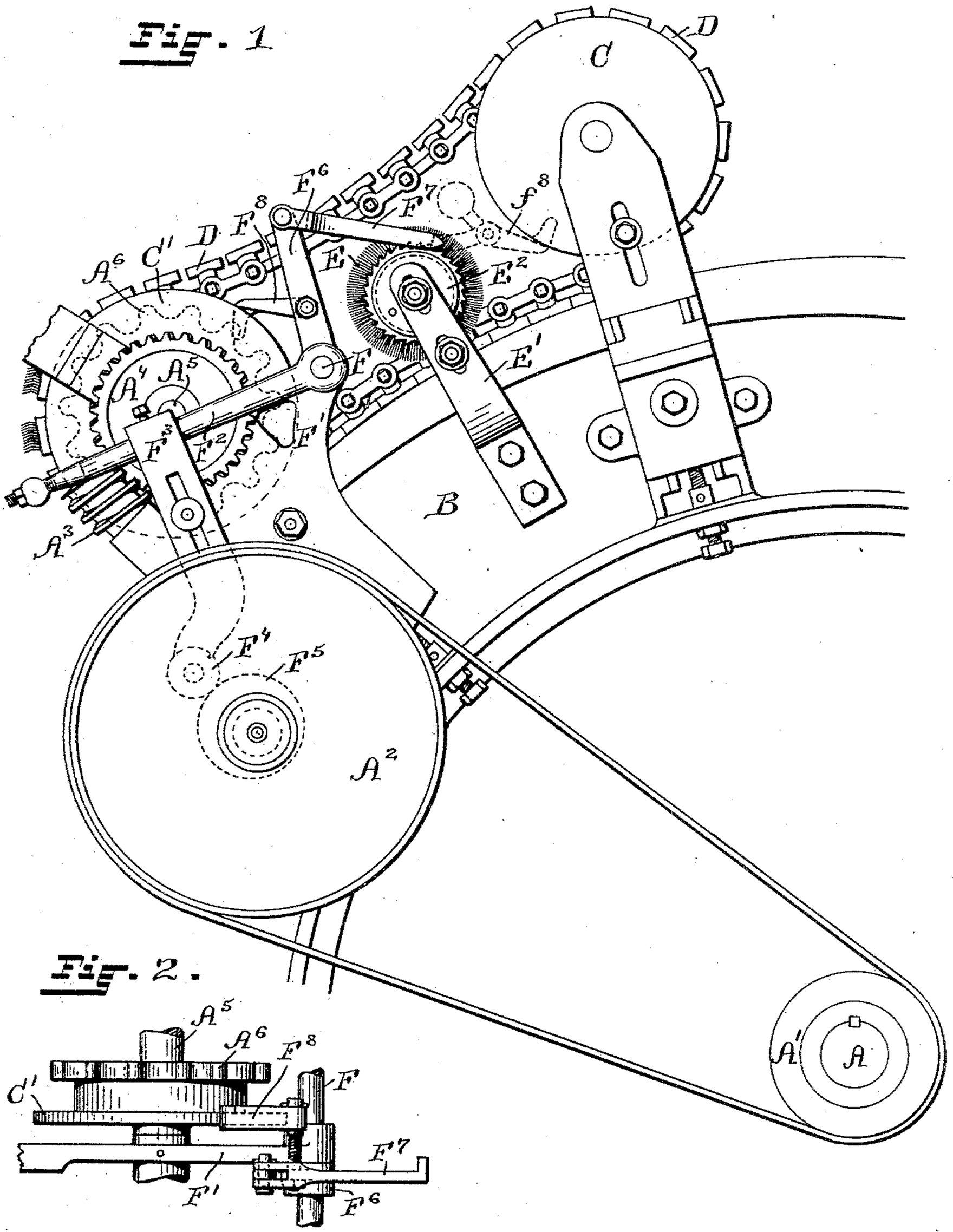

Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

MELVIN H. COFFIN, OF WHITINSVILLE, MASSACHUSETTS, ASSIGNOR TO THE WHITIN MACHINE WORKS, OF SAME PLACE.

CARDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 597,314, dated January 11, 1898.

Application filed August 30, 1897. Serial No. 649,911. (No model.)

To all whom it may concern:

Be it known that I, MELVIN H. COFFIN, of Whitinsville, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Carding-Machines; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improvement in revolving-flat carding-machines; and it consists in the peculiar and novel construction of a clearer, whereby the positions of the flats with reference to the carding-cylinder are maintained, as will be more fully set forth hereinafter.

In revolving-flat carding-engines the flats, which are connected by chain-links to form an endless series of connected flats, are supported on disks secured to two shafts, one of which is rotated, so that the chain of flats is continually moving off from the carding-cylinder around one pair of disks and onto the carding-cylinder around the other pair of disks. Floating fiber and dust collect on the peripheral surface of the disks and if allowed to accumulate disturb the adjustment of the flats with reference to the carding-cylinder, and more particularly of the clean flats when they are first presented to the main carding-cylinder. The object of this invention is to automatically clean the peripheral edge of these disks, and particularly the disks supporting the delivery end of the chain of flats.

Figure 1 is a side view of part of a revolving-flat carding-machine, showing my invention. Fig. 2 is a top view of part of a revolving-flat carding-engine, showing the clearer in connection with one of the disks.

Similar letters of reference indicate corresponding parts in both figures.

In the drawings, A indicates the shaft of the main carding-cylinder; A′, a pulley secured to the shaft A; B, the side frame or casing of the carding-machine; C, the rear disk; C′, the front disk on which the ends of the flats D D are supported. The revolving flats are driven from the pulley A′ by a belt passing around the pulley A^2, by which through suitable gears the worm A^3 is rotated, which engages with the worm-wheel A^4, secured to the shaft A^5, near the opposite ends of which the disks C′ are secured. A sprocket-wheel A^6 (shown in broken lines in Fig. 1) rotates with the shaft A^5, and, engaging with the chain connecting the flats D D, imparts motion to the revolving flats. The brush-roller E extends across the width of the chain of revolving flats. It is journaled in brackets E′, secured to the opposite sides of the casing B of the carding-machine and, is provided with the ratchet-wheel E^2. To secure the thorough cleaning of the backs of the flats, the brush-cylinder has to be rotated, and to secure this rotation the shaft F is supported in the brackets F′, secured to the opposite sides of the casing B of the carding-engine. To the shaft F, at opposite ends, is secured the arm F^2, on which the rider F^3 is adjustably secured, usually by means of a set-screw. On the lower end of the rider F^3 is journaled a small wheel F^4, which rests on the cam F^5, connected with the pulley A^2, so as to rotate with the same. An arm F^6 is secured near each end to the shaft F, and to the upper end of this arm is pivotally secured the pawl F^7, which engages with the ratchet-wheel E^2 on the brush-cylinder. To the arm F^6 is also pivotally secured the clearer F^8, which rests on the peripheral surface of the disk C′ and extends down on the side of the disk. The forward edges of the clearer F^8 are finished to a scraping edge adapted to remove lint, dust, or other impurities liable to settle on the disks. As the disks C′ control the presenting of the cleaned flats to the main carding-cylinder and as the collection of lint and dust on the disks disturbs the accurate adjustment required to secure the best work, these clearers are more particularly required on these disks C′; but they may be also used in connection with the disks C by extending the end of the pawl F^7 and pivotally connecting therewith the counterweighted clearer f^8. (Shown in broken lines in Fig. 1.)

When in use, the small wheel or roller F^4 of the rider is raised and lowered at each revolution of the pulley A^2 and cam F^5, imparting an up-and-down motion to the arm

F^2, and as this arm F^2 forms with the arm F^6 a bell-crank lever the motion is transmitted to the arm F^6 and by it to the pawl F^7 and clearer F^8, as well as to the clearer f^8, if the same is used. The oscillating motion of the arm F^6 gives to the clearer F^8 a positive scraping action by which the dirt, lint, and impurities are removed from the peripheral surface of the disk C′ on one side, and a similar arm F^6 operates a similar clearer F^8 on the opposite side of the carding-machine.

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

1. In a revolving-flat carding-machine, the combination with the disks supporting the flats, and the flats, of an oscillating member, means, substantially as described, for oscillating the member, and a clearer pivotally supported on the oscillating member and held against the peripheral surface of the disk.

2. In a revolving-flat card, the combination with the flats, the disk C′, the cam F^5, the rider F^3, the arms F^2 and F^6, the pawl F^7, and the brush-roll provided with the ratchet-wheel E^2, of the clearer F^8 pivotally connected with the arm F^6 whereby the peripheral surface of the disk is cleaned and the adjustment of the flats maintained, as described.

In witness whereof I have hereunto set my hand.

MELVIN H. COFFIN.

Witnesses:
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MOLLIE RAWDON.