2 Sheets—Sheet 1.

C. SCHOFIELD & R. WILDE.

Feeding Device for Carding-Machine.

No. 205,427. **Patented June 25, 1878.**

FIG. 1.

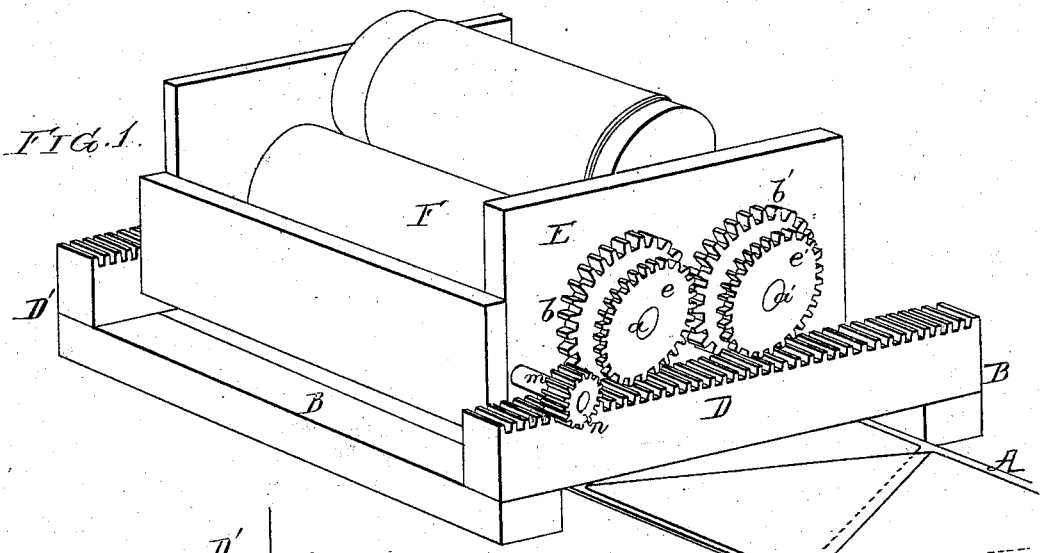
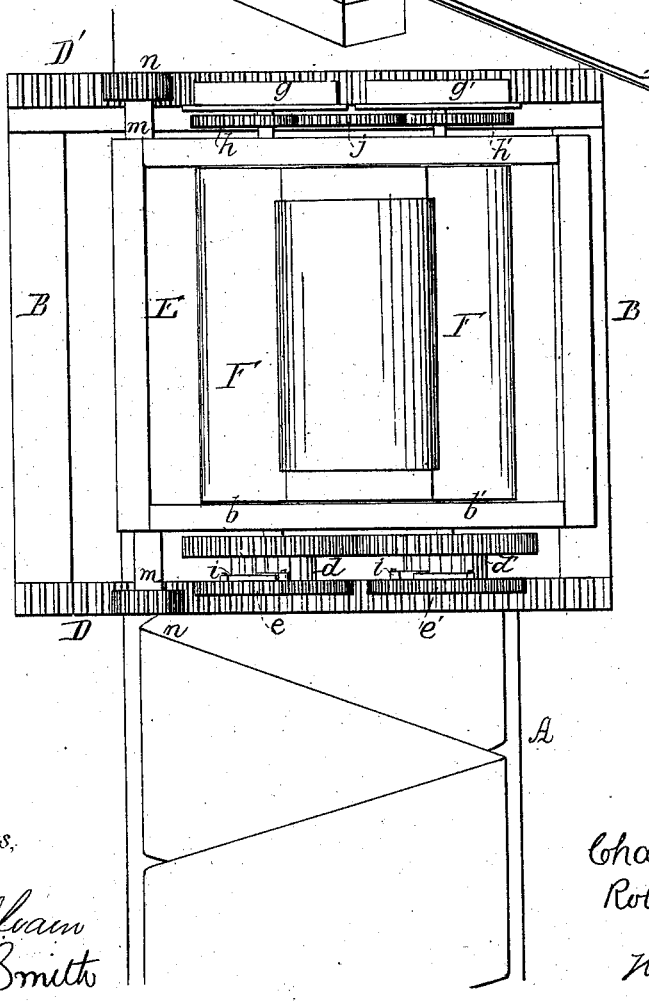


FIG. 4.



Witnesses,

Thos. McIlvain

Harry Smith

Inventors

Charles Schofield

and

Robert Wilde

by their attorneys

Howson & Son.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

2 Sheets—Sheet 2.

C. SCHOFIELD & R. WILDE.

Feeding Device for Carding-Machine.

No. 205,427. **Patented June 25, 1878.**

FIG. 2.

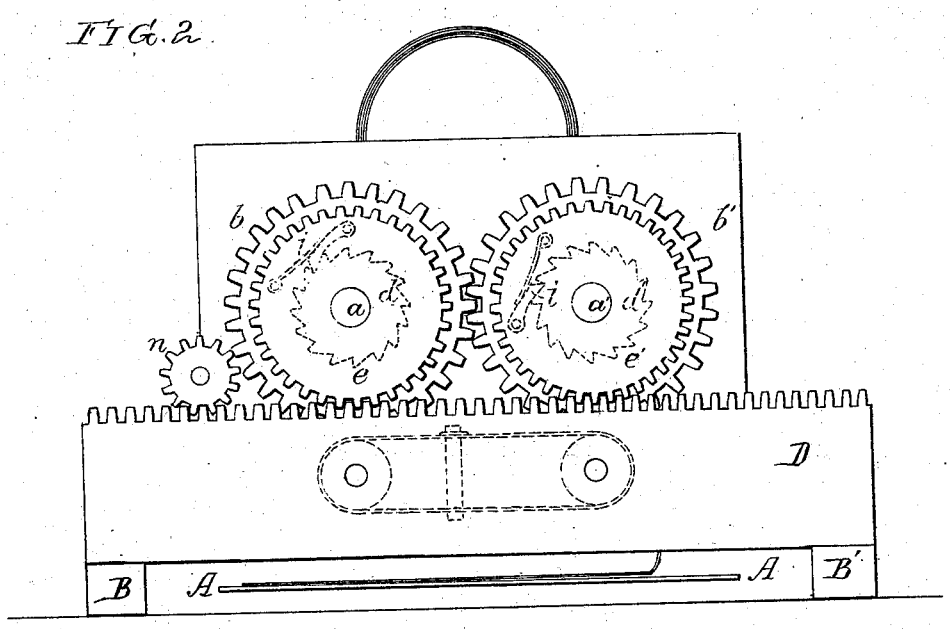
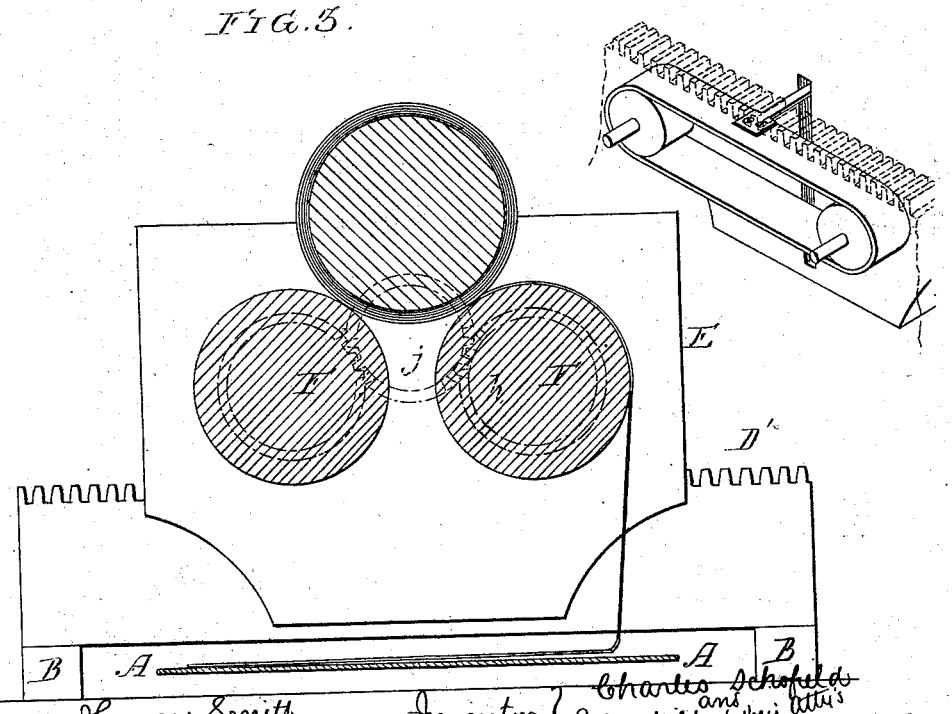


FIG. 5.

FIG. 3.



Witnesses, Harry Smith, Thomas McElwain.

Inventors, Charles Schofield and Robert Wilde, by their Attys Howson & Sons.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES SCHOFIELD AND ROBERT WILDE, OF PHILADELPHIA, PA.

IMPROVEMENT IN FEEDING DEVICES FOR CARDING-MACHINES.

Specification forming part of Letters Patent No. **205,427**, dated June 25, 1878; application filed March 18, 1878.

To all whom it may concern:

Be it known that we, CHARLES SCHOFIELD and ROBERT WILDE, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Feeding Devices for Carding-Machines, of which the following is a specification:

Our invention relates to an improvement in the devices used for feeding lap to a condenser-card, the object of our invention being to insure the feeding of the lap in such a manner that it will be laid upon the condenser-card uniformly throughout its width. This object we attain in the manner which we will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1, Sheet 1, is a perspective view of our improved lap-feeder; Fig. 2, Sheet 2, a side view of the same; Fig. 3, Sheet 2, a longitudinal section; Fig. 4, Sheet 1, a plan view; Fig. 5, a perspective view of the device for reciprocating the carriage.

A represents a portion of the ordinary endless band or apron, by which the lap is carried to the devices which deliver it to the condenser-card. On opposite sides of this apron are frames B, which are connected by means of transverse bars D D′, arranged above the apron A, and serving to support a reciprocating carriage, E, in the opposite side frames of which are formed bearings for the journals *a a′* of two rolls, F F. These journals *a a′* project from the sides of the carriage E, and one end of the journal *a* carries a loose cog-wheel, *b*, the corresponding end of the journal *a′* carrying a fast cog-wheel, *b′*, which is geared to the wheel *b*.

To the face of the cog-wheel *b* is secured a ratchet, *d*, and to the face of the cog-wheel *b′* a ratchet, *d′*, the teeth of the latter facing in a direction opposite to those of the ratchet *d*.

The journals *a a′* carry at the ends beyond the ratchets loose pinions *e e′*, which are adapted to a rack formed on the bar D, and each of these pinions carries on the inside a spring-pawl, *i*, adapted to the teeth of the adjacent ratchet.

The opposite ends of the journals *a a′* carry guide-wheels *g g′* and cog-wheels *h h′*, the guide-wheels being adapted to the bar D′, and the cog-wheels being geared together by means of an intermediate pinion, *j*, as shown by dotted lines in Fig. 3.

Across the front of the carriage extends a transverse shaft, *m*, on the ends of which are cog-wheels *n*, one of the latter being adapted to the rack on the bar D and the other to a similar rack on the bar D′. By this means the front end of the carriage E is guided, and its even and regular forward or backward movement insured.

The roll of lap, as it is taken from the breaker, is laid upon and is supported by the rolls F F, the ends of the roll of lap passing down around one of the said rolls F F and resting on the apron A.

As the carriage E reciprocates in one direction the pawl of the pinion *e* engages with the teeth of the ratchet *d*, and causes, through the medium of the gearing shown and described, the rotation of the rolls F F in the same direction, and the consequent rotation of the roll of the lap and the feeding of the portion of the same down onto the apron.

During this movement the pawl of the pinion *e′* slips past the teeth of the ratchet *d′*; but on the reverse movement of the carriage E this pawl engages with the teeth of the ratchet and effects the movement of the rolls, the pawl of the pinion *e* slipping over the teeth of the ratchet *d*.

As the feed-apron is constantly moving while the lap is being fed onto the same, the result will be that the lap is laid on the apron in a series of diagonal folds, as shown in Figs. 1 and 4.

As the lap is delivered by the breaker-card it is thinner at the edges than in the center, and, if fed directly to the condenser-card, is the cause of the production of lap of an uneven quality.

By laying the lap on a longitudinally-traversing feed-apron by means of a transversely-reciprocating carriage, however, so as to produce diagonal folds, as shown, this objection is effectually overcome, and the lap presented to the condenser-card uniformly throughout its width.

Various modes of reciprocating the carriage D may be employed, that shown in the present case being an endless belt carrying a pin adapted to a slot in the carriage, as shown by dotted lines, Fig. 2, and by the perspective view, Fig. 5.

We claim as our invention—

1. The combination of the longitudinally-moving feed-apron A with the transversely-reciprocating carriage E, having two rolls, F F, which support the lap-roll, and are combined with mechanism, substantially as described, whereby they are both rotated in the same direction as the carriage reciprocates.

2. The combination of the feed-apron A and reciprocating carriage E with the guide D and its rack, the loose pinions *e e'* and their pawls, the loose cog-wheel *b* and fast cog-wheel *b'* and their ratchets, the rolls F F, and the cog-wheels *h h'* and *j*, all substantially as specified.

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

CHARLES SCHOFIELD.
ROBERT WILDE.

Witnesses:
HARRY A. CRAWFORD,
HARRY SMITH.