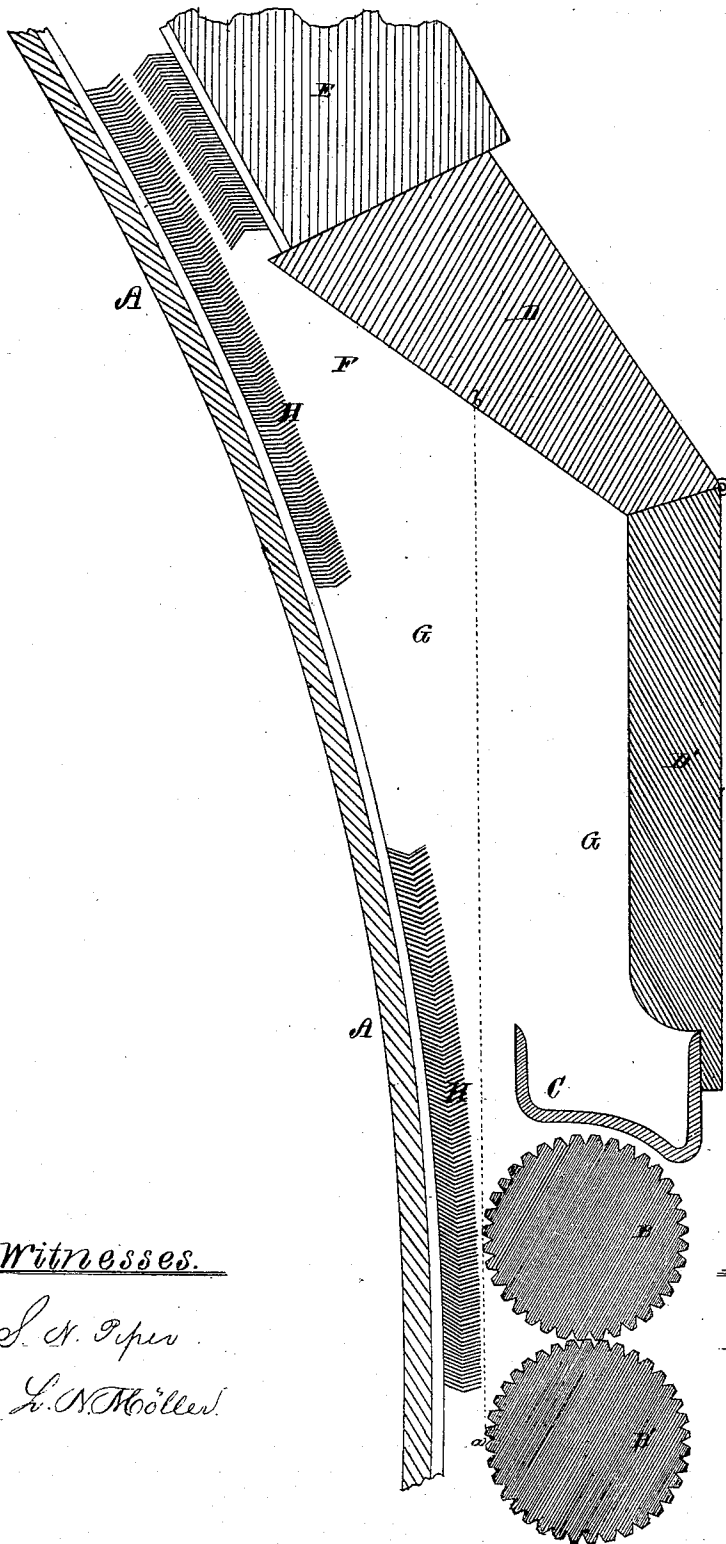


EDWARD ATKINSON.

Improvement in Carding-Machines.

No. 128,202.

Patented June 25, 1872.



Witnesses.

S. C. Piper

L. N. Möller

E. Atkinson.

by his attorney

R. N. Eady

UNITED STATES PATENT OFFICE.

EDWARD ATKINSON, OF BROOKLINE, ASSIGNOR TO HIMSELF AND CHARLES JORDAN GOODWIN, OF INDIAN ORCHARD, MASSACHUSETTS.

IMPROVEMENT IN CARDING-MACHINES.

Specification forming part of Letters Patent No. 128,202, dated June 25, 1872.

To all persons to whom these presents may come:

Be it known that I, EDWARD ATKINSON, of Brookline, of the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Machinery for Carding Cotton or other like material, and separating from it certain motes and dirt or other injurious matters; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, which exhibits a section of the feed-rollers and part of the main card-cylinder of a carding-engine, with my improved receiving-space and its deflector arranged with the dirt or mote receptacle, and constructed in accordance with my invention.

On March 5, 1872, Letters Patent No. 124,351 were granted to Charles Jordan Goodwin and myself, as assignees of said Goodwin, for an improvement in carding-engines; the object of such improvement being the separation from the cotton of the dirt and motes thereof. The space over the dirt-receptacle is arranged directly over the feed-rollers, and provided at top with a deflector in the shape of an inverted trough, narrowed in width from the dirt-receptacle upward, at a tangent to the inner edges of the two feed-rollers, touching the back of the space at or about its middle. In consequence of this, the "fine-fly" and more or less of the motes would, while the carding-machine was in operation, be thrown first against the middle of the back of the space, at a very acute angle therewith, and by the said back would be deflected up into the deflector at the head of the space. Much of the "fine-fly" and motes would pack in the inverted trough or deflector, and subsequently be drawn therefrom, in a body, by the main card-cylinder, to the detriment of the cotton when carded.

My improvements are intended to prevent such gathering of the "fine-fly" and motes, to have but one deflection of the fine-fly fibers, and to insure sufficient space back of the current of fly and motes for the latter to fall out of such current and into the dirt-receptacle.

In carrying out my invention, which, in practice, has proved highly efficient, I place at the top of the space or chamber (marked G in the drawing) over the dirt-receptacle C, (arranged

immediately over the feed-rollers B B',) a single inclined-plane deflector, D, disposed at an angle of about one hundred and twenty-five degrees with the common tangent to the inner edges of the feed-rolls, and sloped toward the main card-cylinder A in manner as shown. The back-board D' of the said space G I arrange parallel, or about so, with the said tangent, which is a vertical line, or substantially so, thereby causing the said space G to widen from the dirt-receptacle C up to the deflector D, from whence it narrows to the top card E. The tangential line above mentioned is shown by the dotted line *a b*. A particle of matter driven upward in the direction of the tangent line and striking the deflector at the point *b* would, theoretically speaking, be deflected upon the main card-cylinder in a line at or about at a right angle therewith. In practice, however, such a particle will be met by the upward current of air, and by it be carried upward in the space F between the deflector D and the main card-cylinder. As the current is mostly if not entirely confined between the said tangent and the main card-cylinder there is a space directly over the dirt-receptacle, in which there is, practically, little or no upward current of air. The motes and dirt escaping into this space readily fall into the dirt-receptacle, while the "fine-fly," passing in and striking the deflector D, will be thrown forward upon the main card by such deflector and the upward current of air. The dirt-receptacle C, arranged with the feed-rollers and main card in manner as represented, performs the functions of a cap to the upper feed-roller, a means of intercepting the motes and dirt, and of keeping the cotton well up to the main card-cylinder, whose card-clothing is represented at H H.

I herein make no claim to the subject or subjects of the aforesaid patent; neither do I claim anything described or shown in the United States Patent No. 103,889, dated June 7, 1870, in which the mote-receptacle is shown as arranged in rear of the feed-rollers, and provided with a vibratory flap, to extend directly over the upper feed-roller.

In the said patent No. 124,351 there is described a modification of the deflector, such consisting in the lower top flat, with its edge

projected inward beyond the front board, all of which not only differs from the deflector D, arranged as shown and described, but operates differently in practice, as, like a curved deflector the said top flat will estop the fine-fly and cause it to pack and be drawn away in a body or mass with more or less of the motes.

The deflector D, by its construction and arrangement with the front board and the lower top flat, deflects the fine-fly upon the card-cylinder and prevents it from packing in a mass and gathering motes, thereby overcoming the great difficulty experienced by the use of a curved or trough-shaped deflector, such as shown in the said patent.

I claim—

With the dirt-receptacle C, arranged immediately over the feed-rollers B B', and at the bottom of the receiving-space G, the deflector D, substantially as described, arranged as represented.

I also claim, with the dirt-receptacle C arranged directly over the feed-rollers B B', and at the bottom of the space or chamber G, such space or chamber G as made to increase in width from the said receptacle C upward to, and provided at top with, a deflector, D, arranged substantially as described and represented.

EDWARD ATKINSON.

Witnesses:

R. H. EDDY,
S. N. PIPER.