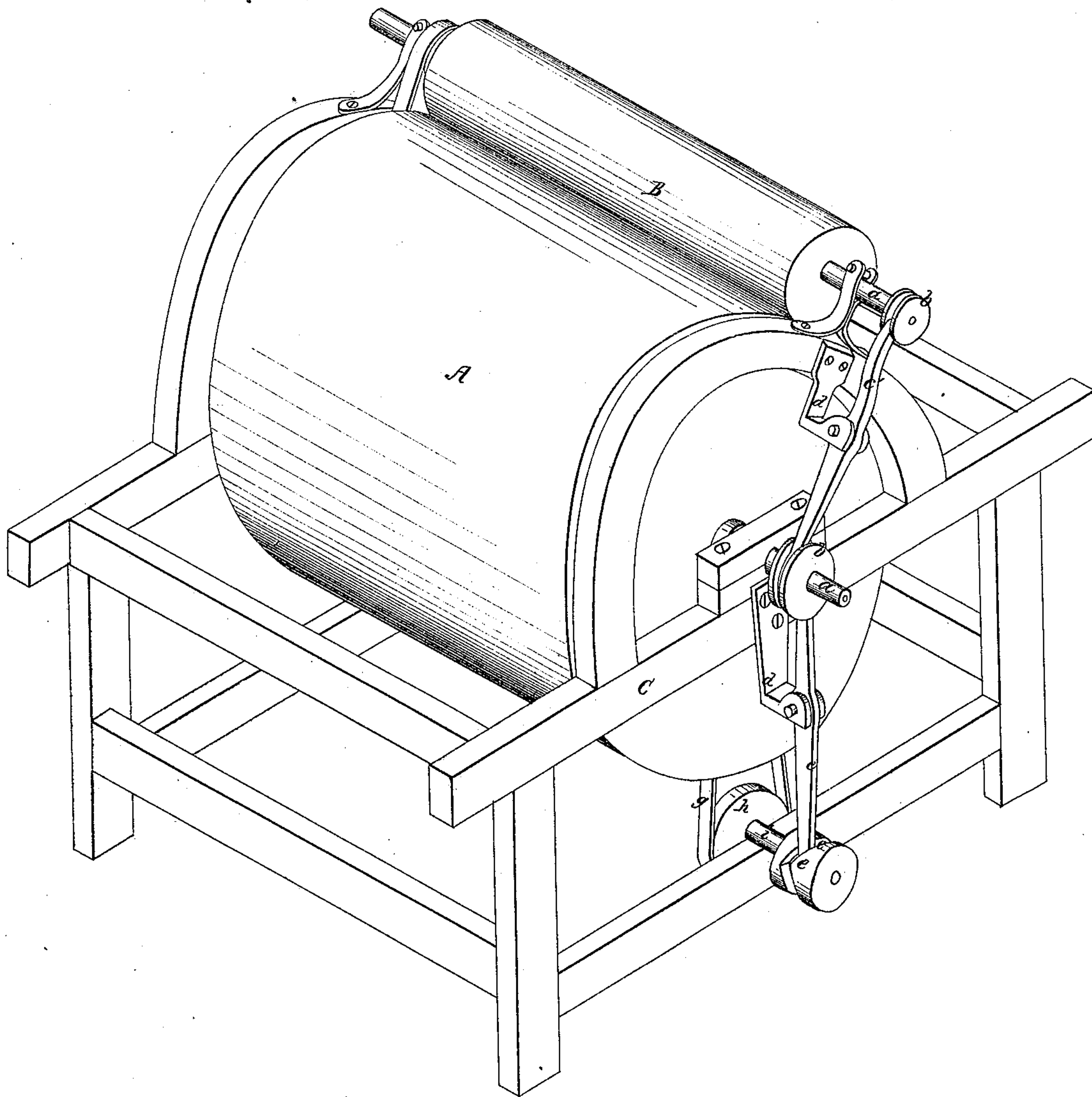


S. Wetters.
Curling Machine.

Nº 26,153.

Patented Aug. 16, 1859.



Witnesses.
H. H. Griffith
Sam. D. Toy

Inventor.
Samuel Wetters

UNITED STATES PATENT OFFICE.

SAMUEL WETHERED, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN CARDING-ENGINES.

Specification forming part of Letters Patent No. **25,153**, dated August 16, 1859.

To all whom it may concern:

Be it known that I, SAMUEL WETHERED, of Baltimore, in the county of Baltimore and State of Maryland, have invented a new and useful Improvement in Vibrating Cylinders of Carding-Engines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification.

The drawing exhibits a perspective view of my invention.

The nature of my invention consists, first, in a card-clothed main cylinder for carding-engines which performs a lateral vibrating movement simultaneously with its revolution, substantially as hereinafter described, and thereby serves, in concert with the upper card-clothed workers, &c., to accomplish the important results hereinafter named.

It consists, second, in a card-clothed "fancy" or upper cylinder which is capable of performing a lateral vibration as it revolves, in combination with a laterally-vibrating card-clothed main cylinder, substantially as hereinafter described.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In order to employ my invention, I hang the main and fancy cylinders A B in the ordinary manner on the card-frame C, as represented in the drawing, said cylinders occupying the same relative position to the upper workers and other attachments of the carding-engine as they occupy when my invention is not introduced in the engine. It, however, requires that the journals *a a* of the fancy and main cylinders shall be extended out beyond one side of the engine-frame A, and that grooved pulleys *b b* be arranged on the extended portion, and vibrating levers *c c'*, pivoted to brackets *d d* of the frame-work in said grooved pulleys, as represented in the drawing. On the lower part of the engine-frame it is necessary to provide a grooved or double-inclined revolving cam *e e*, and have the lower end of the lever work in the cam or inclined groove, as shown. This cam is to be combined with the shaft of the main cylinder by means of a band *g*, which passes

over a pulley *h* on the shaft *i* of the cam *e e*, as represented, or in any more convenient manner.

From the foregoing description it will be evident that when the main cylinder is set in motion the cam *e* will be caused to revolve, and in its revolution its two opposing inclined planes *e e* will give the main cylinder, through the lever *c*, a vibrating movement laterally, and, owing to said vibrating movement being imparted to the main cylinder, the fancy, through the lever *c'*, will have a lateral vibrating movement imparted to it. Said movement, however, is such that when the cylinder is going in one direction laterally the fancy will be moving in an opposite direction.

The advantages of my vibrating cylinder and fancy may be summed up as follows:

First. It has the effect of keeping a smooth surface and a fine point on the wire of card-clothing, as the teeth of the upper workers operate in concert with the main cylinder in passing one another to perform these results. Consequently this part of the carding-engine is always in good order under ordinary circumstances.

Second. The main cylinder being kept in the above condition does not carry the fibrous material beyond the doffer. Consequently the carding is more evenly done and the staple not so much injured.

Third. The cards do not require cleaning once where they formerly required cleaning five or six times, and of course there is not one-fifth of the waste made in this department, which is of vital importance to the manufacturing business.

Fourth. The fibers are thoroughly mixed. Consequently the goods finish to a better face.

Fifth. In the mixing of different colors it improves the look of the work very materially, and overcomes the difficulty which affects the value of goods by taking away the streaky appearance. This improvement is very marked and decided.

Sixth. Twenty per cent. more and better work can be got off the cards.

Seventh. The card-clothing will last much longer than hitherto, because the cards will not require grinding and sharpening once

now where formerly they required frequent grinding. In fact, with this system they are self grinding and cleaning.

Eighth. The card-room will not require as many to oversee it, in view of the seventh advantage.

Ninth. The fancy will last longer and take less power, because it will not require to be set on the main cylinder so hard as to raise the wool.

Tenth. When cards are fed with roping or roving, they are apt to wear the cards in ridges or rows, which does much harm. This invention overcomes that difficulty effectually.

Eleventh. In mixing cotton and wool or any other fibrous substance it acts admirably.

Twelfth. The work being carded more evenly makes the roving or roping much more perfect. Therefore more spinning and weaving can be done with the same, and, above

which, it cheapens the cost of manufacturing. The goods being more perfect will bring better prices.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A card-clothed main cylinder for carding-engines, which performs a lateral vibrating movement simultaneously with its revolution, substantially as and for the purposes set forth.

2. A card-clothed fancy or upper cylinder, which is capable of performing a lateral vibration as it revolves, in combination with a laterally-vibrating card-clothed main cylinder, substantially as and for the purposes set forth.

SAMUEL WETHERED.

Witnesses:

SAML. D. TOY,

LEWIN WETHERED, Jr.