

*H. L. Moulton.*  
*Carding Engine.*

*No. 50,377*

*Patented Oct. 10. 1865.*

Fig. 1

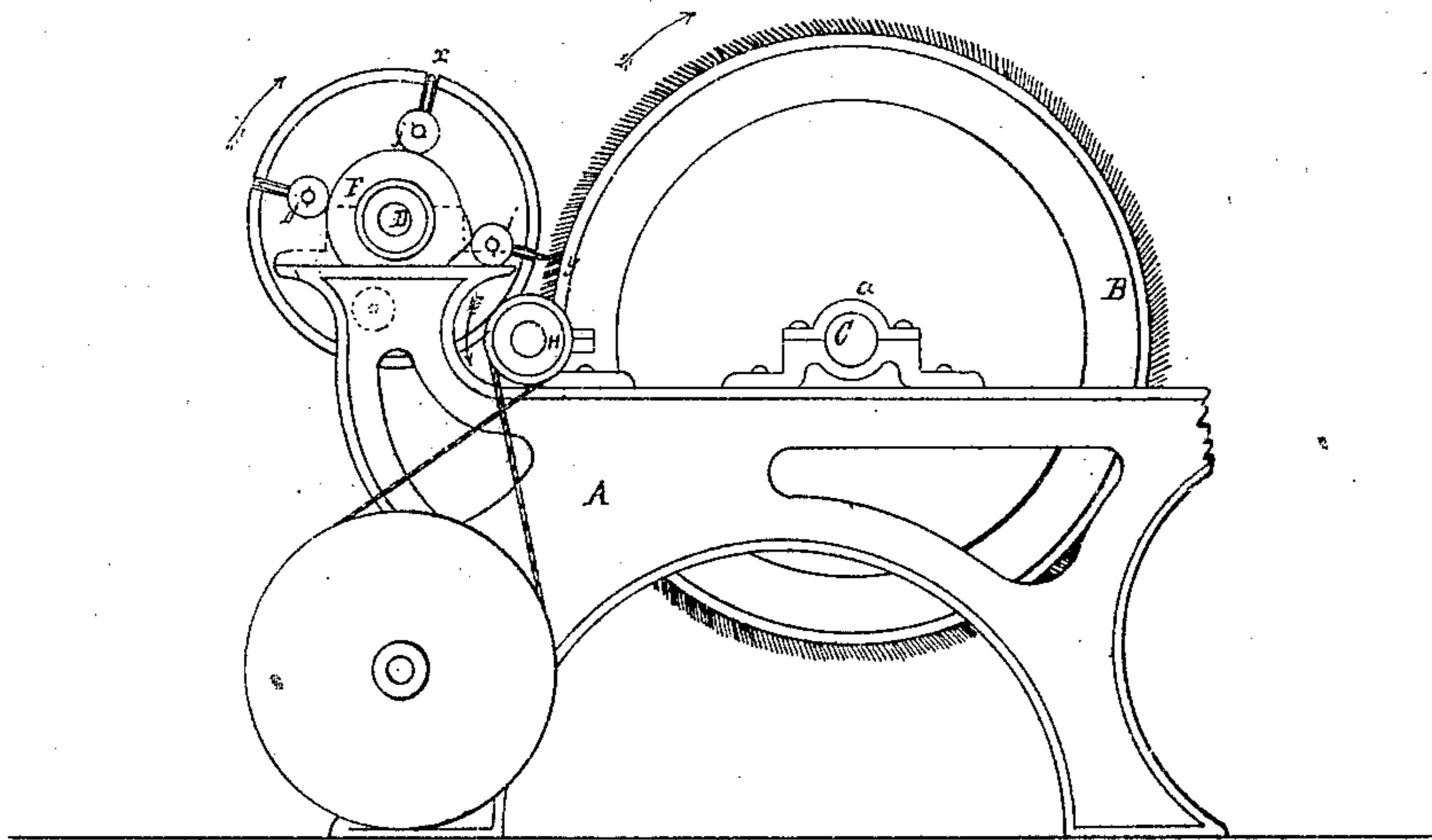


Fig. 2

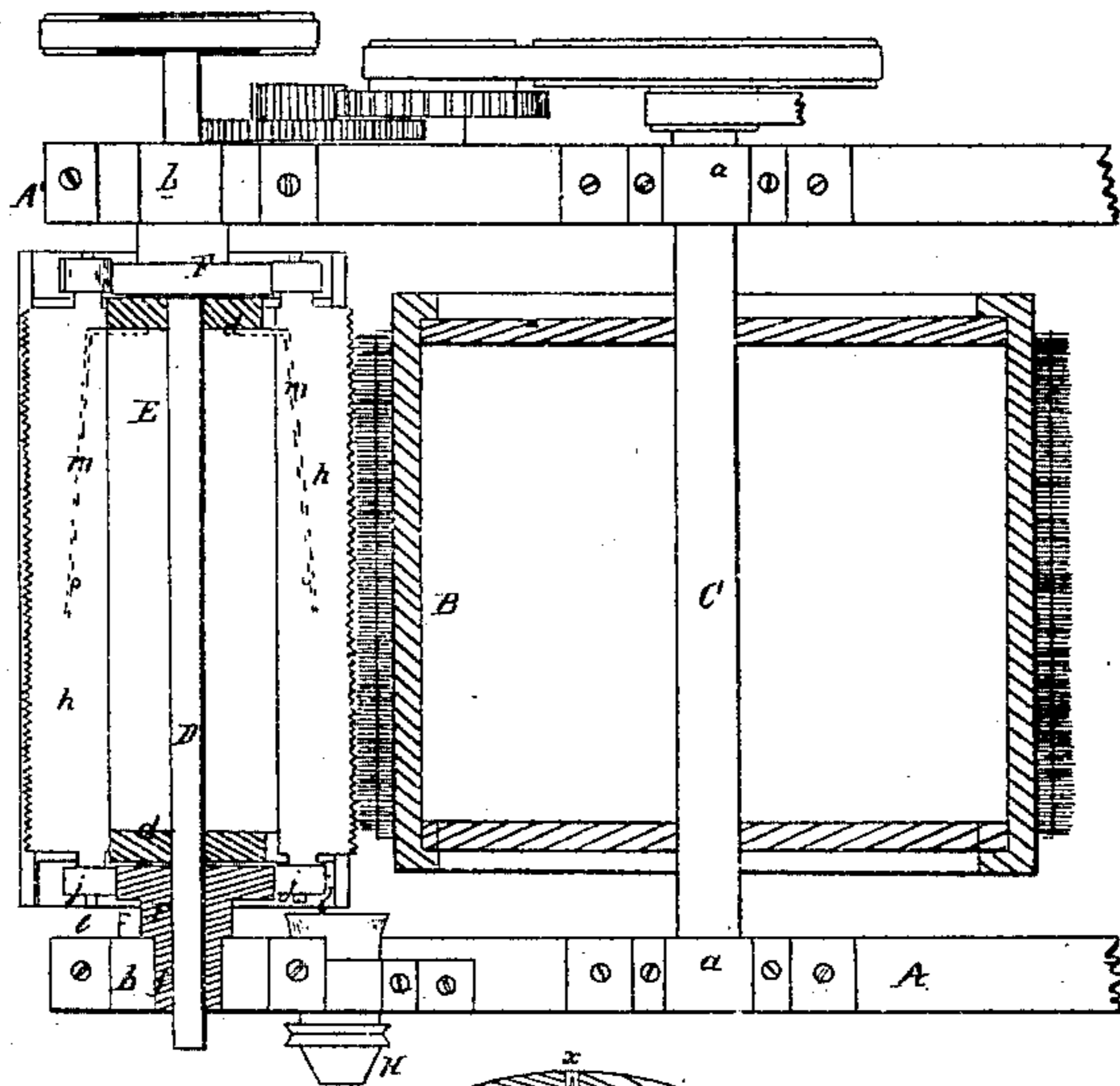
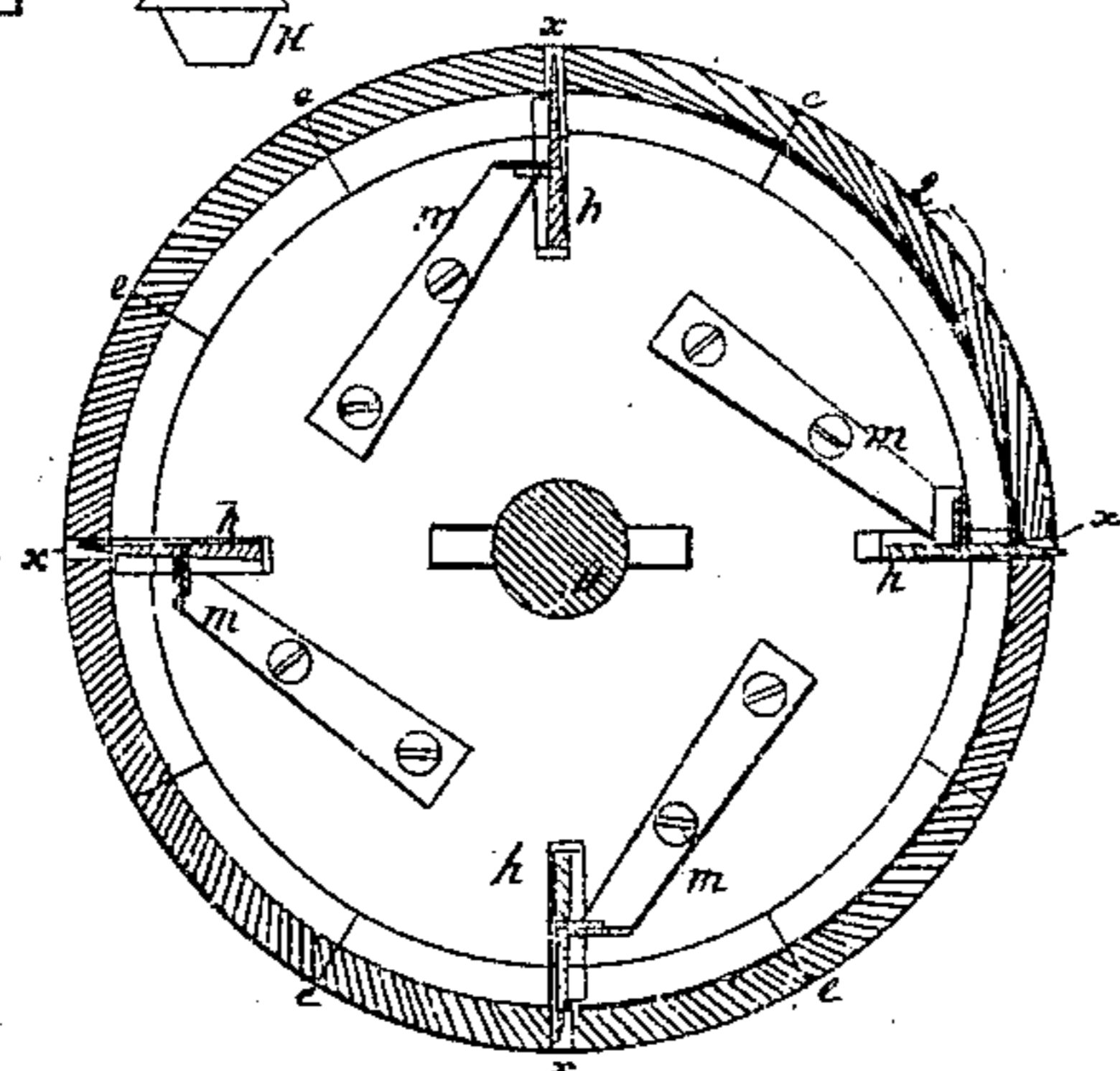


Fig. 3.



Witnesses.

*Wm. Albert Steel*  
*Wm. Delaney*

Inventor

*H. L. Moulton*  
*By Lewis Allen*  
*Henry Howden*

# UNITED STATES PATENT OFFICE.

H. L. MOULTON, OF CAMDEN, NEW JERSEY.

## IMPROVEMENT IN CARDING-ENGINES.

Specification forming part of Letters Patent No. 50,377, dated October 10, 1865.

*To all whom it may concern:*

Be it known that I, HAMILTON L. MOULTON, of Camden, Camden county, New Jersey, have invented certain Improvements in Carding-Engines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a revolving drum or cylinder, provided with combs, caused to operate by stationary cams and springs, substantially in the manner described hereinafter, in combination with the doffing-cylinder of a carding-engine, for the purpose of stripping from the said doffing-cylinder a more uniform sliver of fibers than can be obtained by the use of the ordinary stripping devices, the wear and tear of the carding-engine being at the same time much reduced by the application of my improvement.

My invention further consists in the combination of the said stripping-cylinder, doffing-cylinder, and a tube, the whole being caused to revolve in the direction pointed out hereinafter, so that a strong and regular sliver may be produced.

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

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a side view of sufficient of a carding-engine to illustrate my invention; Fig. 2, a sectional plan of Fig. 1; and Fig. 3, a transverse section of the stripping-cylinder, drawn to an enlarged scale.

A and A' are the opposite side frames of the machine; and B, the doffing-cylinder, the shaft C of which turns in suitable boxes, *a a*, on the said side frames.

Near the front end of the machine is a shaft, D, to which is secured a cylinder or drum, E, composed of the circular ends or heads *d*, connected together at their peripheries by slats *e*. The shaft D projects through and turns in the cams F, each cam having a projection, *f*, which is secured to a suitable box, *b*, on one of the side frames.

In the cylinder or drum E are a number of narrow longitudinal slots, *x*, (there being four in the present instance,) each slot being such as to contain one of the combs *h*, and permit

the same to slide freely toward and from the shaft D. Each comb has at each end a projection or pin, *i*, carrying a roller, *j*, the several rollers being caused to bear against the peripheries of the cams by springs *m*, (shown in dotted lines, Fig. 2,) there being in the present instance one spring to each comb, one end of each spring being secured to the heads or slots of the cylinder, and the other end being turned down through a hole in the comb. The cams are of such a form and the combs and drum or cylinder are of such dimensions that when one of the combs arrives at the point *y* its serrated edge shall project outward from the face of the cylinder to a distance of about five-sixteenths of an inch, but on passing from the point *y* shall recede into the cylinder and remain there until it again approaches the point *y*; in other words, the combs remain drawn inward from the face of the cylinder at all times, excepting when approaching and leaving the point *y*.

A tube, H, is caused to revolve in a box or bracket attached to one of the frames, this tube being in a proper position for receiving the sliver as it is stripped from the doffing-cylinder B. This cylinder and the tube H may be driven in the direction of their arrows by any suitable system of belts or gearing, but I prefer in all cases to drive both from the shaft C, so that the doffing-cylinder, tube, and stripping-drum may operate in unison. As the doffing-cylinder revolves in the direction of the arrow the fibres collected in the card are stripped therefrom by the combs of the revolving cylinder and leave the card in the shape of an uniform sliver, which passes through the revolving tube H.

A most important feature of my invention is that each comb during one revolution acts with stripping effect on the doffing-card for a very brief time, and that each comb always remains withdrawn into the cylinder, excepting during its brief action. Hence there is no possibility of the fibers being carried round. At the same time the sliver is uniform and perfect.

Another important feature of my invention is causing the doffing-cylinder, stripping-cylinder, and tube A to revolve in the direction of the arrows, as by this arrangement the fibers are stripped from the card in a direction the same, or nearly the same, as that in which the sliver is twisted by the revolving tube. A strong sliver is thus produced. In fact, the fibers, as they are stripped from the card-cylinder, are

rolled during the stripping process in the direction in which they are afterward twisted by the tube.

It will be evident that by the substitution of the revolving stripper for the ordinary reciprocating comb the wear and tear of the engine is much reduced.

I do not desire to confine myself to any specific number of combs or to the precise devices described for operating the said knives; but

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

1. The revolving drum or cylinder, with the combs *h* and the springs *m*, or their equivalent,

in combination with the stationary cams *F F* and doffing-cylinder *B*, the whole being constructed, arranged, and operating substantially as and for the purpose herein set forth.

2. The combination of the tube *H*, a stripping-cylinder having combs operating substantially as described, and the doffing-cylinder *B*.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

H. L. MOULTON.

Witnesses:

JOHN WHITE,

W. J. R. DELANY.