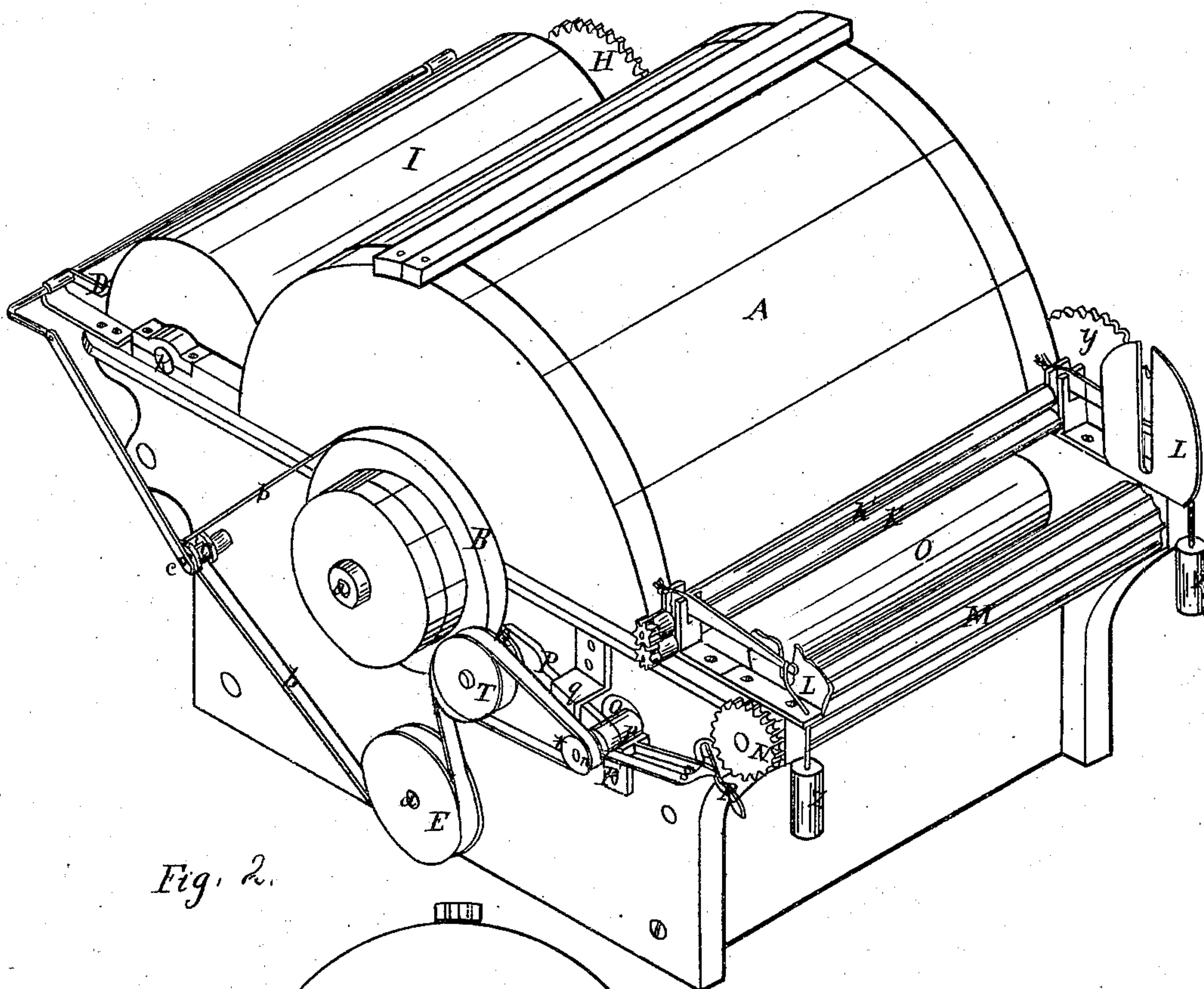
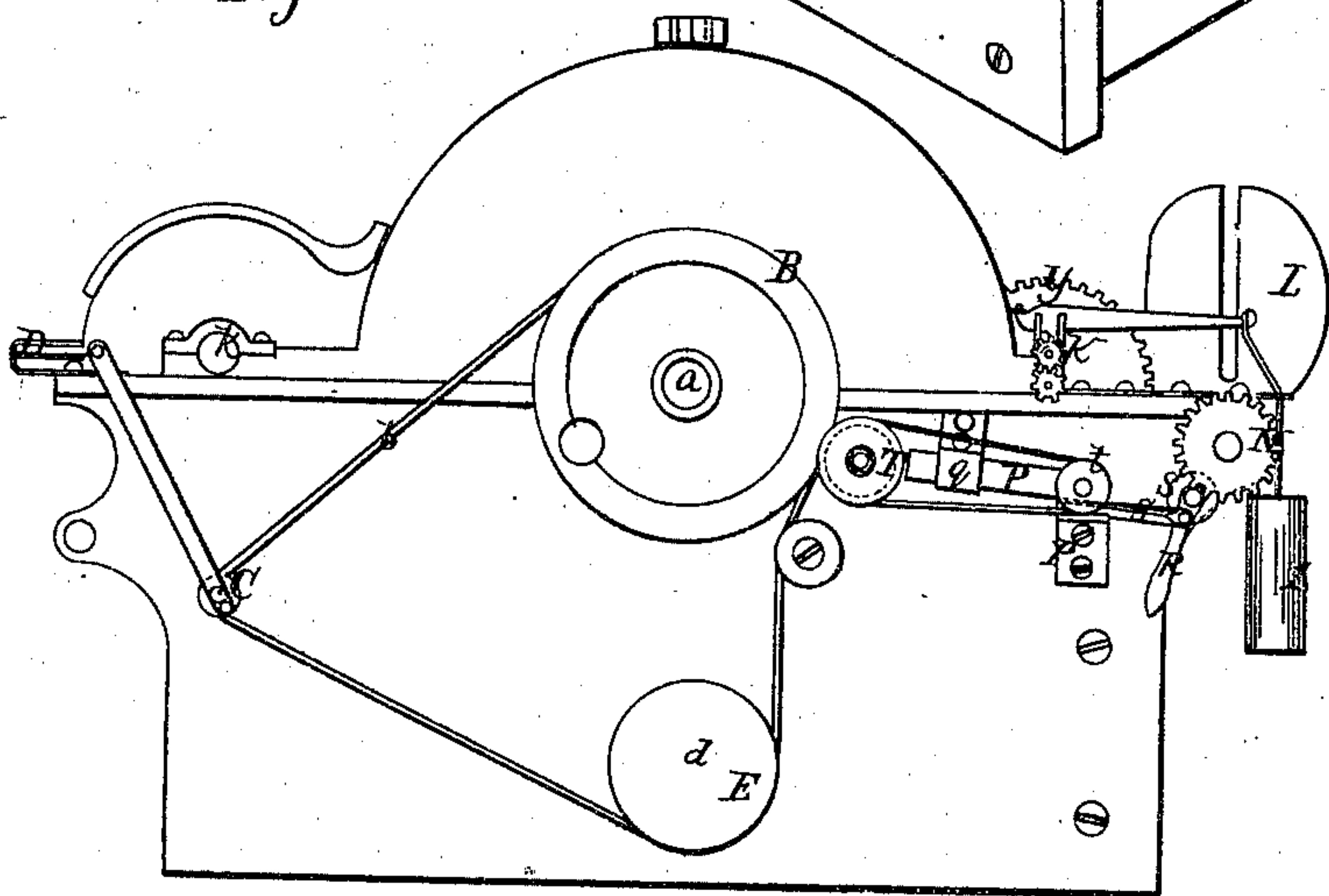


*Abbott & Fields*  
*Stripper for Carding Engines*  
*No. 74874* *Patented Feb. 25. 1868*

*Fig. 1.*



*Fig. 2.*



*Witnesses:*  
*F. P. Williams,*  
*W. J. Cambridge*

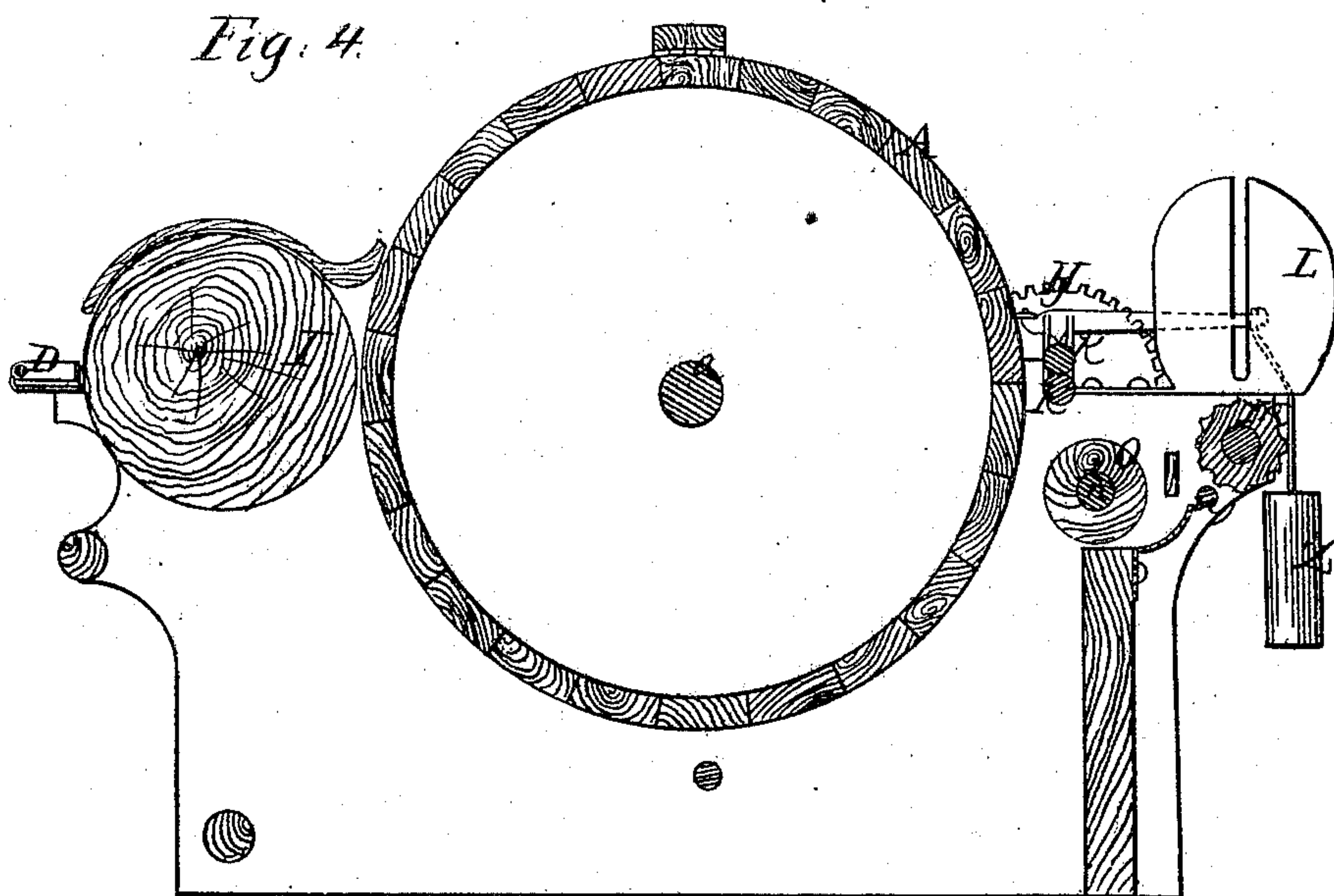
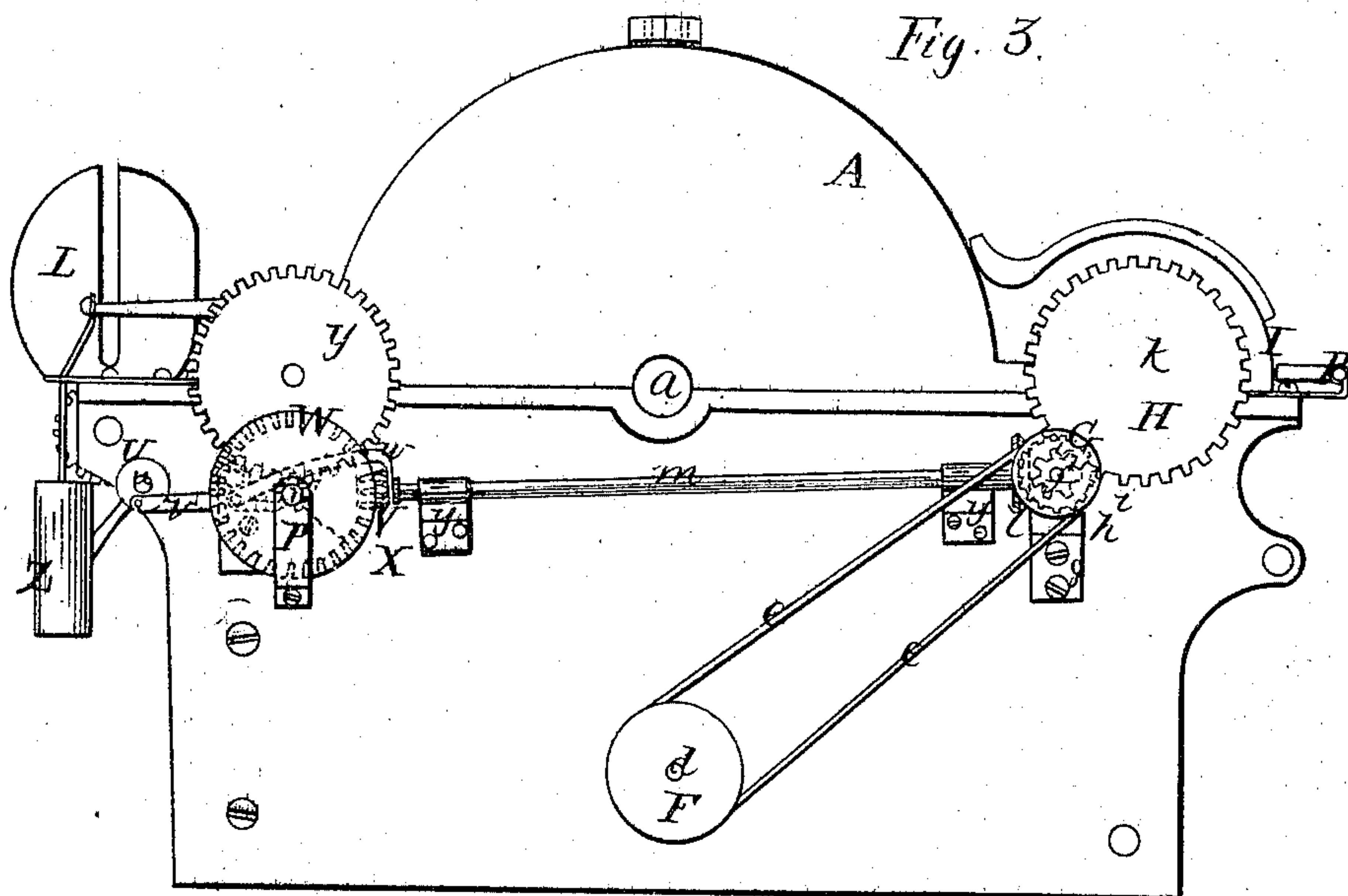
*Inventors:*  
*F. M. Abbott & E. F. Fields*  
*By their Attys*  
*Teschmacher & Stearns.*

Abbott & Fields

Stripper for Carding Engines

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# United States Patent Office.

FLETCHER M. ABBOTT, OF BOSTON, MASSACHUSETTS, AND EDWARD F. FIELDS, OF LEWISTON, MAINE.

*Letters Patent No. 74,874, dated February 25, 1868.*

## IMPROVEMENT IN STRIPPERS FOR CARDING-CYLINDERS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that we, FLETCHER M. ABBOTT, of Boston, in the county of Suffolk, and State of Massachusetts, and EDWARD F. FIELDS, of Lewiston, in the county of Androscoggin, and State of Maine, have invented certain Improvements in Carding-Engines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of a carding-engine, with our improvements applied thereto.

Figure 2 is an elevation of one side of the same.

Figure 3 is an elevation of its opposite side.

Figure 4 is a central longitudinal section.

The teeth of a carding-engine frequently become clogged with refuse cotton and other impurities, which require to be removed before the combing out of the lap can be continued. To effect the removal of these impurities, it has usually been the practice to throw the carding-cylinder out of gear and clean its teeth by hand. Where a number of engines are employed, a very serious delay is incurred in thus stopping them, and this operation, together with that of cleaning the teeth, is laborious and inconvenient to perform. The doffer being moved independently of the cylinder, continued to revolve after the engine was stopped, and the sliver was consequently drawn out and broken.

We are aware that Letters Patent of Great Britain were granted to William Brown, on the twenty-third day of January, A. D. 1861, in which the carding-cylinder was cleaned while revolving, by a stripper, which was moved to and from it periodically, to cause the teeth of the stripper to engage with and disengage them from those of the card-cylinder. The means employed by him for moving the stripper consisted in crank-pins, put in motion by toothed wheels, in connection with a worm and toothed wheel, the shaft of the stripper resting in vibrating bearings. We are also aware that Letters Patent of Great Britain were granted to Joseph C. Rivett, on the thirteenth day of April, A. D. 1861, in which the revolution of the feed-rolls is discontinued previous to and while the "stripper" is cleaning the carding-cylinder; the teeth of the stripper also engaging with those of the card-cylinder, and the latter being reversed during this operation.

The mechanism employed for performing the above-mentioned functions consists chiefly in worm-wheels, a ratchet, acting against catches, a pin, disk, auxiliary shaft, series of levers, plate, bar, inclines, &c., which is evidently of complicated construction.

The object of our invention is to simplify the mechanism for cleaning the card-cylinder, and consists in supporting the shaft of the "stripper" in sliding bearings, so operated by a "stripper" as to cause the "stripper" to be instantly thrown forward to bring its teeth close to the teeth of the cylinder, without engaging therewith when the cylinder is being cleaned. And in connection with the above, our invention also consists in certain improvements in the mechanism for discontinuing the feed of the lap during the operation of cleaning the main cylinder.

To enable others skilled in the art to understand and use our invention, we will proceed to describe the manner in which we have carried it out.

In the said drawings, A represents the cylinder of a carding-engine, which is revolved by suitable power communicated to the shaft *a*, which carries a drum, B, over which passes a belt, *b*, which is placed around and drives a roll, C, on a shaft, *c*, which operates the crank of the clearing or doffer-knife D, and also drives a pulley, E, on one end of a shaft, *d*, which carries, at its other end, a pulley, F, over which passes a belt, *e*, which drives a pulley, G, on a short shaft, *f*, resting in bearings *g*, projecting from the framework, (see fig. 3.) *h* is a bevel-wheel, and *i* a pinion, (both seen dotted,) secured to the shaft *f*, back of the pulley G, the pinion *i* engaging with a cog-wheel, H, on one end of the shaft *k* by which the doffer I is revolved. The bevel-wheel *h* gears into a bevel-wheel, L, on one end of a long shaft, *m*, of small diameter, which is revolved for a purpose to be explained hereafter. K K are a pair of feed-rolls, for supplying the cotton to the carding-cylinder. L L are slotted guides, in which rest the ends of the shaft of the roller, around which the lap is wound. M is a fluted roller, provided with a cog-wheel, N, which receives motion from the revolution of the feed-rolls, by means of a series of cog-wheels, (not shown,) and thus drives the lap-roller positively. O is a



roller, of a length equal to that of the cylinder A, provided with card-teeth, and serves as a stripper for cleaning the teeth of the cylinder when clogged with the impurities contained in the cotton. This stripper is made to slide close up to the cylinder, so that their teeth may be brought quite close to each other, without engaging, by means of the following device: Both ends of the stripper-shaft, *n*, project through slots *o* in the framework, and rest in movable bearings *p*, supported in brackets *p'*, secured to the framework. From one of these bearings, *p*, extends an arm, *P*, figs. 1 and 2, which rests on a guide-plate, *q*, the outer end of this arm having projecting therefrom a short shaft, *r*, upon which are placed two pulleys, one, *Q*, a friction-pulley, which is brought up against the periphery of the drum B, by a shipper or lever, *R*, pivoted to an arm, *s*, of the movable bearing *p*, and to a crank-wheel, *S*, and serves to revolve the short shaft *r*, and with it the other pulley, *T*, which drives a pulley, *t*, on one end of the stripper-shaft *n*, and thus revolves the "stripper," which, by placing a bar or cleat behind it, and creating a draught, is entirely freed from dirt, the current of air being sufficiently forcible, and so directed against the waste as to separate it from the stripper while revolving, and to deposit it into a receptacle beneath the card-cylinder. By providing the short shaft *r* with pulleys of varying sizes, made to slide thereon to bring them in place against the periphery of the drum B, the speed of the stripper may be varied as desired, and by covering the pulley *Q* with rubber or other elastic material, it may be compressed more or less against the drum, so that the teeth of the stripper may be brought to within the proper distance of those of the cylinder, without touching, the width of the space between the teeth depending on the quality of the cotton to be carded, and also on the condition of the cylinder, according as it requires a thorough or only a partial cleaning.

The feed-rolls K are prevented from revolving while the stripper is removing the waste from the card-cylinder by the following mechanism: The crank-wheel *S* is fastened to one end of a small shaft, *u*, which carries at its other end a crank-wheel, *U*, similar to that of *S*, and is connected with its movable bearing *p* by an arm, *v*. *w* is a rod, leading from the bearing, and provided with a hook or clutch, to fit over a collar at the back of a bevel-wheel, *V*, secured to one end of the shaft *m*, which turns within bearings *y*. When the crank-wheels *S* *U* are vibrated, by throwing the shipper into the position seen in fig. 3, the bevel-wheel *V* is thrown into gear with another bevel-wheel, *W*, on a short shaft, *n'*, resting in a bracket, *p'*, projecting from the side of the framework, (see fig. 3.) A pinion, *X*, on this short shaft *n'*, engages with and drives a cog-wheel, *Y*, on the end of the lower feed-roll shaft, and causes it to revolve. When the "stripper" is thrown toward the carding-cylinder, the shipper is in the position seen in fig. 1, and the bevel-wheel *V* is thrown out of connection with that of *W*, and the revolution of the feed-rolls, and consequently the supply of cotton thereto, is discontinued. *Z* are weighted levers, for pressing the upper feed-roll down upon its lower one, by which the revolution of the upper feed-roll is effected.

What we claim as our invention, and desire to secure by Letters Patent, is—

The mechanism, constructed and operating substantially as described, for moving and regulating the "stripper," as and for the purpose set forth.

We also claim, in combination with a "stripper," supported in a sliding bearing, a feed-connecting and disconnecting mechanism, substantially as described and for the purpose set forth.

F. M. ABBOTT,  
E. F. FIELDS.

Witnesses to the signature of F. M. ABBOTT:

N. W. STEARNS,

W. J. CAMBRIDGE.

Witnesses to the signature of E. F. FIELDS:

N. S. MELCHER,