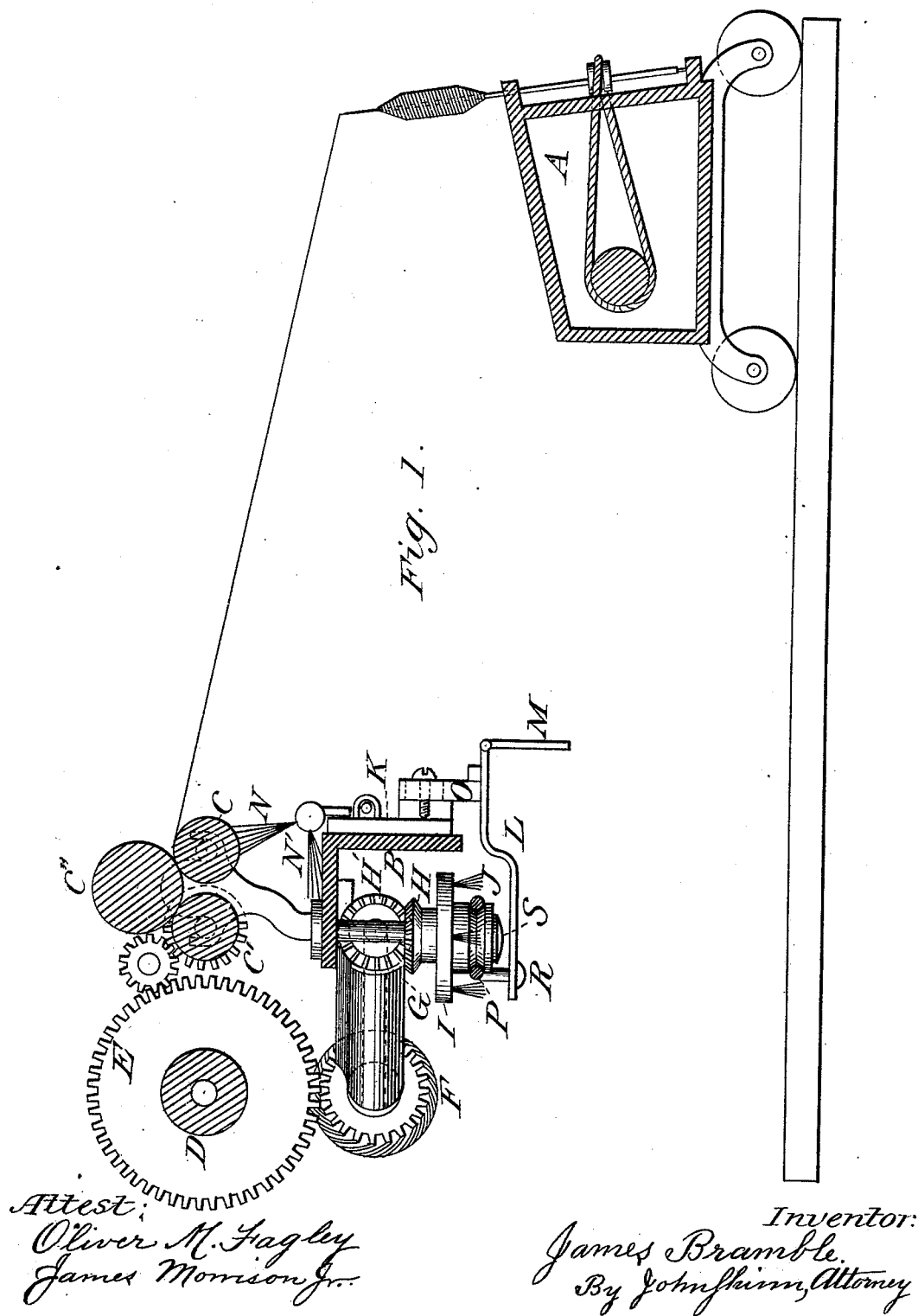
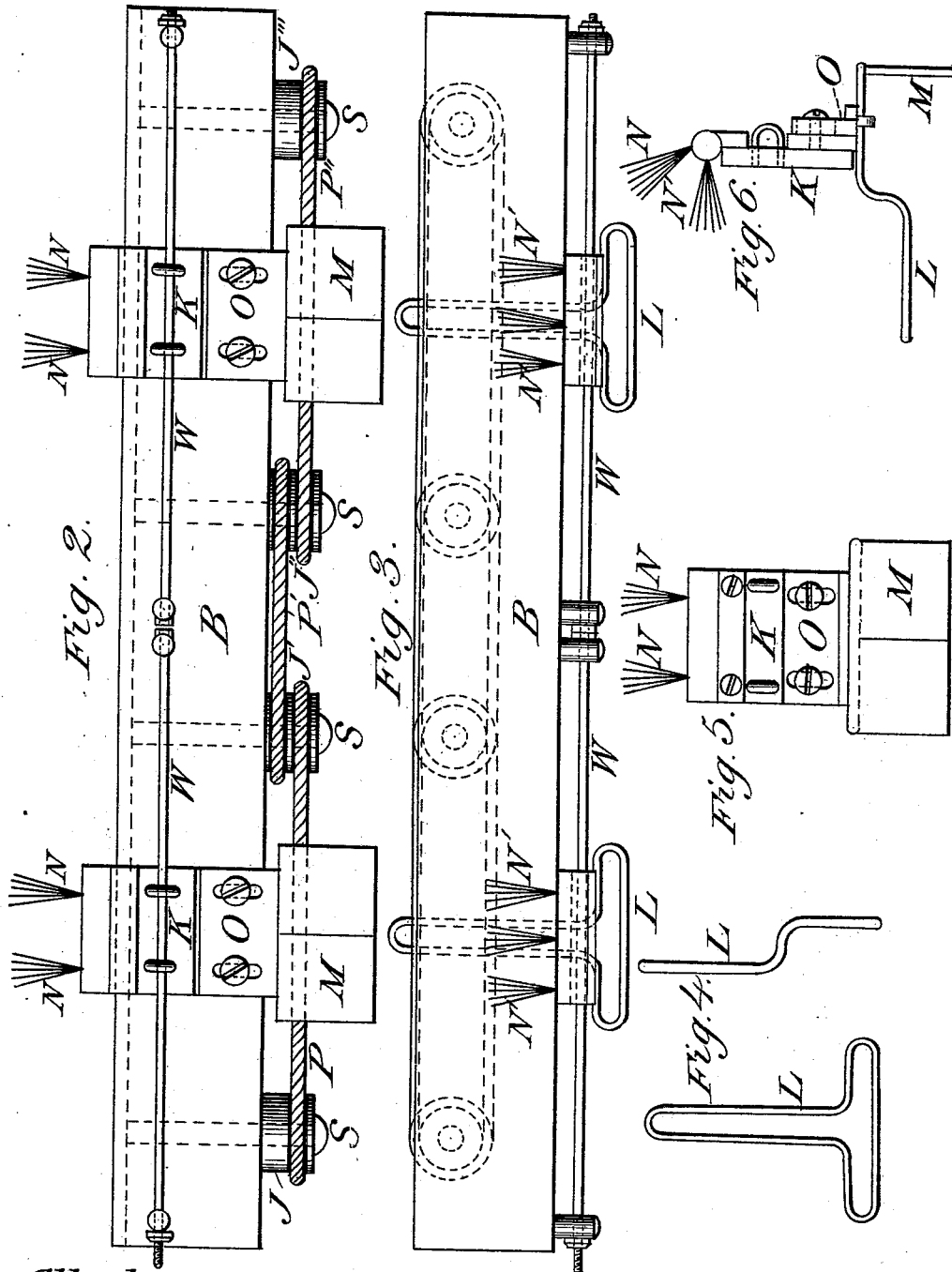


J. BRAMBLE. 2 Sheets—Sheet 1.
Automatic-Clearer for Spinning-Mules.
No. 214,988. Patented May 6, 1879.



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Attest:
Oliver M. Fagley
James Morrison Jr.

Inventor.
James Bramble.
By John H. H. Attorney.

UNITED STATES PATENT OFFICE

JAMES BRAMBLE, OF LEVERINGTON, ASSIGNOR TO THOMAS P. PAXSON, OF
MANAYUNK, PENNSYLVANIA.

IMPROVEMENT IN AUTOMATIC CLEARERS FOR SPINNING-MULES.

Specification forming part of Letters Patent No. **214,988**, dated May 6, 1879; application filed
December 31, 1878.

To all whom it may concern:

Be it known that I, JAMES BRAMBLE, of Leverington, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Automatic Clearers for Spinning-Mules, of which the following is a specification.

My invention is an improvement on a like invention for which Letters Patent No. 158,218, December 29, 1874, and No. 209,912, November 12, 1878, have been granted.

My improvement consists, first, in the combination and arrangement of a spur-wheel, spiral-toothed pinion, a pair of miter-wheels, and band-pulley for operating the traveling brushes and aprons; second, in the combination and arrangements, with the roller-beam and front roller, of a traveling slide having tufts of bristles for wiping the roller-beam and front roller; third, in the combination and arrangement of a series of band-pulleys, bands, and brush-slides with an operating mechanism, for the purpose of operating two sets of slides from one driving-wheel.

The object of my improvement is to simplify, make the parts easy of adjustment, and dispense with the clutch, drum, cord, and weight shown in Patent No. 209,912, before referred to, and make the clearer wipe the front roller as well as the roller-beam and carriage-board, as will be hereinafter described, referring to the drawings making a part of this specification, in which—

Figure 1 is a sectional end view of such parts of a woolen-yarn-spinning mule as enables me to show my improvement connected thereto. Fig. 2 is a front view of a roller-beam with my improvement. Fig. 3 is a top view of the parts shown in Fig. 2. Fig. 4 is a view of the wire yoke and blanket-apron support. Figs. 5 and 6 are views of the traveling brush-slide.

Similar letters of reference in the drawings indicate like parts.

The construction of my improvement is as follows: A, Fig. 1, represents in cross-section a spinning-mule carriage; B, the roller-beam; C C' C'', the delivery-rollers; D, the spool-drum, and E a spur-wheel on end of spool-drum shaft. All these parts are constructed as is

usual in woolen-yarn-spinning mules. F is a spiral-toothed pinion fastened to one end of a shaft fitted in the journal-box G, which journal-box is fastened to one end of the roller-beam B. H H' is a pair of small miter-wheels, one, H', being fastened on the same shaft that carries the spiral-toothed pinion F, the other, H, having fastened to it a circular brush, I, and band-pulley J. These last-named parts, H, I, and J, are fitted loosely on a stud, S, fastened to the roller-beam B. K is a traveling brush-slide. L is a wire yoke, for traversing the brush-slide and supporting the blanket-apron M. N N' are the tufts of bristles forming the clearer or brush. J' J'' J''' are grooved band-pulleys; and P P' P'' are endless bands. To the bands P and P'' is fastened a pin, R. (See Fig. 1.) This pin R works in the slot of the wire yoke L, and the yoke L is fastened to the lower part of the brush-slide O, which part is made adjustable by means of the slots and wood screws shown in Fig. 2.

The brush-slides K K are supported on the wires W W, strung in front of the roller-beam B. The band-pulleys J' and J'' are made with double grooves, the band P' being simply a carrier to communicate motion to band P''.

The operation of my improvement is as follows: The spur-wheel E communicates motion to spiral-toothed pinion F, and it to the miter-wheels H H', and they to band-pulley J and bands P P' P'', which bands in turn traverse the traveling brushes from one end of the roller-beam to the other, and wipe the fly from it, and the blanket-apron will wipe the fly from the carriage-board, as is fully described in the above-mentioned patents, of which this invention is claimed as an improvement. The tufts of bristles N will wipe the front roller, while the tufts N' will wipe the roller-beam.

The part O of the brush-slide K is made adjustable, so that it may be adjusted to a proper height for removing the fly from the carriage-board. The yoke L is made of one piece of wire, as shown in Fig. 4.

The parts as shown and described separately I do not claim; but as my improvement I claim—

1. The combination of spur-wheel E, spiral-

toothed pinion F, miter-wheels H H', and band-pulley J, as shown and described, and for the purpose specified.

2. The combination of the traveling slide K, having tufts of bristles N and N', with the roller-beam B and front roller, C, as shown and described, and for the purpose specified.

3. The combination of band-pulleys J J' J''

J''', bands P P' P'', brush-slides K K, and mechanism for operating the same, as shown and described, and for the purpose specified.

JAMES BRAMBLE.

Witnesses:

JOHN SHINN,

JAS. F. OGLE.