(No Model.)

2 Sheets—Sheet 1.

J. L. PERRY.

SAND PAPER CYLINDER.

No. 346,680. Patented Aug. 3, 1886.

Fig. 1.

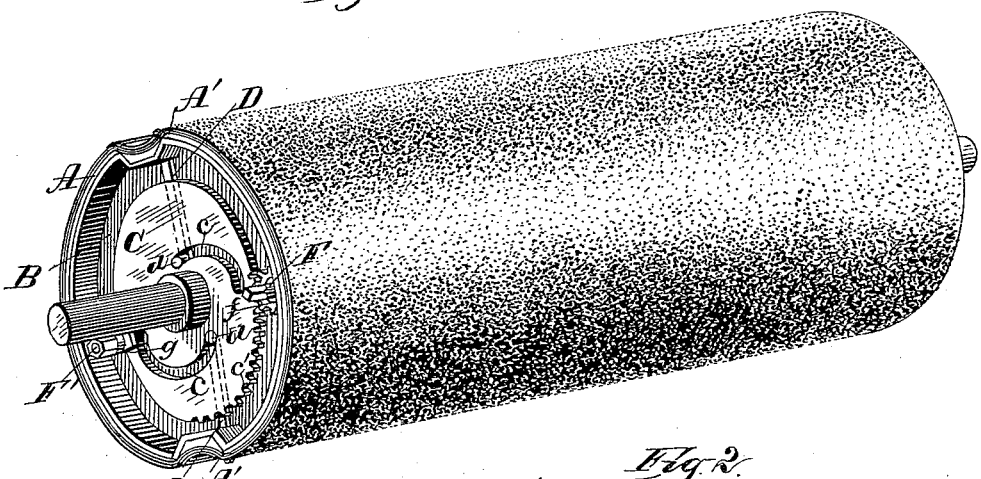

Fig. 2.

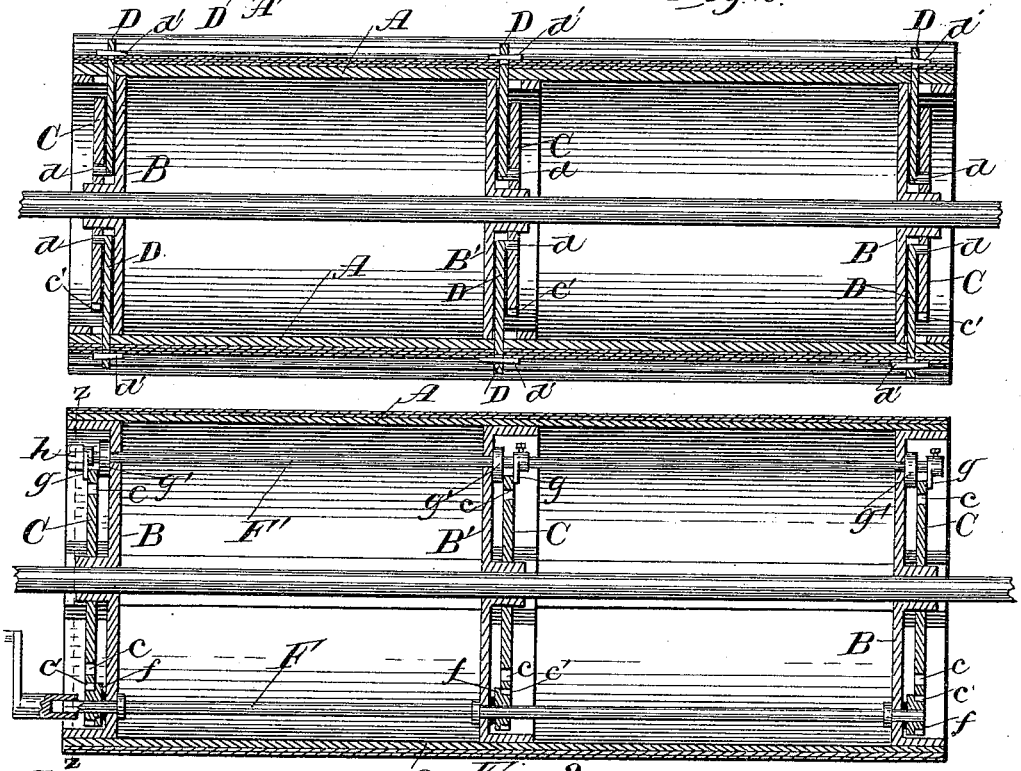

Fig. 3.

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(No Model.) 2 Sheets—Sheet 2.

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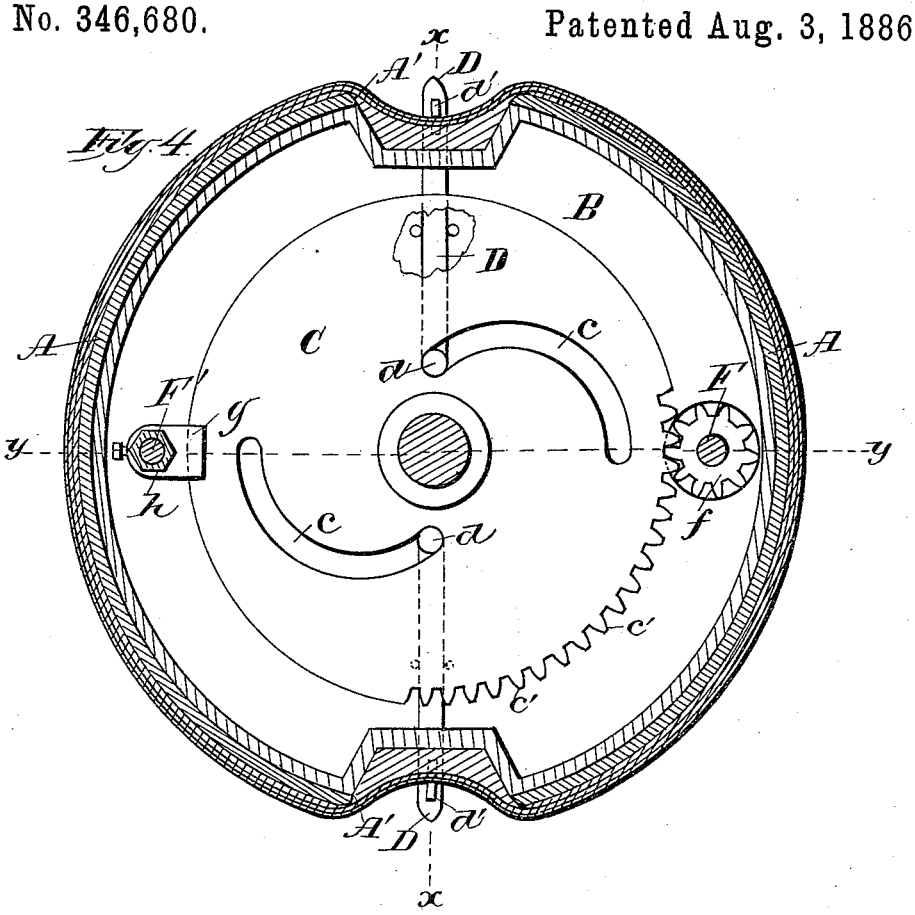
Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES L. PERRY, OF WATERTOWN, WISCONSIN.

SAND-PAPER CYLINDER.

SPECIFICATION forming part of Letters Patent No. 346,680, dated August 3, 1886.

Application filed January 8, 1886. Serial No. 187,977. (No model.)

To all whom it may concern:

Be it known that I, JAMES L. PERRY, of Watertown, in the county of Jefferson and State of Wisconsin, have invented certain new and useful Improvements in Sand Paper Cylinders; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to sand-paper or other covered revolving cylinders, and will be fully described hereinafter.

In the drawings, Figure 1 is a perspective view of my improved cylinder. Fig. 2 is a longitudinal section on line *x x*, Fig. 4; and Fig. 3 is a like section on line *y y*, Fig. 4. Fig. 4 is a cross-section on line *z z*, Fig. 3.

A is the barrel of my cylinder, which is made with longitudinal grooves or channels A′ along its sides. Inside of this barrel are fitted two or more heads, B B′ B, and on the hub of each of these heads is fitted a disk, C, each of which is provided with two eccentric slots, *c*, and each having a toothed segment, *c′* on its edge.

D are draw-bolts, a pair of which is placed between each disk and its adjacent head, the outer ends of bolts composing each pair passing through the barrel in opposite directions, while the inner end of each bolt terminates in a wrist, *d*, that passes through one of the eccentric slots *c*, while the outer end of each bolt has a slot or hole through it to take a pin, *d′*.

F is a shaft that passes through the heads B B′ B, and carries pinions *f*, each of which meshes with the teeth of a disk, and one end of shaft F is squared to take a wrench by which it is turned.

Opposite shaft F is another shaft, F′, and on this shaft are fixed clamps *g*, while the shaft also carries loose collars *g′*, the edge of each disk C projecting between a collar and clamp. One end of the shaft is screw-threaded, and is provided with a tightening-nut, *h*, by means of which the clamps are drawn against the disks to lock them after they have been adjusted.

The object of my invention is to facilitate the removal and replacement of the sand-paper of this class of cylinders, and this is accomplished as follows: Suppose the sand-paper now on the cylinder is to be replaced by fresh paper; the nut *h* is first loosened, a wrench is then slipped onto the squared end of shaft F, and the latter, with its pinions, is turned until the eccentric slots in the disks have forced the draw-bolts D out as far as necessary. The old sand-paper is then removed and fresh paper is wrapped about the barrel, with its edges overlapping in one of the grooves or channels A′, and the ends of the draw-bolts passing through them. The pins *d′* are now passed through the slots in the draw-bolt, and the shaft F is turned so as to cause the disks C to retract the draw-bolts, and through them and their pins tighten the sand-paper about the cylinder, the bolt ends and pins sinking so deeply into the channels as to be entirely out of the line of travel of the work. Instead of several pins *d′*, I may use a single rod for each channel.

I am aware that abrading-rollers have been constructed wherein a shaft was provided with cam-grooved heads that bear against the ends of the roller, and that abrading-paper has been secured to said roller by means of clamps, the ends of which enter the said cam-grooves of the heads, and such, therefore, I do not claim.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a sand-paper cylinder, the combination of a barrel and its heads, and disks having eccentric slots and teeth upon a portion of their peripheries, and pinions adapted to mesh with said teeth, with draw-bolts and their pins, as set forth.

2. The combination, with the barrel and its heads, and the disks having slotted toothed segments, as described, of shaft F and its pinions, and draw-bolts and their pins.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

JAMES L. PERRY.

Witnesses:
S. S. STOUT,
MAURICE F. FREAR.