G. FOWLER.

EMERY GRINDER FOR CARD CYLINDERS.

No. 182,519. Patented Sept. 26, 1876.

Fig. 1

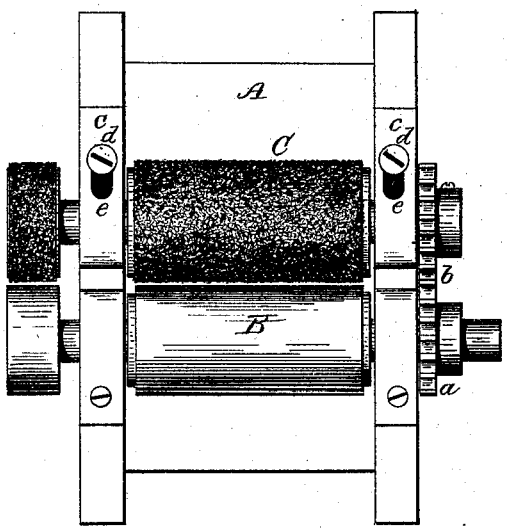


Fig. 2.

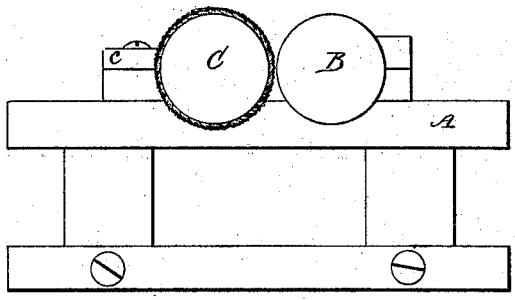
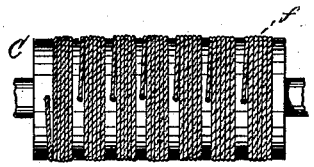


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE FOWLER, OF PHILMONT, NEW YORK.

IMPROVEMENT IN EMERY-GRINDERS FOR CARD-CYLINDERS.

Specification forming part of Letters Patent No. **182,519**, dated September 26, 1876; application filed August 28, 1876.

To all whom it may concern:

Be it known that I, GEORGE FOWLER, of Philmont, in the county of Columbia and State of New York, have invented a new and valuable Improvement in Method of Coating Cylinders with Emery; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a plan view illustrating the operation of my invention. Fig. 2 is a side view of Fig. 1. Fig. 3 is a view of a roller prepared to receive the emery.

This invention relates to coating card-grinding cylinders with emery, &c., while in a plastic state; and the invention consists in first coating the periphery of the cylinder with emery, and afterward rolling its surface by bringing it in contact with another cylinder or roller whose surface is hard and true, both cylinders rotating in an opposite direction at or about the same speed, so as to roll the emery into the glue and make the surface of the cylinder perfectly round and smooth, as will be hereinafter described.

In the accompanying drawings, A represents a suitable frame, on which is journaled a cylinder, B, of any suitable material, and having upon one end of its shaft a gear-wheel, *a*, meshing into the teeth of a similar gear-wheel, *b*, keyed upon the shaft or journal of an emery-wheel, C. The boxes *c*, in which is fitted the shafts of the emery-wheel, is made sectional, to admit of the ready removal of the emery-cylinder, said cylinder being also capable of adjustment to or from the cylinder B, as circumstances may require, by a set-screw, *d*, and elongated slots *e*, in the two sections of the boxes *c*. The rotation of the rollers or cylinders may be effected by a belt or pulley instead of gear-wheels, as shown.

In the operation of coating the cylinder with emery previous to its being finished and smoothed down by the roller of cylinder B, the emery-cylinder is first wound around with suitable cord or rope *f*, in the manner as shown in Fig. 3, and then covered with glue or other suitable adhesive substance, after which the emery is spread on, and before it becomes set or the glue or other adhesive substance dries, said roller or cylinder is rotated with its surface in contact with the equalizing or finishing cylinder or roller B, also rotating in an opposite direction to the roller or cylinder C, which surface comes in contact with the emery surface of the cylinder B, making it true and even.

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

The method of equalizing and truing the surfaces of emery-cylinders or rollers by bringing in contact with the perimeter thereof a plain face roller or cylinder whose surface impinges against the emery surface, and whose axis is parallel to the surface to be equalized, and by rotating the two in contact, substantially as and for the purpose described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE FOWLER.

Witnesses:

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