C. C. MAURICE.

POLISHING STONE CYLINDERS

No. 184,212. Patented Nov. 7, 1876.

Fig. 1.

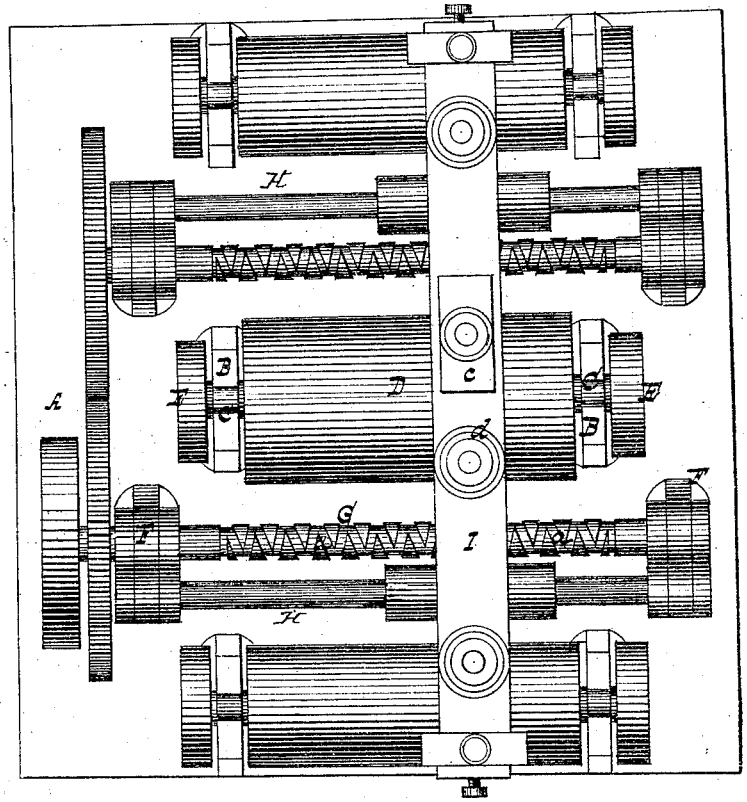
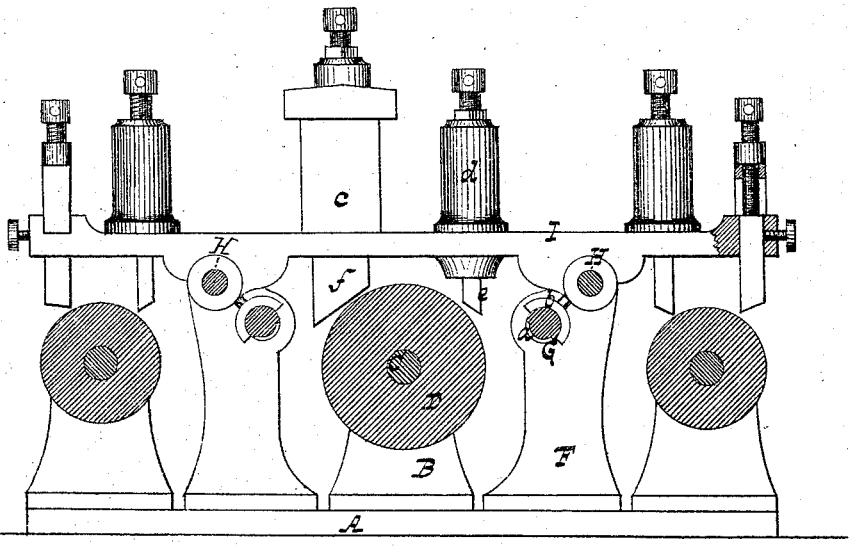


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES C. MAURICE, OF NEW YORK, N. Y.

IMPROVEMENT IN POLISHING STONE CYLINDERS.

Specification forming part of Letters Patent No. **184,212**, dated November 7, 1876; application filed May 6, 1876.

To all whom it may concern:

Be it known that I, CHARLES C. MAURICE, of the city, county, and State of New York, have invented a new and Improved Machine for Turning and Polishing Stone and other Material, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a plan or top view. Fig. 2 is a vertical section in the plane *x x*, Fig. 1.

Similar letters indicate corresponding parts.

This invention relates to a turning-machine which is provided with fixed bearings for the reception of the shaft or gudgeons of the cylinder to be turned, and with a guide-rod and a tool-stock, which carries a cutting-tool and a grinding and polishing tool, and which moves back and forth automatically by the action of a right-and-left-hand screw-spindle, which runs parallel to the cylinder to be turned and polished.

In the drawing, the letter A designates a bed-plate of cast-iron or any other suitable material. From this bed-plate rise two or more standards, B, which form the bearings for the shaft or gudgeons C of the cylinder D, which is to be turned and polished. On the ends of this shaft are pulleys E, on which run belts, which extend downward, so that the journals of the shaft C are held down in their bearings, and the surface of the cylinder, when turned off, will be true or concentric with said journals.

From the bed-plate A also rise the standards F, two or more, which form the bearings for a shaft, G, and for a fixed guide-rod, H, both said shaft and guide-rod running parallel to the shaft C of the cylinder to be turned. On the shaft G is formed a duplex right and left hand screw-thread, *a*, which engages with a fork, *b*, secured in the tool-stock I, and a slow revolving motion is imparted to said shaft by a belt and pulley, or by any other suitable means.

The tool-stock slides on the guide-rod H, and it contains two tool clamps or holders, *c d*—one for the reception of a cutting-tool, *e*, and the other for a grinding and polishing tool, *f*. As the shaft G revolves, the tool-stock is caused to traverse back and forth on its guide-rod by the action of its duplex right and left hand screw-thread, and by the action of the tools *e* and *f* the cylinder D is turned and polished at one operation in a comparatively short time.

In order to produce cylinders of uniform thickness throughout their entire length, it is indispensable that the guide-rod H shall be exactly parallel to the shaft C; and to accomplish this object the standards F are made adjustable, so that the position of the guide-rod and of the tool-stock can be regulated as may be required.

This machine is particularly intended for turning cylindrical stones for lithographic printing; but it can also be used for turning cylinders of any other material.

In practice, I extend the tool-stock, and provide the same with two or more pairs of tool-clamps, at suitable distances apart, so that I can turn and polish simultaneously two or more cylinders, as indicated in the drawing.

It will be noticed that in my machine the cutting-tool *e* is situated on one, and the grinding or polishing tool on the opposite, side of the work, and in practice, particularly for turning stones, I propose to use a cutter of diamond and a polishing-tool of emery. These tools may be applied at the same time, or one after the other, according to the nature of the work.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of fixed bearings B for the shaft C of the cylinder, to be turned with a guide-rod, H, running parallel to said shaft, a tool-stock, I, and a duplex right-and-left-hand screw-spindle, G, which engages with the tool-stock, the whole being constructed and operating substantially in the manner herein shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 4th day of May, A. D. 1876.

CHARLES C. MAURICE. [L. S.]

Witnesses:

W. HAUFF,

ROBT. E. MILLER.