

G. Miller,

Polishing Machine.

No. 100,175.

Patented Feb. 22. 1870.

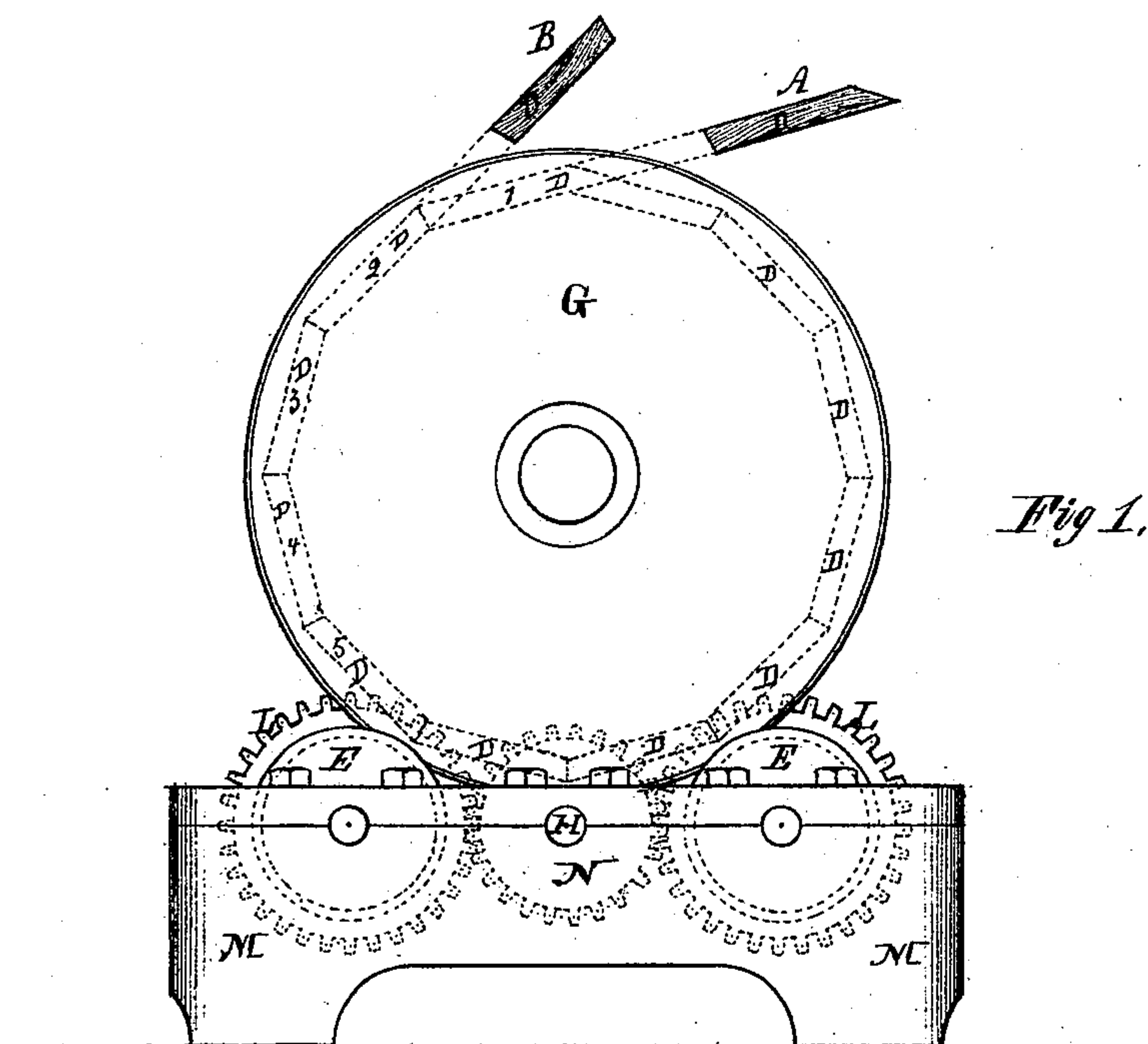


Fig 1.

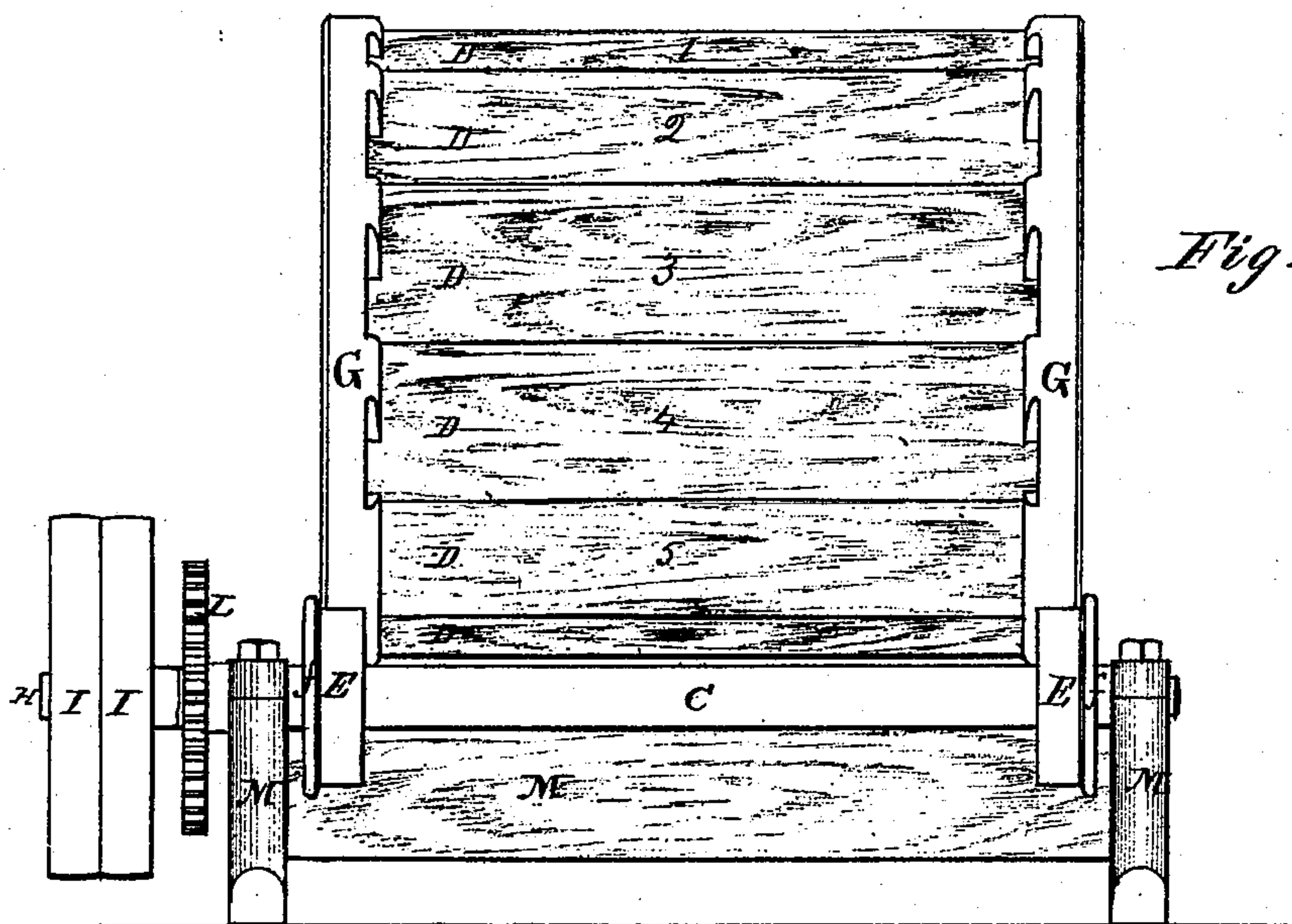


Fig 2.

Witnesses.

Isaac A. Brownell.
Alfred B. Irons.

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United States Patent Office.

GEORGE MILLER, OF JOHNSTON, RHODE ISLAND.

Letters Patent No. 100,175, dated February 22, 1870.

IMPROVEMENT IN GRINDER OR RATTLER FOR CLEANING CASTINGS.

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

To all whom it may concern:

Be it known that I, GEORGE MILLER, of the town of Johnston, in the county of Providence, and State of Rhode Island, have invented a new and improved Grinder or "Rattler" for Cleaning Castings; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is an end elevation of my improved grinder.

Figure 2 is a front elevation of the same.

Similar letters indicate like parts in both figures.

My improved machine is intended more particularly to grind off the sand and smoothly finish the larger pieces of castings, and to that end is constructed with capacity and convenience to receive such castings, and with power to rotate a cylinder carrying a heavy load of large shapes of metal.

The first part of my invention relates to the construction of the cylinder, and consists in making the same with two metallic or wooden heads, with a lagging of thick plank or metal, forming the sides or barrel, said lagging being in plane sections, forming a number, say four, six, eight, or twelve planes around the cylinder-heads, with nearly or quite half their number removable, for introducing and removing the casting from the cylinder conveniently, regardless of their size or form.

The second part of my invention relates to the mode of mounting and rotating such a cylinder, and consists in elevating the cylinder upon a set of rollers, two upon each side, upon which the circumference of the two heads of the cylinder rests, so that the surfaces of the two heads revolve upon and with the surfaces of the four rollers when power is applied directly to the cylinder, or the power may be applied through the medium of the rollers, the rotation of which is communicated to and drives the cylinder.

In the drawings—

G is the cylinder, the two heads being generally of cast-iron, and the body of sections of plank D D D, &c., as represented, twelve in number, the cylinder being, say four or five feet in diameter, the ends of a portion of these plank sections are securely bolted to the two heads, while those numbered one, two, three, four, five, are removable, being fitted to slide, one after the other in the order of the numbers, from their position at a tangent to the circumference of the cylinder, as shown at A and B, fig. 1. By this means a

sufficient portion of the side or body of the cylinder may be readily removed to admit the heavy and bulky pieces of casting to arrange the same suitably within the cylinder, and fill up the intervening space with cinders or other material suitable for polishing the same.

The cylinder is supported by its two heads resting on the rollers E E on the shafts O, having bearings o at each end in the frame M, equidistant from the axis of the cylinder.

Each roller is provided with a flange, f, to keep the cylinder in place, and the roller-shafts are connected in their movements by a gear, L L, on each, and an intermediate gear, N, on the shaft H, on which the driving-pulleys I are placed, by which this and the roller-shafts are driven by any first mover, the weight of the material in the cylinder contributing to increase the traction between the surfaces of its heads and that of the rollers upon which it rests, and from which it thus derives its rotative force or movement.

Instead of rotating the cylinder by means of the rollers E E, in the manner just described, I propose, should it be deemed advantageous or necessary from any cause, to simply mount the cylinders upon such rollers, as a means of rotation, in lieu of the shaft or axle at its center upon which it has hitherto been mounted and rotated, and by means of a segmental rack or gear on the cylinder-head, and a pinion meshing therewith, to drive the cylinder in the usual way independent of the rollers E E, or, if need be, for different classes of work, to use either or both means of rotating the cylinder, the peculiar method of mounting the cylinder on rollers with its advantages for carrying the rotating cylinder being retained in both cases.

Having described my invention,

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

1. The cylinder, constructed with two heads G and a sectional lagging or body, D, a portion of which is removable by sections, substantially as and for the purpose specified.

2. The roller E, when combined and arranged with the cylinder G, as described.

In testimony whereof I have hereunto subscribed my name this 21st day of December, 1869.

GEORGE MILLER.

Witnesses:

ISAAC A. BROWNELL,
ALFRED B. IRONS.