S. REYNOLDS.

Machines for Dressing Millstones.

No. 156,100. Patented Oct. 20, 1874.

Fig. 1.

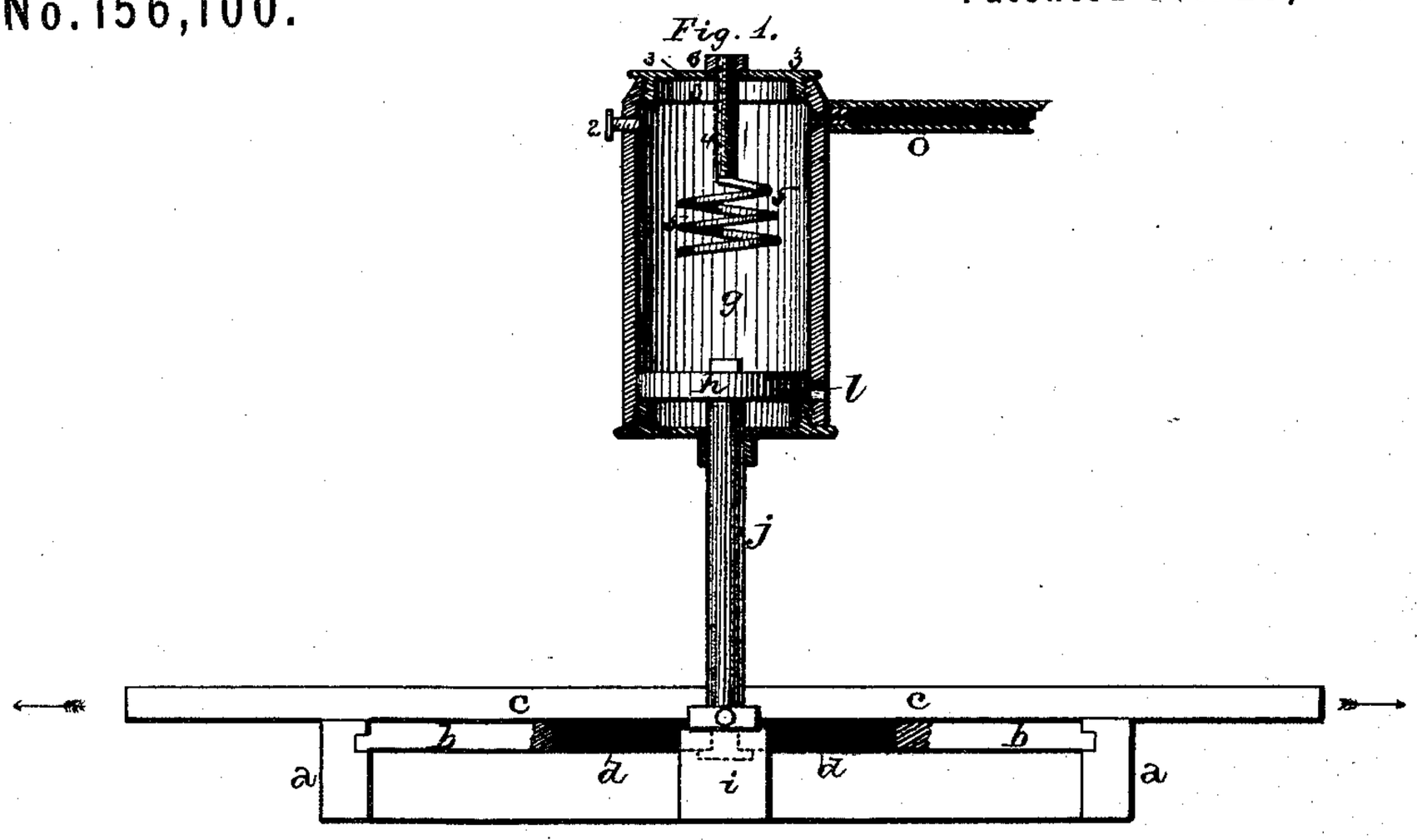
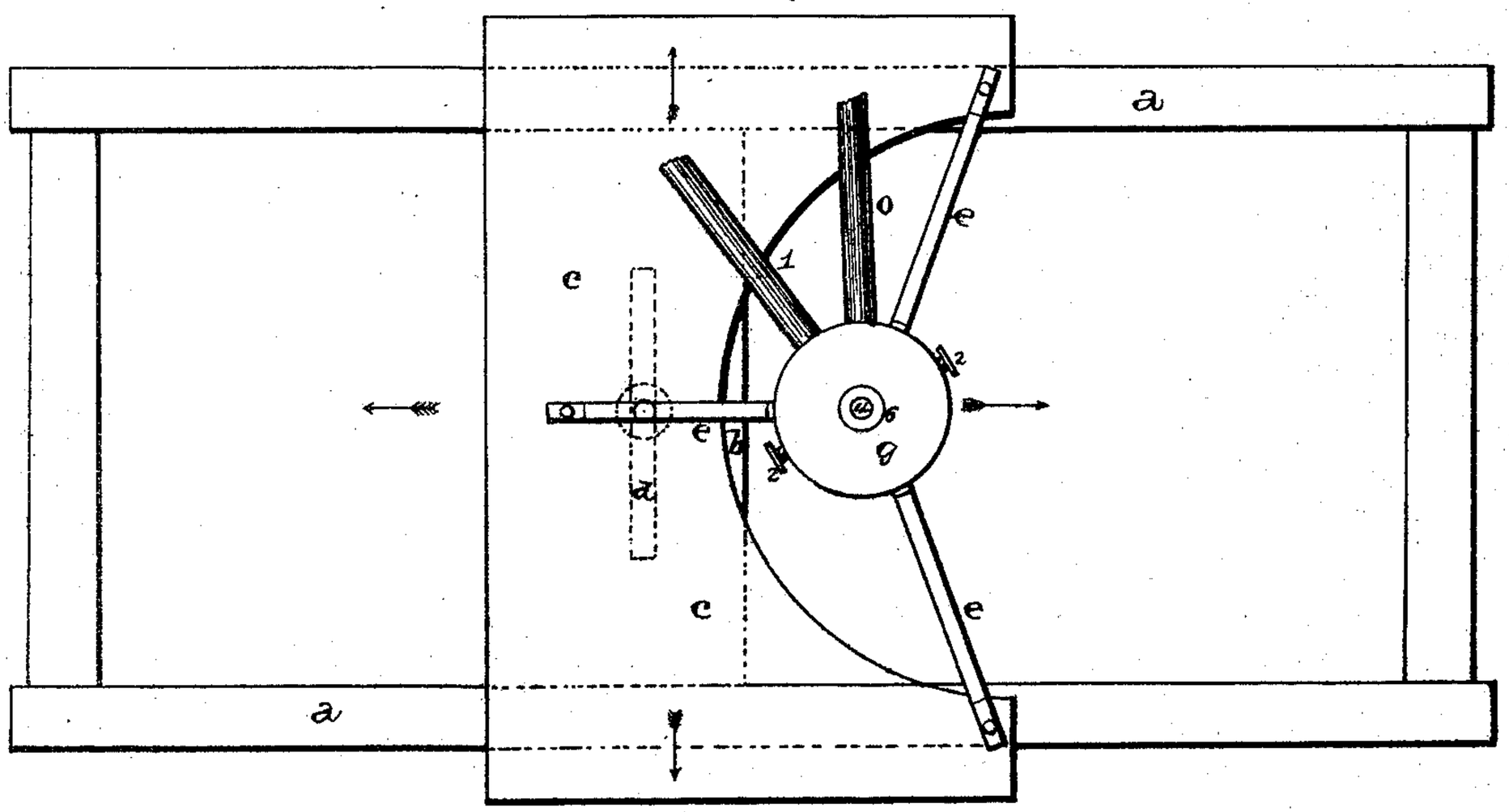


Fig. 2.



WITNESSES.

W. H. J. Murphy.

J. Wm. Garner.

INVENTOR.

Saml Reynolds

per

F. A. Lehmann, Atty.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

SAMUEL REYNOLDS, OF PIERREPONT MANOR, NEW YORK.

IMPROVEMENT IN MACHINES FOR DRESSING MILLSTONES.

Specification forming part of Letters Patent No. **156,100**, dated October 20, 1874; application filed May 25, 1874.

To all whom it may concern:

Be it known that I, SAMUEL REYNOLDS, of Pierrepont Manor, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Machines for Dressing Millstones; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention relates to an improvement in machines for dressing millstones; and it consists in operating the pick by pneumatic power, and in the arrangement and combination of parts, which will be more fully described hereafter.

The accompanying drawings represent my invention.

a represents a rectangular frame, which is laid upon the top of the stone being dressed, and which has grooves formed in its insides in which the slide *b* moves back and forth. Upon the top of this frame, at right angles thereto, is placed the stand *c*, which has its front edge cut away, as shown, and which is attached, by means of any suitable clamping device, to the slide *b* through the longitudinal slot *d*. As the slide moves back and forth in a line with the length of the frame, and as the stand, carrying the pick, moves back and forth at right angles to this line, it will be readily seen that the pick can be made to traverse the whole surface of the stone with very little trouble. Attached to the stand, by means of the supports *e*, is the cylinder *g*, in which the piston *h* works up and down, having a pick, *i*, of any suitable kind, detachably fastened to the lower end of the rod *j*, the cylinder having a hole, *l*, through its bottom or side, so as to permit a free ingress and egress of air as the piston is moved up and down. Attached to the cylinder, at its top, above the strokes of the piston, are two flexible pipes, the one *o* being attached to a single-acting valveless air-pump, which alternately forms a vacuum in the cylinder, so as to lift the pick upward, and then compresses the air, so as to force the pick downward upon the stone. The other pipe, 1, is held in the hands of the operator, who controls the force of the blows of the pick, or who can instantly stop or start the pick, by simply compressing the pipe so that no air can pass through it, or by letting the air pass freely in and out. When this pipe is closed, the pick will be driven with greater or less rapidity and force in proportion to the action of the air-pump, and the force will be graduated by the amount of air the operator lets pass through the pipe 1. Passing through the sides of the cylinder are one or more set-screws, 2, which stop the upward movement of the piston and prevent it from rising up above the air-holes of the pipes. Passing down through the cover 3 of the cylinder is the vertically-adjustable screw-rod 4, which has the spiral spring 5 secured to its lower end, against which the piston strikes in its upward movement, the rod also being provided with a jamb-nut, 6, to hold it in any desired position. By adjusting the spring up or down, greater or less power can be given to the blows of the pick, as may be desired.

By means of the devices above described, the pick can be controlled so as to work with great power and rapidity, or so as to work very slowly and lightly, and can be instantly stopped or started.

Having thus described my invention, I claim—

1. A machine for dressing millstones, having its pick attached to the piston of the cylinder, and operated by the air-engine, substantially as shown and described.

2. The combination of the cylinder, piston, pick *i*, cover 3, adjustable rod 4, and spring 5, substantially as shown.

3. The combination of the frame *a*, slotted slide *b*, and stand *c*, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 9th day of May, 1874.

SAMUEL REYNOLDS. [L. S.]

Witnesses:

JACOB SCHMITT,

JOHN H. COMER.