

F. G. Chapman,

Polishing Wood.

No. 100,503.

Patented Mar. 2. 1870.

Fig. 1

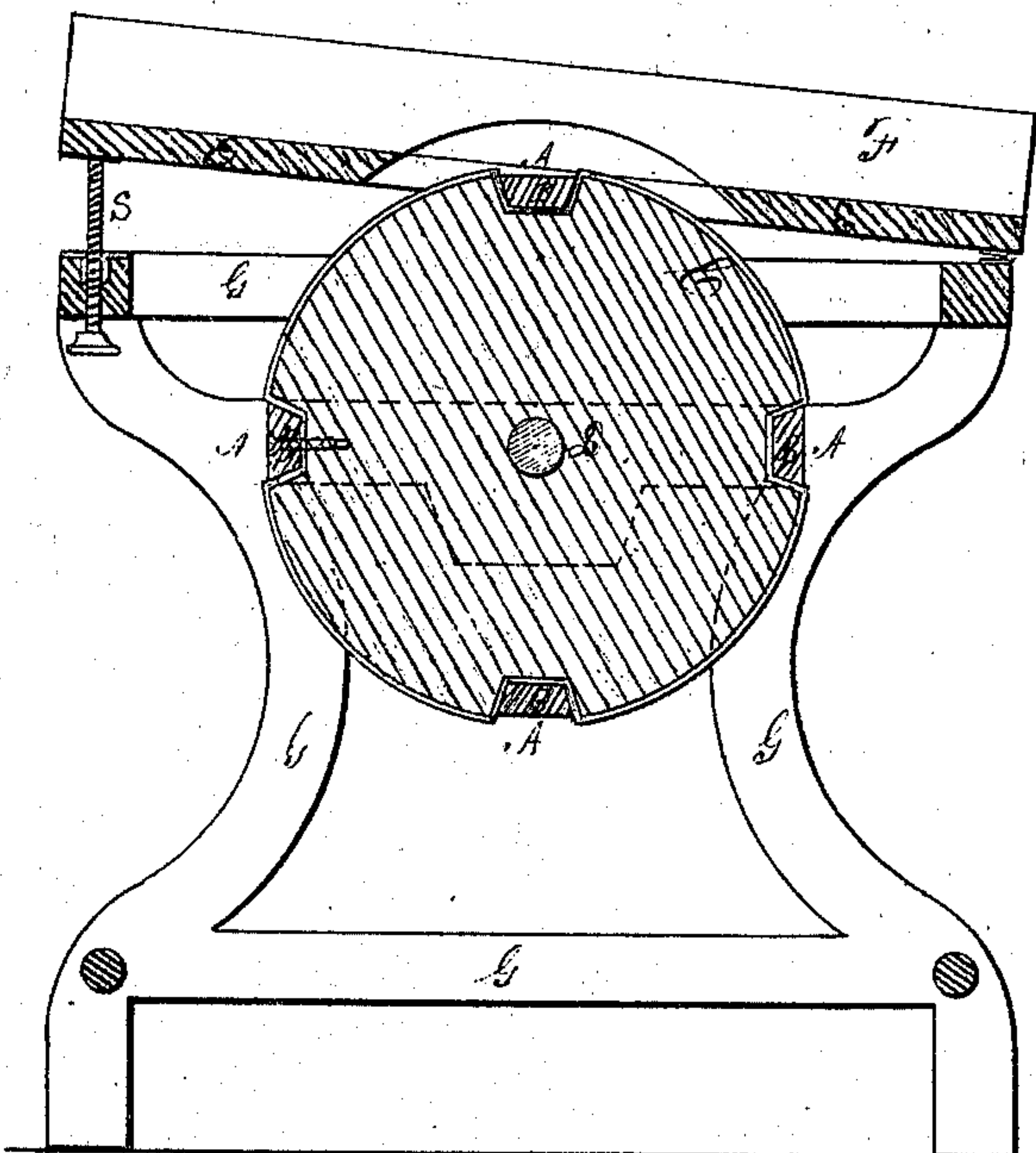


Fig. 2

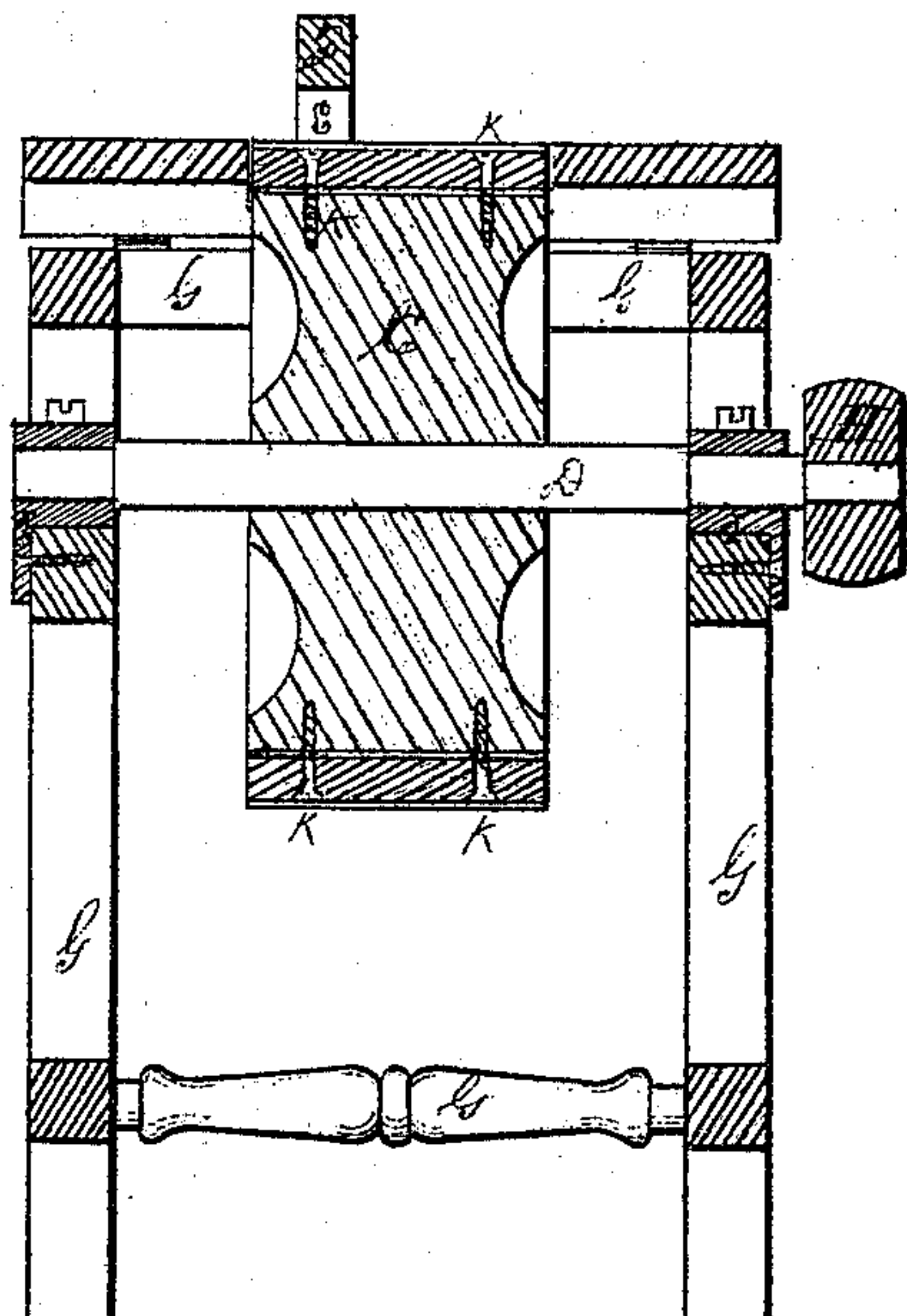
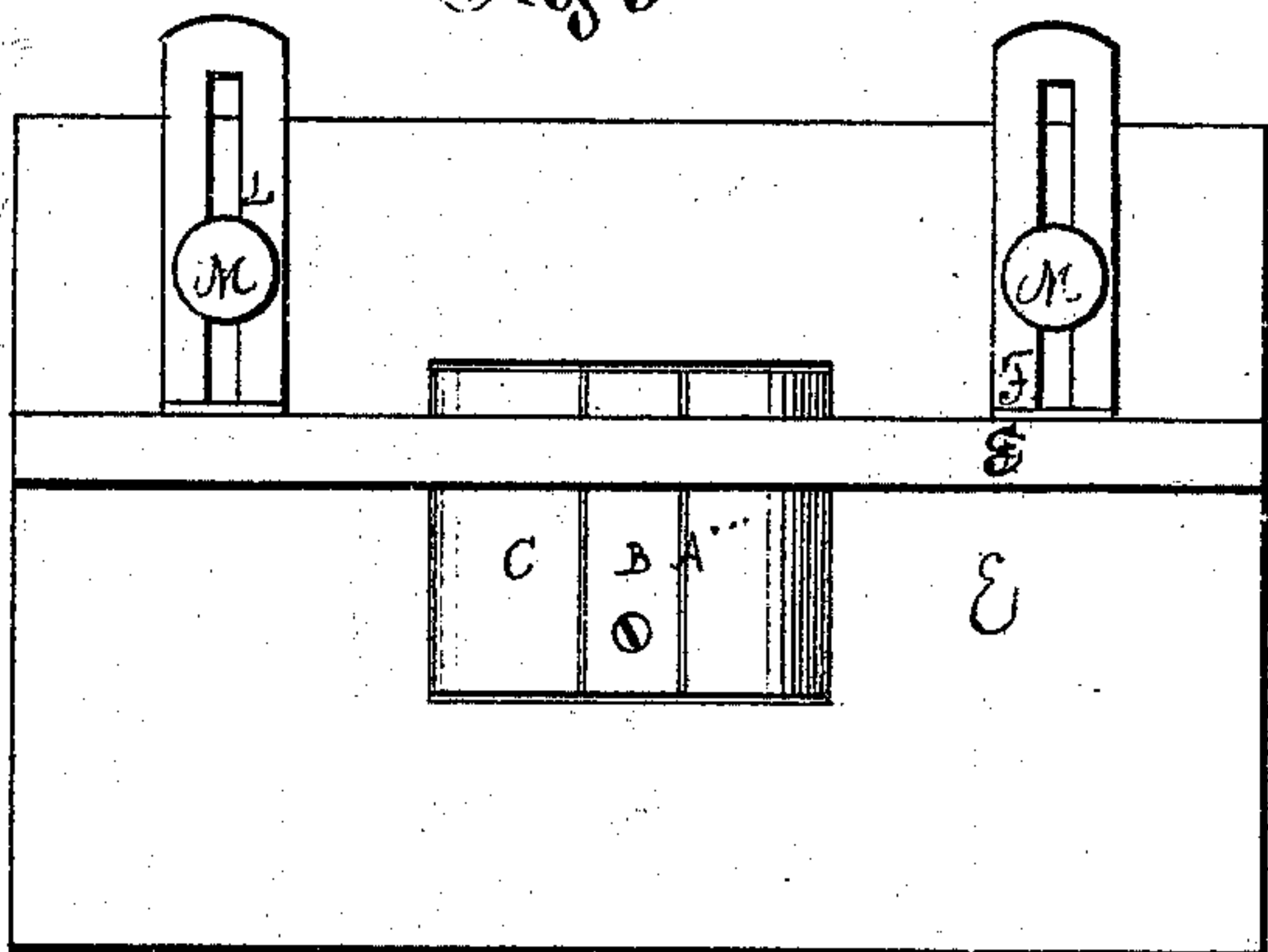


Fig. 3



Witness:

Wm H. Lotz
Jas H. Pimm.

Frank G. Chapman
Inventor:

UNITED STATES PATENT OFFICE.

FRANK G. CHAPMAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO DENNIS BEACH,
OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR POLISHING WOOD.

Specification forming part of Letters Patent No. **100,503**, dated March 8, 1870.

To all whom it may concern:

Be it known that I, FRANK G. CHAPMAN, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sand-Paper Wheels; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of my machine. Fig. 2 is a vertical cross-section of same. Fig. 3 is a plan view of the same.

My invention relates to an improvement in sand-paper wheels upon which common sheet sand-paper is employed; and it consists in the combination of an adjustable feed-table with the sand-paper wheel, as will be hereinafter more fully described.

That others may fully understand my invention, I will particularly describe its construction and mode of operation.

C represents a solid cylinder of such dimensions as will adapt it to the special duty or work it may have to perform. This cylinder is hung upon a shaft, D, which is mounted in bearings I, supported by the stout frame G G. The shaft D and cylinder C are driven by a belt driven by a belt running upon the pulley H, and transmitting power from any convenient motor. The surface of the cylinder C is provided with four (more or less) longitudinal grooves, A A, made wider at top than at bottom, and fitted in said grooves are strips B, of corresponding shape, secured firmly by screws or other convenient and suitable means. The grooves A are so disposed that the sheets of sand-paper will extend over the surface of the cylinder from one groove to another and down the sides of the adjoining grooves nearly to the bottom thereof, so that the strip B, when placed in its groove and pressed down toward the bottom thereof, will clamp and bind the edges of the sand-paper. It is necessary that the sand-paper should be separated from the unyielding surface of the wheel C by a stratum of some soft or elastic material, otherwise the operation of the machine will be rough and unsatisfactory. I therefore place beneath the sand-paper, and secured in the same manner,

pieces of porous paper or other suitable material. When the sand-paper is secured to the surface of the cylinder C in the manner above described, it is manifest that the upper surfaces of the strips B must still be depressed below the surface of the cylinder, or said strip will come in contact with the surface upon which the sand-paper is operating, and it is equally manifest that the surface upon which the sand-paper is operating cannot be applied to the wheel by the hands alone, as it would then be impossible to so hold it that the edges of the grooves A would not come in contact with said surface. I therefore have provided a perforated table, E, which is hinged to the frame G at one side, and supported at the other upon an adjusting-screw, S. The upper surface of the table E is made to coincide exactly with the upper surface of the cylinder C, covered with as many sheets of sand-paper as may be necessary or desired, and the work to be operated upon is placed upon the table E and pushed forward and backward over the wheel until the desired result is attained.

F is a gage, made adjustable upon the table E by means of the slotted plates L and screws M. The gage is hollowed or scored away at that part opposite to the cylinder C, so that it will not come in contact with said cylinder when the table E is lowered toward the frame G.

By the means above described, or their equivalents, it will be perceived that sheets of common sand-paper may be secured to the surface of a wheel or cylinder, and the same employed for any of the operations usually performed with such wheels. It will also be perceived that the action of the strips B will be to draw the paper tight upon the surface of the cylinder and hold it securely, and that new sheets may be applied with little trouble or delay, as often as may be required.

Having described my invention, what I claim as new is—

In combination with the sand-paper wheel C, constructed as described, the adjustable perforated table E, as set forth.

FRANK G. CHAPMAN.

Witnesses:

JAS. ISON PIMM,
JOHN A. SILENCE.