

No. 785,762.

PATENTED MAR. 28, 1905.

J. RISCHKE.  
FLOOR POLISHING APPARATUS.

APPLICATION FILED APR. 5, 1904.

3 SHEETS—SHEET 1.

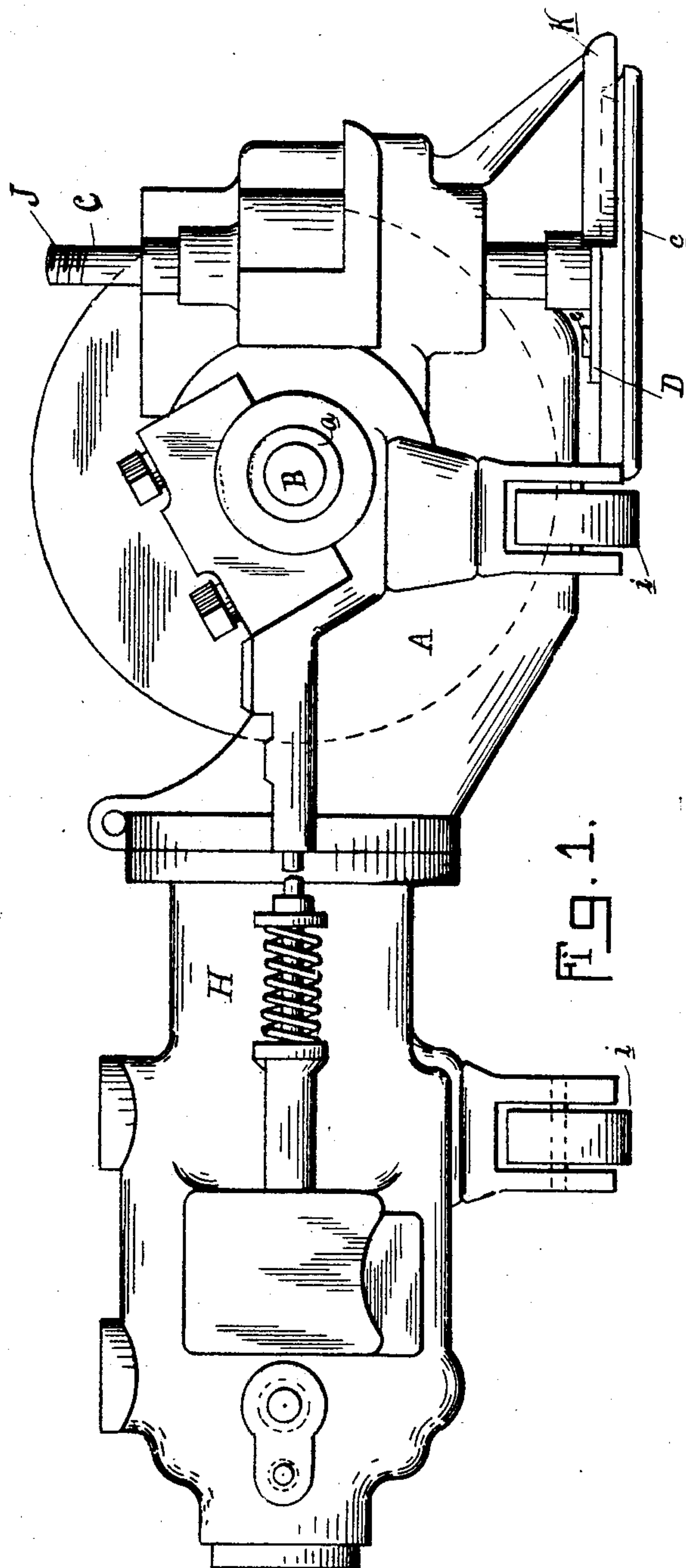


FIG. 1.

Witnesses

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Lillian Langworthy.

Inventor  
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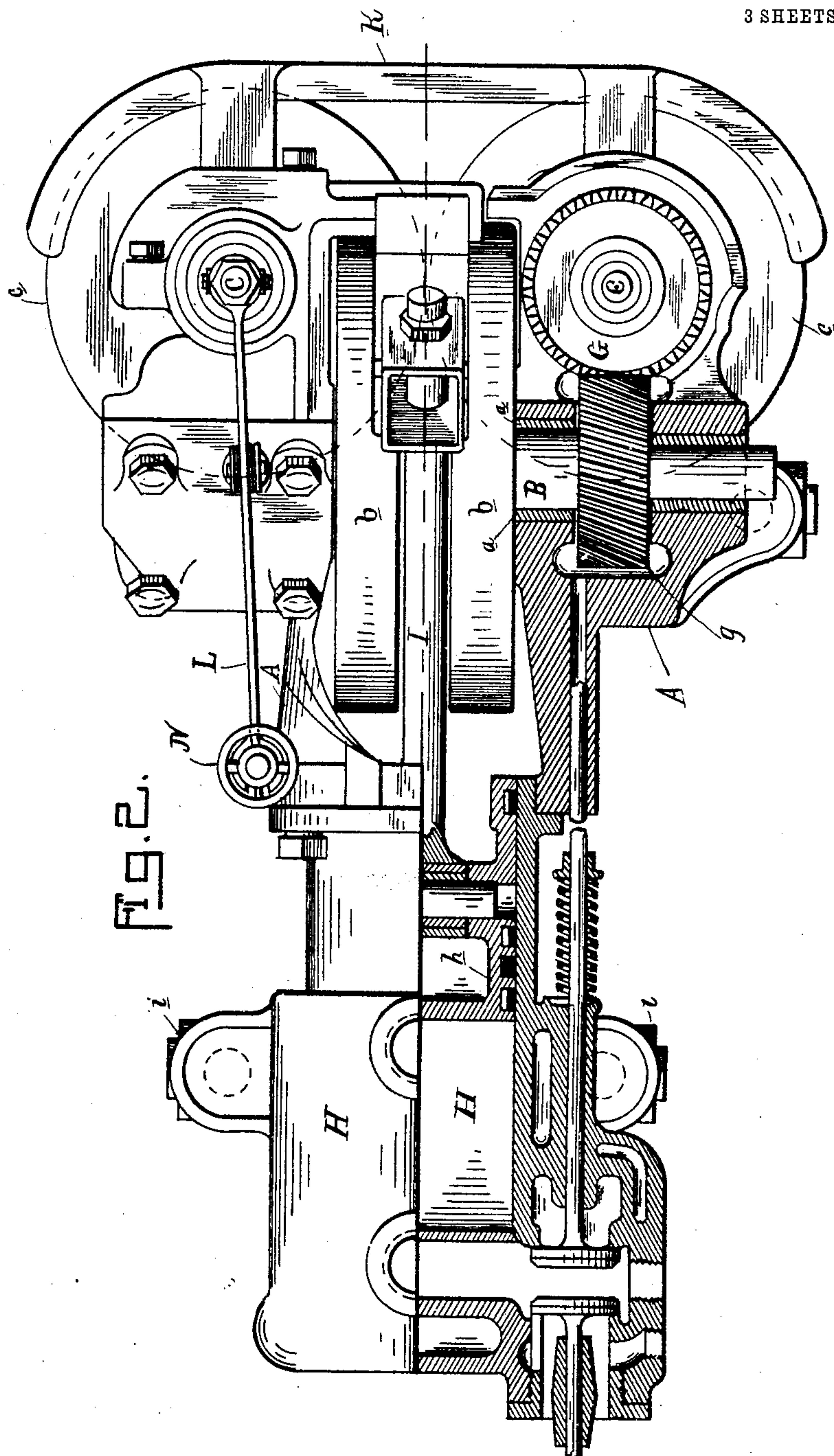
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Witnesses

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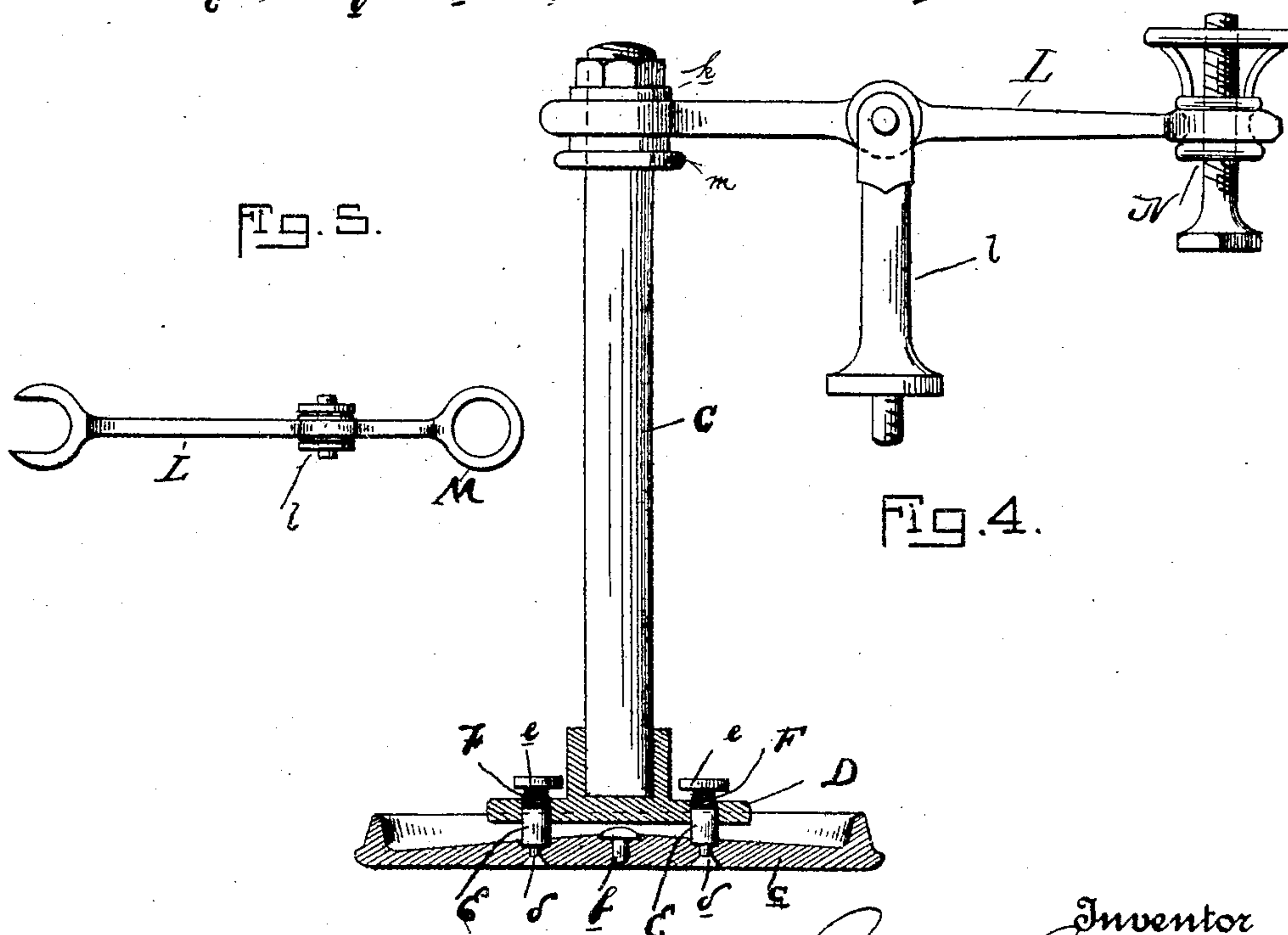
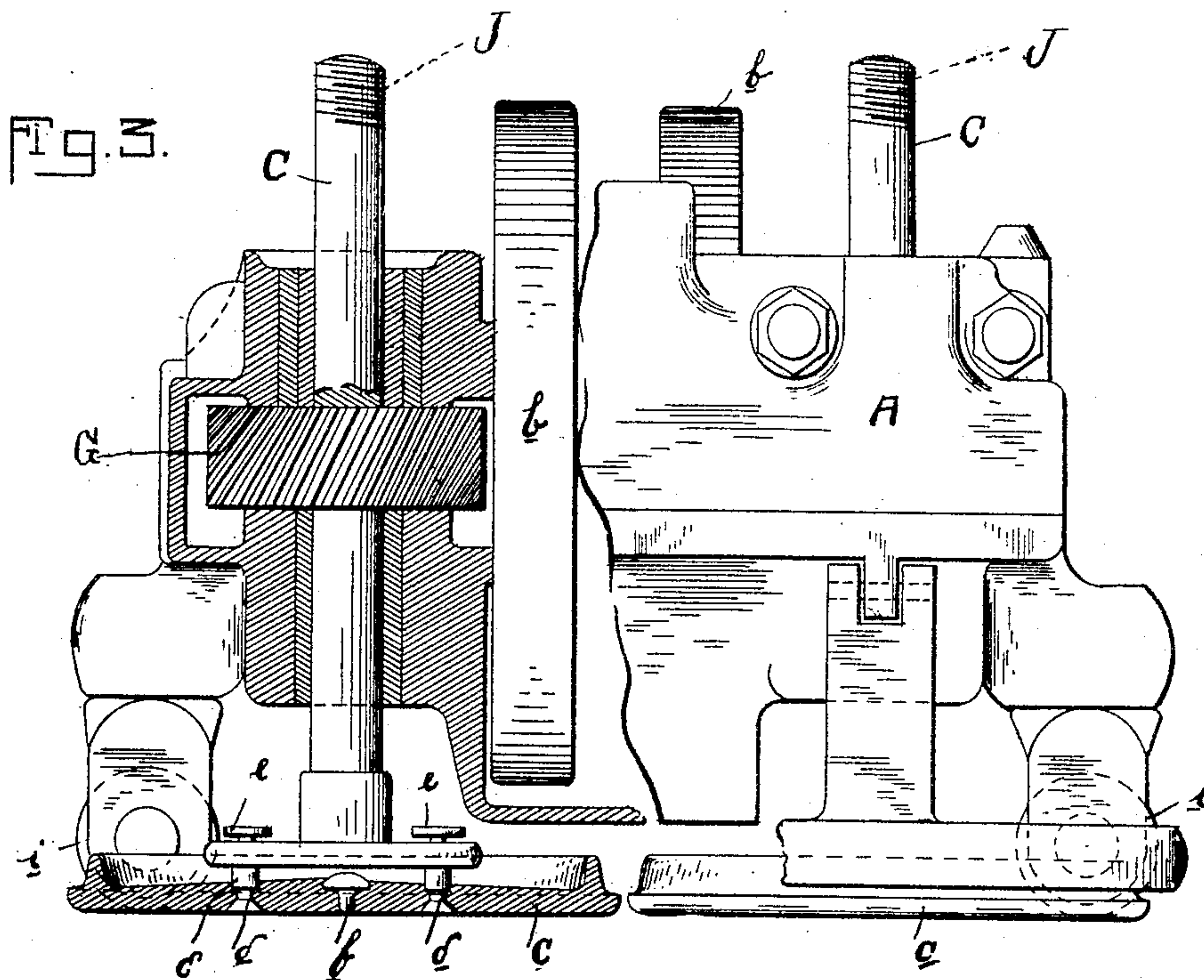
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3 SHEETS—SHEET 3.



Witnesses  
J. Macon Mangham  
J. Mae Wright

Inventor  
Jacob Rischke  
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# UNITED STATES PATENT OFFICE.

JACOB RISCHKE, OF IDLEWOOD, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO JULIUS GOTTFRIED, OF PITTSBURG, PENNSYLVANIA.

## FLOOR-POLISHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 785,762, dated March 28, 1905.

Application filed April 5, 1904. Serial No. 201,742.

*To all whom it may concern:*

Be it known that I, JACOB RISCHKE, a citizen of the United States, residing at Idlewood, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Floor-Polishing Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in floor polishing and finishing apparatus, one of the objects being to provide a device of the character described that can be easily and readily moved about over the floor and which will rapidly and evenly rub, polish, or cleanse the surface thereof.

A further object of my invention is to provide an apparatus of the character described by means of which floors having a rough and uneven surface may be reduced to a smooth and even finish and an apparatus that shall be effective and efficient in polishing, waxing, rubbing, and scouring floors composed of any material, such as wood, cement, concrete, marble, mosaic, and the like.

A still further object is to provide a device of the character described that shall be provided with one or rotating disk-shaped heads that may be covered with sand or emery-paper or any other abrading or polishing material or which may be composed of brushes or other suitable means for scrubbing, finishing, or drying the surface.

The invention consists in the construction and novel arrangement and combination of the several parts hereinafter fully described, illustrated, and finally claimed.

In the drawings accompanying this specification and made a part hereof I have illustrated a preferred embodiment of my invention, and while it is obvious that certain modifications of form and arrangement of parts will suggest themselves to the skilled operator and mechanic such modifications come well within the spirit and scope of my invention as disclosed and claimed, and I do not, therefore, desire to be limited to the exact construction and arrangement shown.

In the drawings, Figure 1 is a side elevation

of my device. Fig. 2 is a top plan view, partly in section. Fig. 3 is an end view, partly in section. Fig. 4 is a detailed view of the connections between the disk and the means for graduating them. Fig. 5 is a detailed view of the lever for raising and lowering the disks.

Like letters of reference designate similar parts in all the figures of drawings.

Referring to the drawings, A designates the main frame of the apparatus. This frame is provided with bearings *a*, in which are mounted the shafts B. These shafts are provided with crank-disks or drive-wheels *b*. The vertical shafts C are mounted in suitable bearings in the main frame and are provided at their lower ends with disks *c*, which are secured thereto in such manner as to freely oscillate and adapt themselves to unevenness in the floor. In the drawings the disks are shown to be secured to the projecting plates D, which form the lower ends of the vertical shafts C, by means of the bolts *d*. These bolts pass through a sleeve E and are arranged between the sleeve and the cap *e*. On the bolts is a spiral spring F, which permits the disks to move up and down, and thus adapt themselves to an uneven surface while in operation. Each of the disks *c* is provided with a hardened central bearing *f*, against which the projecting plate D abuts when the disk is sufficiently oscillated or reciprocated to admit thereof, the object of said bearing being to keep the disk from coming into contact with said plate when the machine is in operation. Each shaft is also provided with a spiral toothed gear-wheel G, splined on the shaft and meshing into a similar wheel *g*, mounted on the main shaft B, by means of which the shafts and disks are rotated.

H represents the cylinder of an engine or motor secured to or made integral with the main frame for the purpose of providing motive power to actuate the apparatus herein described. The piston *h*, operated by the motive power used, is connected with the crank-disks *b* by means of the piston-rod I, which is operatively connected with the crank-disks by a crank-pin or other suitable means. The engine is provided with suit-



able valve mechanism, and the explosive fluid is supplied by a flexible hose or from a storage-tank mounted on the frame.

The entire apparatus is mounted upon casters or rollers *i*, preferably four in number, journaled or operatively mounted in the under portion of the frame or cylinder, by which means it is supported and may be moved freely about over the floor.

For the purpose of raising and lowering the disk-shafts they are threaded at the upper ends, as shown at *J*, for the reception of a nut *k*. A lever *L* is pivoted on an upwardly-projecting standard *l* and provided with a collar *M*, which fits on over the vertical shaft *C* and rests on an annular rim or projection *m* on the vertical shaft. The other end of the lever is provided with a set-screw *N*, by means of which the lever is operated in raising or lowering the disk-shaft. In front of said disks and extending around at each end of the apparatus is the fender *K*, which prevents the disks from being brought into contact with walls, furniture, and the like when the machine is in operation.

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

1. In a floor-polishing apparatus, the combination with a frame, casters supporting the same, a motor, vertical shafts driven by the motor, and means for adjusting the shafts vertically, of polishing-disks having a yielding oscillating connection with the lower ends of the shafts, and a central bearing interposed between the disks and shafts, and means for adjusting the shafts vertically.

2. In a floor-polishing apparatus, the combination with a frame movably mounted, a motor carried thereby, vertical shafts mounted in the frame, and driven by the motor, and plates carried by the lower ends of the shafts, and provided with apertures, of polishing-disks, sleeves within the apertures of the plates, bolts secured to the disks and passing through the sleeves, nuts upon the bolts, and

coiled springs arranged within the sleeves and engaging with the nuts.

3. In a floor-polishing apparatus, the combination with a frame, casters supporting the same, a motor, vertical shafts driven by the motor, and means for adjusting the shafts vertically, of polishing-disks having an upper convex face, means for securing the disks to the lower ends of the shafts, and a hardened bearing interposed between the crest of the convex face of each disk and its shaft.

4. In a floor-polishing apparatus, the combination with a frame, casters supporting the same, a motor, vertical shafts driven by the motor, and means for adjusting the shafts vertically, of polishing-disks mounted upon the lower ends of the shafts with their peripheries in close proximity to each other, a hardened central bearing interposed between the disks and shafts, and fenders arranged adjacent to the outer portion of the periphery of the disks.

5. In a floor-polishing apparatus, the combination with a frame, casters supporting the same, a motor, vertical shafts driven by the motor, and movable longitudinally, a lever fulcrumed on the frame, one arm of the lever connected with the shaft, a threaded standard on the frame, the other arm of the lever embracing the standard, and a thumb-screw on the standard, whereby the shafts may be adjusted to a nicety longitudinally, of polishing-disks having an upper convex face, means for yieldingly securing the disks to the lower ends of the shafts with their peripheries in close proximity to each other, a hardened bearing interposed centrally between the crest of the convex face of each disk and its shaft, and fenders arranged adjacent to the outer portion of the periphery of the disks.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

JACOB RISCHKE.

Witnesses:

MARY A. JUNKIN,  
GEORGE E. PEEBLES.