

C. DELSEE.
SANDPAPERING HAND PLANE.
APPLICATION FILED JUNE 17, 1907.

915,746.

Patented Mar. 23, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

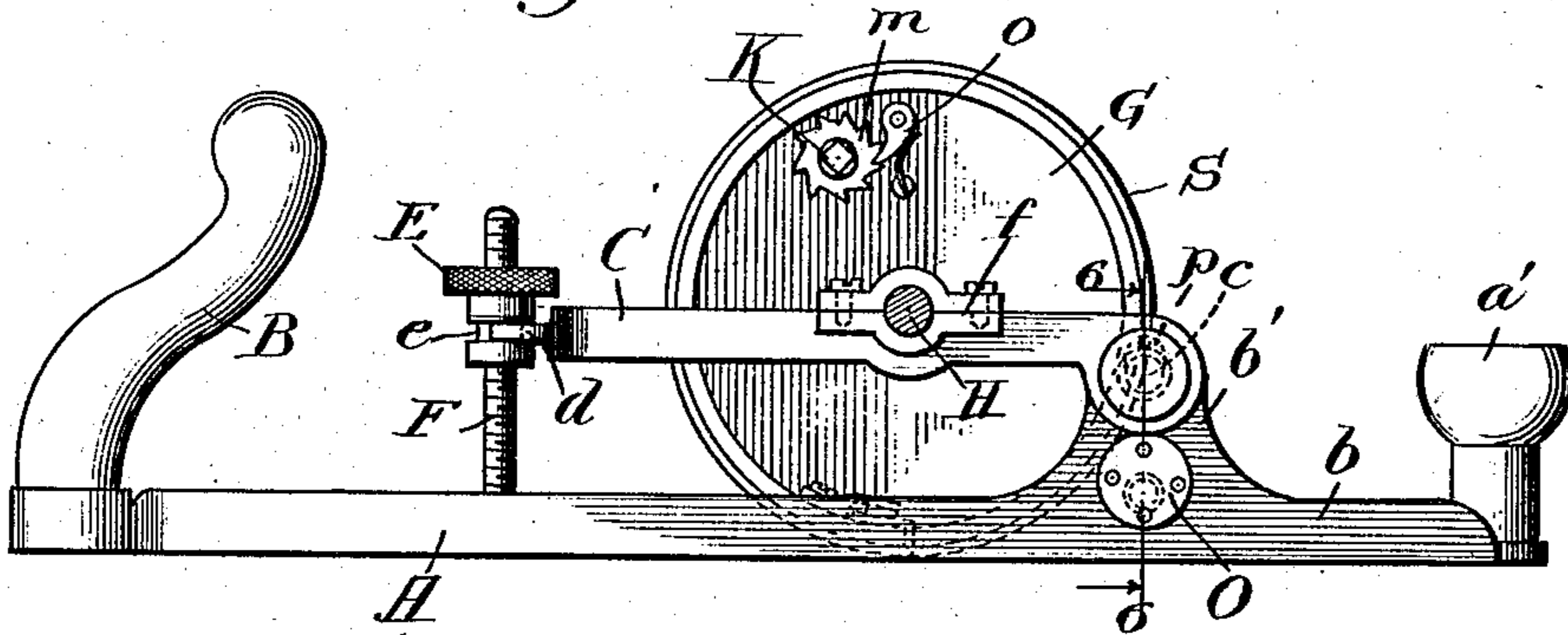


Fig. 2.

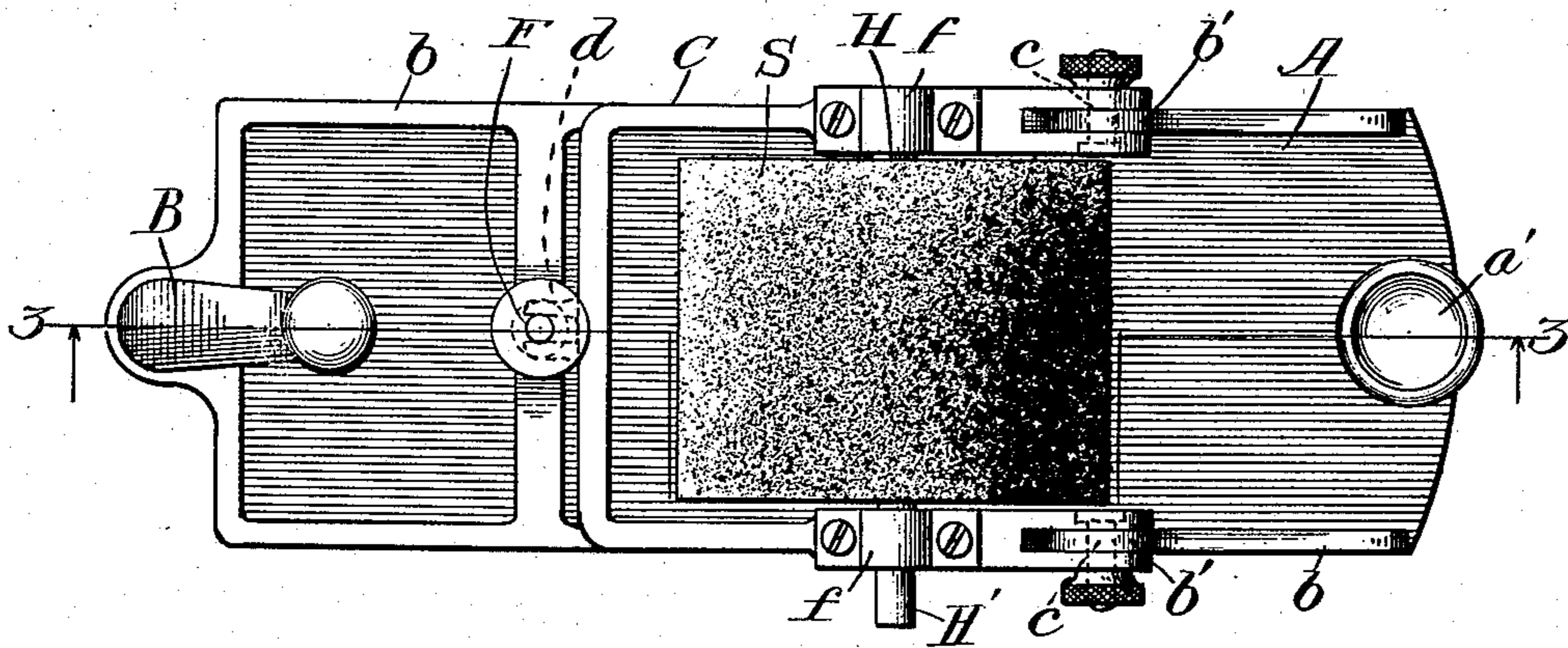
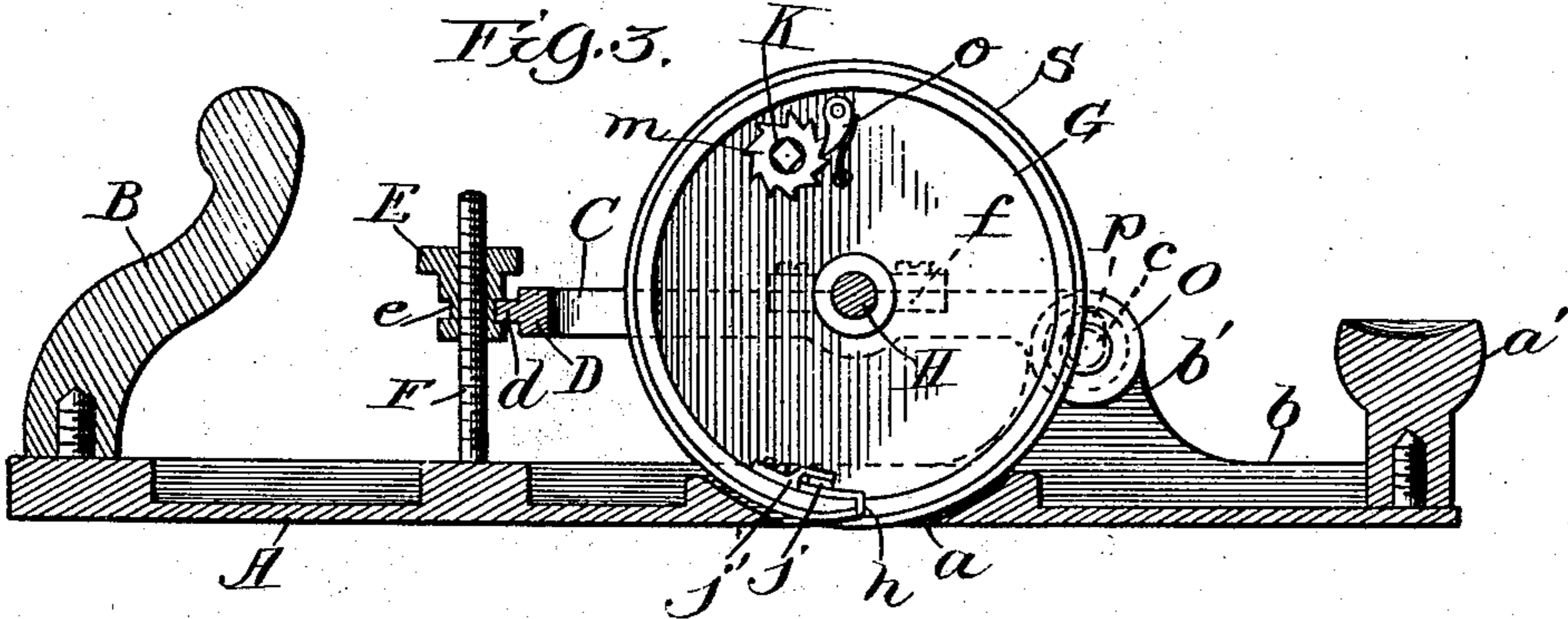


Fig. 3.



Witnesses
O. M. Vermeil
E. A. Lundy.

Inventor
Charles Delsee.
by Frank D. Thomson
att'y

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2 SHEETS—SHEET 2.

Fig. 4.

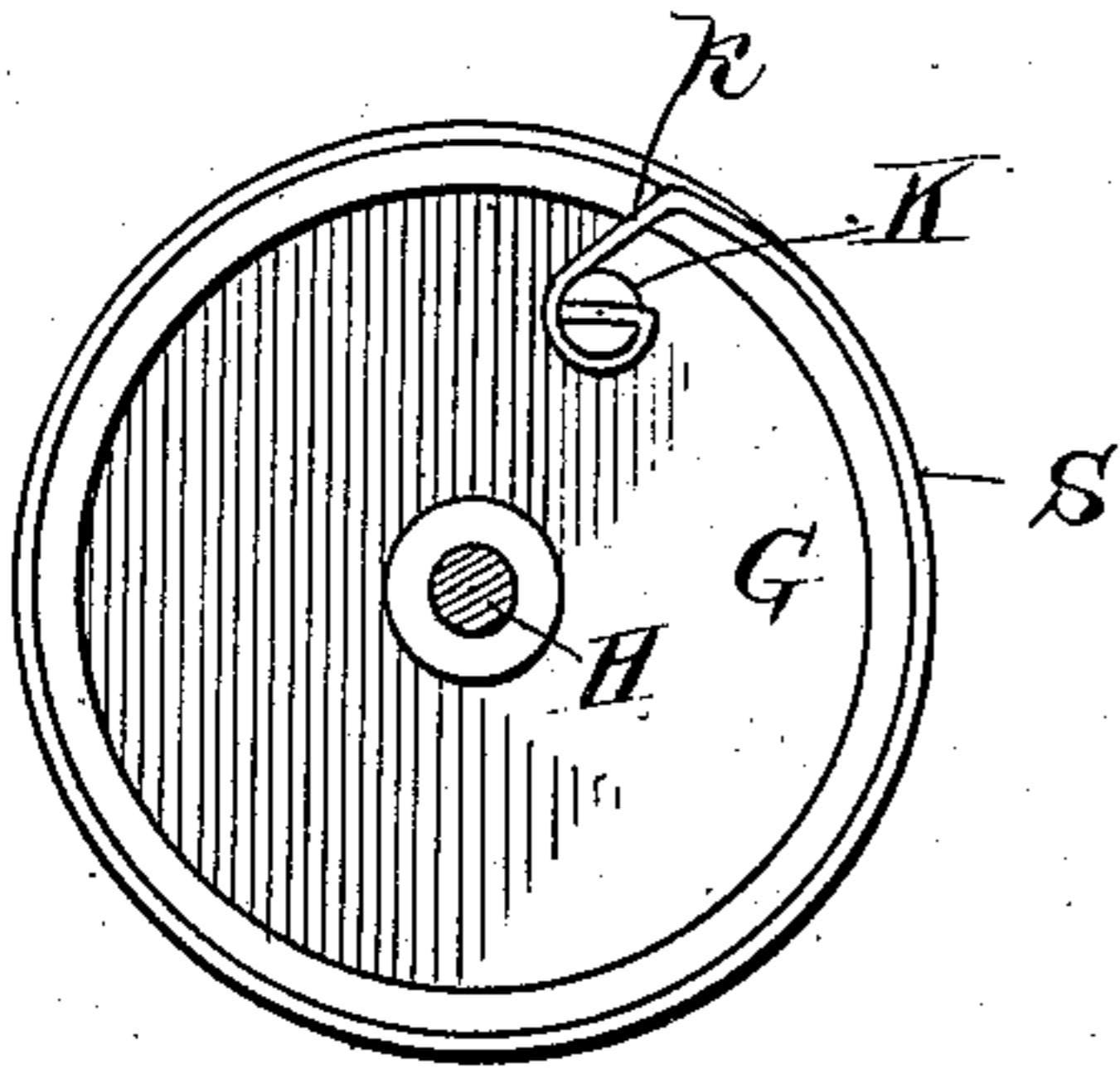


Fig. 5.

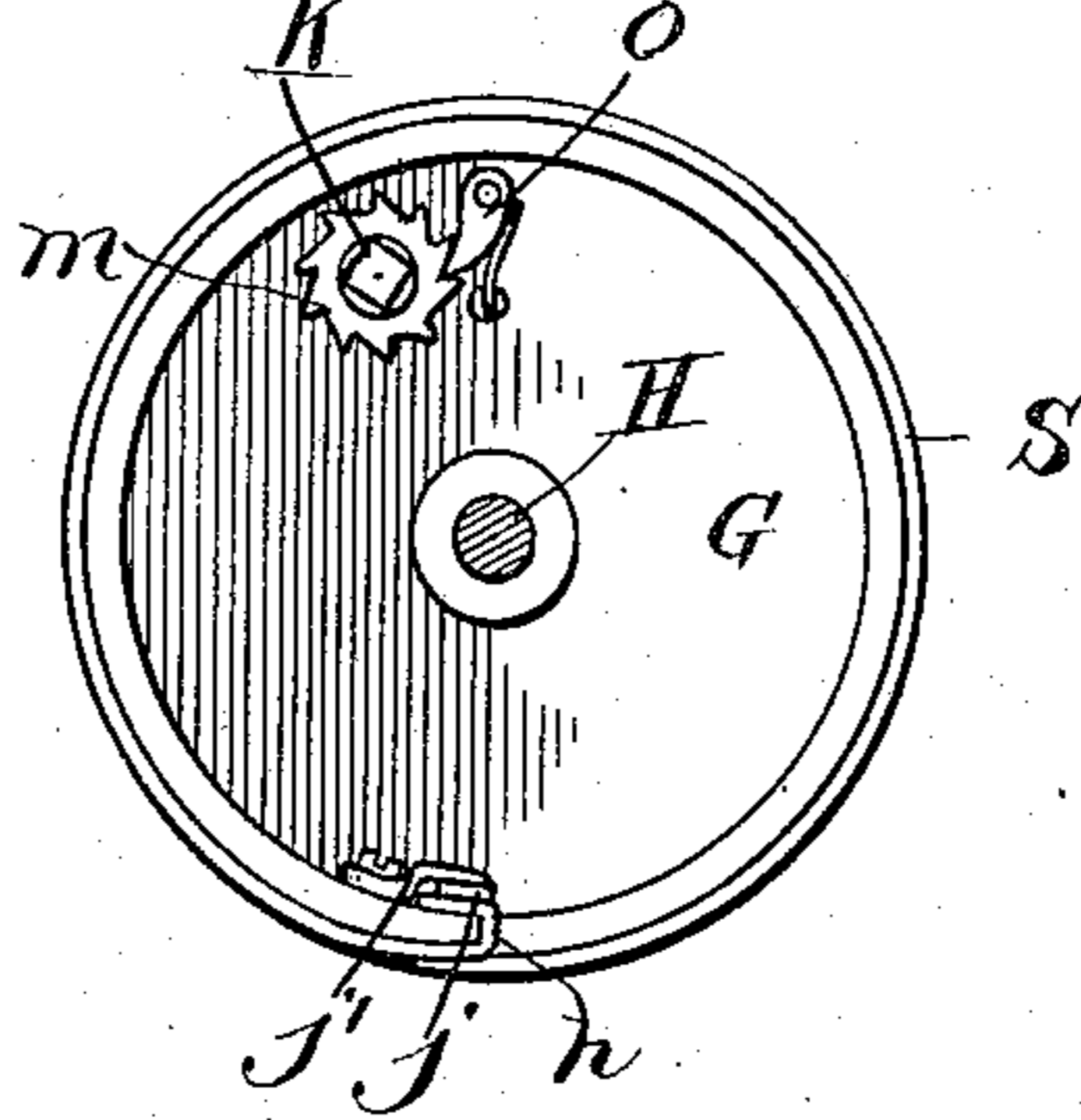


Fig. 7.

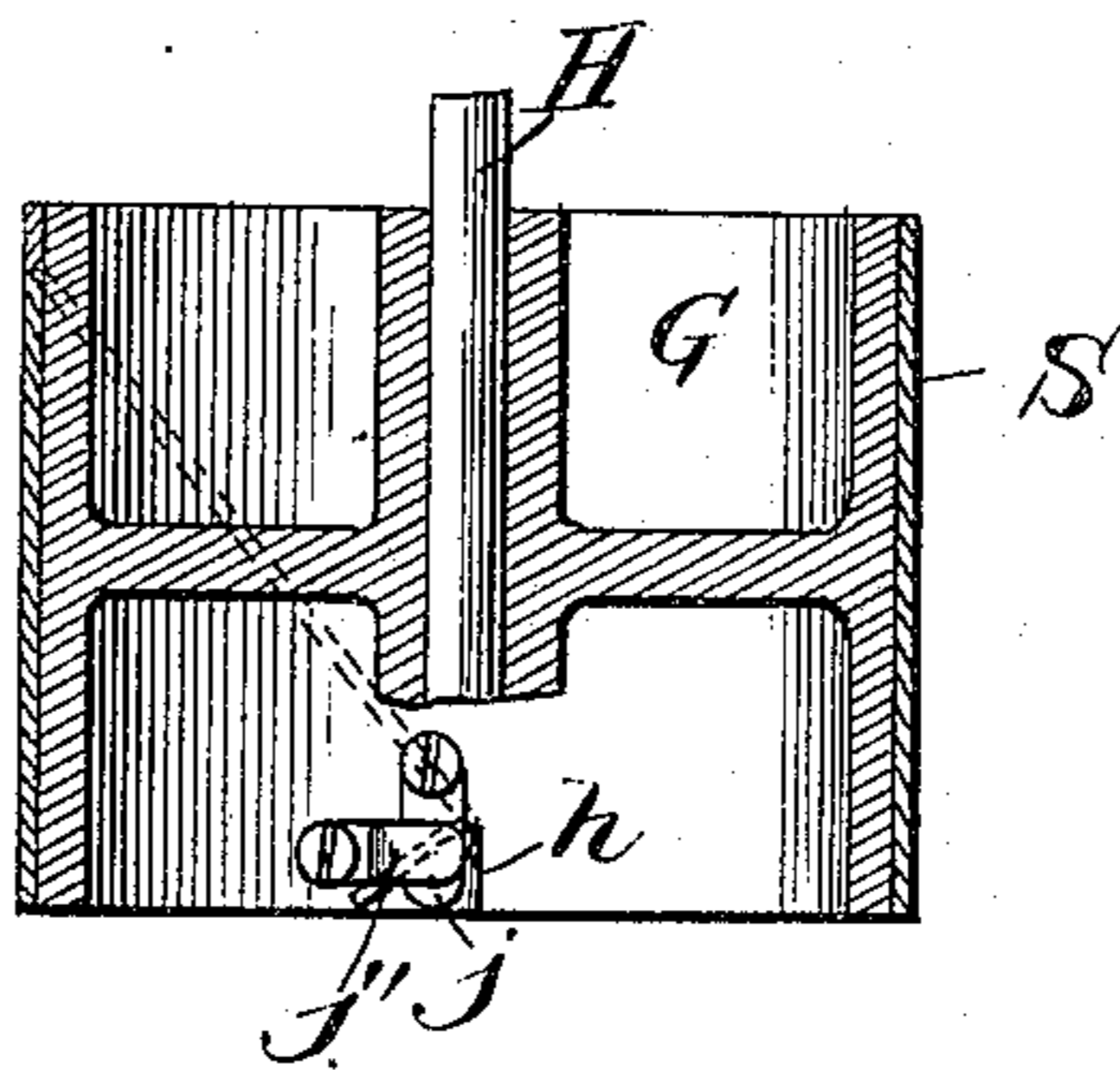


Fig. 6.

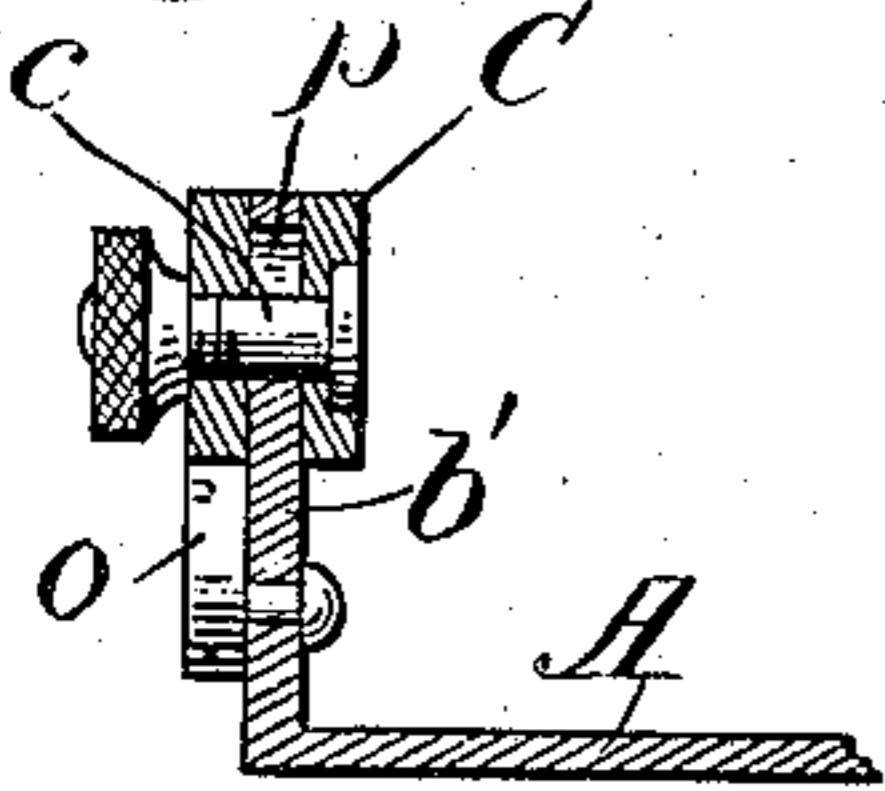


Fig. 10.

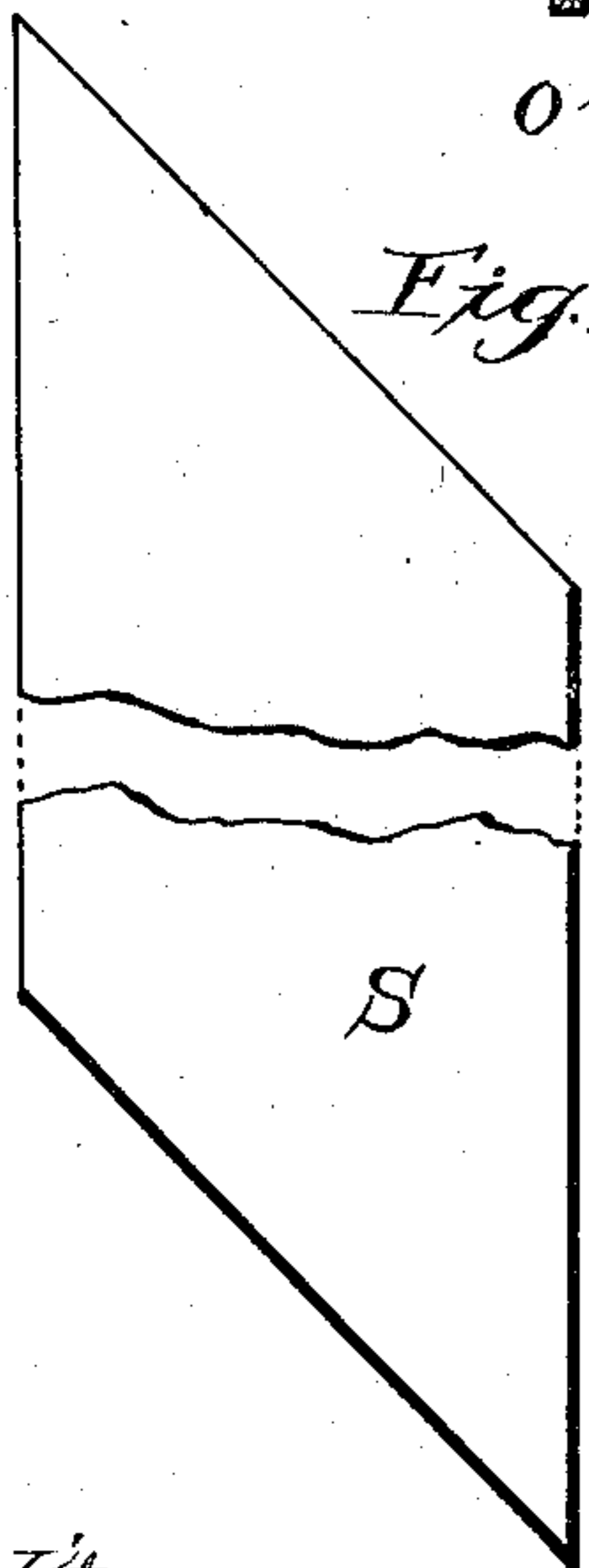


Fig. 8.

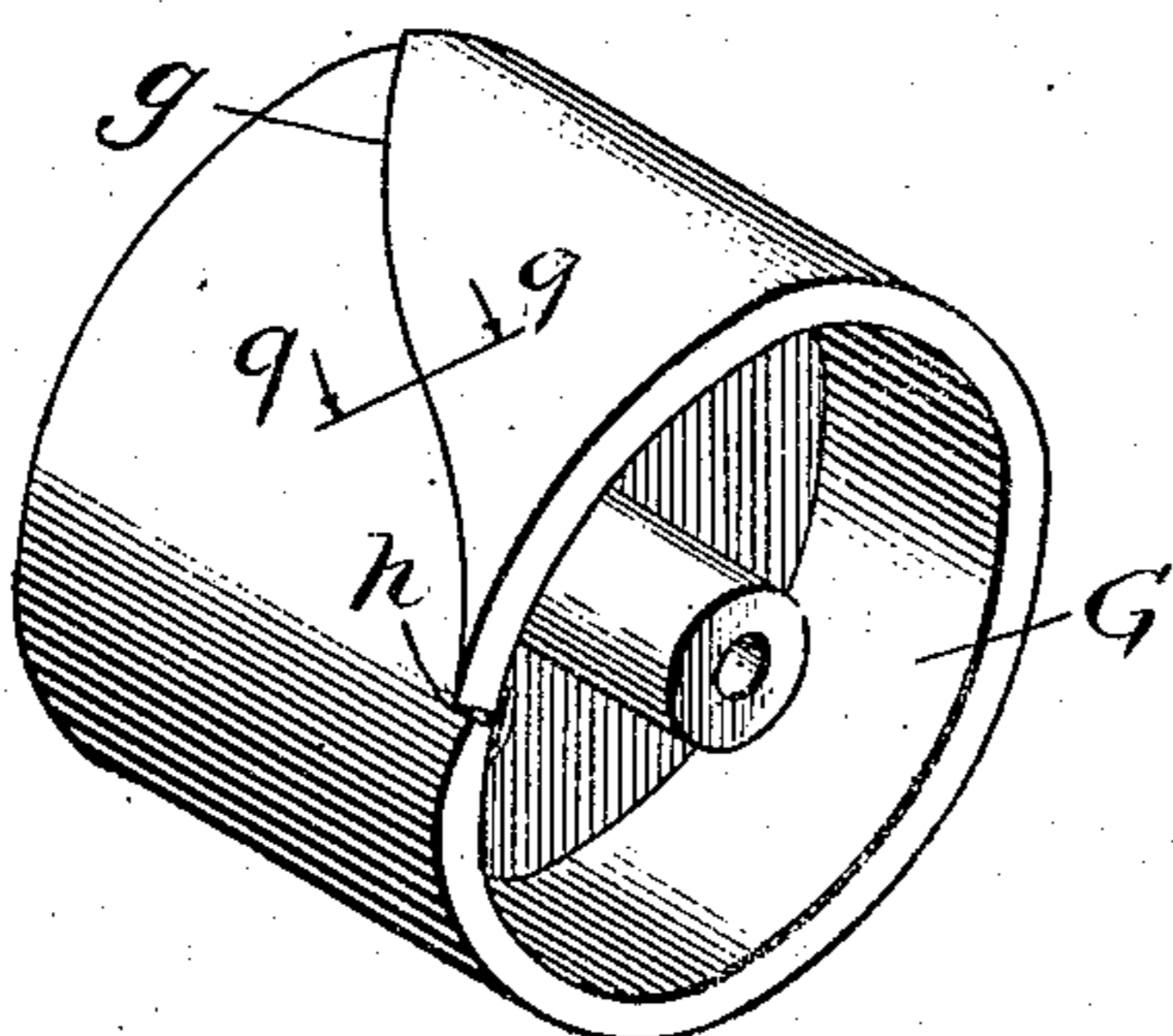
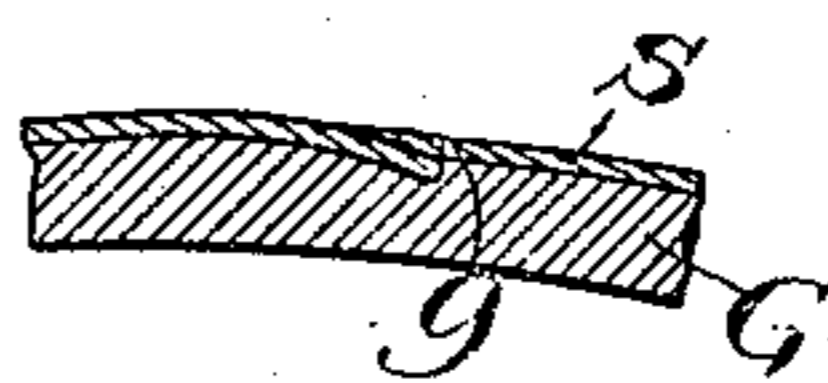


Fig. 9.



Witnesses
O. M. Merrill
E. A. Lundy.

Inventor:
Charles Delsee.
by Frank D. Thompson
Att'y

UNITED STATES PATENT OFFICE.

CHARLES DELSEE, OF CHICAGO, ILLINOIS.

SANDPAPERING HAND-PLANE.

No. 915,746.

Specification of Letters Patent.

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Application filed June 17, 1907. Serial No. 379,397.

To all whom it may concern:

Be it known that I, CHARLES DELSEE, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Sandpapering Hand-Plane, of which the following is a clear, full, and exact description.

My invention relates to hand manipulated devices for sand-papering and smoothing floors and other plain surfaces. Its object is to enable an operator to utilize the action of a revolving cylinder having sand paper upon its circumference, whereby the surface of the work when finished will not be wavy or irregular but perfectly smooth and plain, and whereby the sand papering can be done quickly and with less fatigue, and can be adjusted to cut deep or shallow, substantially as hereinafter fully described, and as particularly pointed out in the claims.

In the drawings:—Figure 1 is a side elevation of my invention. Fig. 2 is a plan view thereof. Fig. 3 is a longitudinal section of the same taken on dotted line 3—3, Fig. 2. Figs. 4 and 5 are end views of the drum of the device. Fig. 6 is a vertical section through the fulcrum connecting the yoke to the metal stock. Fig. 7 is a longitudinal central section of the cylinder. Fig. 8 is a perspective view of said cylinder. Fig. 9 is a fragmental section taken on line 9—9 Fig. 8, showing in detail the manner of lapping the engaging edges of the abrading surface of the cylinder. Fig. 10 is a plan view of a sheet of abrading material showing the manner of cutting the same to fit the cylinder.

Referring to the drawings A represents the metal stock of my invention, which corresponds in shape to the metal stock of a carpenter's hand-plane, and has a handle B of suitable shape suitably secured to and arising from its rear end, and a hand-grasp *a'* secured to and arising from its forward end, substantially as shown. The longitudinal edges of this stock are, preferably, flanged upward, and, at a suitable transverse plane in front of the transverse slot *a* thereof, these flanges *b* are developed into upwardly projecting fulcrumal lugs *b'*. The bifurcated ends of a U-shaped yoke C are fulcrumed or pivotally connected by means of pins *c* to these lugs *b'*, and the parallel legs of this yoke C are, preferably, separated a distance corresponding to that between the flanges *b* of the stock, and extend back to a transverse

plane approximately midway between the transverse slot *a* of the block and the rear end thereof, where they are connected by a transverse bar D, which latter, at its center of length, has a bifurcated arm *d* projecting rearwardly therefrom. The branches of this bifurcated arm *d* extend to both sides of the barrel of a nut E and enter a circumferential groove *e* therein, and this nut has a milled wheel on its upper end for convenience in manipulating it, and engages a vertical screw-threaded post F secured to and arising from the center of width of the block, substantially as shown in the drawings. The parallel legs of the yoke C are provided, in the same transverse plane as the center of the slot *a*, with bearings *f, f*, for the journals of the cylinder G, which latter is of a width slightly less than the length of the slot *a*, and is of such diameter that when the yoke is properly adjusted vertically by means of the nut E, the cylinder can be lowered so that its lowest segment will pass through the slot *a* and move in a plane below the slot of the stock, or can be raised out of and above the same, according as desired.

The circumference of the cylinder is covered by a sheet of sand or emery-paper or other suitable cutting and abrading material. When sand or emery-paper is used I prefer to cut the ends of the same on the bias, and to provide an oblique groove *g* in the circumference of the cylinder into which the edge of one of said bias ends is seated and secured by extending the point or acute angle of the bias end of the fabric through the slot *h* at the end of said groove in the overhanging edge of the cylinder, and lapping said pointed end of the sand paper back under the inner circumference of said overhanging edge and holding or securing it there by means of the pivotal buttons, *j, j'*, substantially as shown. When one end of the sand paper is secured to the cylinder in the manner just stated, said paper is drawn tightly around the circumference of the cylinder so that its opposite biased end overlaps the first mentioned end and this overlapping bias end is secured by extending the point or sharp angle thereof through a slot, *k*, in the overhanging edge of the cylinder opposite that to which the buttons *j, j'* are pivoted, and inserting the extremity of said point in the slotted end of a transverse spindle K. This spindle K extends through suitable bearings in the web of the cylinder, and its end opposite that to

which the extremity of the point of the said paper is secured, is squared and provided with a ratchet *m*, which is engaged by a spring depressed pawl *o* pivoted to the web of the cylinder. By the use of a suitable key the spindle *K* is turned and winds the extremity of the point of the overlapping bias end of the sand-paper upon it, so as to draw said paper tight upon the circumference of the cylinder, and the reverse motion of the spindle is prevented by the engagement of the pawl *o* with the said ratchet *m*.

In operation the cylinder is removed from its bearings in the yoke when it is desired to cover the same with sand-paper, and the bearings in the legs of the yoke are designed with this end in view. When properly journaled in said bearings one of its journals extends through its bearings and is adapted to form the shaft of the armature of a suitable electric motor (not shown) or may have a suitable pulley (not shown) secured thereto, which may be connected by a suitable system of belting to an adequate source of power. By adjusting the yoke up or down by means of the nut the depth of the cut or abrasion of the sand paper covered cylinder may be regulated as desired.

While the means for raising and lowering the cylinder are deemed sufficient, yet, if desired, the fulcrum of the ends of the yoke may be slightly raised or lowered by making the barrels of the pivotal pins engaged by the bifurcated ends of the yoke offset, that is, reduced in diameter and with their center concentric to that portion of the said pins engaging the lugs *b'*, *b'*. All such changes in the details of construction of my invention, including means for securing the sand paper to the circumference of the cylinder, I desire to be considered as contemplated within the scope of my invention.

What I claim as new is:—

1. A sand-papering hand-plane comprising a revoluble abrading cylinder, a suitable stock, a horizontally disposed yoke in which said cylinder is journaled having one of its ends adjustably and pivotally secured to said stock, and means for adjusting the opposite free end of said yoke toward and from the stock.

2. A sand-papering hand-plane comprising a suitable stock having bearing lugs arising from the sides thereof, a yoke having the forward ends of its legs adjustably and pivotally mounted in said lugs, a revoluble abrasive cylinder journaled in said yoke, a post engaging the rear end of said yoke, and means on

said lugs for adjustably journaling the forward ends of the legs of the yoke.

3. A sand-papering hand-plane comprising a suitable stock having bearing lugs arising from the sides thereof, a yoke having the forward ends of its legs adjustably and pivotally mounted in said lugs, a revoluble abrasive cylinder journaled in said yoke, a screw-threaded post having an adjusting nut thereon engaging the rear end of said yoke, and means on said lugs for adjustably journaling the forward ends of the legs of said yoke.

4. A sand-papering hand-plane comprising a suitable stock having bearing lugs arising from the sides thereof provided with elongated slots, a yoke having the forward ends of its legs adjustably secured in said slots, a revoluble abrasive cylinder journaled in said yoke, and a post engaging the rear end of said yoke.

5. A sand-papering hand-plane comprising a suitable stock having bearing lugs arising from the sides thereof provided with elongated slots, a yoke having the forward ends of the legs adjustably secured in said slots, a revoluble abrasive cylinder journaled in said yoke, and a screw-threaded post having an adjusting nut thereon engaging the rear end of said yoke.

6. A sand-papering hand-plane comprising a suitable stock having bearing lugs arising from the sides thereof provided with elongated slots, a yoke having the forward ends of its legs adjustably secured in said slots, a revoluble abrasive cylinder in said yoke, a post engaging the rear end of said yoke, an adjusting cam engaging the forward end of the legs of said yoke, and a nut on the journals of said legs for locking the same in their adjusted position.

7. A sand-papering hand-plane comprising a suitable stock having bearing lugs arising from the sides thereof provided with elongated slots, a yoke having the forward ends of its legs adjustably secured in said slots, a revoluble abrasive cylinder in said yoke, a screw-threaded post having an adjusting nut thereon, an adjusting cam engaging the forward end of the legs of the yoke, and a nut on the journals of said legs for locking the same in their adjusted position.

In testimony whereof I have hereunto set my hand and seal this 12th day of June, A. D. 1907.

CHARLES DELSEE. [L. s.]

Witnesses:

JOHN YOST,

E. K. LUNDY.