(No Model.)

J. SCHMIDT.

REVOLVING BRUSH.

No. 327,323. Patented Sept. 29, 1885.

Fig. 1.

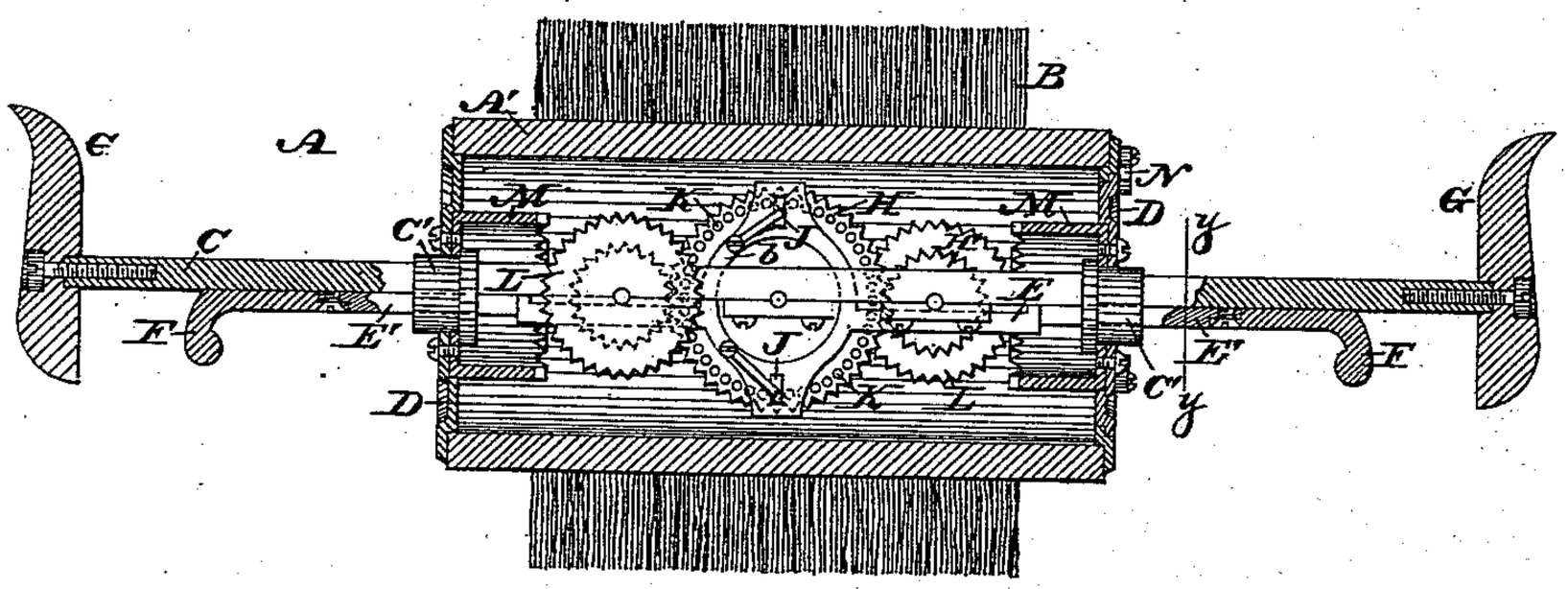


Fig. 2.

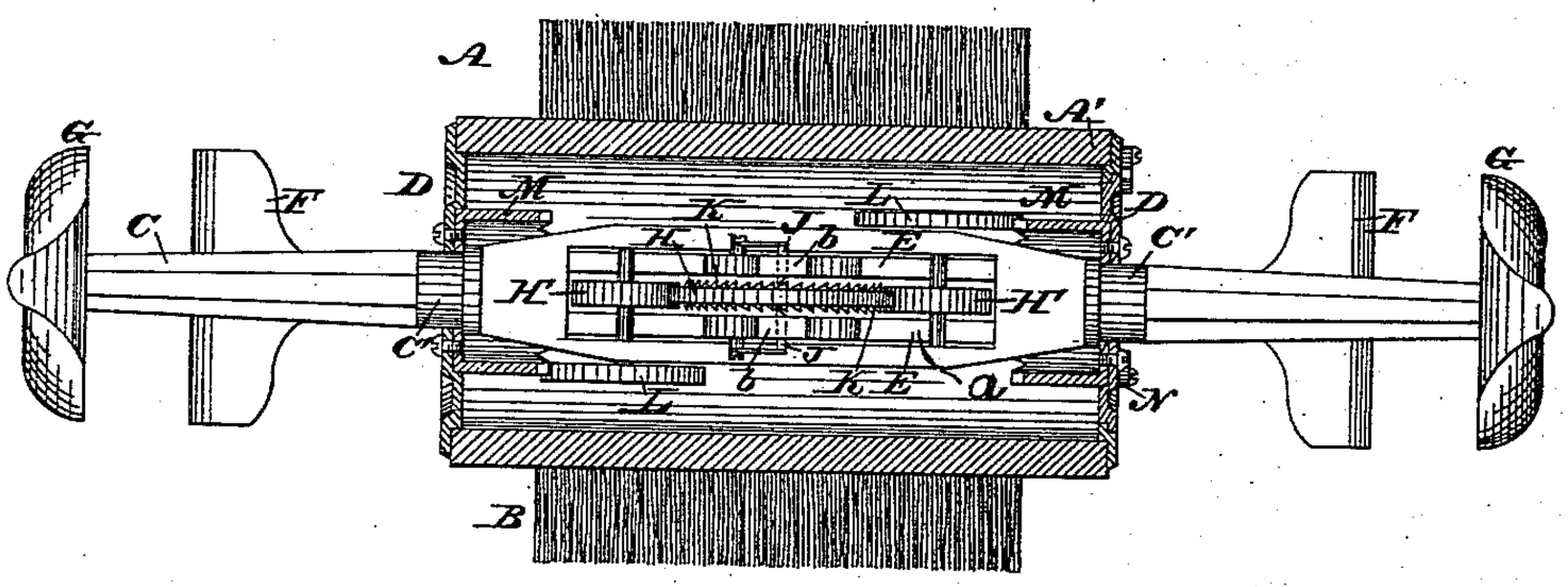
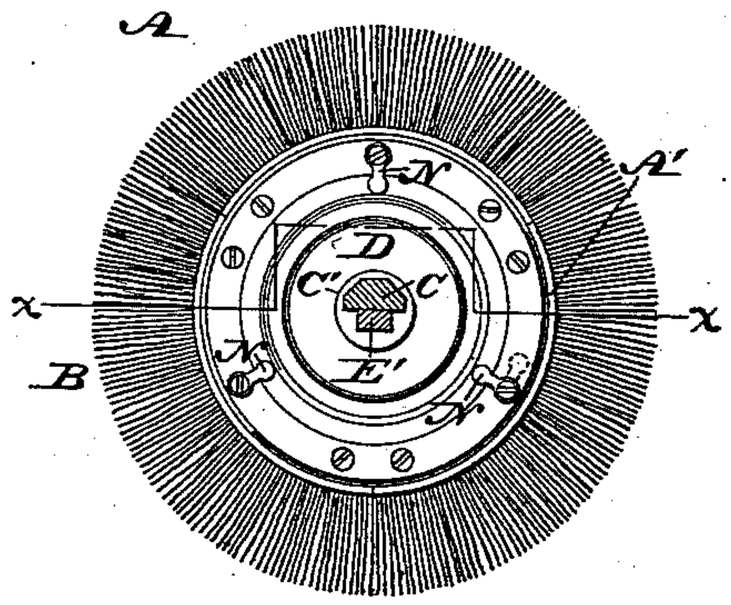


Fig. 3.



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JULIUS SCHMIDT, OF NEW YORK, N. Y.

REVOLVING BRUSH.

SPECIFICATION forming part of Letters Patent No. 327,323, dated September 29, 1885.

Application filed August 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, JULIUS SCHMIDT, a citizen of the United States, residing in the city and county and State of New York, have invented a new and useful Improvement in Revolving Brushes, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a longitudinal section of the revolving part of the brush, and a side elevation, partly sectional, of the mechanism thereof, embodying my invention. Fig. 2 is a horizontal section thereof in line *x x*, Fig. 3. Fig. 3 is a partial end view and partial transverse section in line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to an improvement in revolving brushes; and it consists in constructing the same with slides connected to a handle, the said slides being provided with mechanism operating a train of gearing located within the body of the brush, meshing with a wheel secured to the said body, so that the moving of the slide continuously rotates the brush in one direction.

Referring to the drawings, A represents a brush formed of a hollow cylinder, A′, and the bristles or brushing portion B.

C represents a shaft or rod, which is passed through the brush A and formed with journals C′, constituting the axis of the brush, the caps or plates D, which close the ends of the brush and are secured thereto, rotating on said journals.

E represents a slide, which is parallel with the shaft C and has its shanks or stems E′ passed through the journals C′, the ends of said stems having secured to them finger-pieces F, which are adjacent to the rests G on the ends of the shaft C, the palms of the hands of the operator being held in contact with said rests, while the fingers engage with the pieces F for the purpose of imparting motion to the slide E, as will be hereinafter more fully explained. The slide is in the form of a yoke, as at *a*, so as to straddle the spur or gear wheels H H′, and has yokes *b* at its side, in order to straddle the shaft of the wheel H, the ends of the yokes *b* carrying spring-pressed pawls J, which are adapted to engage with ratchets K on the side of the gear-wheel H.

On the shafts of the wheel H′ are gear-wheels L, which engage with gear-wheels M, secured to the end plates or caps, D, of the cylinder.

It is evident that ratchets K and the pawls J may be dispensed with, and in lieu thereof I may provide the wheel H with a friction-surface and employ friction-blocks in place of the pawls J, and it is also evident that while the wheels L and M are shown as spur-wheels, they may be of the order of bevel-wheels without producing different results.

The operation is as follows: The brush is held by the palms of the hands pressing the rests G and the fingers grasping the pieces F. The brush is then applied to the place of service and power of the hand applied alternately to the two pieces F, whereby the slide E is moved to the right and left. The pawls J during one motion of the slide ride over the ratchets K and on the other motion engage with said ratchets, whereby rotation is imparted to the wheels H, wheels L M, and thus to the brush A, the latter thus being operated in a convenient, powerful, and rapid manner.

I show two gear-wheels H′, two ratchets K, and four pawls J, and consequently two gear-wheels L M. The duplication and multiplication of said parts are not a necessity, but are desirable, for by their use the brush receives power with each right and left motion of the slide E.

In order to provide access to the interior of the cylinder A′, one of the caps D is made removable from the end of the cylinder, although both said caps may be similarly constructed.

The rim on the end of the cylinder has screwed to it tongues N, which may be rotated and which overlap the edge of the cap, and when the screws are tightened the cap is firmly clamped to said rim, so as to rotate as one. By loosening the screws the tongues may be rotated to clear the cap, and the latter is disconnected from the cylinder. The rests G and pieces F are removed from the shaft C, and slide E and said shaft, with the gearing and other connected parts, entirely withdrawn from the cylinder, the end of the shaft and slide from which the piece F and rest G were

removed readily passing through the opening in the cap at the corresponding end of the cylinder.

As the slide is parallel with the axis of the brush, and the movement of the slide is in a rectilinear direction, the rotation of the brush is accomplished without the fatigue incident to revolving brushes having crank-handles, and the brush may be more easily handled and controlled.

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

1. A revolving brush provided with a slide operated by handles, said slide being connected by a train of gear-wheels within the body of the brush to the said body of the said brush, whereby a continuous rotary motion is imparted to the brush by the operation of the slide, substantially as described.

2. A shaft carrying a revolving brush, provided with hand-rests, gearing within the revolving frame or cylinder of the brush, and a slide supported on said shaft operating said gearing and having finger-pieces, combined and operating substantially as and for the purpose set forth.

3. In a revolving brush, a shaft supporting the revolving frame or cylinder of the same, gearing, and operating-slide, in combination with hand-rests and finger-pieces connected, respectively, with said shaft and slide and located at the sides of the brush, substantially as and for the purpose set forth.

4. In a revolving brush, a supporting-shaft, gearing within the revolving frame of the brush mounted on said shaft, a slide supported on said shaft operating the gearing, and a gear-wheel engaging with said gearing and connected with said revolving frame, the shaft and slide having suitable handles for sustaining the brush and operating the same, all substantially as stated.

JULIUS SCHMIDT.

Witnesses:
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