(No Model.)

# T. J. McCONNAUGHAY.

## ROTARY BRUSH.

No. 345,854. Patented July 20, 1886.

Fig. 1

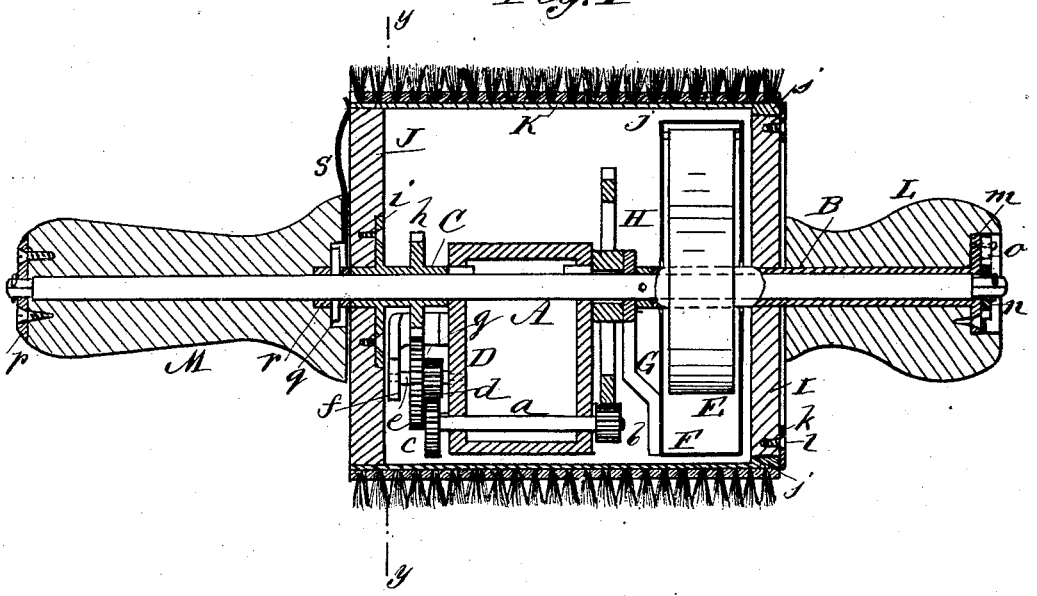



Fig. 2

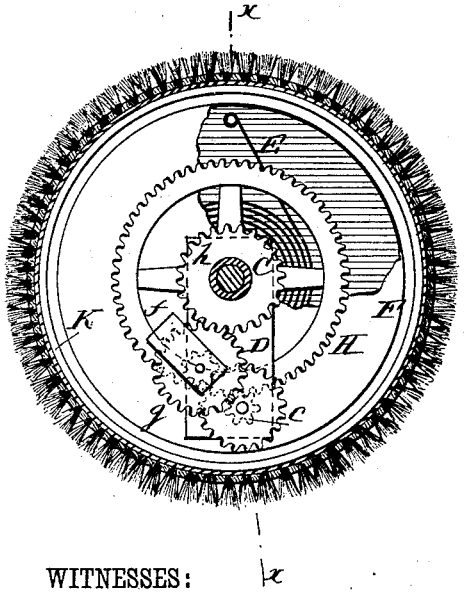
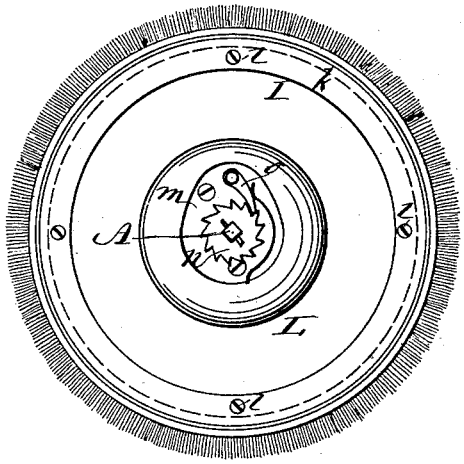



Fig. 3

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# UNITED STATES PATENT OFFICE.

THOMAS J. McCONNAUGHAY, OF HARRISONVILLE, MISSOURI.

## ROTARY BRUSH.

SPECIFICATION forming part of Letters Patent No. 345,854, dated July 20, 1886.

Application filed March 31, 1886. Serial No. 197,349. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS J. McCONNAUGHAY, of Harrisonville, in the county of Cass and State of Missouri, have invented a new and useful Improvement in Rotary Brushes, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a longitudinal section of my improved rotary brush, taken on line *x x* in Fig. 2. Fig. 2 is a transverse section taken on line *y y* in Fig. 1. Fig. 3 is an end elevation.

Similar letters of reference indicate corresponding parts in the different figures of the drawings.

My invention consists in the construction and arrangement of parts, as will be hereinafter fully described and claimed.

Upon the rod A, forming the axis of the machine, are mounted the sleeves B C, and between the sleeves a rectangular frame, D, is rigidly secured to the rod A. To the sleeve B is secured one end of a volute spring, E, the opposite end of which is secured to the drum F, revolving loosely on the sleeve B and carrying the arm G. To the arm G is secured a spur-wheel, H, which revolves upon the rod A.

In the frame D, secured to the rod A, is journaled a shaft *a*, carrying at one end a pinion, *b*, which meshes into the spur-wheel H, and at the opposite end a spur-wheel, *c*, which engages a pinion, *d*, carried by the arbor *e*, journaled at one end in the frame D and at the opposite end in the curved arm *f*, secured to the side of the frame D. The arbor *e* carries a spur-wheel, *g*, which engages the spur-wheel *h*, secured to the sleeve C.

Upon the sleeve B is loosely placed a head, I, and to a flange, *i*, on the sleeve C is secured a head, J. A sheet-metal cylinder, K, fits over the heads I J, and is provided with a fillet, *j*, to which the head I is fitted, and with an inwardly-projecting flange, *k*, against which the head I is clamped by screws *l*, passing through the flange *k* into the head. The head J is secured in the cylinder K by screws passing through the cylinder into the periphery of the head. To the outer end of the sleeve B is secured a flange, *m*, between which and the head I the handle L is placed on the sleeve. Outside of the flange *m*, and upon the squared end of the rod A, is secured a ratchet-wheel, *n*, which is engaged by a spring-acted pawl, *o*, pivoted to the flange *m*.

The rod A projects beyond the opposite end of the cylinder, and is provided with a handle, M, which has a plate, *p*, having a square central aperture for receiving the squared end of the rod A. The handle M is also further secured against turning on the rod A by a pin, *q*, which passes through the rod, and is received in slots formed in the inner end of the handle. The pin *q*, besides holding the handle M against turning, fixes the collar *r*, which confines the sleeve C in its place. To the inner end of the handle M is secured a curved spring, *s*, which is normally out of contact with the head J, but which may be pressed forward into frictional contact with the head by the thumb or finger.

The periphery of the cylinder K is covered with a brush, formed in the present case of a band of leather provided with bristles projecting radially therefrom; but any suitable form of brush may be applied to the cylinder K.

By turning the handle L and the sleeve B, to which it is attached, the spring E is wound in the drum F, the spring being retained under tension by the ratchet-wheel *n*. The pull of the spring rotates the drum F, and with it the arm G and the spur-wheel H, which, acting on the pinion *b*, turns the arbor *a*, and the frame D and rod A being held stationary by means of the handle M, the rotation of the arbor *a* communicates motion to the spur-wheel H through the spur-wheel *c*, carried by the arbor *a*, and the pinion *d* and spur-wheel *g* on the arbor *e*. The sleeve C is thus made to revolve, and the head J being permanently connected with the sleeve C, the cylinder K may be made to revolve with a velocity depending upon the tension of the spring E. Should the speed of the cylinder K become too great, it may be reduced by pressing the brake-spring *s* with the thumb or finger.

Although my improved brush is designed more especially as a hair-brush, I do not confine it to this use, as it may be employed for brushing clothes, for polishing shoes, and

for many other purposes for which ordinary brushes are used.

I am aware that a rotary brush having interior spring-operated mechanism wound from one handle, and also having a brake mechanism, is not new, and I do not claim the same, broadly, as of my invention.

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

The combination, in a rotary brush, of the hollow cylinder K, carrying series of bristles, the rod A, forming the axis of the cylinder, the sleeves B C, mounted loosely on the rod, the handle L, secured to the sleeve B, pawl *o* on the outer end of the handle, the ratchet-wheel *n*, secured to the rod A at the outer end of the handle and engaging pawl *o*, the spring E, connected with the sleeve B, the drum F, mounted loosely on the sleeve B, provided with a fixed arm, G, and connected with the outer end of the spring E, the spur-wheel H, fixed to the arm G, the frame D, fixed to the rod A, the pinion *b*, spur-wheel *c*, pinion *d*, and spur-wheel *g*, the spur-wheel *h*, secured to the sleeve C, and the handle M, fixed to the rod A, substantially as herein shown and described.

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Witnesses:

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