(No Model.) 2 Sheets—Sheet 1.

A. SHERWOOD.

ELECTRICALLY OPERATED BRUSH.

No. 600,383. Patented Mar. 8, 1898.

Fig. 1.

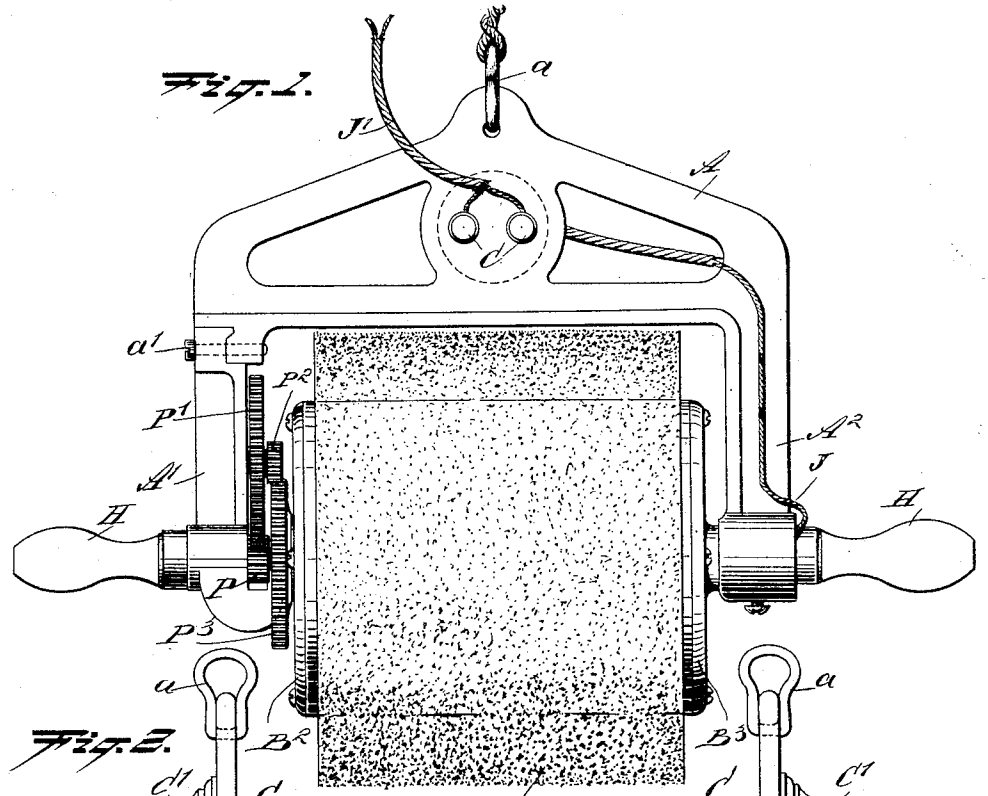


Fig. 2.

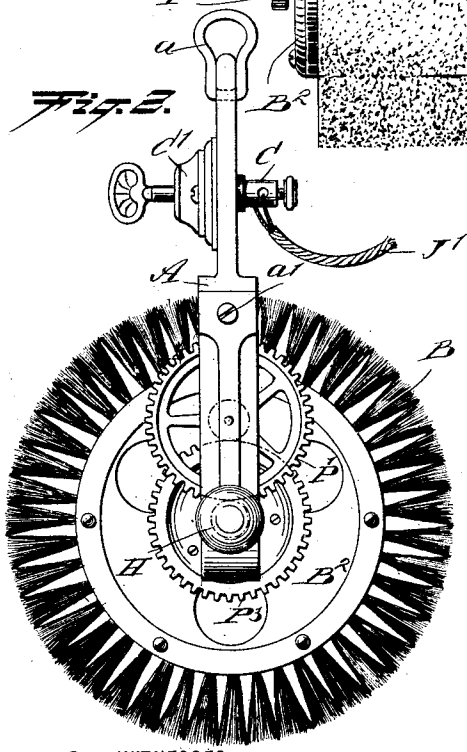
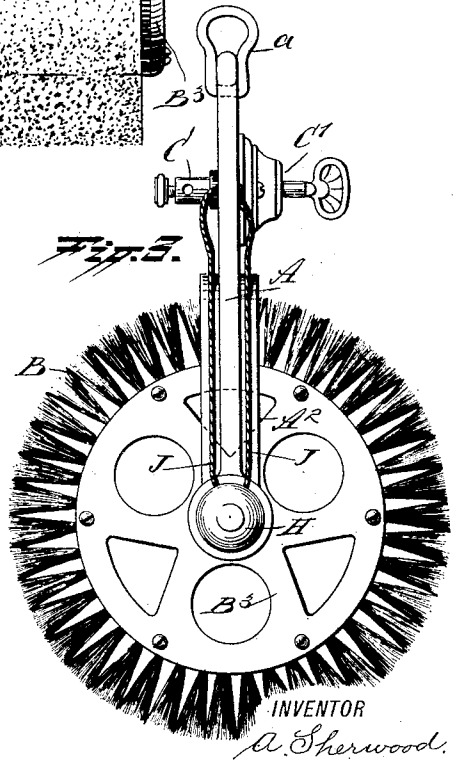


Fig. 3.



WITNESSES:

Henry T. Hirsch.

H. L. Reynolds.

INVENTOR

A. Sherwood.

BY

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

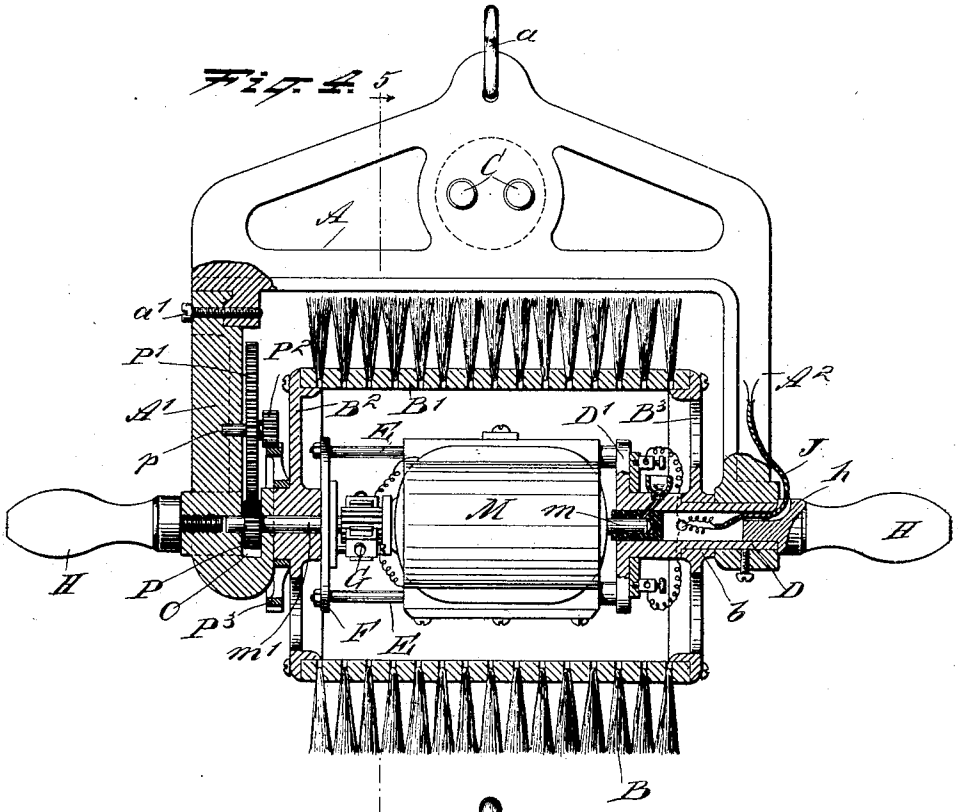
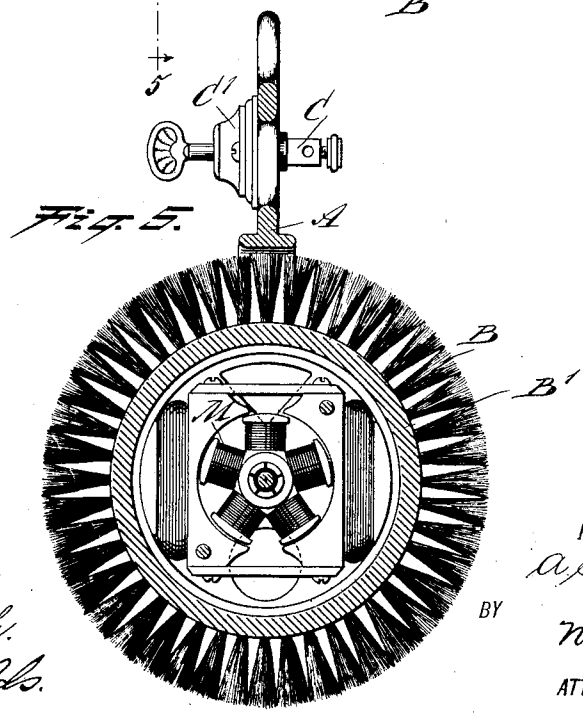


Fig. 5.



WITNESSES:

Henry T. Hitsch.

H. L. Reynolds.

INVENTOR

A. Sherwood.

BY

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALFRED SHERWOOD, OF TOPEKA, KANSAS.

ELECTRICALLY-OPERATED BRUSH.

SPECIFICATION forming part of Letters Patent No. 600,383, dated March 8, 1898.

Application filed March 1, 1897. Serial No. 625,494. (No model.)

To all whom it may concern:

Be it known that I, ALFRED SHERWOOD, of Topeka, in the county of Shawnee and State of Kansas, have invented a new and Improved Electrically-Operated Brush, of which the following is a full, clear, and exact description.

My invention is an improvement in the class of hollow cylindrical rotary brushes which are provided interiorly with an electric motor and are particularly adapted for the use of barbers.

The features of novelty are the construction, arrangement, and combination of parts, including the brush proper and the motor and their bearings, and the yoke or bifurcated hanger by which the other parts are suspended.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my device. Figs. 2 and 3 are end elevations thereof. Fig. 4 is a longitudinal sectional view, and Fig. 5 is a cross-sectional view taken upon the line 5 5 of Fig. 4.

The object of my invention is to construct a brush, more particularly for barbers' use, which may be connected with power for operating it and be of a compact form readily managed. The brush itself is constructed as a hollow cylinder B, the backing for the bristles being shown at B'. This cylinder is open at each end and is provided with heads B^2 and B^3, the latter being perforated to enable the interior to be inspected without taking the heads off.

The yoke A for supporting the brush is provided with two arms A' and A^2, the former being removable from the body of the yoke and attached thereto by a screw a'. The yoke A^2 has attached to its outer end a tube D, which has at b a bearing for the head B^3 of the brush-cylinder to turn upon. This tube extends within the brush-cylinder and is provided with a yoke or bar D' upon its inner end which supports one end of the frame E of the motor. The opposite ends of the bars E, forming the frame of the motor, are attached to a yoke or bifurcated hanger F.

The motor M used in my device is an ordinary electric motor and has nothing novel in its construction. Its construction is therefore not illustrated or described in detail. One end m of the shaft of this motor is journaled in the inner end of the tube D. The other end m' of the motor-shaft passes through the journal of the opposite end of the brush-cylinder and into the arm A' of the frame, in which it turns. This outer end of the motor-shaft is provided with a pinion P, which meshes with a gear P', mounted upon a stud p. To the gear P' is attached a pinion P^2, which in turn meshes with a gear P^3, attached to the head B^2 of the brush-cylinder. The speed of the motor is thus reduced before the power is applied to the brush-cylinder.

It will be seen that the field-magnets of the motor are rigidly attached to the parallel bars E, constituting part of the motor-frame, and are thus held stationary or rigid with the yoke or hanger A. The detachable arm A' of the hanger is bored transversely to receive and furnish a bearing for the motor-shaft m', and its lower end is enlarged and provided with a vertical slot o to receive the shaft-pinion which meshes with the large gear P' of the train.

The wires J, leading the current to the motor, are introduced through the tube D, as clearly shown in Fig. 4. The commutator of the motor is shown at G. The wires J are carried to a switch C, placed upon the upper side of the frame. This switch may be turned by means of the key or handle C', so as to throw the current upon the motor or to switch the same off. The frame A is provided with an eye a, passing through a hole in its upper end and to which a cord for suspending the frame and brush may be attached. This cord may be supported in any desired way—as, for instance, by passing over a pulley and having counterweight attached to the other end of the cord.

The tubular extension D of the motor-frame is secured in the bore of the right-hand hanger-arm A^2 by a clamp-screw, and a handle H is also fixed in said tube, while the other handle H has a screw attachment to the removable arm A'. Thus the handles H serve as means for pulling down the hanger when suspended and guiding the brush proper while in use.

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

The improved electrical rotary brush, comprising the hanger having the integral arm A^2, and removable arm A′, provided with handles, the motor having a frame whose tubular axis D is fixed in hanger-arm A^2, the rotary motor-shaft m', passing through one end of said frame and having a pinion P fixed thereon, the hollow brush proper inclosing the motor and rotating on the aforementioned frame portion D, and provided with the hub-gear P^3, and the gear P′ and pinion P^2 carried by hanger-arm A′ and meshing respectively with the aforementioned motor-pinion and hub-gear, as shown and described.

ALFRED SHERWOOD.

Witnesses:
I. S. CURTIS,
HENRY A. WILLIS.