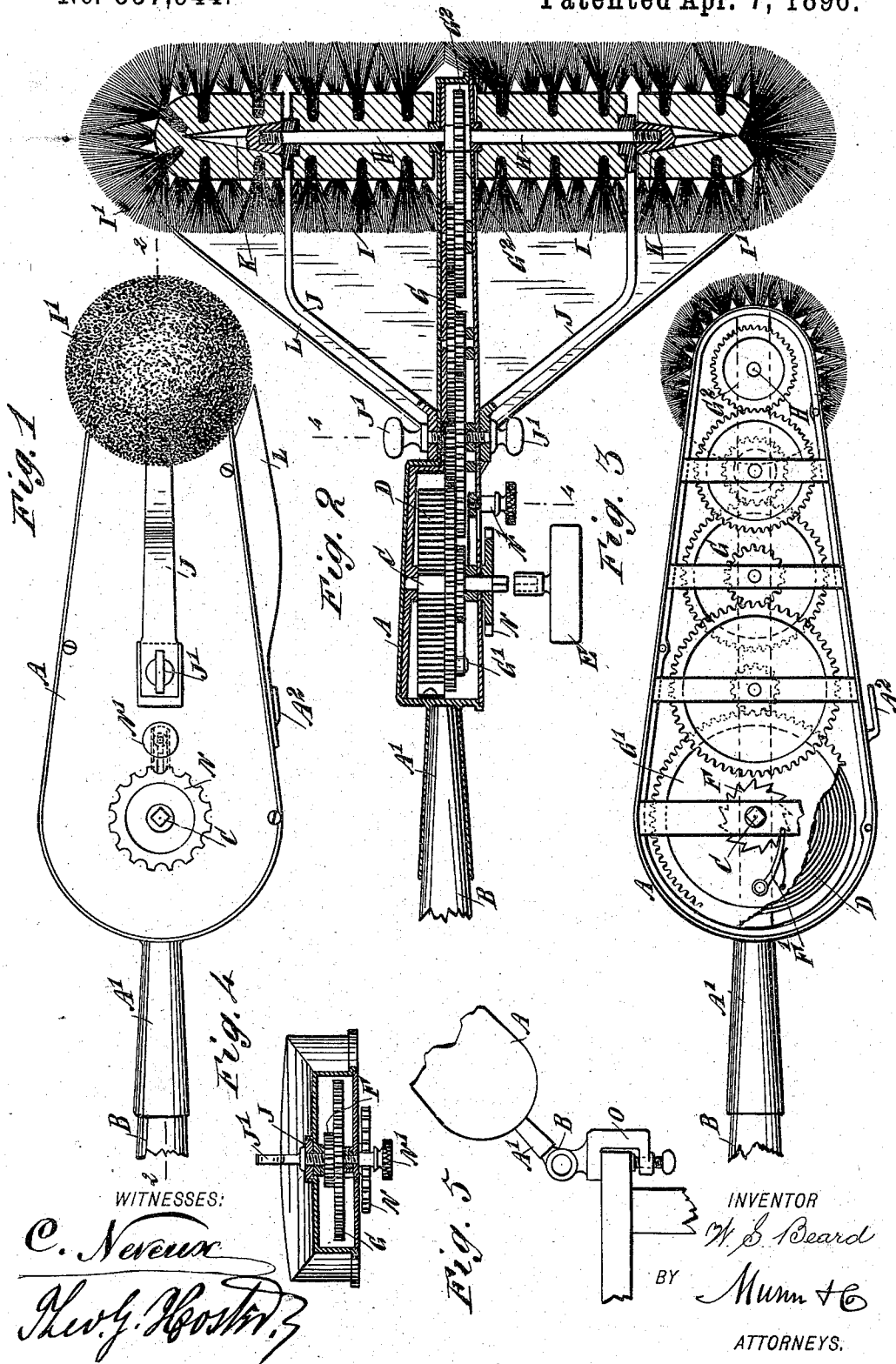


(No Model.)

W. S. BEARD.
ROTARY BRUSH.

No. 557,944.

Patented Apr. 7, 1896.



WITNESSES:

C. Neveu
H. G. Rooster

INVENTOR

W. S. Beard

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM SAMUEL BEARD, OF PINE BLUFF, ARKANSAS.

ROTARY BRUSH.

SPECIFICATION forming part of Letters Patent No. 557,944, dated April 7, 1896.

Application filed October 29, 1895. Serial No. 567,287. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SAMUEL BEARD, of Pine Bluff, in the county of Jefferson, in the State of Arkansas, have invented a new and Improved Rotary Brush, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved rotary brush which is simple and durable in construction, rotated by spring-power, and designed for dusting rooms, brushing suits, dresses, &c., and at the same time collecting the dust removed.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

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 the improvement. Fig. 2 is an enlarged sectional plan view of the same on the line 2 2 of Fig. 1. Fig. 3 is a side elevation of the improvement with the casing-cover removed and a part of the device broken away. Fig. 4 is a transverse section of the improvement on the line 4 4 of Fig. 2, and Fig. 5 is a reduced side elevation of the improvement as clamped to a table.

The improved rotary brush is provided with a suitably-constructed casing A, having a hollow extension A', carrying a handle B, for conveniently manipulating the brush or for fastening the brush to a table or other support by means of a clamp, as indicated in Fig. 5.

In the casing A is journaled a transversely-extending shaft C, on which is fastened the inner end of a coil-spring D, fastened at its outer end to the inside of the casing, as is plainly illustrated in Figs. 2 and 3. This spring D is adapted to be wound upon the shaft to furnish the necessary motive power for revolving the brushes, as hereinafter more fully described, and the said shaft is adapted to be wound up by a key E, applied to the outer square end of the shaft C.

The rotary motion of the shaft C is transmitted by a ratchet-wheel F and pawl F' to a gear-wheel G', mounted to rotate loosely on the shaft C and forming one of a train of

gear-wheels G, journaled in the casing A, as is plainly shown in the drawings. The outermost gear-wheel G² of this train of gear-wheels G is secured on a brush-shaft H, journaled in the sides of the casing A and carrying on opposite sides of the latter brushes I, made cylindrical in shape, as indicated in the drawings.

The outer ends of the shaft H are journaled in brackets J, secured by screws J' to the sides of the casing A, and the extreme outer ends of said shaft H are threaded to receive nuts K, made pointed or spear-shaped and driven centrally into the end brushes I', so that when the shaft H is rotated the brushes I, as well as the end brushes I', rotate in unison, the brushes being driven by the motive power supplied by the spring D.

It is understood that when the shaft C is turned by the key E the spring D is wound up, and when the operator removes the key or releases the same then the spring rotates the shaft C in the opposite direction and by the ratchet-wheel and pawl transmits a rotary motion to the gear-wheel G', so that the whole train of gear-wheels is set in motion, and the last gear-wheel G² revolves the shaft H, carrying the brushes I and I'.

A receptacle L is secured to the inside of the casing A to receive the sweepings from the several brushes, the said receptacle being preferably set at its inner end in a loop A², forming part of the casing for holding the receptacle in place.

In order to stop the motor, and consequently the revolving of the brushes, whenever desired, I provide a notched wheel N, secured to the outer end of the shaft C and adapted to be engaged by a button N', held to slide on one side of the casing A. Thus, when the button is moved so that its shank is in engagement with one of the notches of the wheel N, the latter is stopped and the shaft C, together with the train of gear-wheels, is held stationary and the rotary motion of the brushes ceases.

A revolving brush of the kind described can be readily employed for dusting rooms, cleaning brackets and scrollwork of any kind, shelves of stores and libraries, and also for cleaning walls and the like, it being understood that an upward or downward brush-

ing can be had by the brushes being applied with the corresponding side to the wall. Ordinary bristles or feathers may be used on the brushes, according to the nature of the articles to be dusted.

When it is desired to use the brushes in a tailor-shop or other establishment, it may be fastened by a clamp O to a table, as shown in Fig. 5, and the article to be brushed is moved over the brushes while they revolve, driven by spring-power, as before explained.

The brushes can be readily removed from the shaft H at any time to replace the same when worn out.

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

1. A rotary brush comprising a casing, a spring-motor held in said casing, a train of gear-wheels driven from said spring-motor, a brush-shaft journaled in said casing and driven from said train of gear-wheels, brushes secured on said shaft, brackets held on the casing and forming journals for the outer ends of the shaft, and end brushes held on the extreme outer ends of said shaft, substantially as shown and described.

2. A rotary brush comprising a casing, a spring-motor held in said casing, a train of gear-wheels driven from said spring-motor, a brush-shaft journaled in said casing and driven from said train of gear-wheels, brushes secured on said shaft, brackets held on the casing and forming journals for the outer ends

of said shaft, end brushes held on the extreme outer ends of said shaft, and means, substantially as described, for stopping and releasing said spring-motor, as set forth.

3. A rotary brush, comprising a casing, a brush-shaft projecting from opposite sides of the casing at one end thereof, a brush on each projecting part of the shaft, a spring-motor in the casing and geared with the brush-shaft, and a receptacle for receiving the sweepings from the brushes, said receptacle being secured to the under side of the casing and projecting forwardly under the brushes, substantially as described.

4. In a brush, the combination with a casing, of a shaft projecting from opposite sides thereof, a brush on each projecting part of the shaft, said shaft projecting beyond the brushes, and end brushes detachably secured to the ends of the said shaft in alinement with the main brushes, substantially as described.

5. In a brush, the combination with a casing, of a shaft projecting from opposite sides thereof, and having its ends screw-threaded, brushes on the shaft the said shaft projecting beyond the outer ends of the brushes, end brushes, and nuts secured centrally in the ends of the end brushes and screwing on the ends of the shaft, substantially as described.

WILLIAM SAMUEL BEARD.

Witnesses:

J. F. HUTT,

J. B. TALBOT.