

No. 632,748.

Patented Sept. 12, 1899.

C. H. RAYMOND & G. W. BEAL.

BRUSH.

(Application filed Dec. 16, 1898.)

(No Model.)

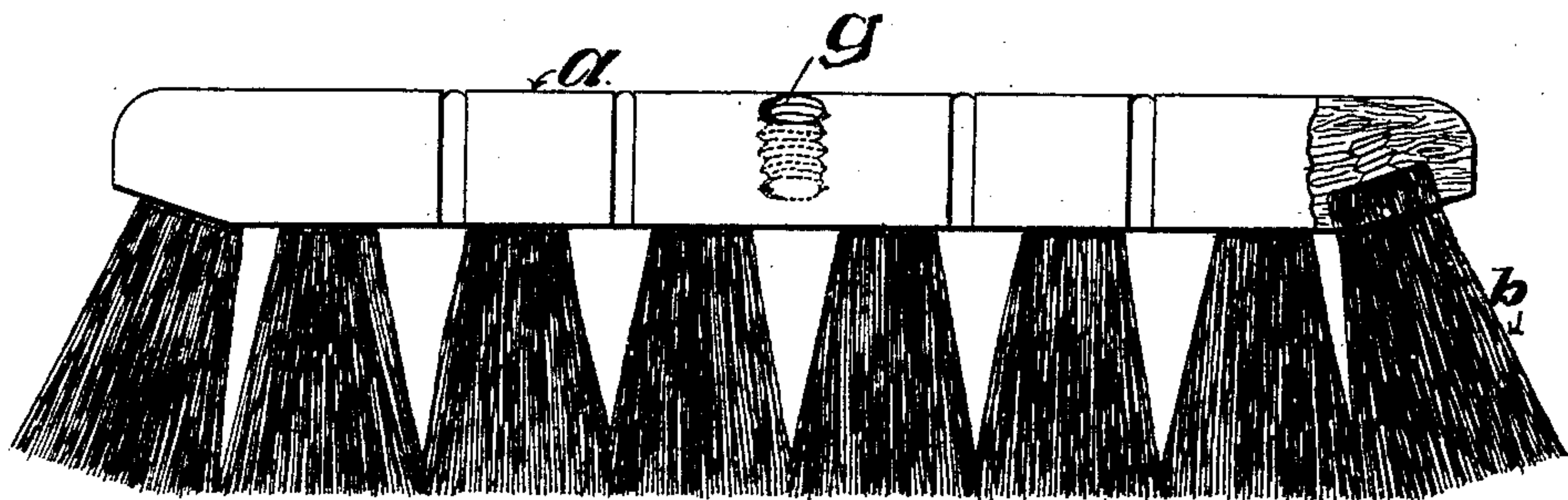


Fig. 1.

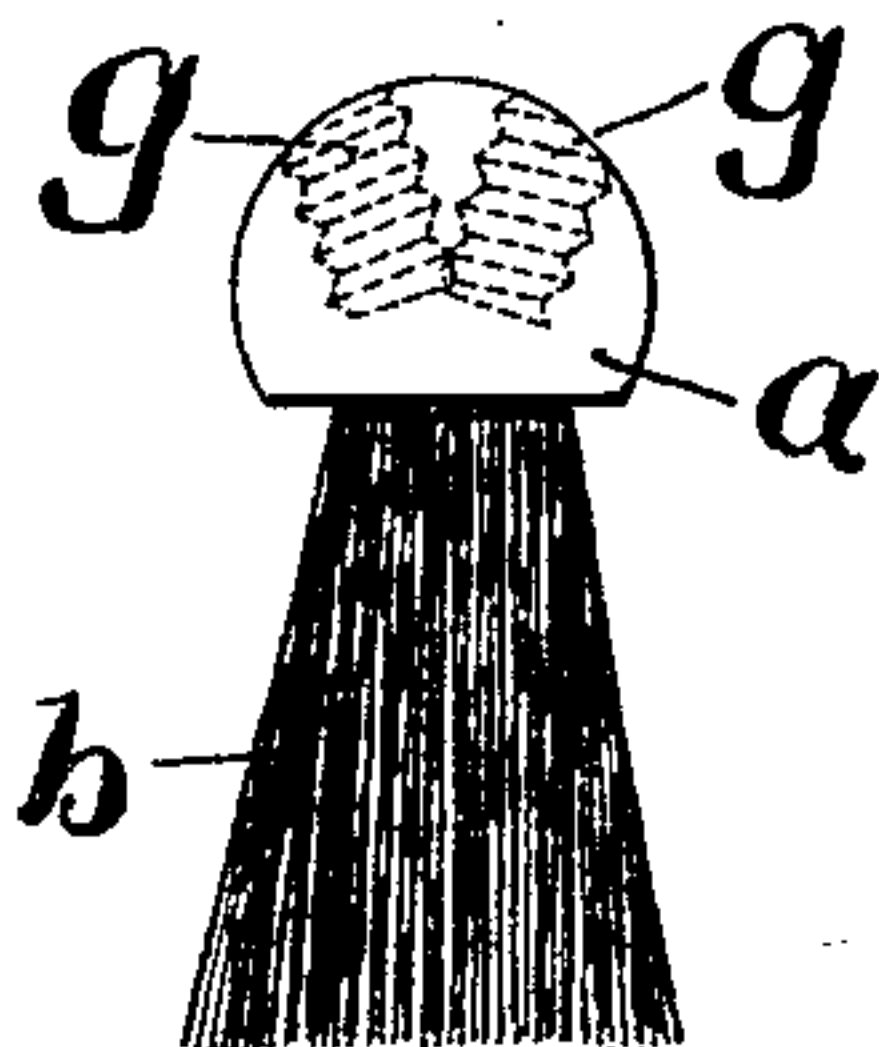


Fig. 2.

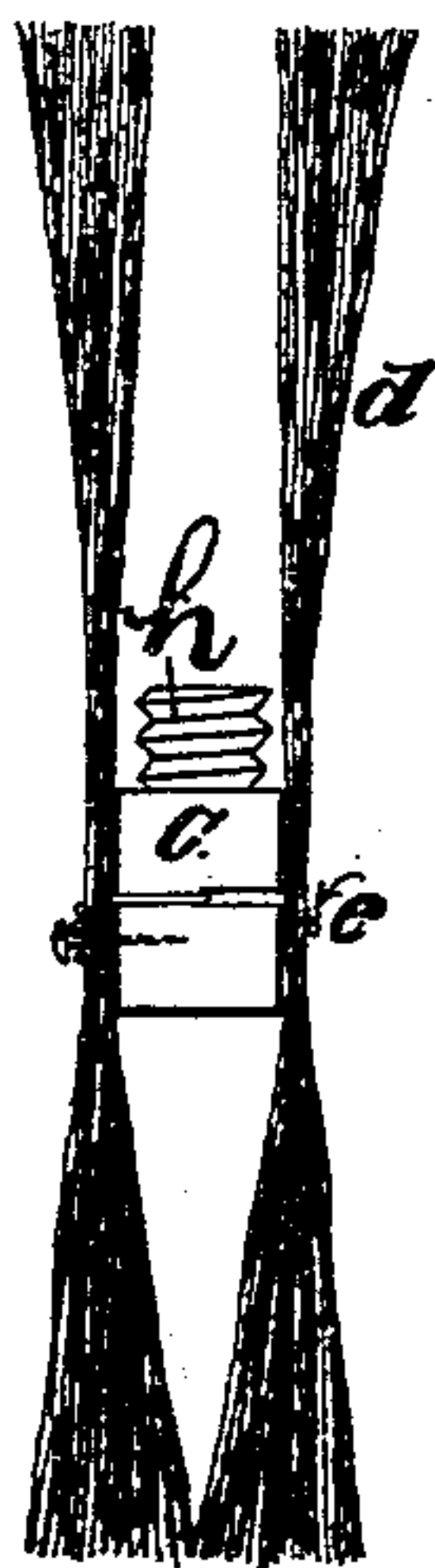


Fig. 3.

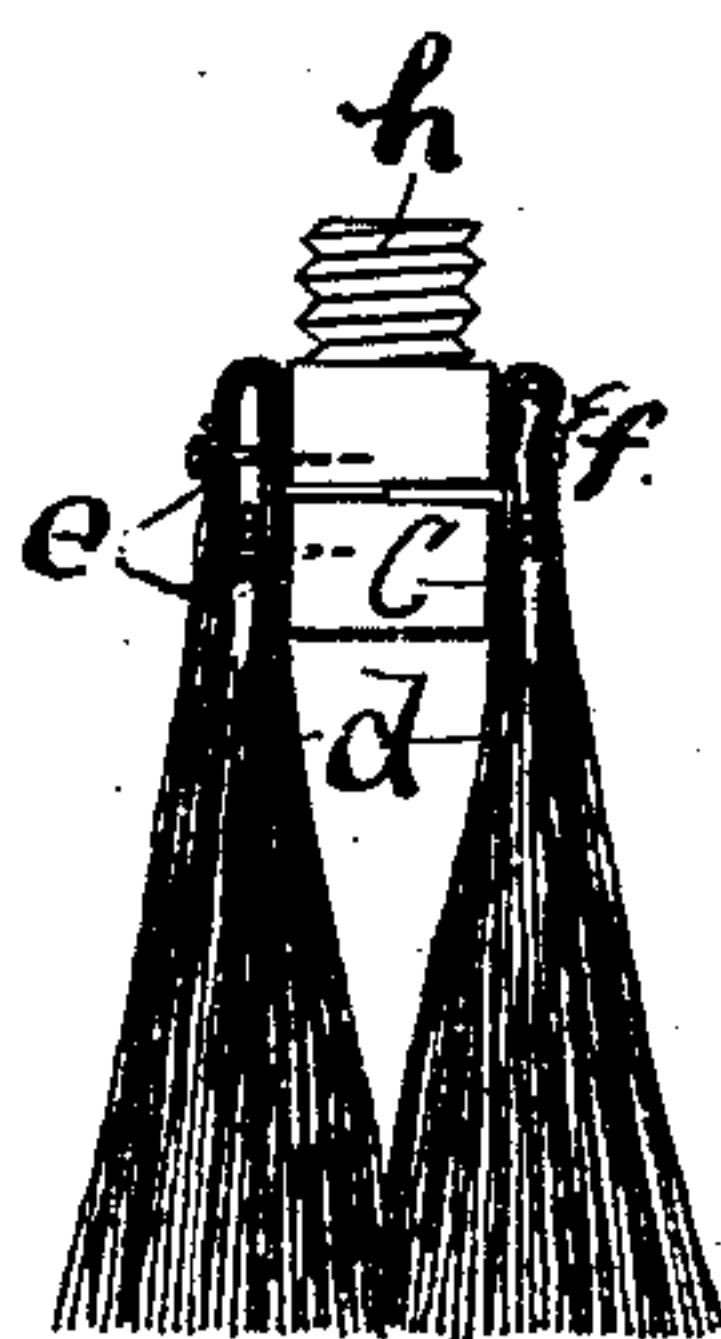


Fig. 5.

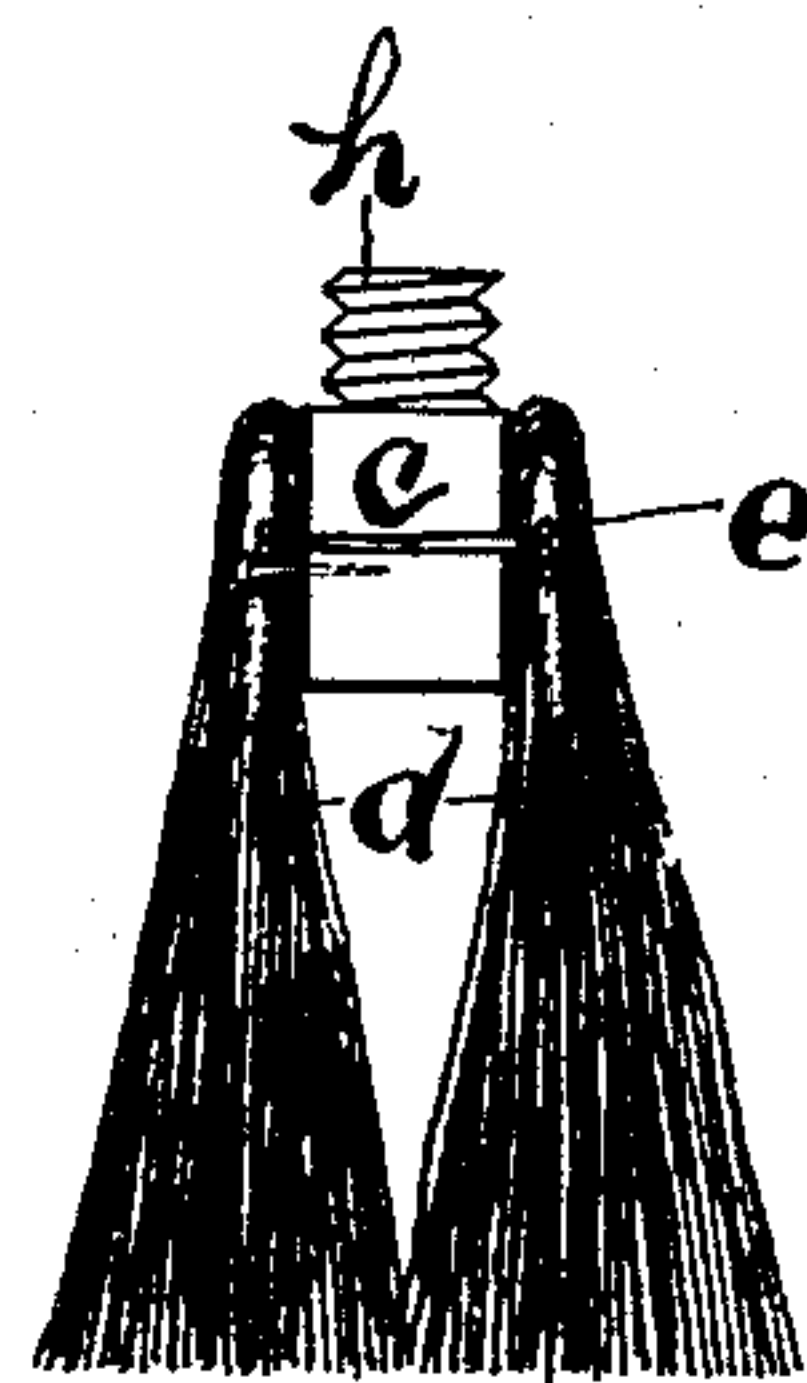


Fig. 4.

Witnesses.

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*C. H. Raymond & G. W. Beal*

*per Southgate & Southgate*  
Attorneys.



# UNITED STATES PATENT OFFICE.

CHARLES H. RAYMOND, OF WORCESTER, MASSACHUSETTS, AND GEORGE W. BEAL, OF NEW YORK, N. Y.; SAID BEAL ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO GEORGE A. PARK, GEORGE S. DAVIS, AND R. JAMES TATMAN, OF WORCESTER, MASSACHUSETTS.

## BRUSH

SPECIFICATION forming part of Letters Patent No. 632,748, dated September 12, 1899.

Application filed December 16, 1898. Serial No. 699,432. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES H. RAYMOND, residing at Worcester, in the county of Worcester and State of Massachusetts, and GEORGE W. BEAL, residing at New York, in the county of New York and State of New York, citizens of the United States, have invented a new and useful Brush, of which the following is a specification.

10 The object of our present invention is to provide a brush in which the bobs are removably secured in place, so that they can be readily adjusted or replaced when desired.

To these ends our invention consists of the 15 removable bobs and the combinations of parts, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is 20 a side view, partially in section, of a brush constructed according to our invention. Fig. 2 is an end view of the same; and Figs. 3 to 5, inclusive, are detail views illustrating the manner in which we prefer to manufacture 25 or build up our removable bobs.

In the ordinary construction of floor-brush now most widely employed the bristles or other materials employed to form the sweeping-surface are ordinarily wrapped into comparatively small bundles or bobs, which are rigidly glued or otherwise permanently secured 30 in the brush-back. The bristles at the ends of the brush wear out more quickly than those nearer the central part of the brush, and on this account brushes are now frequently discarded in which the end sections have been worn out, while the body portions of such brushes are still comparatively serviceable.

The especial object of our present invention is therefore to provide a construction 40 which will permit the replacement or renewal in whole or in part of the sweeping-surface of a brush without discarding the brush-back. To accomplish this purpose, the sweeping-surface of a brush constructed according to 45 our invention is formed by a single line of comparatively large bobs or bundles of strands. Each of these bobs consists, essentially, of

a peg having a threaded shank and a cylindrical body portion. The strands secured to 50 these pegs may consist of bristle vegetable fiber, such as tampico or other similar material. The strands are preferably double length and are preferably wired or otherwise secured to the pegs near their central parts 55 and are then bent back upon themselves and wired or otherwise permanently secured in their bent-back positions. The brush-back is provided with threaded sockets for receiving the threaded shanks of the pegs, and these 60 sockets are preferably countersunk to aid in retaining the shape of the bobs.

Referring to the drawings and in detail, *a* designates the brush-back, which is preferably formed of wood in the ordinary manner. 65 Removably secured in the brush-back *a* are bobs *b*. The brush-back *a* is preferably provided with inclined sections at its ends, and the end bobs preferably extend at an angle from the central bobs of the brush. The 70 brush-back *a* may also preferably be provided with one or more threaded sockets *g* for receiving the handle, as shown by the dotted lines in Fig. 2.

The construction of the removable bobs *b* 75 is most clearly shown in Figs. 3 to 5. As illustrated therein, each of the bobs comprises a wooden center piece or peg having a threaded shank *h* and a cylindrical body portion. Double-length strands of suitable material—as, 80 for example, bristle tampico, &c.—are wrapped around the body portion *c* of a peg and are secured thereon by a wire *e*. The ends of the strands are then bent back upon themselves, as illustrated in Fig. 4, and the completed 85 bob is preferably held in shape by an outside wire, as *f*. The wires *e* and *f* are held in place by nails, and the first layer of the wire *e* may be fitted into a groove in the body portion of the peg. 90

By means of this construction it will be seen that the end bobs of a brush may be replaced as often as necessary, and as the threaded peg-shanks preferably fit comparatively tightly into their sockets the several bobs employed may be independently adjusted to 95



maintain a substantially uniform sweeping-surface, and whereas it has heretofore been customary to discard the entire brush when its sweeping-surface is worn a brush constructed according to our invention may have its sweeping-surface replaced as frequently as may be necessary.

We are aware that changes may be made in the details of construction of our brush by those who are skilled in the art, and we do not wish, therefore, to be limited to the exact form of construction which we have herein shown and described; but

What we do claim, and desire to secure by Letters Patent of the United States, is—

1. In a brush, the combination of a back having threaded countersunk sockets, and a plurality of bobs, each bob comprising a peg having a threaded shank, and a cylindrical body portion with strands doubled back on themselves and secured on said body portion, substantially as described.

2. As an article of manufacture, a removable bob for brushes comprising a wooden peg

having a threaded shank, and a cylindrical body portion, and double-length strands having their central parts wired upon the body portion of the peg and their ends bent back upon themselves and wired in place, substantially as described.

3. As an article of manufacture, a brush comprising a back *a* and a plurality of bobs *b*, the bobs at the ends of the brush extending at an angle from the central bobs, each of said bobs comprising a threaded shank *h*, and a cylindrical body portion *c* and double-length strands having their central parts secured on said peg and their ends bent back upon themselves and wired in position, substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

CHARLES H. RAYMOND.  
GEORGE W. BEAL.

Witnesses:

LOUIS W. SOUTHGATE,  
PHILIP W. SOUTHGATE.

It is hereby certified that in Letters Patent No. 632,748, granted September 12, 189 upon the application of Charles H. Raymond, of Worcester, Massachusetts, and George W. Beal, of New York, N. Y., for an improvement in "Brushes," errors appear requiring correction as follows: In the grant and in the printed head of the specification, it is stated that said Beal has assigned his interest to George A. Park, George S. Davis, and R. James Tatman, whereas it should have been stated that *They have assigned, by direct and mesne assignments, all the right, title, and interest, to said Charles H. Raymond, George A. Park, George S. Davis, and R. James Tatman;* and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 26th day of September, A. D., 1899.

[SEAL.]

WEBSTER DAVIS,  
*Assistant Secretary of the Interior.*

Countersigned.

C. H. DUELL,  
*Commissioner of Patents.*