No. 666,360. Patented Jan. 22, 1901.

T. R. SHEARER.

FOLDING BRUSH.

(Application filed Jan. 27, 1900.)

(No Model.)

FIG. I.

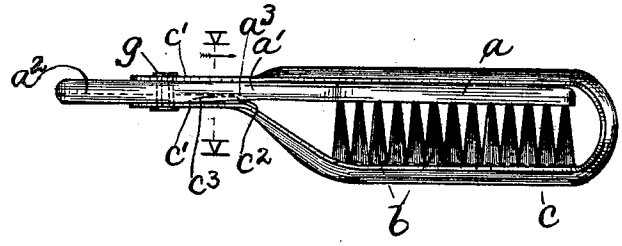


FIG. II.

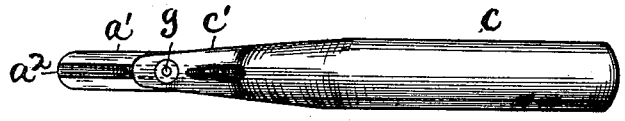


FIG. III.

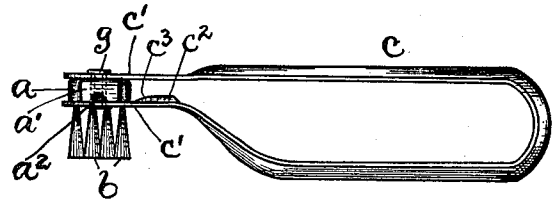


FIG. IV.

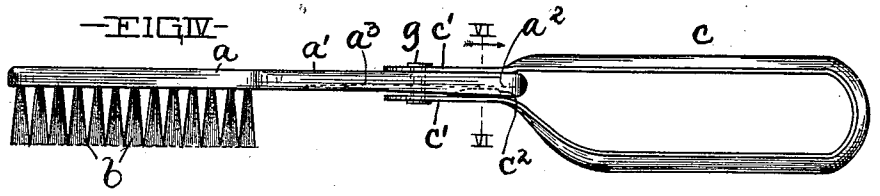


FIG. V.

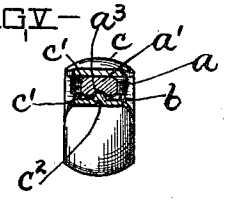
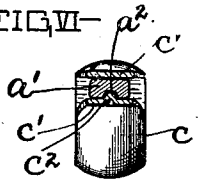


FIG. VI.



WITNESSES:
Daniel E. Daly.
Victor C. Lynch.

INVENTOR
Thomas R. Shearer
BY
Lynch & Dorer
his ATTORNEYS

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

UNITED STATES PATENT OFFICE.

THOMAS R. SHEARER, OF CHICAGO, ILLINOIS.

FOLDING BRUSH.

SPECIFICATION forming part of Letters Patent No. 666,360, dated January 22, 1901.

Application filed January 27, 1900. Serial No. 2,996. (No model.)

To all whom it may concern:

Be it known that I, THOMAS R. SHEARER, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Folding Brushes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in folding brushes, and more especially to folding tooth-brushes and nail-brushes; and it consists in certain features of construction and combinations of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure I is a top plan of a folding tooth-brush embodying my invention and shows the brush proper swung into the handle of the device. Fig. II is a side elevation of the same. Fig. III is a top plan of the device and shows the brush proper in an intermediate position. Fig. IV is a top plan of the device and shows the brush proper in its operative position. Fig. V is a transverse section on line V V, Fig. I. Fig. VI is a transverse section on line VI VI, Fig. IV.

Referring to the drawings, *a* designates the brush-back of my improved folding brush. Back *a* upon its forward side is provided with tufts of bristles *b* in the usual manner and at the inner end of its bristle-bearing portion terminates in the shank *a'*, that is flat upon its forward and rear sides and arranged in line with the brush-back proper and extends between and longitudinally of and is pivoted to the jaw-forming ends *c' c'* of the handle *c*, that is composed of a band or strip of sheet metal, vulcanized rubber, or other suitable material bent centrally to form the outer end of the handle and thence forming the opposite and parallel sides of the handle, which are arranged far enough apart to receive the brush proper between them. The handle is therefore hollow and open at the top and bottom, so that the brush proper can enter the handle from above and below. The forward side of the handle at the inner end of the handle somewhat approaches the rear side of the handle, so that the jaws *c' c'* are formed upon the different handle sides, respectively, and overlap the forward side and rear side, respectively, of the shank *a'* and are arranged, therefore, to clamp or hold the said shank between them. The shank *a'* is pivoted horizontally, as at *g*, preferably at a point between the free ends and central portions of the jaws *c' c'*, so that the brush proper (including the brush-back, the bristles, and the former's shank) can be swung vertically in opposite directions into the handle for convenience in carrying the brush in the pocket of a vest or other garment, for the protection of the brush proper in the pocket, and for preventing contact between the bristles of the brush and other articles carried in the same pocket. The arrangement and dimensions of the parts are such that when the brush proper is swung into the handle, as shown in Fig. I, the outer end of the shank *a'* shall fit snugly between the free ends of the jaws at the outer side of the pivot *g*, and thereby prevent displacement of the brush proper within the handle, and the shank of the brush proper when the latter is within the handle shall extend beyond the free extremities of the jaws to accommodate the application of a person's finger employed in actuating the brush proper from within the handle into the operative position. (Shown in Fig. IV.) The brush-back's shank is reduced in thickness between the brush-back proper and the pivot *g*, so that the said portion of the shank shall not fit snugly between the jaws of the handle in the brush proper's operative position.

The inward pressure exerted upon the jaws in taking hold of and slightly pressing inwardly upon the forward and rear sides of the hollow handle causes the jaws to clamp the brush proper's shank between them and thereby prevent lateral displacement of the brush proper. To more effectually or more positively prevent displacement of the brush proper during the use of the brush, one of the jaws *c'*, and preferably the forward jaw between the pivot *g* and the inner end of the respective jaw, is provided with an inwardly-projecting rib c^2, that is arranged centrally and longitudinally of the jaw and is adapted to register with a groove a^2, that is formed in and centrally and longitudinally of the brush proper's shank and has the width and length

required to receive the aforesaid rib, and the arrangement of parts is such that the rib c^2 registers with the groove a^2 in the operative position of the brush proper, as shown in Figs. IV and VI. The rib c^2 projects into the sweep of the grooved portion of the shank a', so that a slight force or pressure is required to swing the said portion of the shank between the jaws, and the jaws form springs that act to retain the catch-forming rib in the latter's normal position, and the catch is pressed outwardly against the action of the springs when the recessed portion of the shank is forced into the space between the jaws.

The rib c^2 is formed, preferably, by material displaced inwardly from the rib-bearing jaw. To facilitate the introduction of the recessed portion of the shank of the brush proper into position within the space between the jaws c' and c', the rib c^2 is rounded transversely, as shown in Fig. VI, and is gradually reduced in thickness, as at c^3, in the direction of the free end of the rib-bearing jaw, as shown in Fig. III.

Preferably the groove a^2 extends beyond the pivotal connection between the shank and the handle in the direction of the back of the brush proper, as at a^3, so that when the brush proper is swung into the handle, as shown in Figs. I and V, the rib c^2 shall slightly engage the inner end portion of the said groove, and thereby assist the friction had between the thicker portion of the shank and the jaws c' and c' in preventing displacement of the brush proper from within the handle in the inoperative position of the brush proper.

What I claim is—

1. In a folding brush of the character indicated, the combination, with the brush proper's shank that is provided with a groove, of a handle overlapping opposite sides of and pivoted to the shank and provided with a rib arranged to register with and engage the aforesaid groove or recess in the operative position of the brush proper.

2. A folding brush of the character indicated, having its handle overlapping opposite sides of and pivoted to the brush proper's shank and provided with a rib formed internally of the handle a short distance from the axis of the pivotal connection formed between the handle and the said shank but between the said axis and the handle's outer end and arranged longitudinally of the handle, and the aforesaid shank being provided, between the aforesaid axis and the outer or free end of the shank, with a groove arranged longitudinally of the shank and arranged, furthermore, to be engaged by the aforesaid rib in the operative position of the brush proper.

3. In a folding brush of the character indicated, the combination, with the brush proper's shank provided with a groove, of the handle overlapping opposite sides of and pivoted to the shank, and provided with a rib c^2 arranged at the inner side of the pivotal connection between the handle and the shank and in position to register with and engage the aforesaid groove in the operative position of the brush proper, which rib is rounded transversely, and gradually reduced in thickness, as at c^3, in the direction of the said pivotal connection, substantially as and for the purpose set forth.

Signed by me at Chicago, Illinois, this 15th day of November, 1899.

THOMAS R. SHEARER.

Witnesses:

L. H. CHATTERSON,

C. H. DORER.