Sept. 24, 1940. F. SMITH 2,216,026

POCKET FOLDING TOOTHBRUSH

Filed Nov. 25, 1938

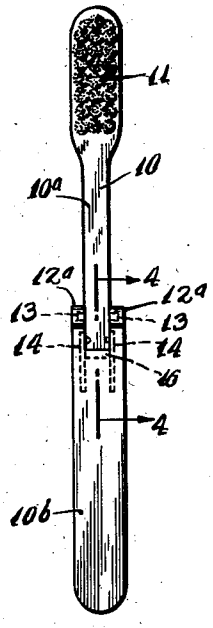


Fig. 1.

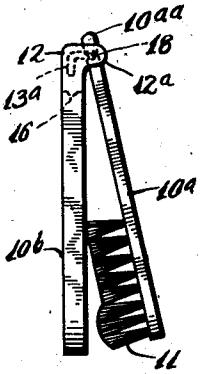


Fig. 3.

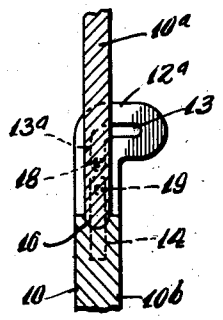


Fig. 4.

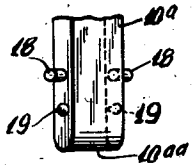


Fig. 5.

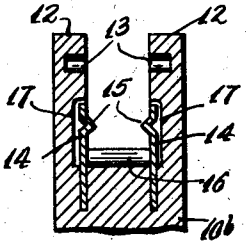


Fig. 6.

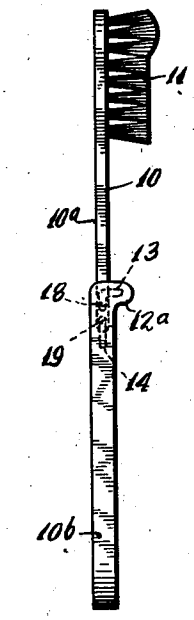


Fig. 2.

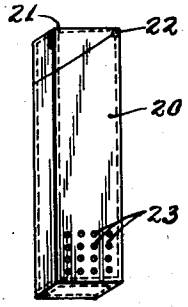


Fig. 7.

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POCKET FOLDING TOOTHBRUSH

Florence Smith, Long Island City, N. Y.

Application November 25, 1938, Serial No. 242,133

2 Claims. (Cl. 15—144)

This invention relates to new and useful improvements in a pocket folding toothbrush.

The invention has for an object the construction of a toothbrush which may be folded and then carried in a small case for convenient carrying in one's pocket or pocketbook.

More specifically, the invention proposes to characterize the toothbrush by a handle portion and a bristle portion, and an arrangement whereby the handle portion is composed of a pair of sections in end alignment with each other and a novel arrangement for holding the sections in this position and for permitting the sections to be folded.

Still further the invention proposes that one of the sections be provided with a pair of projecting spaced lugs formed with lateral offset parts having horizontal opposed grooves continuing into vertical grooves, and that the other of the sections be provided with a trunnion engaging said vertical grooves in a particular manner.

Furthermore, it is proposed to provide springs mounted on the adjacent inner faces of the lugs and having inwardly directed prongs engageable with niches formed in the other of the sections in a particular manner.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is an elevational view of a pocket folding toothbrush constructed according to this invention.

Fig. 2 is an edge elevational view of Fig. 1.

Fig. 3 is a view similar to Fig. 2 but showing the toothbrush folded.

Fig. 4 is a fragmentary enlarged sectional view taken on the line 4—4 of Fig. 1.

Fig. 5 is a perspective view of the lower end of the top section of the handle.

Fig. 6 is a transverse sectional view of the upper end of the lower section of the handle.

Fig. 7 is a perspective view of a carrying case for the toothbrush.

The pocket folding toothbrush, according to this invention, includes a handle portion 10 and a bristle portion 11. The handle portion is composed of a pair of sections 10^a and 10^b in end alignment with each other. One of these sections, namely, the outer section 10^b, is formed with a pair of projecting spaced lugs 12 each having a lateral offset part 12^a. Horizontal grooves 13 are formed on the opposed faces of these lateral offset parts and continue into vertical grooves 13^a formed in the lugs 12. Springs 14 are mounted on the inner faces of the lugs 12 and have inwardly directed prongs 15. The material of the section 10^b across the bases of the lugs 12 is provided with a concaved portion 16. The springs 14 have their lower ends embedded into the material of the section 10^b. The upper ends of these springs extend along within recesses 17 formed in the adjacent faces of the lugs 12. The prongs 15 project out from the recesses 17.

The section 10^a is provided with a trunnion 18. The elements of this trunnion, as illustrated in Figs. 1, 2 and 4, engage the vertical grooves 13^a. Below the trunnion elements 18 there are niches 19 formed in the sides of the section 10^b. These niches 19 receive the prongs 15 of the springs 14. The lower end 10^{aa} of the section 10^a is curved and snugly engages the concaved portion 16. The sections 10^a and 10^b are endwise separable against the holding action of the prongs 15 and then the trunnion 18 may be moved into the horizontal grooves 13 for adapting the sections to be relatively folded.

In Fig. 3 the toothbrush is shown in its folded condition. In this condition it may be stored away within a small case 20 illustrated in Fig. 7. This case may be made of Celluloid material or other sheet material. The case 20 is provided with a cover 21 which is hingedly mounted at 22 and which may be opened and closed. The case 20 is also provided with a plurality of perforations 23 for ventilation purposes.

The toothbrush may be opened from the closed position shown in Fig. 3 by first pivoting upwards, the handle section 10^a. When the handle section reaches the vertical position it must be forced backwards so that the trunnion 18 moves to the rear ends of the grooves 13 and then it must be forced downwards so that the trunnion 18 moves down into the grooves 13^a. While this is taking place the prongs 15 snap into the niches 19 and the curved end 10^{aa} engages into the concaved portion 16. The handle sections are now firmly held in their end aligned positions.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

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

1. In a folding toothbrush, an elongated handle formed of separate sections, a pair of parallel adjacent lugs formed on the end of one of said sections and each of said lugs being formed with a groove on its inner face, outwardly extending trunnion elements mounted on the other of said sections and engaging said grooves to permit said section having said trunnion elements to be moved longitudinally and pivoted with relation to said section having said lugs, said section having said trunnion elements being formed with inwardly extending niches on the sides thereof at a point between said trunnion elements and the end of said section, springs mounted on the inner faces of said lugs, prongs formed on said springs and engageable with said niches when said trunnion elements are located within the inner ends of said grooves, socket means on one of said sections, and projecting means on the other of said sections for engaging in said socket means for limiting said sections against longitudinal movement or pivoting.

2. In a folding toothbrush, an elongated handle formed of separate sections, a pair of parallel adjacent lugs formed on the end of one of said sections and each of said lugs being formed with a groove on its inner face, outwardly extending trunnion elements mounted on the other of said sections and engaging said grooves to permit said section having said trunnion elements to be moved longitudinally and pivoted with relation to said section having said lugs, said section having said trunnion elements being formed with inwardly extending niches on the sides thereof at a point between said trunnion elements and the end of said section, springs mounted on the inner faces of said lugs, prongs formed on said springs and engageable with said niches when said trunnion elements are located within the inner ends of said grooves for limiting said sections against longitudinal movement or pivoting, and means upon the adjacent ends of said sections for assisting said prongs and niches in holding said sections, comprising a concaved surface formed on the end of one of said sections and engageable with a convexed surface formed on the end of the other of said sections when said trunnion elements are positioned within the inner ends of said grooves.

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