This invention relates to toilet combs of the type provided with teeth which are individually freely revoluble on their axes.

Such combs are known, but have not met with acceptance from the public principally because their bulk renders them unsuited for the intended purpose. For example, some have employed an individual fixed spindle for each tooth which, in turn, required a cross section for the tooth substantially greater than preferred standards and therefore requiring greater pitch. Thus the comb was no longer suited for combing the hair. Other constructions were provided with a bearing for the Shank of each tooth which was so designed as to render the back of the comb unduly thick or to take no cognizance of the need of accessibility for replacement of a tooth.

Having in view the elimination of these shortcomings of combs heretofore available a principal object of this invention is to provide a toilet comb having revoluble teeth which has dimensions virtually the same as a conventional comb having fixed teeth.

Another object is to provide a comb as aforesaid so arranged as to permit simple replacement of a broken tooth. In this connection it will be understood that a comb in accordance with the invention will cost somewhat more than a conventional comb and that therefore tooth replacement rather than discard of the comb, will prove more economical.

A further object of the invention is to provide a comb as outlined which lends itself to production as a plurality of molded plastic parts and simple screw fastenings therefor.

Other objects and advantages of the invention will appear from the ensuing description which, taken with the accompanying drawing, discloses a preferred mode of carrying the invention into practice.

In this drawing:

Fig. 1 is a side elevation of a comb in accordance with the invention, shown slightly enlarged;
Fig. 2 shows a cross section taken on the line 2—2 of Fig. 1;
Fig. 3 is a detail of a tooth;
Fig. 4 is a view similar to that of Fig. 2 but with the tooth retaining cap displaced; and
Fig. 5 is a cross section taken on the line 5—5, but with the retaining cap displaced as in Fig. 4.

Regarded broadly the invention comprehends the provision of a comb which includes an elongated two part body secured by screws, each of the parts being provided with a plurality of half-bearings which, together, make up a plurality of bearings, one individual to each tooth. Each of the latter is a slender cone terminating at the base in a cylindrical portion which is reduced in diameter over a short extent, to provide a rotating fit in the individual bearing, and the teeth are fitted into their bearings and provided with clearance apertures having minimum dimensional tolerance. The two-part body preferably comprises one part adapted to nest tightly within the other with a flush exterior aspect. Thus crevices and corners wherein dirt may lodge are avoided, and the sales appeal of the article thereby considerably enhanced.

Turning to the drawing I have illustrated a body member 10 comprising an elongated portion or back 11 flanked at its ends by fixed teeth 12—12 of conventional form. However, in view of what follows it will become apparent that these end teeth may be omitted and the revoluble teeth distributed throughout the entire length of the body.

Desirably the back 11 (Fig. 2) is tapered slightly toward the teeth for aesthetic considerations and is recessed to receive the removable, tooth-retaining bar or cap 15, the recess being indicated as having a main wall 16, end walls 17—17 and a top wall 18. Desirably the wall 16 lies in the longitudinal, vertical, medial plane of the comb. As shown, the exposed face of the bar 15 is tapered symmetrically with the opposing face on the back 11 and a plurality of countersunk head machine screws 21 is provided to secure the same to the back. The bar 15 is made flush with the adjacent surfaces of the body 10 and the joint therebetween made as close as the exigencies of plastic molding will allow thereby to avoid interstices into which dirt may deposit.

The back 11 is provided with a longitudinally extending rib 25 defining a longitudinally extending groove 26. Rib 25 has a plurality of semi-cylindrical notches 27 spaced apart along its length by an amount determined by the diameter of the teeth and the space desired therebetween.

Each tooth 31 (Fig. 3) comprises a slender conical portion 32 terminating in a rounded tip 33 and an upper cylindrical shank 34 reduced in diameter to a neck 35 serving as a pivot. The axial extent of the neck 35 is made sufficiently greater than the thickness of the rib 25 to provide free rotation of the tooth as motivated by movement of the teeth through the hair. Similarly the diameter of the neck 35 is selected to permit a running fit in the bearing constituted by the notch 27 and its complementary notch 27a in the bar 15, these latter being formed in a rib 44 which is complementory to the rib 25. Desirably, but not essentially, the portion 34 of the teeth may find bearing on the sides of the rabbit 41 in order to reduce lateral stress on the teeth adjacent the shoulder 42 whereat fracture is most likely to occur. Clearance between the uppermost end 43 of the teeth and the fixed portions circumjacent the same may be the minimum required for free rotation of the teeth.

The material for the fixed parts of the comb may be and fairly rigid plastic composition while the teeth are preferably of nylon, which has that degree of resiliency required by their function. Furthermore nylon is an excellent bearing material.

From the foregoing description it will have become clear that I have provided a toilet comb with revoluble teeth characterized by simple means for facilitating replacement of broken teeth and so constructed as to minimize accumulation of foreign matter to a far greater extent than similar articles heretofore known. Moreover, since the teeth are freely revoluble the cleansing thereof is greatly facilitated including the self-cleansing action which occurs during use.

While I have shown a particular embodiment of my invention, it will be understood, of course, that I do not wish to be limited thereto since many modifications may be made and I therefore contemplate the appended claims to cover any such modifications as fall within the true spirit and scope of my invention.

I claim:

1. A toilet comb comprising an elongated back having a longitudinal recess therein, a companion piece for said
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back received in said recess flush therewith, said back and piece each having a longitudinal groove and a longitudinal rabbet parallel thereto which, between them, define a longitudinal rib, the said rabbet being at that edge of the back from which the teeth of the comb protrude and said groove being inwardly of said rabbet, the rib of each of said piece and back meeting at the medial plane of the comb, and said ribs each having a plurality of spaced semi-cylindrical notches in confronting relation together forming cylindrical bores, and a plurality of teeth each having a cylindrical neck received in an individual bore for rotational support with respect thereto.

2. A toilet comb in accordance with claim 1 further characterized in that said back is provided at each extreme end with a single, non-revolvable tooth for protecting the endmost of the revolvable teeth.

3. A toilet comb comprising an elongated back having a longitudinally-extending rectangular recess in one surface entering one edge thereof and including a floor and three side walls, the side walls being substantially perpendicular to the floor, an elongated companion piece adapted to fit said recess in flush relation with said surface, each of said recess and piece having a longitudinally-extending groove and a longitudinally-extending rabbet parallel thereto defining between them a pair of longitudinally extending, confronting, abutting ribs, each of the confronting surfaces of the ribs having a plurality of semi-cylindrical notches together constituting cylindrical bores, a corresponding plurality of teeth supported for independent rotation in said notches, each tooth having a cylindrical necked portion for rotating fit in its individual bore and a head portion adjacent said necked portion received in said groove, and each tooth having a cylindrical portion on the opposite side of said necked portion for contact with the walls of the respective rabbets.

4. A toilet comb of the type having teeth which are individually revolvable by friction with the hair and individually replaceable when broken comprising an elongated body having a longitudinal notch therein, a wall of said notch having a plurality of openings providing bearings, a plurality of comb teeth of circular cross section including a cylindrical portion received in a respective opening for rotational support and a terminal enlargement adapted to bear against said wall at that end of the aperture adjacent said recess for preventing axial, outward, accidental displacement of a tooth through its bearing, a member interfitting with said recess for retaining said teeth axially and rotationally during normal use of the comb, and means common to said member and body for detachably securing said member with respect to said body whereby said member may be detached and replaced when inserting a broken tooth.

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