April 30, 1940. J. MUROS 2,198,832

SHAVING IMPLEMENT

Filed Nov. 10, 1937

Fig. 1

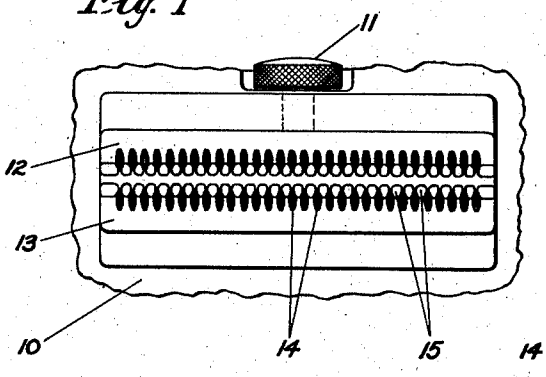


Fig. 4

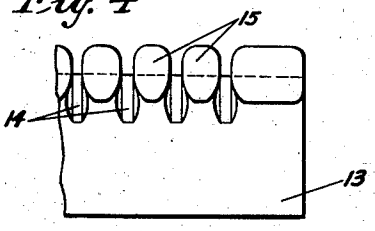


Fig. 5

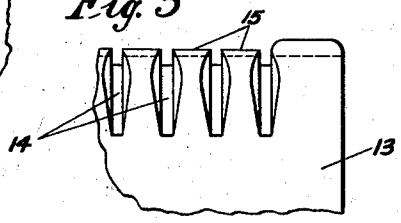


Fig. 2

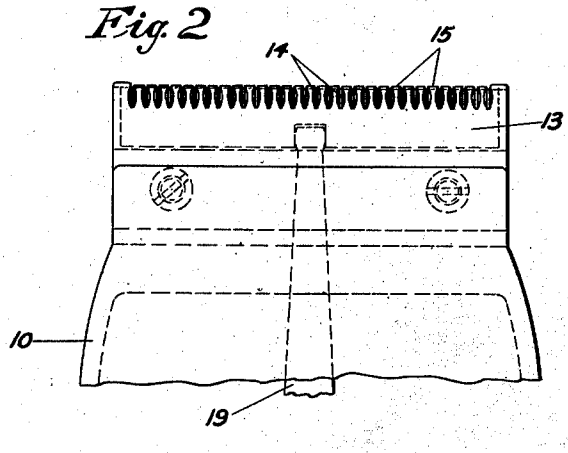


Fig. 6

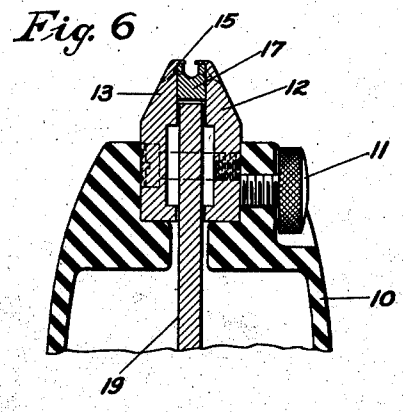
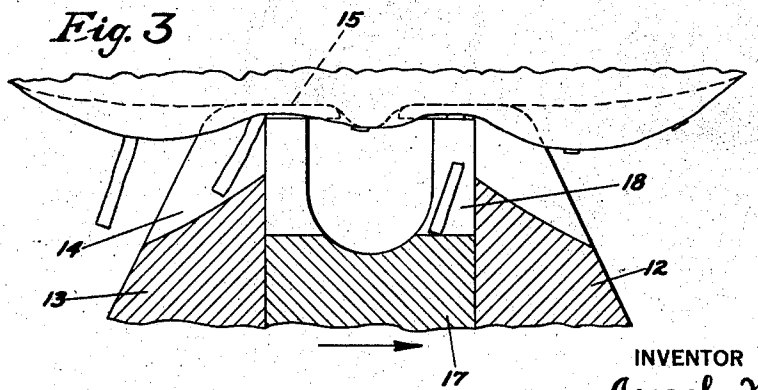


Fig. 3



INVENTOR

BY Joseph Muros

H. C. Conway.

ATTORNEY

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UNITED STATES PATENT OFFICE

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SHAVING IMPLEMENT

Joseph Muros, Cambridge, Mass., assignor to Gillette Safety Razor Company, Boston, Mass., a corporation of Delaware

Application November 10, 1937, Serial No. 173,883

2 Claims. (Cl. 30—43)

This invention relates to dry shaving implements of the type employing co-operating shearing members and consists in an implement having combined guard and shearing teeth of novel shape whereby shaving efficiency is improved and the implement made more comfortable upon the face of the user.

Most implements of the type under discussion include guard members or outer shear members which are equipped with transverse hair passages through which the hairs must pass in reaching the shaving zone as the implement is moved over the face. Heretofore these hair passages have been long as compared to the distance between adjacent hairs so that each passage may contain as many as five or six hairs which have not actually reached the shaving zone but which have been more or less forcibly brought into alignment in the passage. If the hairs grew in regular transverse rows they might pass through the hair passages without deflection or appreciable friction but this is not the practical condition encountered. Investigation indicates that the hairs grow without any definite arrangement and with an average spacing of .039". Few if any of these hairs can pass directly and without change in their natural position through the elongated hair passages of guards heretofore used. On the contrary, they are deflected by being bent into line with the passages or by the temporary displacement of the skin so that the movement of the implement across the face feels more or less harsh and uncomfortable. Moreover, the close shaving efficiency of the implement is impaired if the hairs reach the shaving zone in a bent-over condition since under these circumstances only the top section of the hair is sheared instead of its entire length from the skin surface. The difficulties above discussed are obviated in accordance with the present invention which contemplates a dry shaving implement having hair passages of an effective length less than the normal spacing of two hairs on the face of the user. Under such conditions, the hair passages will each normally contain a single hair with the result that friction and pulling are correspondingly reduced. In a preferred embodiment of my invention the shaving implement may have hair passages approximately .032" in length, the passages preferably being flared at both ends to improve the pick-up of hairs and having this major dimension which, as already noted, is appreciably less than the average distance between two hairs on the face of the user.

My invention is herein shown as embodied in an implement having stationary shearing teeth which overhang a shearing face disposed at right angles thereto and in this design the length of the hair passages corresponds to the length of the shearing edges of the teeth. For example, the teeth may have overhanging shearing edges of .032" and terminate in a side or wall surface curved divergently from the adjacent tooth. Also, the inner or overhanging ends of the teeth may be divergently curved to gather in hairs as the implement is moved in an approaching direction in respect to that side.

These and other features of the invention will be best understood and appreciated from the following description of a preferred embodiment thereof, selected for purposes of illustration and shown in the accompanying drawing, in which:

Fig. 1 is a fragmentary view of the implement as seen from the end on an enlarged scale;

Fig. 2 is a corresponding view in front elevation;

Fig. 3 is a view in cross-section on a still larger scale;

Fig. 4 is a fragmentary end view of one of the guard or outer shear members;

Fig. 5 is a corresponding fragmentary view in front elevation; and

Fig. 6 is a cross-sectional view corresponding to Fig. 2.

The implement comprises a casing 10 of Bakelite or other plastic composition moulded to form a hollow handle and also a housing for the operating motor of the implement. In its upper end it contains a socket for the metallic head of the implement and this is held in place by a clamping screw 11. The head comprises a pair of outer stationary shear members 12 and 13 held together in assembled relation by spacer blocks and transverse bolts. Each of the side members 12 and 13 has an inner vertical wall and an inwardly overhanging flange which is transversely slotted to form a series of stationary shearing teeth 15. The outer walls of the stationary shear members 12 and 13 converge in oppositely inclined faces and the slots 14 extend at an outward and downward inclination through these faces. The slots are also flared outwardly from substantially the plane of the inner shear faces of the members 12 and 13. The inner ends of the slots are also flared as best shown in Fig. 4, with the result that the parallel wall hair passage is reduced in length to substantially .032". Each passage extends inwardly and its walls overhang the inner vertical wall of the members 12 and 13. The outward flare of the passages be-

gins at points lying substantially in the plane of this inner vertical wall of the member 12 or 13.

The reciprocatory cutter member comprises an elongated bar 17 having at both longitudinal edges upstanding ribs shaped to fit into the right angles between the vertical shearing walls and the under side of the horizontal shearing teeth 15 of the outer members. The upstanding ribs of the cutter are slotted to form shearing teeth 18 which co-operate both with the shearing edges formed by the passages 14 in the vertical shearing walls and also with the horizontal shearing edges in the overhanging surface of the teeth 15. The shearing teeth 18 of the reciprocatory cutter are somewhat shorter than the overhanging teeth 15, as best shown in Fig. 3 and are thus completely guarded at their free ends from contact with the face of the user. The cutter 17 is reciprocated longitudinally by a lever 19 at high speed with an amplitude sufficient to carry the edges of its shearing teeth into shearing engagement with the adjacent teeth of the outer members 12 and 13.

As suggested in Fig. 3 when the implement is pressed against the face of the user the skin is indented opposite to the teeth 15 and bulges into the passages 14. It is apparent, however, that the hair passages are long enough to contain only one hair at a time, one being shown in Fig. 3 as approaching the shearing zone and the next nearest hair being shown as still outside the entrance of the hair passage into which it will be presently moved.

On account of the outward flare of the passages 14 the hair does not enter the parallel wall portion of the passage until it reaches the plane of the inner wall of the members 12 or 13. In other words the hair is confined in the passage only where it extends between the overhanging portions of the teeth 15. The hair may be sheared as it crosses the normal plane of contact between the outer shear member and the cutter 17 or it may be sheared beneath the teeth 15, depending on the position of the implement on the face and the opening of the shearing teeth. In any case the short length of the passage reduces if it does not eliminate frictional drag of the hair and substantial deflection so that the action of the implement is smooth and comfortable and its shearing close and efficient.

Having thus disclosed my invention, I claim as new and desire to secure by Letters Patent:

1. A dry shaving implement having an outer shear member presenting a series of overhanging shear teeth in its upper edge having parallel edges less than the average spacing between hairs in length, viz. .039", and an inner shear member having teeth of less length.

2. A dry shaving implement having inner vertical walls and overhanging horizontal flanges both slotted to present shearing edges, and a reciprocatory cutter cooperating with both of said shearing edges, the slots flaring outwardly from points substantially in the planes of said inner vertical walls and having parallel walls only within the overhanging flanges and not longer than the average spacing between hairs, viz. .039".

JOSEPH MUROS.