March 19, 1940. L. L. GRETERMAN 2,194,387

RAZOR

Filed March 8, 1937

FIG-1.

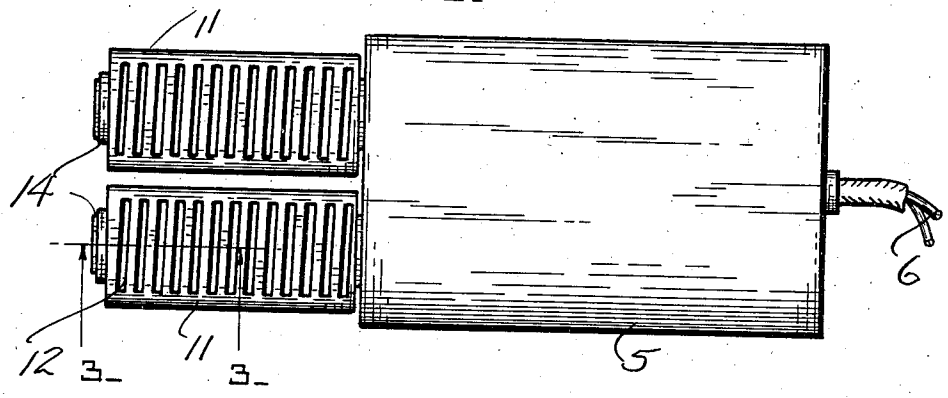



FIG-2.

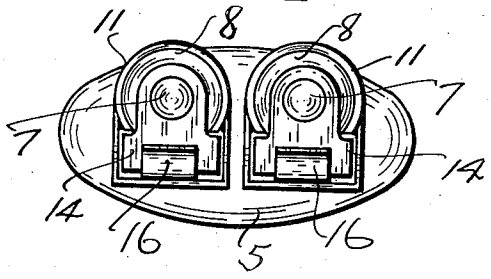



FIG-4.

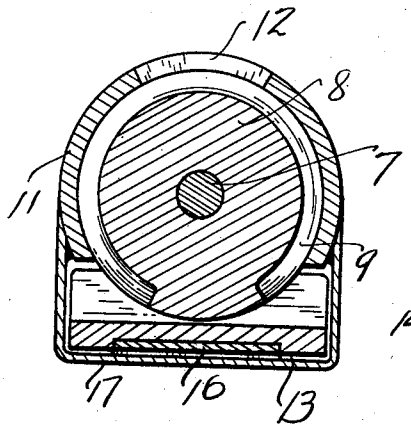
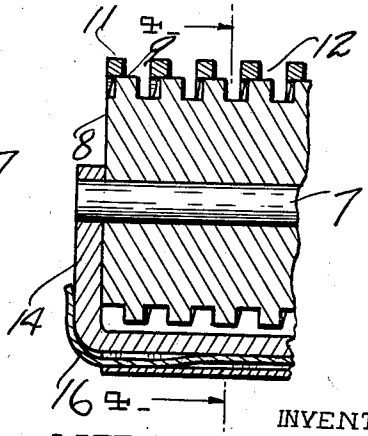



FIG-3.




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Patented Mar. 19, 1940 2,194,387

# UNITED STATES PATENT OFFICE

2,194,387

## RAZOR

Lambert L. Greterman, Santa Monica, Calif., assignor of fifty-one per cent to Robert A. Gaudy

Application March 8, 1937, Serial No. 129,735

1 Claim. (Cl. 30—43)

This invention relates to improvements in razors and has particular reference to that type of razor referred to as a "dry shaver."

The principal object of this invention is to produce a shaver which will give a clean cut, one which is simple and economical to manufacture, and a razor which will not pull the beard.

A further object is to produce a device of this character which will be self-adjusting and the ground parts will remain in intimate contact at all times.

Other objects and advantages will be apparent during the course of thhe following description.

In the accompanying drawing forming a part of this specification and in which like numerals are employed to designate like parts throughout the same:

Fig. 1 is a side elevation of my razor;

Fig. 2 is an end elevation thereof;

Fig. 3 is a cross sectional view taken on the line 3—3 of Fig. 1; and

Fig. 4 is a cross sectional view taken on the line 4—4 of Fig. 3.

In the accompanying drawing wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 5 designates a motor casing, providing a handle for my razor, with flat ends and of cross sectional oval shape, so that it can be firmly gripped, as will be apparent upon inspection of Figure 2, and suitably mounted within the casing is an electric motor having connected thereto, conductor wires 6 extending through one end of the casing.

The motor drives a pair of parallel shafts 7 extending through the opposite or outer end of the casing, and each of the shafts has secured thereto a rotor 8 provided with spirally arranged cross sectional square threads 9. Surrounding each rotor is a housing 11 including an arcuate portion fittingly receiving the rotor therein, and the arcuate portion is provided with parallel slots 12, disposed at an inclined angle to the longitudinal axis of the housing, to substantially follow the curvature of the threads 9 for cooperation therewith upon rotation of the rotor to provide a shearing action.

Each shaft is provided with a supporting frame 14 secured to and extending from the casing and the outer end portion of the frame is bent at right angles upon itself for disposal parallel with the outer end of the casing to provide an abutment for the outer end of the rotor. The bent portion of the frame 14 has a bearing opening therein within which is journaled the outer end of the shaft, as clearly shown in Figure 3.

In order to urge the rotor in intimate contact with the slotted surface of the housing 11, I provide a slot 13 in the frame 14 and within which is mounted a leaf spring 16 for disposal between the frame 14 and the adjacent flat wall 17 of the housing 11. The spring 16 has a bent outer end disposed in engagement with the outer portion of the frame 14, as clearly shown in Figure 3.

The result of this construction is that when the motor is turned on, the rotors 8 will be revolved within the housings; and as the square threads in rotating pass the slots 12, it will be understood that a clipping action will take place. By providing the slight pressure against the rotor, as previously set forth, it will be evident that the parts will always be maintained in intimate contact, thus assuring an even clipping operation, in counter-distinction to the pulling of a hair when a biting action takes place instead of a shearing action.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same and that various changes relative to the material, size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

Having thus described my invention, I claim:

An electric razor comprising a casing providing a handle having flat ends and being of cross sectional oval shape, supporting frames secured to and extending from one end of the casing and having their outer end portions bent at right angles upon themselves for disposal parallel with said end of the casing, said bent ends having bearing openings therein, shafts mounted for rotation within said casing and extending through said end thereof, with the outer ends of the shafts journaled in the bearing openings, rotors secured to the shafts and having spirally arranged threads thereon, housings for the rotors and including arcuate portions fittingly receiving the rotors, said arcuate portions being provided with parallel slots inclined to substantially follow the curvature of the threads for cooperation therewith to provide a shearing action, said supporting frames each having a slot therein, leaf springs seated in the slots of the frames for disposal between the housings and the frames for urging the rotors in contact with the slotted portions of the housings and means within the casing for driving said shafts.

LAMBERT L. GRETERMAN.