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Dec. 23, 1941.

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ELECTRIC DRY SHAVER Filed Aug. 14, 1939

Fig. 1 2 0 0 - 19/2a

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# UNITED STATES PATENT OFFICE

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Application August 14, 1939, Serial No. 289,942

2 Claims. (Cl. 30-43)

An object of this invention is to provide a dry shaver which shall be of simple construction and therefore of inexpensive manufacture, and yet » which will prove thoroughly practical and efficient in use.

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Another object of the invention is to provide a shaver that is easily handled and will give a clean shave which is not possible with the present day electric shavers.

A feature of the invention is the novel con- 10 struction and arrangement of the device to permit the drawing of the hair away from the cutter, up through a channel and into a receptacle located within the device by fan means above the cutter.

An advantage of the invention is the novel rounded contour of the device which permits the user to contact every possible concave of the face and body and which permits the cutting of hair

tion 5 in which is located the motor 6 that is held in place by the frame 7 held fixed to the housing I by bolts I and the lower section I provides for a vacuum chamber 10 and a hair receptacle if that surrounds the vacuum chamber 13.

Motor 6 is provided with a long shaft 12 that extends downwardly through the lower section 9 and is provided with left hand threads 13 upon which is mounted at the end thereof a cutter 14. Brushes 15 are shown which are set in the upper section **5** and rest against the commutator 16 which are of the usual construction.

To cool the motor a fan 17 is provided that 15 is mounted on the motor shaft 12 at the bottom of the upper section 5 and draws air through the vent hole 18 forcing it around the motor and out the holes 19 of the cover 2.

A main bearing is shown at 29 that is centrally

in any direction.

The invention may have a variety of applications and certain of the features of construction may be embodied in a variety of structures.

Other objects, advantages and features of the invention may appear from the accompanying 25 drawing, the subjoined detailed description and the appended claims.

The accompanying drawing illustrates the invention.

Figure 1 is a plan view of the invention.

Fig. 2 is a front elevation of the invention showing the location of the electric switch and streamlined contour and also shows the spherical cutting head.

Fig. 3 is a section on line 3-3 Fig. 1 showing 35 the interior construction of the shaver and location of the mechanism. Also shows method of holding electric cord in position a fragment of which is shown.

Fig. 4 is a diagrammatic fragmental developed 40 fiat view of the spherical head, showing arrangement of the various combinations of cutting edges.

located in the housing I. 20

To draw the hair from the cutter head 3 and the cutter 14 up through the vacuum chamber 10, a vacuum fan 21 mounted on shaft 12 is provided that also forces the hair through the hole 22 into the receptacle 11 where it is removed by the operator when desired by opening the door 4.

The door 4 is so constructed to fit snugly in place and is provided with a hinge 23, vent hole 24 and a spring clip 25 which is of the usual 30 construction.

As shown in Fig. 3 of the drawing the cutter head **1** is so constructed and arranged to fit snugly in the lower section as at 26 and is removably held in place by the screws 27. This head is of spherical shape and is provided with a plurality of slots 28 of different lengths and holes 23 of different sizes so spaced as shown in Figs. 2 and 4 of the drawing to permit a clean and close shave due to the user being able to contact every possible concave of the face and body.

The cutter 14 is provided with blades 39 con-

Fig. 5 is a plan view of the cutter. Fig. 6 is a front elevation of Fig. 5.

Fig. 7 shows another form and construction of a cutting head that may be attached to the invention as shown.

Fig. 8 is another form of construction showing method of shaft drive and connection to the 50 cutter from the motor.

The invention comprises a housing 1, cover 2 and a spherical cutting head 3 and a door 4 that may be made of aluminum, Bakelite or the like. The housing I is divided into an upper sec- 55 screws 2a,

structed as shown in the drawing and they set 45 flush in the cutter head and will automatically keep themselves sharpened.

The electric switch 31 is located in the center of the housing I, this gives better control of the motor and 32 indicates the electric cord. Motor • being of high speed always turns to the right and the cutter 14 is screwed left hand on to the shaft 12; this construction keeps the cutter always in its correct position for cutting. The cover 2 is fixed to the housing i by

Referring to Fig. 7 a modified cutting head 33 is shown in which is mounted a cutter 34.

Referring to Fig. 8 shows a motor shaft 35 being threaded at its end **36** that permits the end **37** of shaft **38** to screw into being of left hand 5 thread and a square shoulder 39 is provided upon which is mounted the fan 40.

The shaft 38 is provided at its lower end with a pin 41 that is slidably mounted in the slot 42 of the cutter 43 and a cushion spring 44 is 10 mounted in the cutter 43 and acts against the shaft 38 as shown.

I claim:

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**1.** An electric shaver of the character set forth comprising a housing provided with a cover at 15 one end having a plurality of holes therein and a spherical cutting head at its other end; said cutting head having a plurality of slots and holes therein arranged over the surface to contact every possible concave of the face and body; 20 said housing being divided into two sections: a motor mounted in one section and having an armature shaft extending into the other section having a cutter mounted thereon provided with a plurality of cutting blades constructed to cut 25 over the area of said slots and holes; a vacuum

2,267,626

chamber and a receptacle surrounding the vacuum chamber in said section and fan means to remove hair from the vacuum chamber into the receptacle.

2. In an electric shaver of the character set forth comprising a housing provided with a cover at one end having a plurality of holes therein and a spherical cutting head at its other end; said cutting head having a plurality of slots and holes therein of different lengths and sizes so spaced to permit a clean and close shave; said housing being provided with two sections; brushes set in one section and resting against a commutator; a motor mounted in said section and having an armature shaft extending into the other section having a cutter provided with a plurality of blades mounted thereon; fan means that draws outside air through a vent hole and forces it around the motor and out said cover top holes to cool said motor; a vacuum chamber and a receptacle that surrounds said vacuum chamber and a connecting passage for passage of air and hair from the vacuum chamber into the receptacle and means comprising a door to remove said hair from the receptacle.

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