March 18, 1941. J. MUROS 2,235,326

SHAVING OR CUTTING DEVICE

Filed June 26, 1940

Fig. 1

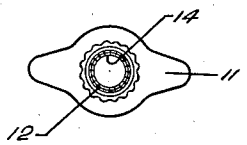


Fig. 2

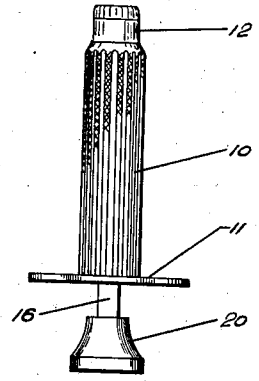


Fig. 3

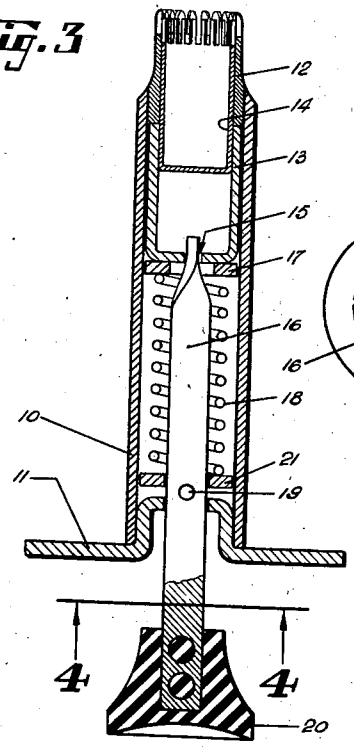


Fig. 4

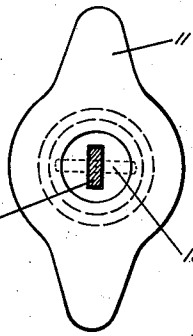
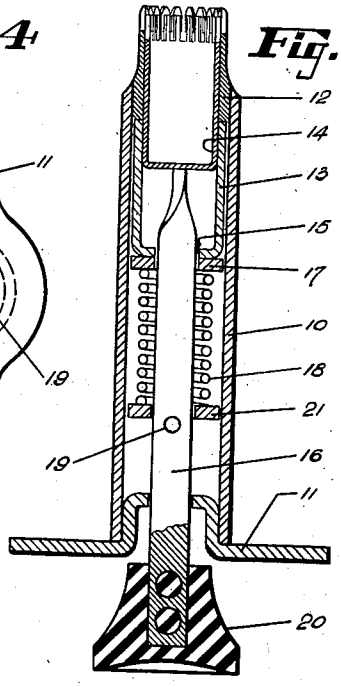


Fig. 5



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SHAVING OR CUTTING DEVICE

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Application June 26, 1940, Serial No. 342,531

4 Claims. (Cl. 30—207)

This invention relates to shaving or cutting devices employing concentric shaving members for removing hair in concavities such as the nostrils or ears. The invention comprises a manually operated device of this type improved in structure, efficiency and convenience of operation as compared to cutting devices heretofore available.

An important feature of the invention, contributing to simplicity of structure and compactness in design, consists in a pair of telescopically arranged and relatively rotatable holding members in one of which is mounted a stationary toothed cutter and in the other of which is mounted the co-operating movable cutter. As herein shown the outer tubular member serves as the housing for the device as a whole as well as the holder for the stationary cutter. Within the housing thus provided is mounted a freely rotatable sleeve or thimble which serves as a carrier for the movable cutter.

The required rotary shearing movement between the two cutters is provided by mechanism constituting another feature of the invention. As herein shown the sleeve or thimble in which the inner cutter is mounted is provided with a transverse slot in its bottom and in this is inserted the inner end of a plunger having a spiral section therein. When, therefore, the plunger is moved longitudinally its spiral section drives the rotary sleeve or holder in an oscillatory manner through an arc of any designed amplitude, for example approximately 90° as herein shown. A compression spring housed within the body of the device is provided for holding the plunger normally in its outermost position and this may be operated or depressed by the user in opposition to the compression spring for rotating the inner cutter.

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 an end view of the device;

Fig. 2 is a view in side elevation;

Fig. 3 is a sectional view on an enlarged scale showing the parts of the device in their initial position;

Fig. 4 is a plan view partly in section on the line 4—4 of Fig. 3; and

Fig. 5 is a view in elevation like Fig. 3 except that it shows the plunger in its inner or elevated position.

As already intimated the device comprises an outer tubular member 10 fluted for ornamentation on its sides and reduced at a bevel at its upper end. Pressed into the top of the body 10 is a stationary tubular cutter 12 provided in its upper edge with a series of longitudinal slots forming teeth with shearing edges. The stationary cutter as is apparent from Figs. 3 and 5 projects substantially beyond the end of the tubular member 10. The lower edge of the stationary cutter 12 forms an annular shoulder within the casing 10. Below this shoulder is rotatably mounted a thimble 13 embracing within its upper portion the rotatable or oscillatory tubular cutter 14 also slotted in its upper edge to provide shearing teeth.

The lower wall or bottom of the thimble 13 is provided with a straight transverse slot 15 extending across the longitudinal axis of the thimble and providing by its edges a follower or following surface for a spiral actuator. Through this slot 15 and into the chamber provided by the thimble 13 below the bottom of the cutter 14 projects the upper end of the actuator which as herein shown may comprise a straight flat bar having its upper end twisted into the configuration of a 90° spiral.

The lower end of the tubular member 10 is closed by a transverse finger piece 11 having an upwardly projecting hub of such diameter as to make a forcing fit with the member 10. In the top wall of the hub is provided a transverse slot through which passes the body of the plunger 16 and by which it is prevented from twisting. As shown in Fig. 4 the plunger is encircled by a compression spring 18 which bears at its upper end against a washer 17 perforated to permit the free passage of the spiral section of the plunger and at its lower end against a washer 21 having a straight transverse slot therein for the plunger. A pin 19 is set transversely in the plunger between the lower washer 21 and the top of the boss of the finger piece. This pin prevents removal of the plunger from the device and also acts to carry the washer 21 as the plunger is moved inwardly or upwardly so that the spring 18 is compressed from expanded condition as shown in Fig. 3 to contracted condition as shown in Fig. 5. A thumb knob 20 is provided upon the outer end of the plunger 16.

In operation the user engages the knob 20 with his thumb and the finger piece 11 with two fingers. By pressure on the knob 20 the plunger is forced inwardly to the position shown in Fig. 5 against the compression of the spring 18 and in this movement the thimble 13 and the cutter 14

are rotated 90° in a counter-clockwise direction. When the pressure on the knob 20 is relaxed the spring acts to force the plunger downwardly or outwardly and the cutter 14 is rotated in a clockwise direction back to its initial position. This action may be kept up at a rapid rate by the user so that the cutters are maintained in a state of shearing movement and cutting or trimming is effected wherever the operative end of the device is directed and without tendency to pull the end of the cutter to one side or the other.

The bevelled end of the tubular member 10 acts to some extent as a gauge to prevent the too deep insertion of the reduced projecting cutter 12 into a body cavity.

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

1. A cutting implement of the class described including concentric relatively rotatable shearing members, one of which has an end provided with a straight transverse slot, and a spiral actuator movable through said slot in rotary driving engagement therewith.

2. A cutting implement of the class described including concentric shearing members, a rotatable thimble carrying one of said members, providing a chamber beneath it and having a slot in its lower end extending transversely across the axis of rotation of the thimble, and a plunger having a spiral configuration movable through said slot and into the chamber provided by the thimble while in rotary driving engagement with the edges of the slot.

3. A cutting implement of the class described comprising a tubular member closed at one end and provided therein with a straight slot, a tubular cutter fixed in the other end of said member, a plunger having a flat sided section guided in said straight slot and a spiral inner end section, and a rotary thimble mounted within said member and having a slot extending transversely across its longitudinal axis to receive the spiral section of the plunger in rotary driving engagement.

4. A cutting implement comprising an outer tubular cutter, an inner rotary tubular cutter having a transverse following surface, and a reciprocatory plunger held against rotation and having a spiral driving surface co-operating with the following surface of the rotary cutter to rotate the same when the plunger is moved longitudinally in the implement.

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