July 5, 1949. J. H. ELINSKY 2,474,935

BRAKE MECHANISM

Filed Feb. 20, 1946

FIG 1

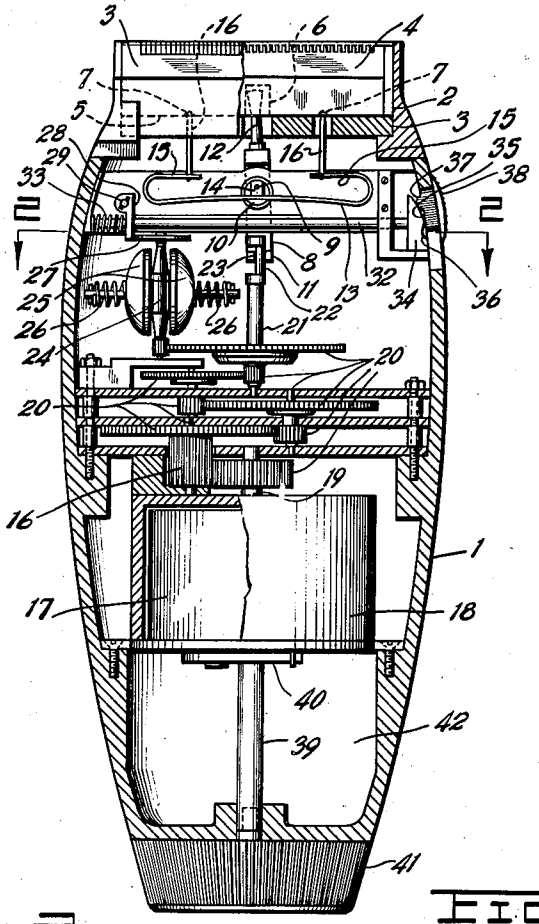


FIG 2

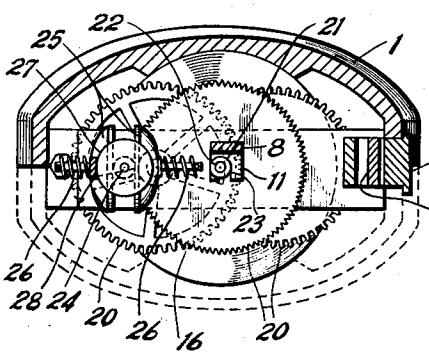
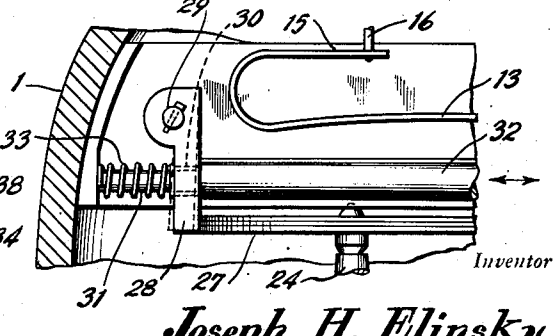


FIG 3



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BRAKE MECHANISM

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1 Claim. (Cl. 188—166)

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This invention relates to new and useful improvements and structural refinements in mechanical shavers, and the principal object of the invention is to provide a device of the character herein described in which the shearing blade is actuated by spring driven clockwork means.

A further object of the invention is to provide a mechanical shaver which, by virtue of its construction as outlined in the preceding paragraph, is particularly suitable for use by persons wishing to use the same in rural areas and other locations which are not equipped with electric current.

Another object of the invention is to provide a mechanical shaver which may be easily wound and which will operate for considerable periods without rewinding.

An additional object of the invention is to provide a mechanical shaver which is of simple construction and which lends itself readily to large scale manufacture.

A still further object of the invention is to provide a mechanical shaver which is of pleasing appearance.

With the above more important objects in view, and such other objects as may become apparent as this specification proceeds, the invention consists essentially of the arrangement and construction of parts as illustrated in the accompanying drawings, in which:

Figure 1 is a central, cross-sectional view of the invention;

Figure 2 is a cross-sectional view thereof, taken in the plane of the line 2—2 in Figure 1, and

Figure 3 is an enlarged, fragmentary view of a portion of the clockwork mechanism.

Like characters of reference are used to designate like parts in the specification and throughout the several views.

Referring now to the accompanying drawings in detail, the invention consists of an elongated housing 1, assuming the form essentially as shown and adapted to fit conveniently into the palm of the user's hand. One end of the housing is formed with a channel-like socket 2, in which is removably positioned a conventional shearing head 3, provided with a transversely reciprocable shearing blade 4.

This blade is formed in the inner surface 5 thereof with a central recess 6, and with a pair of blind apertures 7.

A rocker arm 8 is pivoted medially of its length by means of the fulcrum pin 9 to the housing 1, this pin being stationary, and provided at one end thereof with an anchor plate 10, the purpose

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of which will be hereinafter more fully described.

One end of the arm 8 is turned to form an angulated portion 11, while the remaining end of the arm carries an extension finger 12. The free extremity of the latter engages the afore-mentioned recess 6, as will be clearly apparent from the accompanying drawings.

A resilient, transversely extending equalizing bar 13 is anchored centrally of its length in a slot 14 formed in the aforesaid plate 10, the ends of this bar being angulated to provide the inturned portions 15. An equalizing pin 15', formed with a suitable shoulder at one end thereof to bear against the portion 15, is positioned on each of said shoulders, and the remaining ends of the pins are urged by the resiliency of the bar 13 into the apertures 7.

Positioned medially the length of the housing 1 is a clockwork mechanism designated by the general reference character 16, the same consisting of a spiral spring 17, enclosed in a drum 18, the spring being positioned on a mainshaft 19 and adapted to rotate the same.

The drive from the shaft 19 is taken through a plurality of step-up gears and intermediate shafts designated collectively by the reference numeral 20, the latter being conveniently arranged in the housing as is best illustrated in the accompanying Figures 1 and 2.

A driven shaft 21 is formed with an eccentrically disposed portion 22 constituting a cam, which in turn, engages a slot 23 formed in the aforementioned portion 11 of the rocker arm 8.

A governor shaft 24 is geared to the driven shaft 21, and a centrifugal governor, consisting of a pair of weights 25 slidable against the springs 26, is positioned on the shaft 24 as will be clearly apparent from the accompanying drawings.

The shaft 24 also carries a brake disc 27, with which is engageable a brake shoe 28. The latter is suitably pivoted at 29 to the housing 1 and is provided with an aperture 30 through which a reduced portion 31 of a control pin 32 freely passes. This pin is longitudinally slidable and is journalled in the housing, the pin also carrying a compression spring 33 which normally urges the shoe 28 against the periphery of the brake disc 27.

Positioned at the end of the pin 32 is a keeper 34 provided with a cam surface, consisting of an inclined portion 35 and a depression 36. The latter is adapted to receive a lug 37 projecting from the inner surface of a control button 38,

which in turn, is slidable on one side of the housing 1.

The aforementioned spring drum 18 is connected to a winding shaft 39, disposed longitudinally in the housing, and a conventional pawl and ratchet mechanism 40 is employed to facilitate the winding of the spring 17. One end of the shaft 39 protrudes through the housing and carries a knurled knob 41, the latter constituting a continuation of the housing, as will be clearly apparent from the accompanying drawings.

Having thus described the construction of the invention, the modus operandi thereof will now be presented.

The spring 17 is wound by turning the knob 41, during which time, the button 38 and the associated keeper 34 should be in the position as shown in the accompanying Figure 1, with the shoe 28 engaging the disc 27 to prevent rotation of the mechanism 16.

After the spring has been wound, the button 38 is pushed so that the lug 37 thereof engages the depression 36, while the passage of the lug along the cam surface of the portion 35 will slide the pin 32 against the spring 33, thereby disengaging the shoe 28 from the disc 27.

The mechanism 16 will now rotate and the rocker arm 8 will impart a reciprocating movement to the blade 4. It will be noted that once the lug 37 is seated in the depression 36, it is not necessary to hold the button 38 in order to keep the shaver in operation.

The governor weights 25, in addition to regulating the rate of unwinding of the spring 17, will also act as a "flywheel" to assure even operation of the shearing blade.

While in the foregoing there has been shown and described the preferred embodiment of this invention it is to be understood that minor changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

What I claim as my invention is:

In a brake mechanism positioned in a housing formed with a slot in one side thereof and including a rotatable brake disc, brake actuating means comprising a brake shoe pivotally mounted at one end thereof in said housing and having its remaining end portion engageable with said disc, an intermediate portion of said shoe being formed with an aperture, an axially slidable control rod provided in said housing and having a diametrically reduced portion at one end thereof providing an annular shoulder and a shank, said shank extending through said aperture and said shoulder abutting said shoe, a guide provided in said housing adjacent said slot, a tapered block secured to said rod and slidably engaging said guide to prevent rotation of the rod, said block being substantially parallel to said slot and having a tapered end portion and a relatively thick portion formed with a depression constituting a keeper seat, said block being provided with a cam surface extending from its tapered end to said seat, a control button slidable in said slot and provided with an inwardly projecting lug engageable with said cam surface and with said seat, and a compression spring positioned on said shank and engaging said shoe for simultaneously urging the shoe toward said disc and said block toward the lug on said button.

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