Oct. 26, 1937. S. BYLICKI 2,097,058

APPARATUS FOR WHETTING LITTLE SHAVING KNIVES

Filed Sept. 8, 1934

Fig. 1.

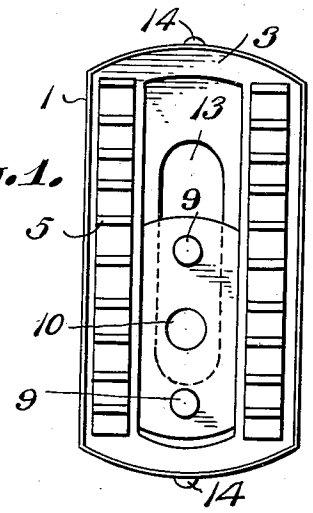


Fig. 2.

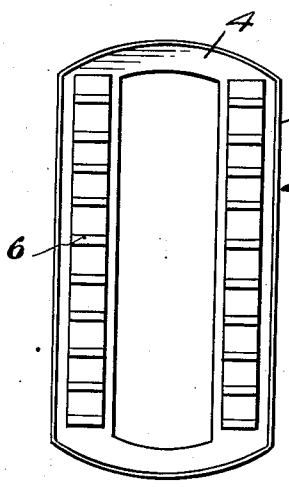


Fig. 3.

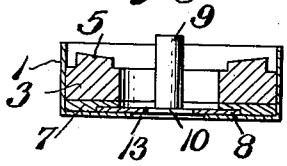


Fig. 4.

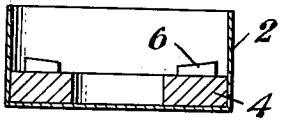


Fig. 5.

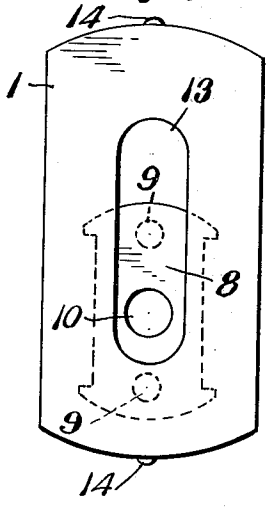
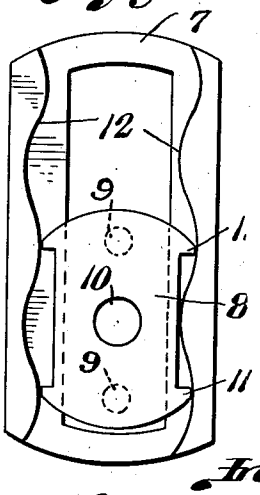


Fig. 6.



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APPARATUS FOR WHETTING LITTLE SHAVING-KNIVES

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Application September 8, 1934, Serial No. 743,286
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2 Claims. (Cl. 51—158)

The object of this invention is an apparatus for whetting little shaving-knives. This invention consists in the adaptation of whetstones, which are placed on both sides of the edge of the knife and have the form of little plates with projections. The projections of one little plate placed under the edge of the knife correspond to the intervals provided between the projections of the other little plate placed above the edge of the knife. The projections of both plates have inclined surfaces engaging the edge of the knife and forming an acute angle therewith. The little knife is moved by a forward-backward undulatory motion between the stones. Each of the projections of the stones functions as a separate whetstone, so that the time required for the purpose of whetting is reduced to a minimum. The above apparatus has very small dimensions; it is cheap, light, comfortable and simple in its operation, and owing to its non complicated mechanism it does not break easily.

In all apparatuses for whetting little shaving-knives, the angle of the reciprocal inflexion of the surface of the edge of the knife always depends upon the breadth of the knife, so that the correct whetting of knives is possible only if they are not worn out by use, while knives which are narrowed in consequence of frequent whetting can not be whetted well because the angle of the inflexion of the surface of their edge is almost straight (90°). This drawback has been eliminated in the apparatus constructed in accordance with this invention.

The drawing shows by way of example a preferred form of the inventive idea. Fig. 1 represents the lower part of the apparatus, viewed from above, Fig. 2 represents the upper part viewed from the bottom; Figs. 3 and 4 are sections along the lines 3—3 and 4—4 of Figs. 1 and 2. Fig. 5 represents the apparatus as viewed from the bottom and Fig. 6 represents the bottom of the slide valve together with the conducting arrangement.

This apparatus is a little box made from tin, artificial mass or a similar material, composed of two parts, to wit, the bottom 1 and the outside 2. Upon closing of the apparatus, the outside 2 falls upon the bottom 1. On the floor and on the outside of the box, there are placed enclosures 3 and 4 made from a material which is used for the whetting of knives, having the form of little frames supplied upon the surface of every longer side with several projections 5 and 6 the surfaces of which are inclined towards the long axle of the little wall.

When the box is closed, the projections 5 and 6 fit next to each other and the inclinations of their surfaces which engage the sides of the knife, form an acute angle therewith.

The height of the lateral little wall of the bottom 1 is such that the edge of that little wall touches, when the apparatus is closed without the little knife, the base of the enclosure 4, so that there is a space between the inclined surfaces of the projections 5, 6 and the base of the corresponding enclosure 3 or 4. The projections 5 and 6 are in this way protected against being rubbed at the bases 3 and 4 as well as against their destruction.

Between the bases of the bottom 1 and the enclosure 3 there is provided a slide valve 8 (Fig. 6) within the introducing device 7 for the purpose of placing the little knife. The slide valve 8 has two pegs 9 towering over the surface of the projections of the enclosure 3 upon which the apertures of the little knife are placed. The aperture 10 serves as a support for the finger when the slide valve is being pushed.

In order to give the slide valve an undulatory motion at the backward stroke, the projections 11 of the slide valve rest upon the lateral undulatory surfaces 12 of the introducing arrangement 7.

The base of the bottom 1 has also an elongated cut-out portion 13 disclosing the aperture 10 and making possible the motion of the slide valve.

Owing to the fact that at the cross motion of the little knife one edge thereof rises while the other one moves downward upon the inclined projections, which causes some changes in the relative inclination of the bottom 1 and the outside 2 of the little box, it is necessary that both parts of the apparatus, to wit the bottom 1 and the outside 2, can move freely side by side. The bottom 1 of the little box is therefore provided with two impressions 14 placed upon the long axle of the little box and resting upon the little front walls of the outside of the little box.

Owing to the fact that at the pushing of the slide valve in the direction of the long axle of the apparatus the little knife is being pushed also in the direction of the cross-axle of the apparatus upon the inclined surfaces of the projections 5 and 6 by an undulatory motion, the edge of every little knife, independently of the angle of the inclination of the surface of the edge can be whetted well. The breadth of the little knife, to wit the distance of its edge from the long axle of the little knife has no influence upon the effect of the whetting, as is the case with prior art devices.

This apparatus functions as follows:

After the opening of the box, the little knife is placed upon the towering pegs **9**, whereupon the bottom of the box is covered with the outside, and while the box is being kept in one hand, the slide valve **8** is pushed on both sides; the finger of the other hand should lean through the cut-out portion **13** upon the aperture **10** of the slide valve.

Owing to the fact that the pressure of the finger compresses simultaneously both of the enclosures **3** and **4** keeping the edge of the little knife and that the pressure is always produced in the middle of the little knife, the enclosures assume a position towards the surface of the edge and the velocity of whetting can be easily changed by the regulation of the pressure of the finger.

The slide valve can be provided, instead of the aperture **10**, with any suitable handle and especially with a composed grasp, which, after the opening, towers through the cutting out **13** of the box, making possible the pushing of the slide valve.

What is claimed is:

1. In a sharpening device for razor blades, the combination of a casing, opposing sharpening elements in said casing, having a plurality of projections along the longitudinal edges, the surfaces of said projections being inclined towards the longitudinal axis of said casing, an introductory element in said casing, a slide in said introductory element adapted to reciprocate a razor blade intermediate said opposing projections having inclined surfaces, a laterally undulating track for said slide in said introductory element whereby a zigzag motion is imparted to said slide and to said razor blade when reciprocated in a longitudinal direction, said casing comprising two halves, one of said halves being adapted to be inserted into the other half and having opposed projections engaging the walls of the other half, whereby the first-mentioned half is movable relatively to the other half around said projections to compensate for the changes in relative inclination between said razor blade and said casing due to the zig-zag movement.

2. In a sharpening device for razor blades, the combination of an elongated casing having a bottom half and a top half fitting over said bottom half, opposing sharpening elements in the two halves of said casing, said elements having a plurality of projections along the longitudinal edges, the surfaces of said projections being inclined towards the longitudinal axis of said casing, an introductory element in said bottom half, a slide in said introductory element adapted to reciprocate a razor blade intermediate said projections having inclined surfaces, the longitudinal sides of said introductory element having laterally undulating surfaces whereby a zig-zag motion is imparted to said slide and to said razor blade when reciprocated in a longitudinal direction, the bottom half being adapted to be inserted into the top half, said bottom half having opposed projections situated upon said longitudinal axis and pressing against the top half whereby said bottom half may be moved in said top half to a limited extent around its longitudinal axis and whereby the changes in relative inclination between said razor blade and said casing, halves, due to the zig-zag motion, are compensated.

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