Aug. 16, 1966 B. M. SCHRAMKO 3,266,198

RAZOR BLADE SHARPENER

Filed Aug. 6, 1964

Fig. 1

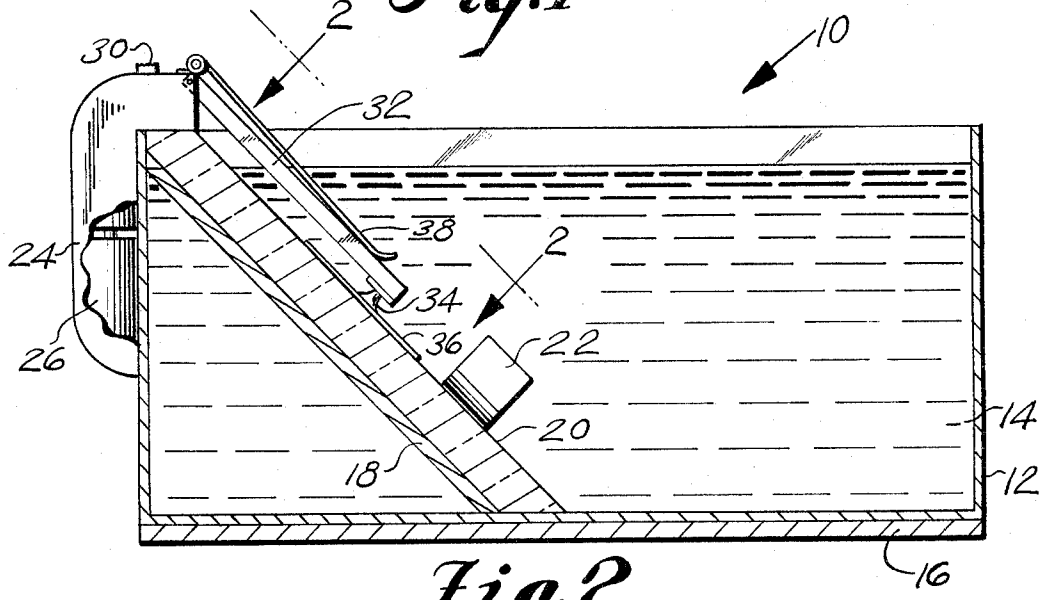


Fig. 2

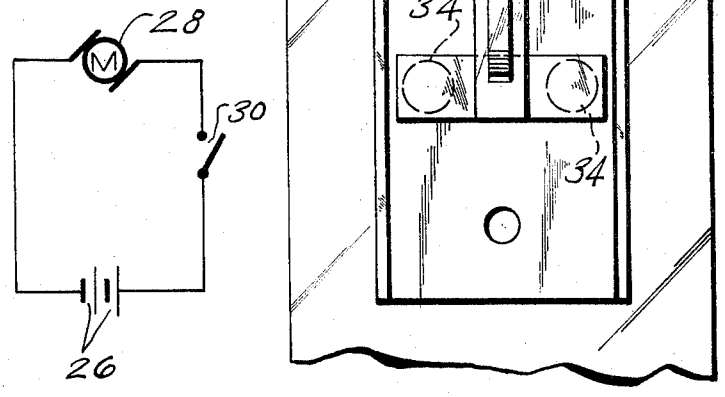
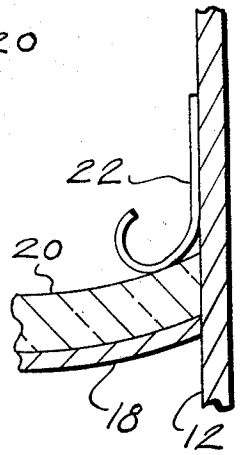


Fig. 3

Fig. 4



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RAZOR BLADE SHARPENER

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This invention relates to sharpening devices and more particularly to an apparatus for resharpening or honing razor blades and the like.

It is an object of the present invention to provide a razor blade sharpener which will allow the user to obtain higher efficiency from his razor blades, enabling the blade to be used for a longer period of time.

Another object of the present invention is to provide a razor blade sharpener which will be battery powered or electrically powered by motor means which will oscillate an arm to secure a razor blade within a tank of water or other solution to hone the razor blade to a fine edge.

A further object of the present invention is to provide a razor blade sharpener which will have a curved glass plate submerged beneath the liquid in order to hone the razor blade which will be held by suction cup or other suitable means to the arm.

A still further object of the present invention is to provide a razor blade sharpener which will have magnetic plate means secured to the container to securely hold the device upon a metal surface.

Other objects of the invention are to provide a razor blade sharpener bearing the above objects in mind which will be of simple construction, have a minimum number of parts, be inexpensive to manufacture and efficient in operation and use.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in conjunction with the accompanying drawing, in which:

FIGURE 1 is a side view of the present invention shown in section and in elevation;

FIGURE 2 is a view taken along the lines 2—2 of FIGURE 1;

FIGURE 3 is a schematic wiring diagram of the invention; and

FIGURE 4 is a side view of one of the glass hold-down spring clips of the invention.

Referring now more in detail to the drawing, a razor blade sharpener **10** made in accordance with the present invention is shown to include a hollow, rectangular tank **12** made of metal or other suitable material which contains a quantity of water, or oil, or the like. The water **14** or other solution contained within container **12** provides a means of producing a fine edge on a razor blade. A magnet plate **16** of rectangular configuration is fixedly secured to the lower extremity of container **12** and provides a means of securing razor blade sharpener **10** to a metallic surface in order to prevent it from moving. A metallic plate **18** is received within container **12** and is secured in an angular position to an end wall and to the base wall of the interior of container **12** and provides support means when arcuately curved glass **20** is springingly held and urged against plate **18** by means of a pair of spring clamps **22** which are fixedly secured to the side wall of container **12**. A housing **24** is fixedly secured to an end wall of container **12** and receives a pair of batteries **26** which provide a means for driving motor **28** which is in series with a switch **30**. Switch **30** provides a means for shutting razor blade sharpener **10** on or off as desired. An arm **32** pivotably secured within housing **24** is provided with a pair of spaced apart suction cups **34** which engage by differential in pressure a surface of razor blade **36** which is moved in a horizontal direction across the surface of glass **20** to hone the edges of razor blade **36**. A leaf spring **38** is fixedly secured at one end to the upper extremity of housing **24** and springingly urges against the lower extremity of arm **32** at its other end to provide the necessary pressure on razor blade **36** to effect a proper honing action within water **14**.

In use, arm **32** is lifted from within water **14** and razor blade **36** is urged against suction cups **34** to hold razor blade **36** to arm **32**. Arm **32** is then released in order that razor blade **36** may be submerged by the spring action of leaf spring **38**. Switch **30** is then turned to the on position and by conventional means arm **32** oscillates to sharpen razor blade **36** by means of glass **20** within water **14** of tank or container **12**.

It shall thus be recognized that when razor blade **36** is sufficiently honed by the oscillations of motor **28**, switch **30** is then pushed to the off position whereupon the arm **32** is lifted from within water **14** and the razor blade **36** disengaged from suction cups **34**.

It shall further be noted that the arcuate glass **20** submerged within water **14** is removable from the top of plate **18** by urging it from beneath the spring clips **22**. A new glass **20** may be placed in the same position, should the glass become broken, whereupon the sharpener may be placed into operation again in the same manner as that heretofore described.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

What I claim as new and desire to protect by Letters Patent of the United States is:

1. A razor blade sharpener comprising, in combination, a hollow, rectangular container, said container providing reservoir storage for water or other suitable solution for sharpening razor blades, a rectangular magnet plate carried by said container providing a means for securing said container to a metallic surface to prevent moving of said container while in operation, an angular metallic plate carried within said container providing resting means for an arcuately configurated glass which provides means for honing a razor blade, a pair of spring clips carried within said container providing means for securing said glass within said container, an elongated arm and an elongated leaf spring providing a means for holding said razor blade against said glass, and a battery and motor housing carried by said container providing a means for housing electrical components of said sharpener.

2. The combination according to claim 1 wherein said container is filled with water or other suitable solution to submerge said glass and said razor blade to be honed, and said glass is urged against said metal plate received within said water, and said metal plate is secured to an end wall and the base wall of said container to support said arcuately configurated glass, and said spring clips urge said glass against said metallic plate within said solution.

3. The combination according to claim 2 wherein said housing containing said batteries and said motor and associated mechanism is secured to an end wall adjacent said glass and said metallic plate received within said container and switch means within the upper extremity of said housing secured to said end wall of said container provides a means for switching said device on or off.

4. The combination according to claim 3 wherein said elongated arm is pivotably secured within said housing of said device, and said arm is provided with a pair of spaced apart suction cups at its lower extremity and said suction cups by means of differential in pressure secure

said razor blade to be sharpened to said arm and hold said razor blade when said arm is oscillated by said motor and said mechanism of said motor.

5. The combination according to claim 4 wherein the oscillating motion of said arm and said razor blade hones the edges of said razor blade beneath said water or other solution within said container.

6. The combination according to claim 5 wherein said elongated leaf spring is secured at the upper extremity of said housing secured to said end wall of said container and the lower end of said leaf spring springingly urges downward against said elongated arm to constantly urge said razor blade in contact with said glass within said water of said container.

7. The combination according to claim 6 wherein said pair of spring clips are each secured to one side wall of said container, and said spring clips springingly urge said glass against said plate within said container, and said glass is replaceable by urging said glass away from said spring clips.

8. The combination according to claim 7 wherein securement means for said sharpener apparatus against the metallic surface of ferrous nature comprises a rectangular magnet secured to the lower extremity of said container to prevent said container from moving when said device is in operation.

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