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SHARPENER FOR RAZOR BLADES

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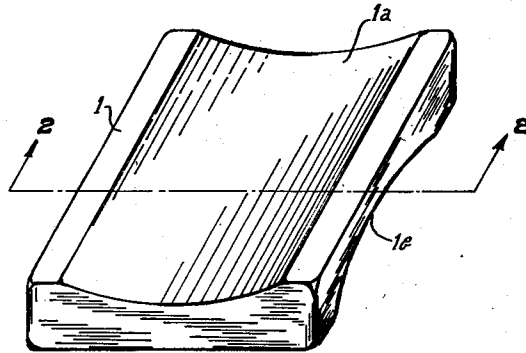


Fig. 1.



Fig. 2.

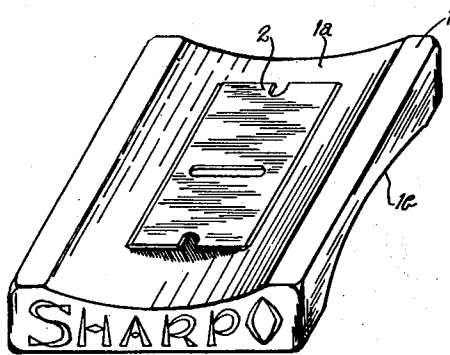


Fig. 3.

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SHARPENER FOR RAZOR BLADES

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4 Claims. (Cl. 51—211)

This invention relates to sharpeners for razor blades, and particularly to a novel combined hone and strop particularly adapted to sharpening safety razor blades, the present application being a refile of my earlier filed abandoned application Serial No. 740,736, filed August 21, 1934.

A general object of the invention is to provide a combined hone and strop which is simple, efficient, and low in cost.

A more specific object is to provide a combined hone and strop of simple form which consists of a single piece of vitreous material, upon the surface of which the razor blade is first honed and then stropped by easy manual manipulation not requiring skill or dexterity.

A further object is to provide a combined hone and strop which can easily be cleaned with soap and water to maintain same in a sanitary condition.

A further object is to provide a combined hone and strop which will be durable and not subject to damage by cutting or wearing by the razor blade when being sharpened.

A further object is to provide a combined hone and strop which does not require a holder, handle, or other attachment to manipulate the blade being sharpened, and which minimizes the chance of dulling the blade by improper positioning or misassembly.

A further object is to provide a combined hone and strop in integral, homogeneous form whose distribution of material is such as to provide the maximum of strength due to its form, and which is particularly adapted to production by casting or molding.

With the above and other objects in view, the invention further includes the novel features and details of construction to be hereinafter more fully described, illustrated in the accompanying drawing and pointed out in the appended claims.

In the drawing:

Fig. 1 shows in perspective view one embodiment of my invention.

Fig. 2 shows the same in vertical median cross section viewed as indicated by line 2—2 of Fig. 3.

Fig. 3 shows a double edged safety razor blade of common type in position of the sharpener ready for manipulation for honing or stropping.

Referring to the figures in detail, which show a preferred embodiment of the invention, in Fig. 1 the body 1 of the sharpener consists of a cast or moulded block of glass or other vitreous material with two concave cylindrical surfaces disposed in cross directions designated by 1a and

1b respectively, which comprise the working or sharpening surfaces. One of the working surfaces, as for example surface 1a, is smooth, being polished if desired, and is used for stropping the razor blade 2. The other surface 1b is preferably of the same form, but instead of being smooth, is rendered finely abrasive by etching, sand blasting, or omission of glazing. This abrasive surface is used for honing the razor.

The concave working surfaces are preferably of substantially cylindrical form but may represent other curvilinear surfaces such as those of a section of a hyperboloid or may be simply troughed surfaces sloping inwardly towards the middle. The main requirement is that the surfaces should present an even contact with the sharpened edge or edges of the razor blade.

For sharpening double edged safety razor blades, a cylindrical surface having a radius of curvature of two inches has been found to give good results, altho it is to be understood that considerable latitude in this respect is permissible.

The combined hone and strop according to the invention may be made of various materials, as for example glass, fine porcelain, metal or plastic compositions. The principal requirements are that the body shall have one surface hard enough to abrade the edge of the razor blade to sharpen same, while the other surface shall be smooth enough to produce little or no abrasion in order to produce a smooth edge on the razor blade. For best results, the material of the body should be highly non-corrodible or the surfaces should be rendered non-corrodible. Glass meets all requirements in a highly satisfactory manner. Die cast metal plated with chromium is also satisfactory.

The operation of resharpening a razor blade is as follows: The razor blade 2 is placed flat on the finely abrasive or honing surface so that the edges of the blade contact the straight elements of the surface. A light pressure is exerted on the razor blade with the finger, and the blade is moved back and forth across the surface with a rotary sliding motion. The blade is then turned over, and the operation repeated. This procedure is repeated until the blade is honed to the extent desired. The sharpener is then turned over to present the smooth stropping surface and the procedure repeated except that in stropping it is preferable to reciprocate the blade back and forth in the longitudinal direction. The effect of the stropping operation is to make smooth and even the edge of the razor

blade, as is well understood. It is of course understood that it is not necessary to hone the razor blade as frequently as it is stropped.

By disposing the cylindrical surfaces in cross directions the combined advantages of maximum strength and lightness due to form, of the most economical use of material, and of uniform distribution of material in the cast or molded body are obtained. The cross curved surfaces provide an arch effect in two directions, and the thin section is restricted to a spot in the center of the body, hence there is no thin section extending across the body to present a line of easy fracture. The advantages of the form of construction disclosed are of particular importance when the combined hone and strop are cast or molded of glass or other vitreous material. In the casting or molding of glass articles shrinkage strains and sinks occur between sections of varying thickness during cooling. By restricting the thin section to the center of the body, the strain of cooling is minimized. The practical advantage gained is that the thickness of the body may be less without danger of spoilage and breakage, thus saving material. Furthermore, the slight depressions or sinks are so placed as not to mar the working surfaces of the sharpener.

Without further analysis, it will be apparent that the construction shown provides an article superior as to strength, lightness, and facility in manufacture, and one which fulfills in highly satisfactory manner the manifold objects of the invention.

Having thus described the invention, what is claimed is:

1. A combined strop and hone for sharpening safety razor blades consisting of a cast or molded integral body of homogeneous vitreous material

provided with two curvilinear concave working surfaces located on opposite faces of the body and disposed in cross directions, one of said working surfaces being substantially non-abrasive, and constituting the strop surface, while the other surface is rendered finely abrasive and constitutes the hone surface.

2. As an article of manufacture, constituting a combined strop and hone for sharpening safety razor blades, an integral body of homogeneous vitreous material provided with two curvilinear concave working surfaces on opposite faces of the body and disposed in cross directions, one of said working surfaces being substantially non-abrasive, while the other working surface is rendered finely abrasive.

3. As an article of manufacture, a combined strop and hone for sharpening safety razor blades, comprising an integral molded body of homogeneous vitreous material formed with opposite curvilinear concave working surfaces on its opposite faces, said working surfaces being disposed with their axes substantially at right angles to each other to form an article of high strength due to form, of efficient disposition of material, and to minimize strains, sinks, cracks and other defects commonly associated with the molding or casting of vitreous articles.

4. As an article of manufacture, a combined strop and hone for sharpening safety razor blades, comprising an integral solid molded body of glass formed with opposite curvilinear concave working surfaces on its opposite faces, said working surfaces being disposed with their axes substantially at right angles to each other, one of said working surfaces being a sand-blasted abrasive surface.

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