

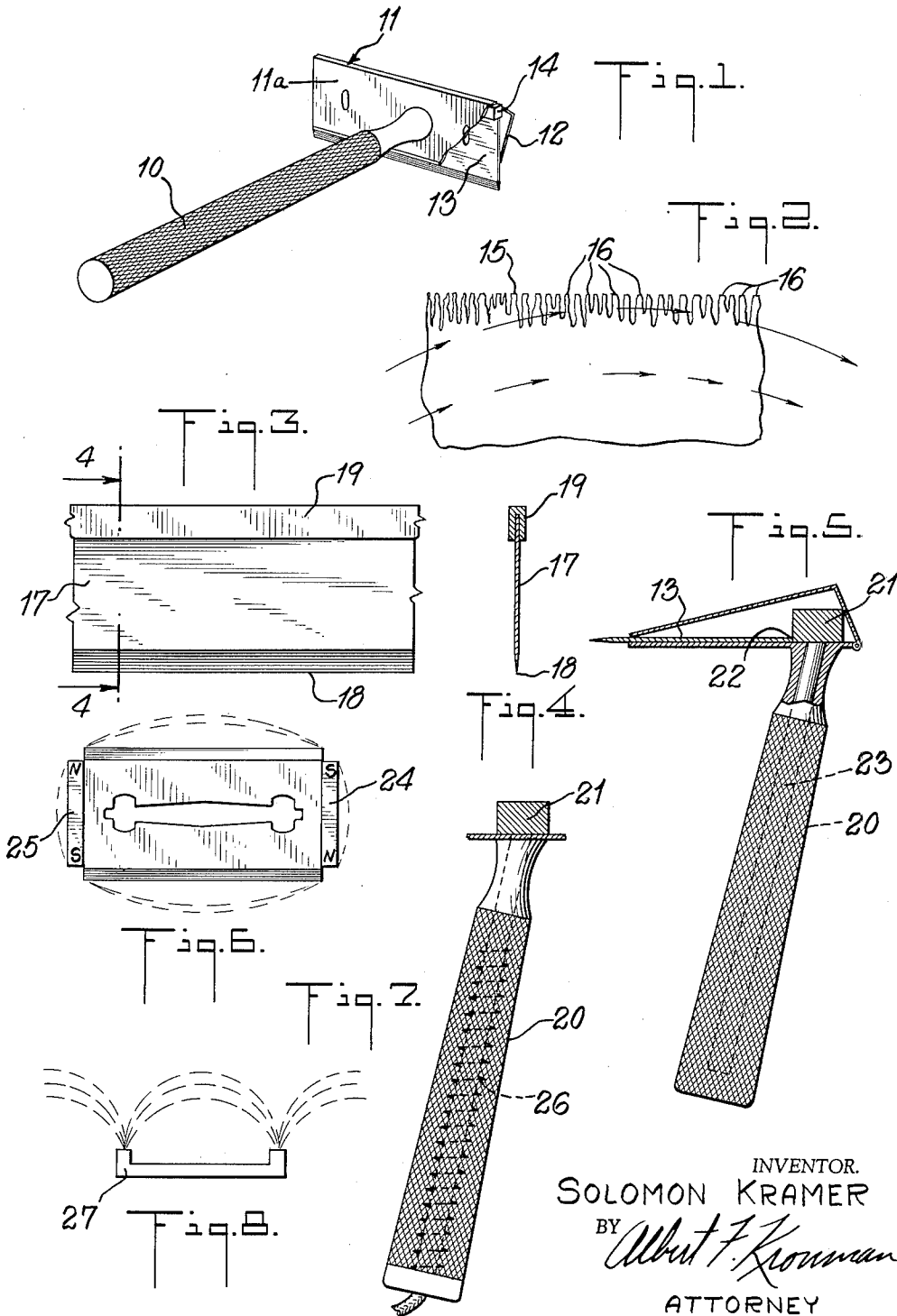
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MAGNETIC RAZORS

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1

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## MAGNETIC RAZORS

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This invention relates to razor blades, and specifically for magnetic means to improve the cutting properties thereof.

The use of magnets in conjunction with razors has been known in the art, but has been largely directed toward apparatus for holding razors and blades together. Certain sources have indicated that the use of magnets helps to sharpen a razor blade. However, an operable structure for maintaining the sharpness of a razor's cutting edge by magnetic means has not been taught to my knowledge.

Accordingly, it is an object of the present invention to combine magnetic means with razors for the purpose of maintaining the keenness of the cutting edges on razor blades.

Another object of the present invention is to increase the useful life of razor blades.

A further object of the present invention is to permit razors to be ground to a finer degree of sharpness without reducing their useful life.

Still another object of the present invention is to incorporate magnetic structures within a razor blade holder without increasing the size of the assembled device.

A feature of the present invention is its use of magnetic means adjacent the periphery of the razor blade.

Another feature of the present invention is its use of bar magnets disposed so as to direct the magnetic flux along the plane of the blade.

Another feature of the present invention is its use of booster magnets within the razor handle.

Still another feature of the present invention is its use of electro-magnetic means for maintaining blade sharpness.

The invention consists of the construction, combination and arrangement of parts, as herein illustrated, described and claimed.

In the accompanying drawings, forming a part hereof, is illustrated five forms of embodiment of the present invention, in which drawings similar reference characters designate corresponding parts and in which:

FIGURE 1 is a view in perspective of one complete embodiment of a razor blade holder in accordance with the present invention.

FIGURE 2 is a fragmentary top plan view, greatly enlarged, showing the edge of a razor blade as it might appear when viewed through a microscope.

FIGURE 3 is a fragmentary top plan view of a safety or straight razor blade showing the application of a magnet to the back thereof.

FIGURE 4 is a sectional view taken on line 4-4 in FIGURE 3.

FIGURE 5 is a view in side elevation, partly cut away, of a second embodiment of the present invention showing a handle, booster magnet.

FIGURE 6 is a top plan view of a razor blade having two cutting edges showing the application of magnetic means to the sides thereof.

FIGURE 7 is a fragmentary view of a razor blade holder showing a handle having an electro-magnet therein.

FIGURE 8 is a top plan view of a magnet suitable for use in conjunction with the present invention with the magnetic flux indicated in dashed lines.

Referring to the drawings, FIGURE 1 illustrates a somewhat conventional razor blade holder consisting of

2

a handle 10, a head 11, a blade support 11a, a razor blade clamping member 12, and a blade 13 carried within the head 11. A permanent bar magnet 14 is secured within the head 11 so that it bears against the rear edge of the blade 13. Referring to FIGURE 2, there is shown a representation of a razor blade under very high magnification. It will be seen that the cutting edge 15 is broken up by a large number of very fine slivers of steel 16 which are almost hairlike in size.

It is my present belief based upon observations, that, as long as the slivers 16 extend in the direction of the plane of the blade, that the blade will remain sharp. When the slivers 16 are bent the blade will become dull. Stropping of a razor has some tendency to straighten out the slivers 16 and has been used for this purpose. However, unskillful stropping may damage the cutting properties by curling the very thin blade edge.

I have found that by disposing a magnet along the edge of a razor blade the magnetic flux will describe a path lying in the plane of the blade, and that the slivers 16 of metal which extend from the cutting edge will straighten out and tend to remain in the plane of the blade. As a result, the razor blade remains sharper longer and it is possible to make the blades thinner because less supporting metal is required to keep the slivers 16 in the desired plane.

In the practice of my invention many forms are possible, such as those shown in FIGURES 3, 4, 5, 6 and 7. In each of these embodiments it is essential that the magnet be disposed along at least one peripheral edge of the razor blade.

Referring to FIGURES 3 and 4, there is shown a safety or straight razor blade 17 having a cutting edge 18, and a magnet 19 disposed along the back of said blade 17. The north and south poles of the magnet will lie at either end of the blade and the lines of magnetic flux will generally follow a path parallel with the plane of the blade.

FIGURE 5 illustrates the manner in which the handle 20 can be used to boost the magnetic power of a bar magnet 21 located along the rear edge 22 of the razor blade 13. In this embodiment, the handle 20 has incorporated therein a magnet 23 which is in contact with the bar magnet 21. The magnetic flux of the magnet 23 will increase the power of the bar magnet 21, thereby raising the effectiveness of the razor blade improvement.

Where double-edged razor blades are employed, as shown in FIGURE 6, bar magnets 24, 25 may be disposed along the blade at each end thereof, so that the magnetic lines of force will travel between the two magnets generally in the plane of the blade. The magnetic lines of force in the drawings have been indicated by dashed lines. In conjunction with FIGURE 6, it may be desirable to dispose the magnets so that their poles are alternately positioned with respect to each other as illustrated.

It is possible to increase the amount of magnetic field by incorporating an electro-magnet within the handle 20 of a razor blade holder, as illustrated in FIGURE 7. The electro-magnet 26 in this embodiment is used in conjunction with the bar magnet 21 as was explained in connection with FIGURE 5. A somewhat flattened U-shaped magnet, such as is shown in FIGURE 8, may be employed within the razor blade holder in accordance with the present invention, provided that the magnet 27 is disposed along the edge of the blade.

I have found that if the magnet is placed below or above the edge 15 of the razor blade it tends to pull the slivers of metal in the direction of the magnet, thereby causing the exact opposite result of that which is desired.

3

From the foregoing it will be seen that there has been provided magnetic means for improving the cutting performance of razor blades without substantially increasing the bulk of the razor blade holder, and with the possibility of using thinner razor blade material which can be given a sharper cutting edge without reducing the cutting life of the blade.

Having thus fully described the invention, what is claimed as new and desired to be secured by Letters Patent of the United States is:

A razor comprising a handle, a blade clamping member and blade supporting member, said blade supporting member adapted to support a blade having at least one

4

cutting margin and non cutting margins, magnetic means carried by the blade supporting member and disposed in contact with at least one of the non cutting margins of the blade whereby the magnetic flux from said magnetic means lies substantially in the plane of the blade during shaving.

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