

B. AMES.
SAFETY RAZOR.
APPLICATION FILED AUG. 8, 1917.

1,299,098.

Patented Apr. 1, 1919.

fig. 1.

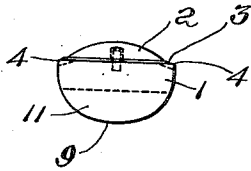


fig. 2.

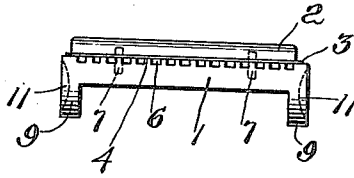


fig. 3.

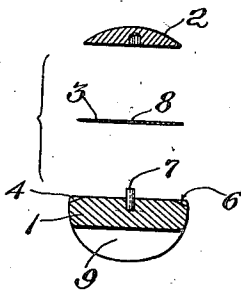


fig. 4.

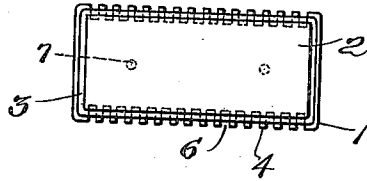


fig. 5.

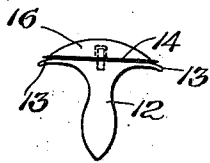
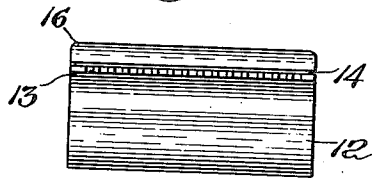


fig. 6.



Inventor:
Butler Ames,
by Robert Robert Kushman
His Attorneys.

UNITED STATES PATENT OFFICE.

BUTLER AMES, OF LOWELL, MASSACHUSETTS.

SAFETY-RAZOR.

1,299,098.

Specification of Letters Patent.

Patented Apr. 1, 1919.

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To all whom it may concern:

Be it known that I, BUTLER AMES, a citizen of the United States of America, and resident of Lowell, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Safety-Razors, of which the following is a specification.

This invention relates to safety razors and more particularly to safety razors of the type adapted to employ double-edged blades.

Safety razors of the general character of the subject-matter of the present application have usually comprised a guard member and a cap member disposed over the guard member for holding the blade in position between the two members. Screw means or some other mechanical mechanism has usually been employed for holding the parts together while the devices are in use. Such mechanism has involved a substantial increase in cost of manufacture, it has involved considerable inconvenience in use, and it has involved screw-threads and the like, which have rendered the device difficult to clean and therefore more or less unsanitary.

It is the object of the present invention to overcome the above difficulties and to produce a device which may be simply and cheaply constructed, which is exceedingly convenient in operation, requiring no manipulation of screws or other mechanism in attaching and detaching the parts to and from each other, and which is wholly sanitary. A further object of the invention is to produce a device of this character which is exceedingly compact and which is therefore especially adapted for use in traveling. To these ends I propose to hold the parts together magnetically and to employ a bar magnet along one or both sides of the cutting blade so that the same parts which support and guard the blade also function to hold the parts together during the operation of the razor, and I preferably accomplish these objects without employing any parts which project from the region of the blade a substantial distance in any direction.

In the accompanying drawings,—

Figure 1 is an end elevation of one embodiment of the invention;

Fig. 2 is a side elevation of the same embodiment of the invention;

Fig. 3 is a cross sectional view of the same

embodiment with the parts in detached relationship;

Fig. 4 is a top plan view of the same embodiment;

Fig. 5 is an end elevation of another embodiment of the invention; and

Fig. 6 is a side elevation of the embodiment shown in Fig. 5.

The embodiment of the invention illustrated in Figs. 1 to 4 comprises a guard member 1 and a cap member 2, the members being adapted to hold a blade 3 therebetween. The base member 1 is provided with a row of teeth 4 along at least one of its edges to guard the cutting edge of the blade, which is disposed over the teeth, and preferably the base member 1 is provided with a row of teeth 4 along each of its lateral edges as shown in the figures so as to guard both edges of a double-edged cutting blade such as illustrated. The teeth 4 are preferably produced by cutting narrow recesses 6 in the upper face of the member along the lateral edges, the recesses sloping outwardly as shown in Figs. 1 and 3, and being so spaced apart that the portions between the recesses constitute teeth adapted to guard the cutting edges of the blade in the well known manner. While the cooperating faces of the base member 1 and cap member 2 may have a transversely curved contour or other suitable contour, I preferably make these faces flat so as to hold the cutting blade in a flattened position therebetween. In order to prevent lateral movement of the parts when in operative position, pins 7 are arranged to extend through openings 8 in the blade into recesses in the base and cap members respectively, the pins being fixedly mounted in the openings of either the base member or the cap member, preferably in the base member as illustrated. At the opposite ends of the base member 1 are provided depending flanges 9 to serve as handles, these flanges preferably being provided with depressions 11 in their outer faces to receive the thumb and finger of the user.

In accordance with the objects of the present invention, one or both of the members 1 and 2 are permanently magnetized so as to constitute a bar magnet. While the members may be magnetized either transversely or longitudinally, they are preferably magnetized longitudinally so as to have poles of opposite polarity at their opposite ends.

In the preferred construction the base member 1 is alone magnetized so as to have poles of opposite polarity at its opposite ends, and the cap member 2 is merely formed of magnetic material so as to constitute an armature and be attracted by the base member 1. However, I may, if desired, magnetize the base and cap members in opposite directions, so that the north pole of the cap member will be disposed over the south pole of the base member and so that the south pole of the cap member will be disposed over the north pole of the base member. By making the base member 1 of considerable thickness throughout its entire length and width it can be sufficiently magnetized to hold the cap member and blade in operative position during use, that is, the parts are held in operative relationship so firmly by the magnetism of the base member that the blade and cap are not detached from the base in the normal operation of the device. In order to separate the parts for cleaning and other purposes, a sharp edged member may be inserted beneath the blade or cap at the end of the device so as to pry these parts away from the base.

The embodiment of the invention illustrated in Figs. 5 and 6 is similar to that shown in Figs. 1 and 2, except with respect to the formation of the base member. In the second embodiment the base member 12 is shaped so that its main body portion is disposed in a plane perpendicular to the plane of the blade instead of in a plane parallel to the plane of the blade as in the first embodiment. While the sides of the base member 12 may be made parallel, they are preferably shaped as shown, so that the base will more conveniently serve as a handle. The upper portion of the base is flared outwardly in each direction, and the flares are provided with teeth 13 to guard the two edges of the cutting blade 14, the flaring portions preferably being comparatively thin, and the slots between the teeth preferably passing entirely through the flaring portions. The cap member 16 is constructed and arranged in substantially the same manner as in the first embodiment.

By virtue of the peculiar shaping of the base member as shown in Figs. 5 and 6, the base when magnetized constitutes a bar magnet disposed in perpendicular relationship to the cap member 16. In this way the major portion of the magnetism passed through the cap member from the base member is directed through the thicker central portion of the cap member where the reluctance of the magnetic circuit is least, and by virtue of the comparatively thin laterally flaring portions of the base member a smaller amount of magnetic flux is directed through the lateral portions of the cap member which are thinner and which therefore have less

capacity for conducting the flux. In this way the flux from the bar magnet 12 is directed through the cap member in the most effective manner. And by virtue of the substantial area of cross section of the base member 12 afforded by its unique shape the base may be so magnetized that it will hold the blade and cap member in operative position during normal use of the device.

I claim:

1. A safety razor comprising a base member and a cap member separate from the base member, said members having cooperating faces of similar contour adapted to hold a cutting blade therebetween, the base member having teeth disposed along at least one side of its said face so as to guard the blade, and one of the members constituting a bar magnet adapted to attract the other member so as to hold the blade firmly in position between the members during operation of the razor.

2. A safety razor comprising a base member and a cap member unattached to the base member, said members having cooperating faces of similar contour adapted to hold a cutting blade therebetween, the base member having teeth disposed along opposite sides of its said face so as to guard both edges of a double-edged blade held between the two members, and one of the members constituting a bar magnet adapted to attract the other member so as to hold the blade firmly in position between the members during operation of the razor.

3. A safety razor comprising a bar magnet having a smooth face adapted to support a razor blade therealong and having teeth along at least one side of said face adapted to guard the cutting edge of a blade disposed on said face, and an armature unattached to the bar magnet adapted to fit over said face so as to hold a blade in operative position on the face, the bar magnet being so energized and the armature being so arranged that the attraction of the magnet for the armature holds the blade firmly in position during operation of the razor.

4. A safety razor comprising a bar magnet having a smooth face adapted to support a razor blade therealong and having teeth disposed along opposite sides of said face so as to guard both edges of a double-edged blade supported on the face, and an armature unattached to the bar magnet surmounting said face, the armature being relatively thick throughout its longitudinal central region and tapering transversely in each direction to relatively thin edges in the regions of the edges of the blade, and the bar magnet being so shaped and energized that the attraction of the magnet for the armature holds the blade firmly in position during operation of the razor.

5. A safety razor comprising a bar mag-

net having a face adapted to support a razor blade therealong and having teeth along at least one side of said face adapted to guard the cutting edge of a blade disposed on said face, and an armature unattached to the bar magnet adapted to fit over said face so as to hold a blade in operative position on the face, the bar magnet being so energized and the armature being so arranged that the

attraction of the magnet for the armature holds the blade firmly in position during operation of the razor, and handle means extending laterally from the bar magnet on the side opposite to said face.

Signed by me at Lowell, Massachusetts, this third day of July, 1917.

BUTLER AMES.