

J. A. OHLSSON.

RAZOR.

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1,044,906.

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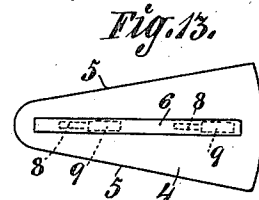
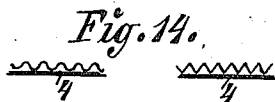
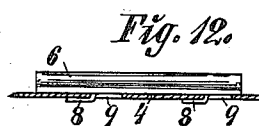
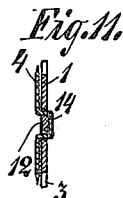
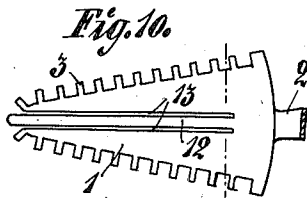
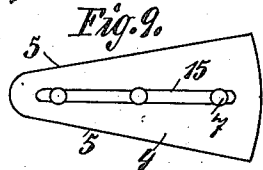
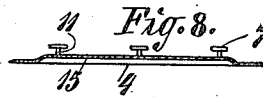
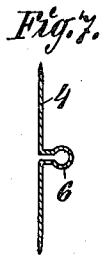
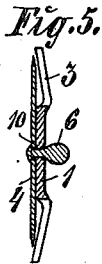
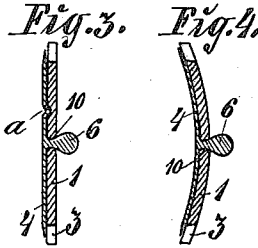
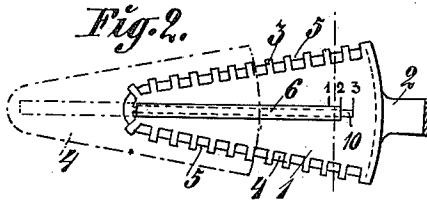
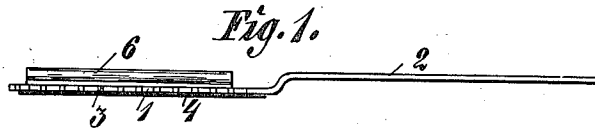
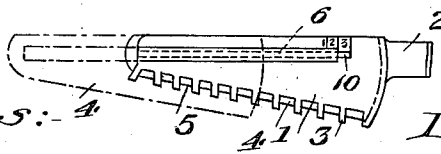


Fig. 15.



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UNITED STATES PATENT OFFICE.

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RAZOR.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHAN ABRAHAM OHLSSON, a subject of the King of Sweden, and resident of 66 Drottninggatan, Stockholm, in the Kingdom of Sweden, have invented certain new and useful Improvements in Razors, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to safety razors, the blade of which has an edge oblique to the longitudinal axis or oblique converging edges, and consists in the blade being so connected with its holder or the protecting part respectively, that it can be moved longitudinally into position for effective work or the blade can easily be cleaned, sharpened or stropped. In the position of the blade last mentioned, the appliance may be used also as an ordinary razor, even if it is constructed like a safety razor.

In the accompanying drawing some forms of the invention are shown as examples.

Figure 1 is a side view of a safety razor. Fig. 2 is a plan view of the blade holder or guard and the blade and a part of the handle. Figs. 3, 4, 5, and 6 are cross sections of the holder and the blade on the section line A—A of Fig. 2 and show different shapes of the said section. Figs. 3 to 6 inclusively are drawn on a greater scale. Fig. 7 is a cross section of a blade adapted to the holder shown in Figs. 1 and 2. Figs. 8, 9 and 12, 13, are side views and plan views respectively of blades, adapted to the holder shown in Figs. 1 and 2 but provided with other connecting means than those shown in Figs. 3 to 7 inclusive. Fig. 10 is a plan view of a modified holder. Fig. 11 is a section of the said holder and a blade, belonging to the same, on the section line B—B of Fig. 10. Fig. 14 shows two other shapes of the guard. Fig. 15 is a plan view showing a modification of the blade and its holder.

The holder 1, called the guard in a safety razor (Figs. 1, 2, and 10), which is made of stiff plate and preferably integral with the handle 2, is provided at its edges with teeth 3 which, in the well known manner, have a protecting action during the shaving operation. The blade 4 has one of its flat sides directed toward the holder 1 and is so con-

nected with the same, that it can be moved longitudinally to the holder. The said blade has two converging edges 5. The rim of the narrower end of the blade, which rim is semicircular or has any other similar shape, may also form a sharpened edge, if wanted. The two rows of protecting teeth 3 converge in the same or substantially the same degree as the edges 5 and may be connected by a semicircular or similar row of teeth, as shown in the drawing. The said teeth may be perpendicular or substantially perpendicular to the longitudinal axis of the holder, as shown in Fig. 15, so that they have an oblique position with relation to the edges, and consequently catch the bristles during the shaving operation, which bristles are then cut off at acute angles, the shaving operation being thus rendered agreeable and painless even if the edge is not perfectly sharp.

In the safety razor shown in Figs. 1 and 2, the holder is arranged to hold the movable blade by means of a stiffening part, extending longitudinally of the blade, an enlarged ridge 6 (Figs. 3 to 7 inclusively and Figs. 12 and 13) or a row of pins 11 provided with heads or buttons 7 (Figs. 8 and 9). The said ridge is fixed to the blade in any suitable manner. For instance it may be riveted to the blade, as shown in Fig. 5. The ridge may be made integral with the blade, by shaping the blade as shown in Figs. 6 and 7. In Figs. 12 and 13 the ridge 6 is connected with the blade in a detachable manner by means of angular tongue shaped pieces 8, provided on the ridge 6. The said pieces are passed through corresponding openings 9 in the blade, the ridge and blade being then moved with relation to each other.

The holder shown in Figs. 1 and 2 is provided with a slot 10, corresponding to the said ridge for holding the blade. Owing to the said arrangement the blade can be moved in the holder, as for instance, to the position shown in dotted lines in Fig. 2, in which position the blade is held so firmly, that it can be cleaned, sharpened or stropped. For additional security the tongue shaped pieces x and y on each side of the said slot 10 (Fig. 2) may be so arranged, that they bear yield-

ingly against the sides of the ridge. As the edges of the blade, moved to the position last mentioned, are perfectly free from the protecting teeth 3, the appliance may in this position of the blade be used as an ordinary
 5 razor. When the appliance is used as a safety razor, the distance between the edges 5 and the free ends of the protecting teeth 3 can be changed, by moving the blade for a
 10 short distance from the position shown in full lines in Fig. 2, and the razor thus be adapted to the sensibility of the skin and to coarser or finer shaving respectively. For the said purpose a scale may be provided as
 15 for instance in the holder, as shown in Fig. 2, in which three lines are shown, the inner end of the ridge 6 forming the index coöperating with the said lines.

The razor may be provided with a device
 20 to keep the blade in its different positions with relation to the holder, without, however, preventing the blade from being removed from the holder, when wanted. The said device preferably consists in a small
 25 projection *a* (Fig. 3) on the blade which engages with a corresponding recess *b* in the holder, the latter being provided with a series of such recesses extending along the holder.

Figs. 10 and 11 show another means for
 30 keeping the blade in the holder. The holder has a central tongue shaped piece 12, at the sides of which slots 13 are provided. A central longitudinal portion 14 of the blade
 35 is raised, the said raised portion being U-shaped in cross section and embracing the said tongue 12, when the blade is mounted in the holder, as shown in Fig. 11, thus
 40 keeping the blade in its holder. Also in this form of the invention the blade can be mounted in different positions in the holder, as described above with reference to Fig. 2.

In Figs. 8 and 9 a raised portion 15 of
 45 the blade is substituted for the stiffening part or ridge mentioned above, the pins 11 with the buttons 7 being fixed in the said raised portion.

The shape of the cross section of the holder may be varied in many ways. It
 50 may be straight as shown in Figs. 3 and 11, or curve shaped as shown in Fig. 4. The holders, shown in cross sections in Figs. 5 and 6, have a plane and curve-shaped central part respectively, while each of the
 55 rims (including the protecting teeth) are first bent away from the blade and then toward the same and the edges of the blade respectively.

Fig. 14 shows a modification of the protecting device, consisting in a corrugated
 60 or wrinkled edge being substituted for the row of protecting teeth. The edge of the blade coöperates with the said corrugated edge in the same manner as with the row
 65 of protecting teeth.

The invention may evidently be modified in many respects without departing from its essential features. As for instance, instead of two edges only one edge may be provided on the blade 4, as shown in Fig. 70
 15, which edge converges to the longitudinal axis of the blade, the guard being correspondingly shaped or substantially so. The blade 4 is shown in operating position by full lines, and in position to be stropped
 75 or cleaned by dotted lines.

What I claim is:

1. A safety razor comprising a blade having an edge oblique with relation to the central longitudinal axis and a holder having
 80 a blade guard constructed with an oblique edge to conform to the blade, the said blade and the guard being provided the one with a projecting member and the other with a
 85 slot adapted to receive the projecting member in sliding engagement, whereby the blade may be held with its cutting edge nearer to or farther from the edge of the guard at pleasure.

2. In a safety razor, the combination of
 90 the blade having an edge oblique with relation to the central longitudinal axis and having a member projecting from its side, and a holder provided with a blade guard
 95 constructed with an oblique edge to conform to the blade and with a slot adapted to receive the said projecting member in sliding engagement, whereby the blade may be held with its cutting edge nearer to or
 100 farther from the edge of the guard at pleasure.

3. A safety razor comprising a blade having an edge oblique with relation to the central longitudinal axis and having an
 105 elongated ridge projecting from its side and a holder provided with a guard having an oblique edge to conform to the blade and having an elongated slot to receive the said ridge in sliding engagement.

4. A safety razor comprising a blade having
 110 an edge oblique with relation to the central longitudinal axis and having a member projecting from its side and detachably secured thereto and a holder provided with a guard constructed to conform to the blade
 115 and provided with a slot to receive the said projecting member in sliding engagement.

5. A safety razor comprising a blade having an edge oblique with relation to the central longitudinal axis, a holder provided
 120 with a guard having an oblique edge to conform to the blade, means to hold said blade and guard in working relation, said means permitting of adjustment of the blade upon its longitudinal axis, whereby the
 125 edges of the blade are moved nearer to or farther from the guard edges.

6. A safety razor comprising a blade member having an edge oblique with relation to the central longitudinal axis, a
 130

holder member provided with a guard having an oblique edge to conform to the blade, one of said members being slotted, means upon the other of said members working in
5 said slot to retain said members in working relation and to permit of adjustment of said blade with relation to said guard.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

JOHAN ABRAHAM OHLSSON.

Witnesses:

ROBERT APELGREN,

A. F. LUNDBORG.