

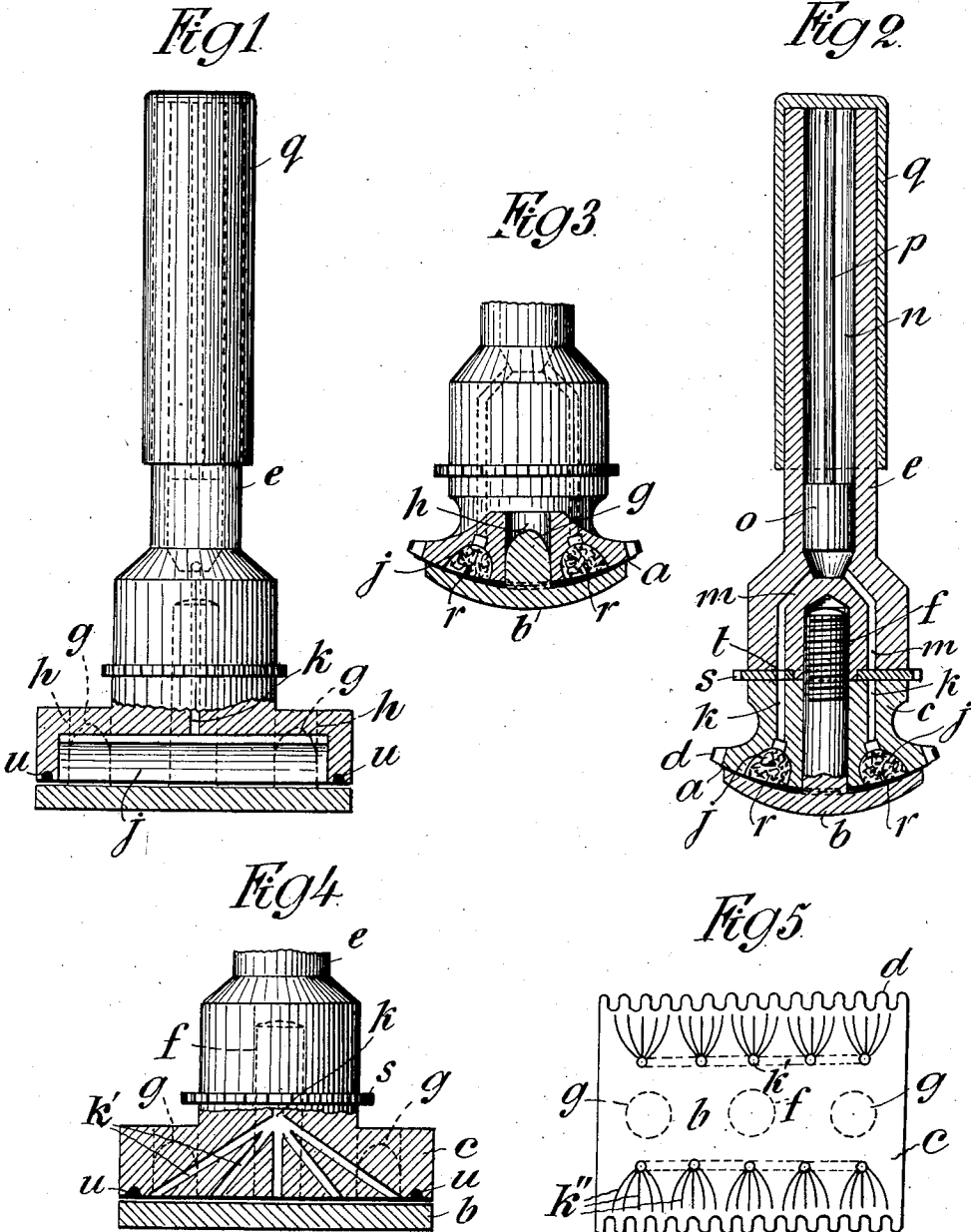
Oct. 6, 1925.

1,556,269

K. WARMING

SHAVING APPARATUS WITH SUPPLY OF SHAVING LIQUID TO THE CUTTING EDGE

Filed Oct. 23, 1924



Inventor
Kai Warming
By
Pemis, Dan Mason & Clement
Attorneys

UNITED STATES PATENT OFFICE.

KAI WARMING, OF COPENHAGEN, DENMARK.

SHAVING APPARATUS WITH SUPPLY OF SHAVING LIQUID TO THE CUTTING EDGE.

Application filed October 23, 1924. Serial No. 745,356.

To all whom it may concern:

Be it known that I, KAI WARMING, a subject of the King of Denmark, residing at Vester Boulevard 48, Copenhagen, Denmark, have invented new and useful Improvements in Shaving Apparatus with Supply of Shaving Liquid to the Cutting Edge; and I do hereby declare the following to be a full, clear, and exact description of the same.

It is well known that shaving is rendered difficult if the lather or the shaving-liquid used is dried up or quite absorbed by the skin or the hair of the beard, and that this drawback is instantly done away with by supplying a small quantity of the shaving-liquid used. If lather is used as shaving means and the same has become too dry, the shaving will be greatly facilitated by supplying the skin with a small quantity of suds or water, which is generally effected with the shaving-brush or by immersing the razor into water or suds.

The invention relates to a shaving apparatus which has means for constantly supplying liquid to the cutting edge, which measure secures an easy and pleasant shaving.

As shaving liquid can be used various liquids or mixtures such as water, suds, glycerine, eau de cologne or olive oil.

The invention can be used in connection with all kinds of razors but is especially adapted for safety razors with loose blades, and such an embodiment is shown in the drawing, where—

Figure 1 shows a safety razor according to the invention, partly in section,

Figure 2 a longitudinal section through the same perpendicular to that shown in Figure 1, and

Figure 3 a detail, partly in section.

Figure 4 shows a modification partly in section, and

Figure 5 a bottom view of the same with the blade removed.

A double-edged blade *a*, Figures 2 and 3, is in known manner clamped between a cap *b* and a head *c*, carrying the ordinary protection teeth *d*. In the handle *e* of the safety razor is a screw threaded hole for receiving the screw threaded stem *f* on the cap *b*. The cap *b* further carries two guiding pins *g* of known kind passing through holes in the blade and holes *h* in the head *c*, as it appears from Figures 1 and 3.

According to one form of the invention, mainly parallel to the cutting edges are arranged in the head *c* two cavities *j*, which are covered and closed by the blade *a*. The cavities *j* are connected, each through canals *k* and *m* in the head *c* and in the handle *e*, respectively, with a cylinder *n* in the same, and in which is found a piston *o* the rod *p* of which is secured to the bottom of a casing *q* enclosing the handle *e*, as shown.

When the lowermost part of the safety razor is immersed into a shaving liquid, and the piston *o* is drawn up, the cylinder *n* is sucked full of liquid, and this can now by applying a pressure on the casing *q* be brought to flow slowly out along the blade *a*. In order to secure a smooth and uniform supply of liquid it can sometimes be appropriate to insert in the cavities *j* porous bodies, for instance of cotton, porous rubber felt, burned clay or the like.

Between the handle and the head *c* is arranged a rotatable disc *s* with holes *t* which can register with one or the other set of canals *k* and *m* at a time in such a manner that the connection can be cut off between the cylinder *n* and the cavity *j* at the cutting edge not used.

In order to prevent waste of shaving liquid may be suitable packing-strings *u* which prevent loss of liquid along the ends of the razor-blade can be used and similar packings may be arranged between the two cavities *j* in order to prevent effluence of liquid along the cutting edge not used.

The embodiment shown is only to be considered as an example, and various modifications may be effected without departing from the spirit of the invention. For instance the described cylinder with piston may be substituted by a rubber ball or some other apparatus by means of which the shaving apparatus can be filled with liquid. Likewise the razor-blade may be provided with perforations near the edge not shown through which liquid can ooze so as to moisten both sides of the edge.

In the modification shown in Figures 4 and 5 the cavities *j* are omitted and the liquid is admitted to the blade through several canals *k'* as shown. The liquid is evenly distributed along the length of the blade by small grooves *k''* in the lowermost surface of the head *c* as shown in Figure 5.

Having thus fully described my inven-

tion I claim as new and desire to secure by Letters Patent:

1. A shaving apparatus comprising in its construction means including a cavity directly covered by the blade when secured in its place in the apparatus for supplying a liquid to the cutting edge of the said blade.

2. A safety razor comprising a handle, a head member, a cap member, means for clamping a razor blade between the said head member and the said cap member, a groove in the said head member in vicinity of and parallel to the cutting edge of the said razor blade when clamped in its position, the said groove being covered by the said blade, and means for supplying a liquid to the said groove.

3. A safety razor comprising a handle, a head member, a cap member, means for clamping a razor blade between the said head member and the said cap member a cavity in the said head member covered by the blade when clamped in its position, and means for supplying a liquid to the said cavity.

4. A safety razor comprising a handle, a head member, a cap member, means for clamping a razor blade having two cutting edges between the said head member and the said cap member, a cavity in the said handle, a piston in the said cavity, operating means for the said piston, canals leading from the said cavity to the said blade near its cutting edges, and means for selectively closing one or the other of the said canals.

5. A safety razor comprising a handle, a head member, a cap member, means for clamping a razor blade between the said

head member and the said cap member, a cavity in the said handle, a piston in the said cavity, operating means for the said piston and a canal leading from the said cavity to a groove in the said head member arranged in the vicinity of and parallel to the cutting edge of the said razor blade when clamped in its position.

6. A safety razor comprising a handle having a cylindrical bore, a head member, a cap member, means for clamping a razor blade between the said head member and the said cap member the head member having a cavity directly covered by the said blade when clamped in its position, and connected with the said bore, a piston in the said bore adapted to be displaced by exertion of an axial pressure by hand thereby supplying a liquid from the said bore to the said cavity.

7. A safety razor comprising a cylindrical handle having a cylindrical bore, a head member, a cap member, means for clamping a razor blade between the said head member and the said cap member the head member having a cavity directly covered by the said blade when clamped in its position and connected with the said bore, a piston in the bore, a piston rod secured in the said piston, a cylindrical cap secured to the said piston rod and slidably arranged on the outer surface of the said handle, the said piston, piston rod, and cylindrical cap being displaceable as a unit by exertion of an axial pressure by hand, thereby supplying liquid from the said bore to the said cavity.

In testimony whereof I have affixed my signature.

KAI WARMING.