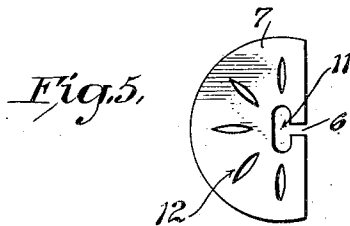
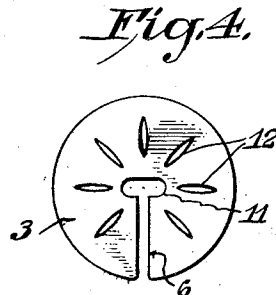
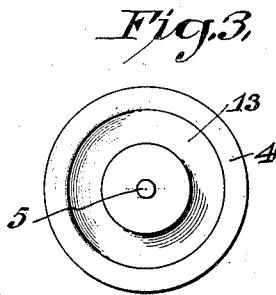
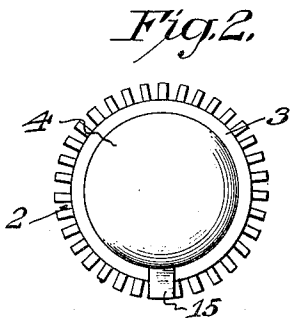
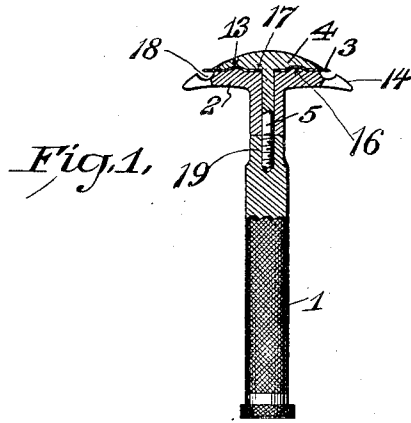


M. M. McCaffrey,
SAFETY RAZOR.
APPLICATION FILED AUG. 30, 1920.

1,382,301.

Patented June 21, 1921.



Witnesses
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UNITED STATES PATENT OFFICE.

MARY M. McCAFFREY, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF ONE-HALF TO ISABEL LEES BAYLESS, OF WASHINGTON, DISTRICT OF COLUMBIA.

SAFETY-RAZOR.

1,382,301.

Specification of Letters Patent. Patented June 21, 1921.

Application filed August 30, 1920. Serial No. 406,947.

To all whom it may concern:

Be it known that I, MARY M. McCAFFREY, a citizen of the United States, residing in the city of Washington, in the District of Columbia, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

This invention is an improvement in safety razors and more particularly to that class of the circular blade type.

To shave hair from the armpit or any depressed portion of the body with the ordinary straight edge safety or other razor is more or less unsatisfactory, therefore an object of the present invention is to provide a safety razor which will effectively and safely do such work, and to this end use is made of a circular blade so constructed that it may be flexed as desired.

Another object of my invention is to provide a guard which serves not only to protect the skin from being cut but also to so depress the skin, that, in conjunction with the pressure placed upon the circular flexible blade, the cutting angle of the blade may be regulated to suit the nature of the depression to be shaved, which is accomplished by tightening or slightly releasing the clamping members of the razor.

A further object of the invention is to provide a circular slotted blade capable of being flexed by means of specially constructed clamping members.

Another object of the invention is to provide a specially constructed guard to cover the slotted portion of the blade, and specially constructed teeth to protect the blade from cutting the skin, having a channel located behind said teeth.

A further object of my invention is to provide a novel construction of a safety razor and blade therefor, flexible at will, which is simple of construction, of few parts, is easily disconnected for cleaning and assembled for use, and which because of its circular form has a large cutting edge, and may be used to a greater advantage than other similar safety razors.

With these and other objects in view my invention consists in certain construction and combination of parts as will hereinafter be fully described and claimed in the specification and claims and illustrated in the accompanying drawing which forms a part of this application, and in which like figures

of reference refer to corresponding parts in all of the views; but it is understood that while I have described my invention as herewith shown, that I do not confine myself to the exact design as shown, as slight changes may be made in the construction and combination of parts without departing from the spirit of the invention.

In the drawing: Figure 1 is a transverse vertical sectional view, except for portion of handle, of the assembled device.

Fig. 2 is a top plan view of the razor.

Fig. 3 is a plan view looking up at cap member showing circular depression.

Fig. 4 is a plan view of the blade.

Fig. 5 is a plan view of a modified form of blade.

Referring to the drawing the razor shown in Fig. 1 comprises a handle 1 with a threaded orifice 19, a blade supporting head 2, circular in form and provided with teeth 14 constituting a guard, a raised circular portion 16 and a blade positioning raised elliptical portion 17, a blade clamping circular cap 4 provided with a central threaded stem 5 and with circular depression 13, best shown in Fig. 3, a circular flexible blade 3 adapted to be clamped between head 2 and cap 4 by use of stem 5, and held firmly in place by blade positioning raised elliptical portion 17 provided on head 2 over which elliptical hole 11 provided through blade 3 snugly fits. Blade 3 is best illustrated in Fig. 4, and is provided with a slot 6 to permit greater flexing and also with elliptical openings 12 placed radially in blade 3 to prevent buckling when being made and to assist in allowing appropriate flexing when pressure is placed on blade 3 by means of screwing handle 1 on stem 5, which flexing is produced by slightly raised circular portion 16 on head 2 (exaggerated in drawing) fitting into depressed circular portion 13 on cap 4 (also exaggerated). The center of the raised circular portion 16 on head 2 passes when in position over elliptical openings 12 slightly beyond the widest portion of said openings radially placed producing thereby an even flexing of blade 3, and thus eliminating to a great extent the tendency of circular blades to break on the outer edge thereof. Head 2 is further provided with a special guard 15, Fig. 2, integral therewith, to prevent any possible cutting from the rounded edges of

blade 3 formed by slot 6. The raised elliptical portion 17 on head 2 is so placed thereon that slot 6 is covered by special guard 15 when the razor is assembled for use. In Fig. 5 a modified form of blade 7 is shown, and if manufactured in this form the other parts may be conformed accordingly, and two special guards 15 would be necessary to prevent cutting the skin.

As described above it will be noted that the edge of circular blade 3 when assembled overlies a channel formed by specially constructed teeth 14. The depression 18 behind each guard tooth descends somewhat abruptly leaving an opening between guard 4 and edge of blade 3 so that when the blade is tightly clamped its edge is flexed toward channel 18 and permits an ordinary shave, whereas if cap 4 is very slightly released by unscrewing stem 5 the flexing of blade 3 is not so great and a larger cutting edge is presented and a closer shave may be thus obtained.

In actual use when it is desired to assemble the four parts, head 2 is inverted and blade 3 placed thereon with slot 6 in proper position over special guard 15, then the stem 5 of cap 4 is inserted through hole in blade 3 and head 2 after which handle 1 is screwed on tightly. In so adjusting the clamping members it will be apparent that blade 3 will be partially flexed because slightly raised circular portion 16 provided on head 2 will be forced against blade 3 and bend it into the slightly depressed portion 13 provided on cap 4. It will also be observed that on account of the space provided by channel 18 the lather and hair removed in shaving is allowed to escape from channel 18 beneath blade 3 and pass out between teeth 14 and this is a particularly desirable feature when removing hair for the first time or a heavy growth thereof.

It will be noted that either side of the blade may be used thereby obtaining more use than with permanently concaved blades. The parts when separated are all easily cleaned and there are no covered places to become unsanitary.

It is understood the construction specially illustrated in the drawing and herein described represents merely the preferred form of the invention and that modifications thereof may be made without departing from the principle or spirit of the invention.

Having thus described my invention, what I claim and desire to secure by Letters-Patent is:

1. A safety razor having in combination, a handle, a flexible circular blade provided with a slot with parallel edges and a series of elliptical openings placed radially in said

blades, a circular head provided with guard teeth and a special guard portion integral therewith to cover slot in blade and an elliptical raised portion integral with said head associated with said blade, a circular clamping cap piece, and means for holding said parts together as and for the purpose described.

2. A safety razor having a handle with threaded orifice, a flexible slotted circular blade provided with slot with parallel edges and a series of elliptical openings placed radially in said blade, a circular head provided with guard teeth and special guard portion integral therewith to cover slot in blade, a slightly curved circular raised portion, and an elliptical raised portion all integral therewith, a circular clamping cap member provided with a slightly depressed circular portion and a threaded stem for screwing into threaded orifice provided with handle, substantially as described.

3. A safety razor comprising a handle provided with a threaded orifice, a flexible circular cutting blade provided with slot with parallel edges and a series of elliptical openings placed radially in said blade, a circular clamping head provided with guard teeth, a special guard portion over slotted portion of blade, a slightly raised circular portion, and an elliptical raised portion, all integral therewith, a circular clamping cap member provided with a slightly depressed circular portion and with a threaded stem both integral therewith, and means for clamping said parts together as and for the purpose described.

4. A safety razor comprising a handle provided with a threaded orifice, a circular blade provided with slot with parallel edges and a series of elliptical openings placed radially in said blade to prevent buckling and permit flexing, a circular clamping head provided with guard teeth so constructed as to produce a channel located behind said guard teeth, a special guard piece to cover slotted portion of blade, a slightly raised circular portion and an elliptical raised portion to hold blade in position, all integral with said head, a circular clamping member provided with a slightly depressed circular portion and a threaded stem integral therewith, and means for screwing said parts together and flexing said blade substantially as described.

In testimony whereof, I have signed my name in the presence of two witnesses.

MARY M. McCAFFREY.

Witnesses:

ALFRED DRESSER,
D. H. SIBBETT.