July 21, 1936. N. K. FOUGNER 2,048,251

SAFETY RAZOR WITH CONTINUOUS BLADE

Filed Sept. 16, 1935

Fig. 1.

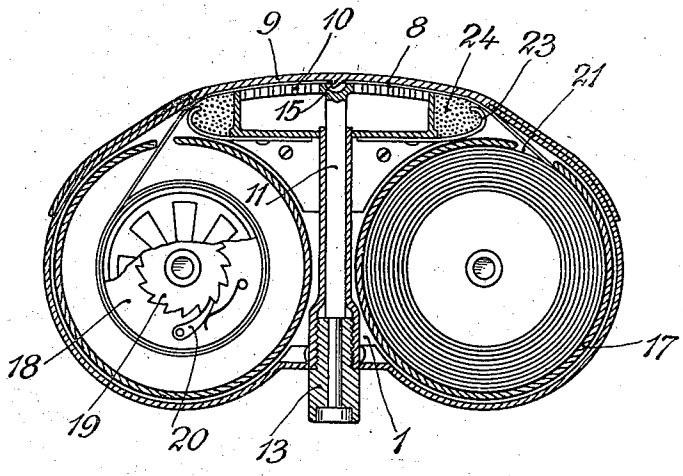
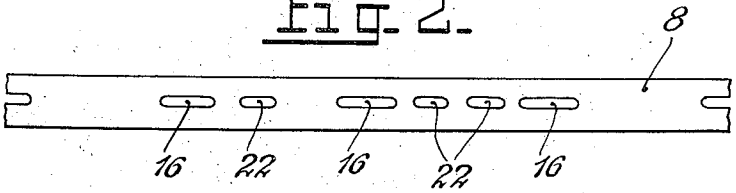


Fig. 2.



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SAFETY RAZOR WITH CONTINUOUS BLADE

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3 Claims. (Cl. 30—40)

The present invention relates to safety razors with continuous blade of the kind specified in U. S. Patent No. 2,012,868 to Ecklio issued August 27th, 1935. The safety razor in accordance with the said patent has a ribbon-shaped blade and comprises an oblong flat box adapted to receive the two blade spools, the blade between the two spools running over a clamping or guard member located in the box and adapted to be displaced therein in a direction substantially perpendicular to a line through the axes of the two spools in order to clamp the ribbon-shaped blade against a rib integral with the edge of the box extending between the spools on one side thereof.

The improvement in accordance with the present invention mainly has for its object to ensure a suitable guiding of the ribbon-shaped blade in order to prevent the blade edge from being transplaced laterally and also to ensure a correct adjustment of the blade when a new part of the same is to be put in position for use.

This in accordance with the invention is obtained by providing the rib, against which the blade is pressed by means of the clamping guard, with one or more knobs adapted to engage corresponding holes in the blade, provided along the center line thereof at a distance from each other corresponding to the length of blade which is used for each shaving operation.

The knob is provided with an inclined surface, so that the blade may be drawn off the knob in the direction of winding, snapping on to the knob each time one of the holes of said blade arrives in position to correspond with the knob.

When the blade is adjusted, the sound of snapping over the knob will indicate when the correct adjustment has taken place, the knob at the same time securing the blade against transverse movement, so that the blade is held in a correct position with regard to the teeth of the guard member and is prevented from being pressed into engagement with the metal parts of the box.

In accordance with a further feature of the invention the guard and the rib between which the blade is clamped, are made slightly curved in the longitudinal direction of the blade, whereby the pressure of the blade against the skin is made more even than it is possible with a rectilinear edge.

Further features of the invention will be apparent from the following description with reference to the drawing.

Figure 1 is a longitudinal sectional view of the razor and Figure 2 shows part of the blade.

On Figure 1, 1 is the box, 10 the adjustable guard with the shank 11 and adjusting screw 13. 9 is the rib, against which the blade edge is clamped by means of guard 10. Rib 9, as will be seen, is slightly curved and immediately above the center of guard 10 is provided with a depending knob or nose 15, which has an inclined surface on one side and is adapted to engage oblong holes 16 in blade 8 (see Figure 2). These holes may be made somewhat longer than the knob in order to prevent the blade from being wound past the knob after the sound of snapping over the knob has been observed.

Near the end of the ribbon-shaped blade further holes 22 may be placed instead of hole 16 in order to indicate by the sound of snapping over said holes that the blade is nearly finished.

The blade spool is placed in a small box or casing 17 on one side of the guard and is wound on to a spool 18 on the other side by means of a suitable handle. Spool 18 as indicated on the drawing is provided with a ratchet wheel 19 and pawl 20 in order to prevent return winding.

The ratchet mechanism may suitably be located on the inside of spool 18, one side wall of which may be provided with suitable openings as indicated on the drawing in order to make the pawl accessible from the outside for putting the same in position when the spool is placed therein.

The small box or casing 17 for the new blade ribbon is provided with a slot 21, through which the blade passes, and during the winding operation the blade spool is free to rotate in the inner-side of the casing, the end surfaces of which are provided with a protective sheet of cardboard or celluloid or the like, in order to prevent dulling of the edge by contact with the box surface.

The box or casing for the new blade is prevented from rotation in the razor casing by means of a knob or the like, which is placed so as to keep slot 21 in the correct position.

The casing adapted to receive the used part of the ribbon-shaped blade is free to turn about its axis in the razor casing, so that the slot in this box or casing will automatically maintain itself in proper relation to the spool on which the used blade is being wound.

In order to prevent moisture from getting into the spool chamber and also in order to keep the ribbon-shaped blade lubricated so as to prevent corrosion, the razor casing on one or both sides of the clamping member 10 may be provided with leaf springs 23, keeping the blade pressed against member 9 and also serving to form closed chambers 24, which may serve as receptacles for vaseline or other lubricating material.

I claim:

1. A safety razor, comprising an oblong flat frame having a rib extending transversely across approximately the middle of one longitudinal side thereof, a spool in each longitudinal end of the frame, a continuous ribbon-shaped razor blade mounted on and extending between said spools, one spool containing the fresh blade portion and the other the used portion of the ribbon, a clamping and guard member in said frame below the rib and between said spools, and adapted to be displaced transversely of the major axis of the frame, to clamp the blade into shaving position against said rib and a knob or nose on said rib adapted to engage holes in the blade in order to provide a guiding means for the blade in the transverse direction thereof and also to ensure a correct adjustment of the blade in its longitudinal direction when a new part of the blade is being put in position for use.

2. A safety razor, comprising an oblong flat frame having a rib extending transversely across approximately the middle of one longitudinal side thereof, a spool in each longitudinal end of the frame, a continuous ribbon-shaped razor blade mounted on and extending between said spools, one spool containing the fresh blade portion and the other the used portion of the ribbon, a clamping and guard member in said frame below the rib and between said spools, and adapted to be displaced transversely of the major axis of the frame, to clamp the blade into shaving position against the said rib, holes in said ribbon-shaped blade at a distance corresponding to the length of blade adapted to be used for each shaving operation, and a knob or nose on said rib adapted to engage said holes in the blade in order to provide a guiding means for the blade in the transverse direction thereof and also to ensure a correct adjustment of the blade in its longitudinal direction when a new part of the blade is being put in position for use.

3. A safety razor, comprising an oblong flat frame having a rib extending transversely across approximately the middle of one longitudinal side thereof, a spool in each longitudinal end of the frame, a continuous ribbon-shaped razor blade mounted on and extending between said spools, one spool containing the fresh blade portion and the other the used portion of the ribbon, a clamping and guard member in said frame below the rib and between said spools, and adapted to be displaced transversely of the major axis of the frame, to clamp the blade into shaving position against said rib, and a blade spring attached to said frame between said guard member and the spool containing the un-used part of the blade, said spring engaging the razor blade with its free end so as to press the same against said rib and also serving to form a closed receptacle adapted to be filled with a suitable lubricating material.

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