W. F. GROSCHOPP.

SAFETY RAZOR.

APPLICATION FILED OCT. 8, 1914.

1,146,869. Patented July 20, 1915.

Fig. 1.

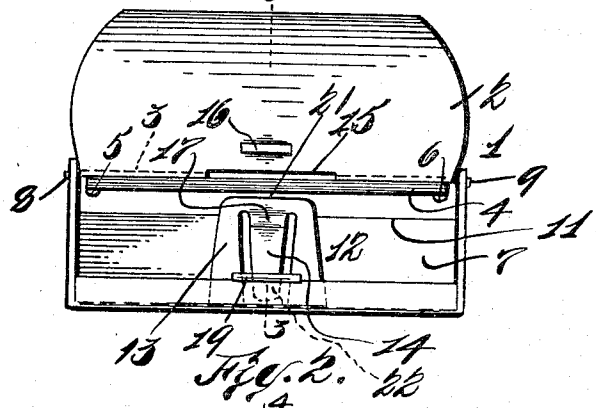


Fig. 2.

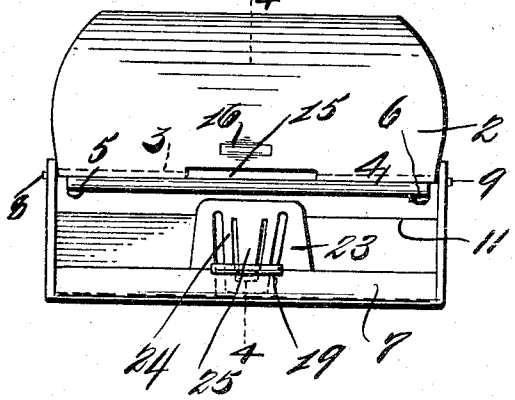


Fig. 3.

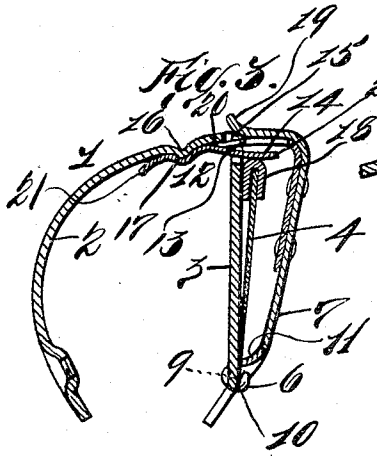
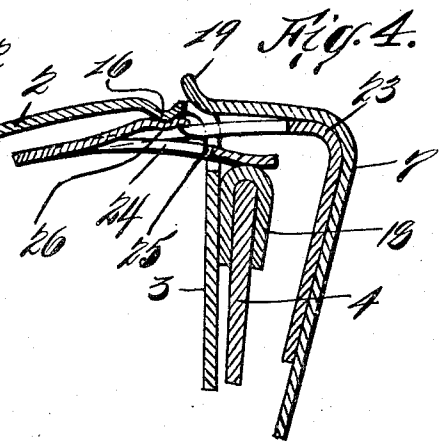


Fig. 4.



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SAFETY-RAZOR.

1,146,869. Specification of Letters Patent. Patented July 20, 1915.

Application filed October 8, 1914. Serial No. 865,628.

To all whom it may concern:

Be it known that I, WILLIAM F. GROSCHOPP, a subject of the Emperor of Germany, residing at Brooklyn, Kings county, State of New York, have invented certain new and useful Improvements in Safety-Razors, of which the following is a full, clear, and exact description.

This invention relates to an improvement in safety-razors, but more particularly to an improved arrangement of latches arranged to secure the cutting-blade in position on the frame and to hold the cover-plate of the razor-frame firmly closed, the lower edge of the plate contacting with the cutting-blade adjacent the cutting edge thereof.

The latches above referred to are secured to the cover-plate and move with it, said latches being arranged to engage both the top-plate of the frame and the heel of the cutting blade.

These being among the objects of the present invention, the same consists of certain features of construction and combination of parts to be hereinafter described and finally claimed with reference to the accompanying drawing, illustrating a suitable embodiment of the invention, in which—

Figure 1 is a top plan view of a razor-frame embodying my improvement; the cover-plate being in open position; Fig. 2 is a similar view of another embodiment of my invention; Fig. 3 is an enlarged cross-sectional view of the form illustrated in Fig. 1, the section being taken on a line 3—3 in Fig. 1, the cover-plate being closed; and Fig. 4 is an enlarged fragmentary sectional view of the form of device illustrated in Fig. 2, the section being taken on a line 4—4 in Fig. 2, the cover-plate also being closed.

Referring to the drawing, a safety razor-frame is indicated by 1 consisting of a body portion 2 carrying a guard 3 which holds the blade 4. The guard 3 is provided with the usual stops 5 and 6 for the blade 3.

The invention consists chiefly of an arrangement of latches to secure the blade 4 in position and to hold the pivotal cover-plate 7 in closed position as shown in Fig. 3.

The cover-plate 7 is pivotally secured to the guard 3 as at 8 and 9 and contacts with the blade 3 adjacent the cutting edge 10 of the blade. The cover-plate 7 is provided with an inwardly projecting edge 11 which edge bears against the blade as shown in Fig. 3.

To hold the cover-plate 7 in closed position and to hold the blade 4 down against the stops 5 and 6, I provide a resilient locking member 12 which is firmly secured to the inner surface of the cover-plate 7. The locking member 12 consists of a resilient tongue or projection 13 carrying an auxiliary resilient tongue or projection 14, the tongue 14 being preferably struck out of the tongue 13. The function of the tongue 14 is to perform the dual rôle of holding the blade 4 down and to hold the cover-plate 7 closed, while the tongue 13 gives to the locking member, as a whole, the proper spring or resilient action.

As can be seen in Fig. 3, the locking member 12 is arranged or located to pass under the upper portion of the body 2 of the frame, and to permit of such passage I provide the frame or body 2 with a slot or opening 15 through which the locking member 12 will pass.

To coöperate with the lock 14, to secure the cover-plate in closed position, I provide the body 2 with a struck down projection 16 which will engage a recess 17 in the tongue or lock 14 when the cover plate is closed. When in the closed position the tongue or lock 14 will bear upon the heel 18 of the cutting-blade, as shown in Fig. 3. The cover-plate is provided with a projecting portion 19, by which means the said cover-plate can be swung outwardly and opened.

When the cover-plate 7 is in the open position, the locking member 12 will be positioned slightly out of alinement with the under surface 20 of the frame; that is to say, it will be located slightly above the line of said under surface; hence when the cover-plate is closed, the lip 21 of the locking member 12 will strike the upper edge of the opening 15 and a continued closing movement of the cover-plate will cause the locking member 12 to spring downwardly, whereby the said locking member is placed under tension. When the socket 17 in the tongue 14 alines with the projection or keeper 16, it will snap into place and at such time the free end 22 of said tongue will bear upon the heel 18 of the cutting-blade. When the cover-plate is forced inwardly

and closed the tongue 14 will be placed under tension as soon as it contacts with the heel of the cutting-blade. The engagement of the tongue 14 and heel of the cutting-blade adds greatly to the locking effect of the keeper 16 and recess 17 in the tongue 14.

In the embodiment of my invention illustrated in Figs. 2 and 4, the resilient locking member 23 is provided with the auxiliary-tongue 24 carrying a supplemental tongue 25. In this form the tongue 25 is provided with a recess 26 which engages the projection or keeper 16, while the auxiliary tongue 24 bears upon the heel 18 of the cutting-blade. The action of this latter form of locking means is substantially the same as the action of the locking means 12.

In both forms of my invention the resilient tongues bear upwardly upon the razor-frame and downwardly on the cutting-blade.

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

1. A safety-razor-frame, comprising a body portion, a guard carried thereby adapted to support a cutting-blade, a cover-plate for said blade pivotally secured to said frame, a locking device carried by said cover-plate consisting of a resilient projecting member adapted to engage said frame, and an independently acting resilient tongue carried by the projecting member adapted to bear upon the heel of the cutting-blade, the said tongue being substantially in the same plane with the projecting member.

2. A safety-razor-frame, comprising a body portion, a guard carried thereby adapted to support a cutting-blade, a cover-plate for said blade pivotally secured to said frame, a locking device carried by said cover-plate, consisting of a resilient tongue secured to the inner surface of the cover-plate at one end and provided with a recess, a non-yielding keeper carried by the razor-frame adapted to engage said recess, said keeper and recess when in engagement being in substantial parallelism with the cover-plate, the free end of said tongue being located to bear upon the heel of a cutting-blade.

3. A safety-razor frame, comprising a body portion, a guard carried thereby, and provided with an opening at its upper edge, a cover-plate pivotally secured to said guard, a resilient finger carried by and secured to the inner surface of said cover-plate at one end and adapted to pass through the opening in said guard-plate and under the wall of said frame at the top thereof, a non-yielding keeper carried by said frame adapted to engage said resilient finger, the free end of said finger being located to bear upon the heel of a cutting-blade.

4. A safety-razor frame, comprising a body, a guard carried thereby and provided with an opening at its upper edge, a cover-plate pivotally secured to said guard, a non-yielding keeper carried by said body-portion projecting downwardly in line with the opening in said guard, a locking device carried by said cover-plate adapted to pass through the opening in said guard, said locking device consisting of a resilient projection and an auxiliary tongue integral therewith at one end and in substantially the same plane, the opposite and free end of said auxiliary tongue being located adjacent the point of securement of said projection to said cover plate, said resilient projection being provided with a recess to engage the keeper on said razor-frame, the free end of said auxiliary tongue being located to bear upon the heel of a cutting-blade.

5. A safety-razor frame, comprising a body portion, a guard carried thereby adapted to support a cutting-blade, a clamping cover-plate pivotally secured to said guard, a locking device consisting of a resilient projection extending outwardly from said cover plate and adapted to pass over the cutting-blade when said cover-plate is closed, a resilient tongue integral with said projection and in substantially the same plane arranged to bear upon the heel of the cutting-blade when the cover-plate is closed, and means carried by the razor frame adapted to engage the said resilient projection.

6. A safety-razor frame, comprising a body portion, a guard carried thereby provided with an opening at its upper end adapted to support a cutting-blade, a clamping cover-plate pivotally secured to said guard, a locking device carried by said cover-plate and projecting therefrom at substantially a right-angle, arranged to pass through the opening in said guard and under the top portion of the body of the razor-frame when said cover-plate is closed, said locking device consisting of a resilient projection, a resilient auxiliary tongue carried thereby and adapted to bear against the heel of a cutting blade, a supplemental tongue carried by the auxiliary tongue provided with a recess at its free end, and a keeper carried by the razor-frame arranged to engage the recess in said supplemental tongue.

7. A safety-razor frame, comprising a body portion, a guard carried thereby, a clamping cover-plate pivotally secured to the guard, a locking device carried by the cover-plate, adapted to pass over a cutting-blade, when the cover-plate is closed, said locking device consisting of a resilient support projecting from said cover-plate adapted to bear upwardly against the razor frame when the cover plate is closed, a resilient tongue carried by the resilient support and in substantially the same plane therewith adapted to bear downwardly upon the heel

of the cutting blade when the cover plate is closed, and means carried by the razor frame to engage said tongue.

8. In combination with a safety-razor-frame, a pivoted cover-plate and locking means carried thereby, said locking means consisting of a plurality of resilient members arranged in substantially the same plane, one bearing upwardly upon the wall of the frame and the other downwardly upon the heel of the cutting-blade.

Signed at New York city, N. Y., this 5th day of October, 1914.

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Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."