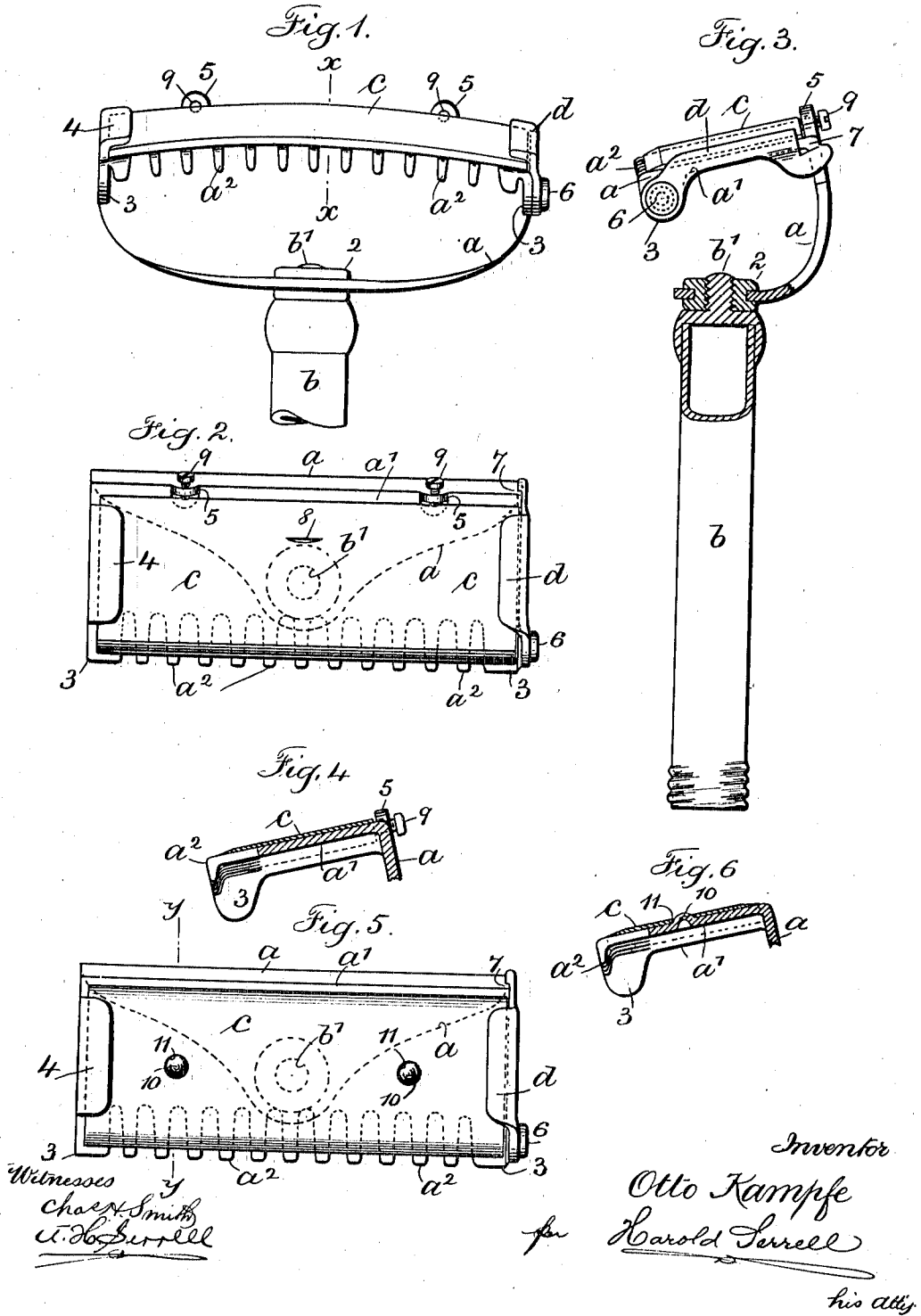


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SAFETY RAZOR.

APPLICATION FILED JULY 20, 1907. RENEWED SEPT. 10, 1912.

1,059,333.

Patented Apr. 15, 1913.



UNITED STATES PATENT OFFICE.

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SAFETY-RAZOR.

1,059,333.

Specification of Letters Patent.

Patented Apr. 15, 1913.

Application filed July 20, 1907, Serial No. 384,798. Renewed September 10, 1912. Serial No. 719,647.

To all whom it may concern:

Be it known that I, OTTO KAMPFE, a citizen of the United States, residing at the borough of Brooklyn, in the county of Kings, city and State of New York, have invented an Improvement in Safety-Razors, of which the following is a specification.

My invention is designed as an improvement upon the interchangeable blade safety razor shown and described in my application for Letters Patent filed October 2, 1906, Serial No. 337,152, with the object of simplifying the construction, reducing the weight and number of the parts and at the same time retaining all the advantages arising from the use of a normally flat blade sharpened along one edge and bent, so that a convex outer face and curved cutting edge are presented to a shaving surface, or to the face.

In carrying out my invention and in combination with a suitable handle, I provide a bent body member adapted for connection to the handle and having integral therewith a transversely flat and longitudinally curved comb-guard with teeth having over-turned free ends, with one or more ears at the forward corners, with an end clip overturned from the guard and with means for regulating the position of the blade.

I employ at one end of the comb-guard a blade-retaining clip-arm which is pivoted to one of the forward corner ears and at its other end is adapted to engage a shouldered notch or catch of the body member. The normally flat blade is connected to the body member by passing one end beneath the end clip, bending the blade down over the comb-guard and engaging its other end by the clip-arm which snaps to place at the shouldered catch. A reverse movement releases the blade and it returns to its normal flat condition and may be removed and replaced by another. The blade consequently in its position as flexed for use has a cutting edge that is arched longitudinally.

In the drawing, Figure 1 is a front elevation. Fig. 2 a plan, Fig. 3 a side elevation partly in section,—Fig. 4 a vertical cross section at x, x , Fig. 1. Fig. 5 is a plan of another form of my invention and Fig. 6 is a cross section at y, y , Fig. 5.

a represents the bent body member which in cross section very closely resembles the bent portion of the body member as shown

in my aforesaid application. This bent body member is provided with a head at 2 perforated and interiorly threaded to receive the screw stem b^1 of the tubular handle b in connecting the handle and the body member together, and this head is securely riveted to the lower portion of the bent body member for this purpose. The bent body member is constructed integrally with a guard-comb a^1 having teeth a^2 with over-turned free ends.

The guard-comb is inclined to the axis of the handle and transversely at slightly greater than a right angle to the back of the body member; it is transversely flat and longitudinally curved. It is provided at the forward corners with down-turned ears 3, with an over-turned end-clip 4 and with ears 5 rising from the back of the body member and perforated for small adjusting screws 9 which are adapted to come up against the back of the blade c so as to adjust the relation of the cutting edge of the blade to the ends of the teeth of the comb-guard.

I provide a blade-retaining clip-arm d placed at the right hand of the safety razor as shown in Figs. 1 and 2, and which is pivotally connected at one end to one forward corner ear 3 at 6 and its forward end is made with a projection adapted to snap under the shouldered catch 7 formed in the back of the body member. In cross section this clip-arm has parts at right angles to one another, the upper portion of which,—similar to the end-clip 4,—extends over the ends of the thin razor blade c when the same is in position,—holding the same securely in position with the blade lying against the curved and transversely flat upper surface of the guard-comb, with the blade bent so that the outer surface is convex and the cutting edge curved and presented flexed to the face or to a shaving surface.

To insert the thin normally flat blade and connect the same to the body member above the curved guard-comb, it is only necessary to swing over the clip-arm d on its pivot 6 and grasping the blade at the right hand end, place the left hand end under the clip 4, bending the blade down over the curved guard-comb with the back of the blade against the screws of the ears 5, and then swinging over the clip and snapping the same into engagement as hereinbefore described. The blade is then flexed and held

firmly in position under tension, longitudinally curved and convex, with its cutting edge curved or arched and ready for use.

I have shown in the surface of the blade near the back edge, a longitudinal recess 8 adapting the blade for engagement with the nail of the thumb or finger so as to move the blade into position if not correctly set or adjusted. While I have shown this, it is a fact that it is seldom required in setting the blade.

In the form of my invention shown in Figs. 5 and 6, the normally flat blade of thin metal is shown as sharpened along both the longest edges so as to be reversible and adapted upon the dulling of one edge to turn the blade around end for end and present the fresh keen edge to the comb for use. In this form, the ears 5 and screws 9 are not employed, and the blade is placed or centered by means of rounded projections 10 formed in and above the surface of the longitudinally curved comb-guard entering holes 11 along the center of the normally flat blade. Otherwise than in this respect the safety razor is constructed exactly like that shown in the other figures of the drawing and the operation is identical therewith.

This device is exceedingly simple,—it is inexpensive to construct in view of the integral character of the body member and the parts associated therewith, and it includes only few parts and there is no complication of the parts whatsoever to get out of order or adjustment.

I claim as my invention:—

1. In a razor and in combination with a normally flat blade sharpened along one edge, and a suitable handle, of a bent body member, a guard-comb transversely flat and at an angle to the bent body member and longitudinally curved and provided with teeth having over-turned free ends, a clip at one end adapted to receive one end of the normally flat blade, and a pivoted clip-arm at the other end adapted to come down upon and hold the other end of the blade, flexing or bending the same over the surface of the guard-comb and holding the same in place.
2. In a razor and in combination with a normally flat blade sharpened along one edge, and a suitable handle, of a bent body member having integral therewith a longitudinally bent and convexed guard-comb, its teeth with over-turned free ends, with ears 3 at the forward corners, with an end-clip 4 and ears 5 receiving screws for regulating the position of the blade, and a blade-re-

taining clip-arm pivotally connected to the guard-comb.

3. In a razor and in combination with a normally flat blade sharpened along one edge, and a handle, of a bent body member, a guard-comb with teeth having over-turned free ends formed integral with the body member, the guard-comb being flat transversely and at an angle to the back of the body member and curved longitudinally, an end-clip 4 over-turned along one end of the guard-comb for receiving one end of the normally flat blade and a pivoted clip-arm at the other end of the guard-comb adapted to come down upon and hold the blade at its other end, maintaining the same in a flexed or bent condition, with a convex outer surface and a curved cutting edge.

4. In a razor and in combination with a normally flat blade sharpened along one edge, and a suitable handle, of a bent body member having integral therewith a longitudinally bent and convexed guard-comb, its teeth with over-turned free ends, with ears 3 at the forward corners, with an end-clip 4 and a blade-retaining clip-arm pivotally connected to the guard-comb.

5. In a razor and in combination with a normally flat blade sharpened along one edge, and a suitable handle, of a bent body member having integral therewith a longitudinally bent and convexed guard-comb, its teeth with over-turned free ends, with ears 3 at the forward corners, with an end-clip 4 and a blade-retaining clip-arm pivotally connected to the guard-comb and means for determining the position of the blade and its cutting edge with reference to the ends of the comb.

6. In a razor and in combination with a normally flat blade sharpened along one of its longest edges, and a suitable handle, of a bent body member adapted for connection with the handle, a guard-comb integral with the body member and formed transversely flat and longitudinally curved and having teeth, an integral clip at one end adapted to receive one end of the normally flat razor blade, and a pivoted device at the other end adapted to engage the blade and to engage the body member in securing the blade flexed and convex upon the curved guard-comb and with its cutting edge curved.

Signed by me this 3d day of July 1907.

OTTO KAMPFE.

Witnesses:

GEO. T. PINCKNEY,
E. ZACHARIASEN.