Oct. 20, 1925. 1,558,033

H. J. MAYNARD

SAFETY RAZOR

Filed Oct. 17, 1923

Fig. 1.

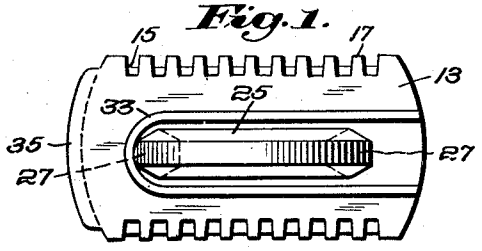


Fig. 4.

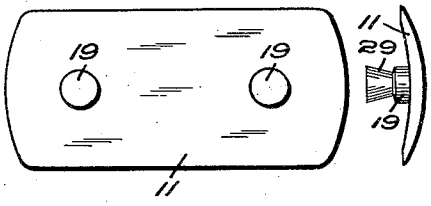


Fig. 4a

Fig. 5.

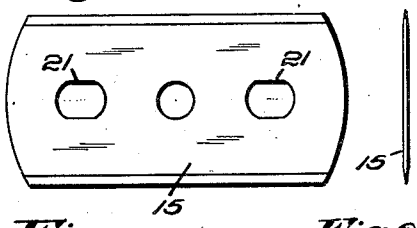


Fig. 5a

Fig. 2.

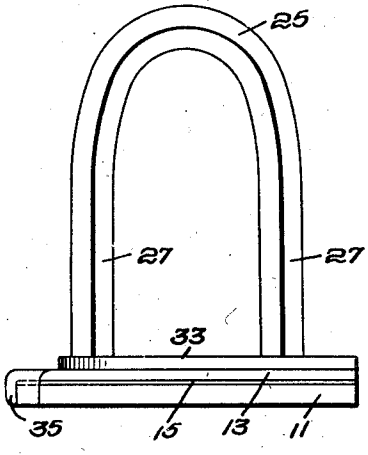


Fig. 3.

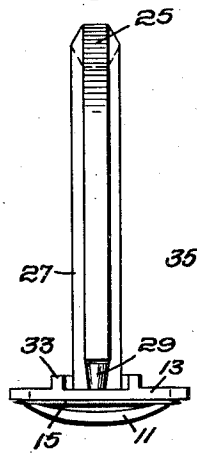


Fig. 6.

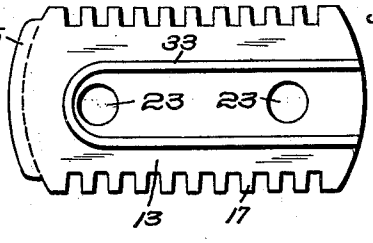


Fig. 6a



Fig. 7.

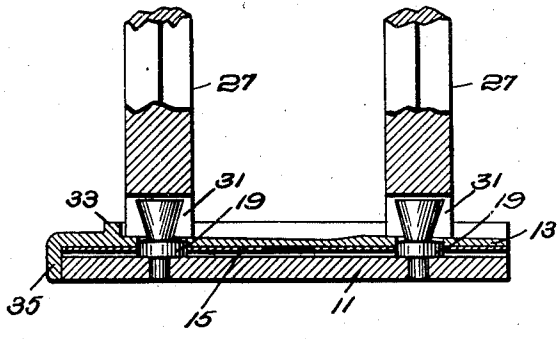
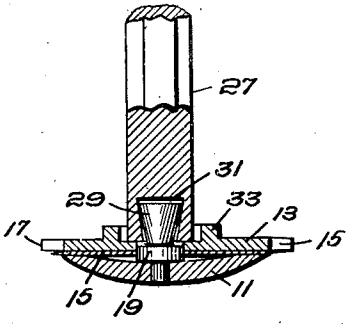


Fig. 8.



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Attys

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UNITED STATES PATENT OFFICE.

HARLAN J. MAYNARD, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO SPECIALTY SALES CORPORATION, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

SAFETY RAZOR.

Application filed October 17, 1923. Serial No. 669,071.

To all whom it may concern:

Be it known that I, HARLAN J. MAYNARD, a citizen of the United States, and a resident of Newton, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Safety Razors, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to safety razors, and more particularly to features designed to simplify, improve and reduce the cost of construction.

The invention will be best understood by reference to the following description, when taken in connection with the accompanying illustration of one specific embodiment thereof, while its scope will be more particularly pointed out in the appended claims.

In the drawings,—

Fig. 1 is a plan view of a razor embodying one form of the invention, this, as well as other figures, showing the parts on a somewhat exaggerated scale for the sake of clearness;

Fig. 2 is a front elevation of the razor shown in Fig. 1;

Fig. 3 is a side elevation of the same;

Fig. 4 is a plan, and Fig. 4ª an end view, of the clamping plate;

Fig. 5 is a plan, and Fig. 5ª an end view, of the blade;

Fig. 6 is a plan, and Fig. 6ª an end view, of the guard plate;

Fig. 7 is a longitudinal section in elevation on a still larger scale showing the blade holding means and the lower part of the detachable handle secured thereto; and

Fig. 8 is a cross sectional elevation showing the same parts which appear in Fig. 7.

Referring to the drawings and to the illustrative embodiment of the invention there shown, blade holding means is provided comprising the clamping plate 11 and the guard plate 13 between which the blade 15 is adapted to be held. The two opposite sides of the guard plate 13 are provided with the usual protecting teeth 17 and the clamping plate 11 is concaved on the side next to the blade so as to clamp each side of the blade against the guard plate close to its edge.

The clamping plate is provided with one or more projecting members 19, herein two in number, in the form of pins rigidly secured to the clamping plate and registering with and fitting openings 21 in the blade and openings 23 in the guard. These are adapted to position the blade and guard relatively to each other and to the clamping plate.

Herein the razor is provided with a detachable handle 25 having branched ends 27 forming a substantially rigid U-shaped structure and adapted to be readily attached to or detached from the blade holding means by an interlocking formation in the two ends of the handle through which it may be engaged with the ends of the pins 19.

For this purpose the pins 19 are reduced in diameter at a point just below the outer face of the guard plate and are provided beyond that point with outwardly flared or tapered walls, so that they terminate each in an enlarged end 29. To interlock with these ends 29 the two tips of the handle are provided with aligned slots 31 extending from one side to the other side of the handle end, these slots having walls tapered inwardly so as to co-act with the tapered ends of the projecting members 29. By engaging the projecting ends 29 with the respective slots 31 and sliding both handle ends in the same direction across the face of the guard plate 13, the handle ends may be caused to interlock with the projecting members 29 and bind the parts together with the straight ends of the handle receiving and containing the respective ends of the members 29 so that the latter are aligned with the ends of the handle, as shown in Figs. 7 and 8.

Preferably the slots are tapered at a somewhat lesser angle than the projecting members 29, so that the two parts engage near the ends of the pins, and preferably also there is provided such a formation as increases the binding pressure of the handle as the latter approaches the desired interlocking position. For the latter purpose that portion of the face of the guard plate which contacts with the handle is inclined upwardly (shown somewhat exaggerated in Fig. 7) beginning with the outer edge of the guard plate and extending to the first opening 23. Thence the surface of the plate is

depressed for a short distance but from the middle part of the guide plate face to the second opening 23 presents a second upward incline, so that as the bearing faces of the handle tips slide over the guard plate they tend to ride up the latter and the parts are gripped or wedged together by a binding force which reaches its maximum when the handle comes to rest in the position indicated in Fig. 7.

To facilitate the attachment and detachment of the handle, the blade holding means also preferably presents a guiding formation adapted to guide the handle in its sliding movement. This object may be secured in various ways, but in the illustrative form of the invention it is had by forming a raised U-shaped bead 33 on the face of the guard plate, the bead presenting an open end at one end of the guard plate and forming a guide of the right width to guide the handle into engagement with the pins. In attaching the handle, the latter is slid over the face of the guard plate through the open end of the bead, while the opposite or closed end thereof serves as a stop to limit the sliding movement of the handle, bringing the latter to rest in the position shown in Fig. 7 where the projecting members 29 are within the handle ends and aligned therewith.

In the illustrative form of the invention the end of the guard plate towards which the handle is slid in its movement of attachment is provided with a small down-turned extension 35 constituting a protecting lip for the blade holding means and preventing contact of the thumb or finger with the blade end or blade corners as the handle is shoved towards its seat. Such lip conforms to the contour of the end of the handle and clamping plate, and also acts to more readily align these parts when they are being quickly assembled.

The guard plate may be arranged symmetrically with reference to the opposite edges of the razor, or it may be so arranged that the ends of the teeth will be relatively nearer the razor edge on one side than the other so that a closer cut may be effected through the use of one side of the razor than through the use of the opposite side. Herein I have shown the guard plate offset relatively to the razor edge, and in order that such offset may be by a predetermined and unalterable amount the same is secured by locating the openings 23 in the guard plate slightly to one side of the longitudinal axis of the blade, thereby securing the required offset, which offset is thereby rendered permanent.

While I have herein shown and described for the purposes of illustration one specific embodiment of the invention, it is to be understood that extensive deviations may be made with respect to form or relative arrangement of parts, all without departing from the spirit of the invention.

Claims:

1. A safety razor having blade holding means comprising a guard plate and a clamp plate, a substantially rigid detachable handle having branched ends, mechanical connections between the handle and blade holding means comprising a plurality of projecting members carried by one plate and extending through registering openings in the other plate to align the same thereon, and cooperating interlocking formation on the handle ends comprising a slot formed in each handle tip, the latter being adapted by a bodily sliding movement of the ends of the handle in the same direction to engage with the blade holding means and bind the parts together.

2. A safety razor having blade holding means, a substantially rigid detachable handle having branched ends, an interlocking formation presented by the blade holding means, and a cooperative interlocking formation on each end of the handle, the latter being adapted by a bodily sliding movement of the ends of the handle in the same direction to engage with the blade holding means and bind the parts together.

3. A safety razor having blade holding means, a substantially rigid detachable handle having branched ends, and mechanical interlocking connections between the blade holding means and the ends of the handle, including a plurality of enlarged ends extending from said blade holding means and adapted to engage the tips of the handle ends and clamping and binding the parts together.

4. A safety razor having blade holding means comprising a guard plate and a clamping plate, one of said plates having two members projecting through the remaining plate and having each an enlarged end, a substantially rigid, detachable handle having branched ends extending at substantially right angles to the blade holding means when attached thereto, the tip of each end having a slot with a narrow mouth adapted to receive and contain said enlarged end and, by a sliding movement of the handle ends, clamp and bind the parts together with the projecting members in substantial alignment with the respective handle ends.

5. A safety razor having blade holding means including a guard and a clamp plate, a substantially rigid detachable handle having branched ends and connections including a plurality of projecting members on the clamp plate passing through registering openings in the guard, said handle being provided with formations to permit a sliding movement of the handle to engage and

pass over the ends of the projecting members and bind the parts together.

6. A safety razor having blade holding means and a detachable yoke-shaped handle presenting substantially rigid branched ends bearing against the blade holding means each end being slotted from side to side through the bearing face.

7. A safety razor having blade holding means including a guard plate and a clamping plate, projecting members on the clamping plate and extending through registering openings in the guard plate, the projecting members having enlarged ends, a handle having branched ends adapted to interlock with the enlarged ends of the projecting members by a sliding movement of the handle ends over the guard plate, and an inclined formation on the guard plate to increase the binding action of the handle.

8. A safety razor having blade holding means, a detachable handle presenting an end for attachment to the blade holding means, connections whereby a sliding movement of the handle end on the blade holding means connects the handle thereto, and a guiding formation on the blade holding means to guide the handle in the direction of its required sliding movement.

9. A new article of manufacture comprising a detachable razor handle having rigid branched ends, the tips of which are provided with aligned slots extending from side to side.

10. A new article of manufacture comprising a perforated guide plate having a channel extending lengthwise the same on one side thereof and on opposite sides of the perforated part thereof, said channel being open at one end of the plate and closed at the opposite end thereof.

11. A safety razor having blade holding means including a guard plate and a clamping plate, a rigid detachable handle having branched ends, projecting members carried by the clamping plate and passing through registering openings in the guard plate, said handle ends having a formation whereby a sliding movement thereof relatively to the blade holding means connects the handles thereto, and a guiding formation on the guard plate to guide the handle in the direction of its required sliding movement.

In testimony whereof, I have signed my name to this specification.

HARLAN J. MAYNARD.