June 5, 1934. F. W. MERRICK 1,961,236

SAFETY RAZOR

Filed July 8, 1931

Fig. 5.

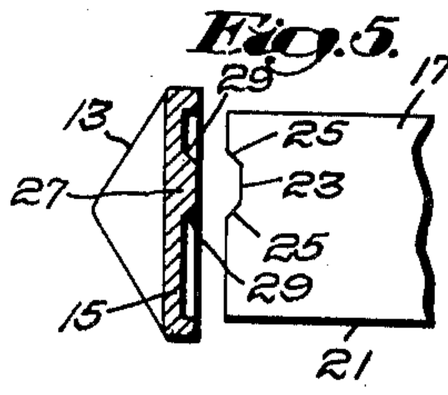

Fig. 1.

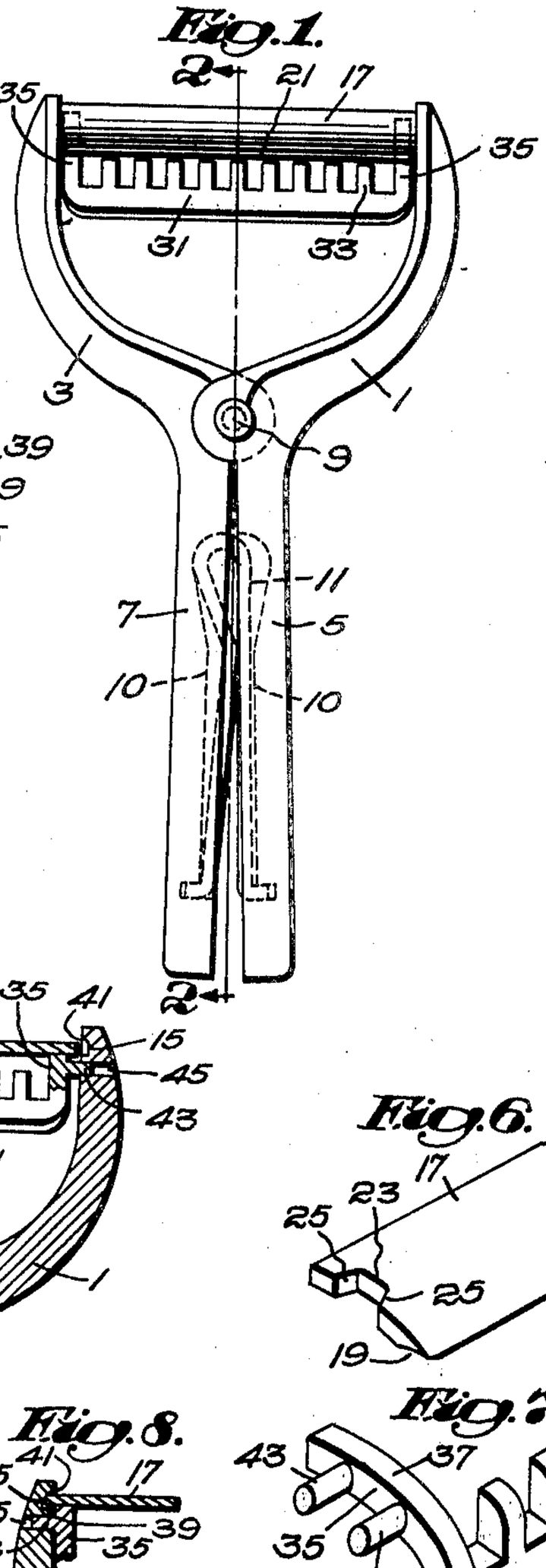

Fig. 2.

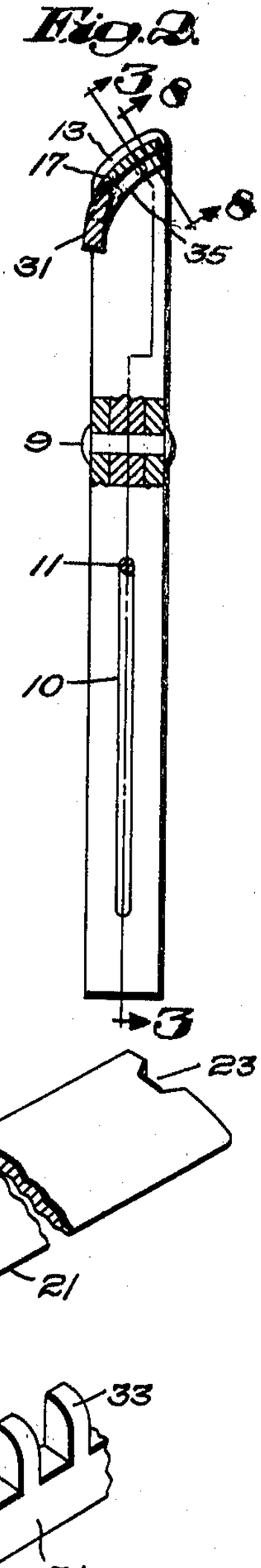

Fig. 4.

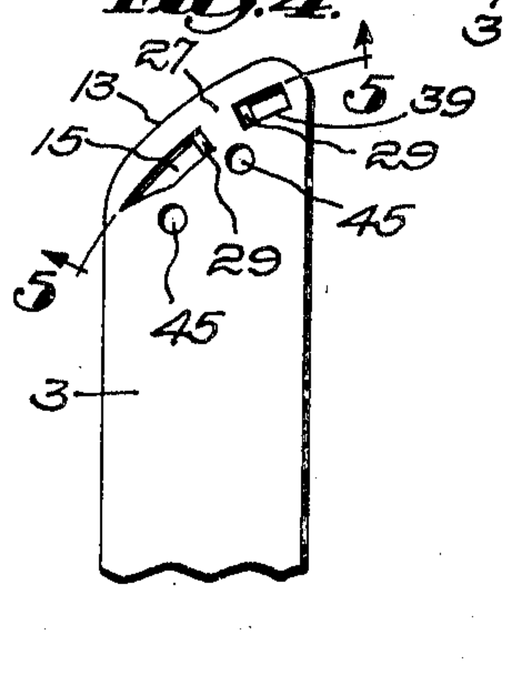

Fig. 3.

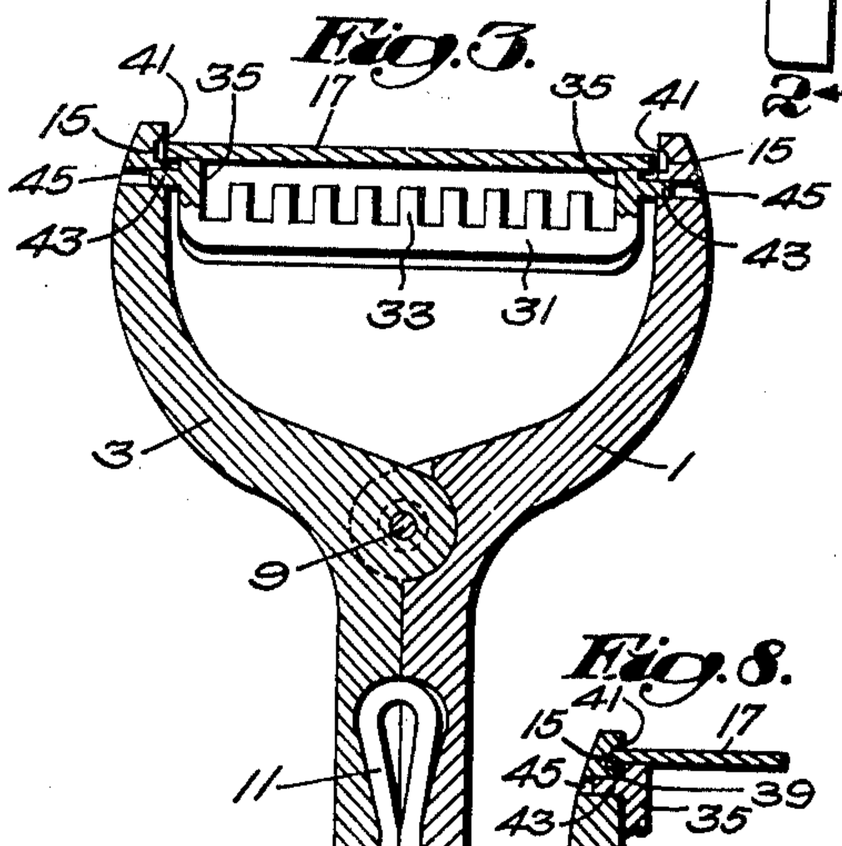

Fig. 6.

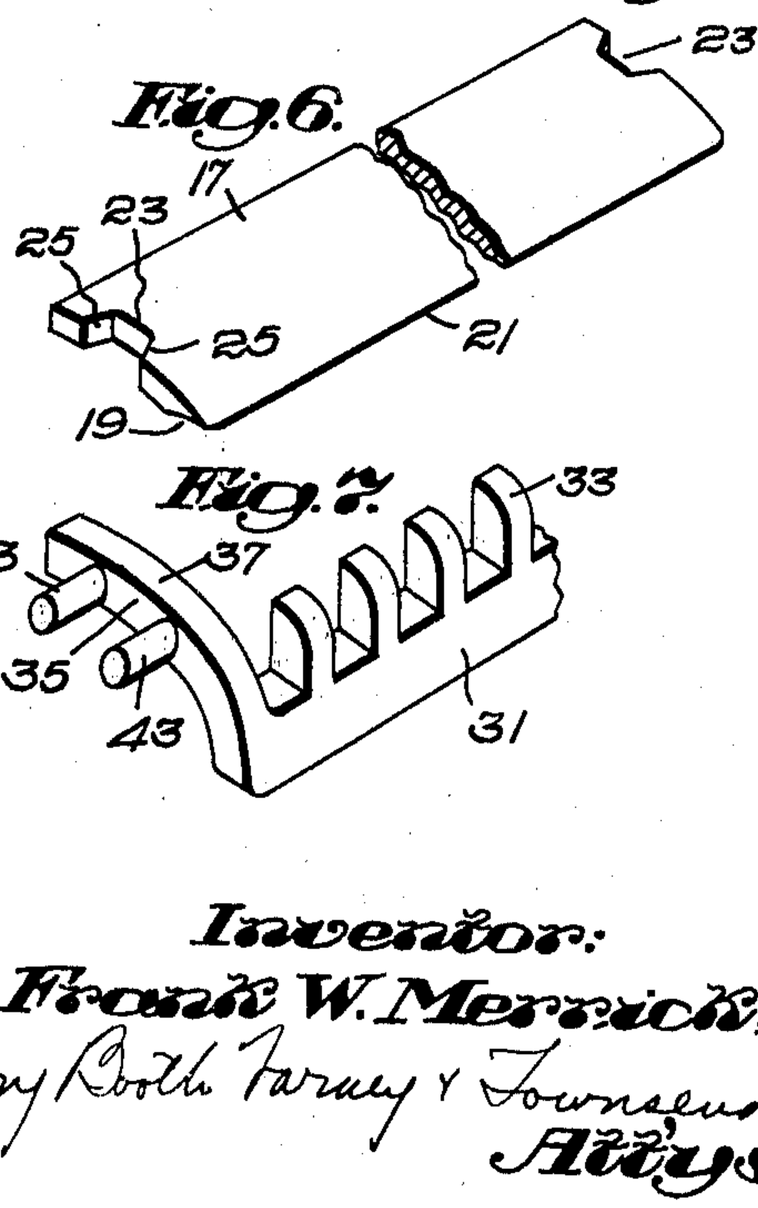

Fig. 8.

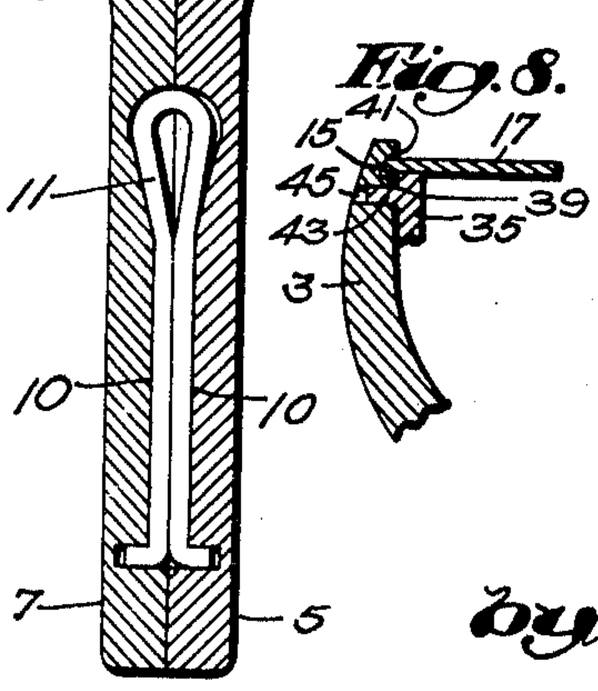

Fig. 7.

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SAFETY RAZOR

Frank W. Merrick, Boston, Mass.

Application July 8, 1931, Serial No. 549,375

7 Claims. (Cl. 30—12)

My invention, which relates to safety razors, will be best understood from the following description when read in the light of the accompanying drawing of an embodiment of the invention selected for illustrative purposes, while the scope of the invention will be more particularly pointed out in the appended claims.

In the drawing:—

Fig. 1 is a front elevation of the razor constructed according to the invention with the blade inserted;

Fig. 2 is a section on the line 2—2 of Fig. 1;

Fig. 3 is a section on the line 3—3 of Fig. 2, with the yoke in open position for receiving or removing the razor blade;

Fig. 4 is an elevation, on an enlarged scale, of the end of the yoke arm, as viewed in Fig. 2, with the blade and blade guard removed;

Fig. 5 is a section on the line 5—5 of Fig. 4, also showing a fragment of the cooperating end of the razor blade;

Fig. 6 is a perspective of the razor blade;

Fig. 7 is a perspective of one end portion of the blade guard; and

Fig. 8 is a section on the line 8—8 of Fig. 2 on an enlarged scale.

Referring to the drawing, the razor illustrated comprises a pair of rigid yoke arms 1 and 3 integrally formed with the halves 5 and 7 respectively of a longitudinally split handle, the parts being preferably formed of suitably colored molded material such as so-called "bakelite", and being pivotally connected at 9. As shown, each half of the handle is provided with a slot 10 for receiving the ends of a bent spring 11. The spring acts to urge the halves of the handle away from each other, and thus acts to urge the arms of the yoke toward each other.

As illustrated, the end surface 13 of each arm is slightly curved, and is downwardly inclined toward one side of the yoke. Adjacent these end surfaces, and approximately paralleling the same, each arm is formed with a shallow groove 15, these grooves being adapted to receive the ends of a razor blade 17 positioned between said arms.

As illustrated, the razor blade comprises a relatively narrow, slightly curved strip, hollow ground from its concave side adjacent one longitudinal edge, as is indicated at 19, to form a cutting edge 21. Herein, each end of the blade is formed with a wedge-like notch 23 having the converging sides 25.

Cooperating with the wedge notches 25 of the blade are lugs 27 formed on the yoke arms intermediate the lengths of the grooves 15, these lugs having the diverging sides 29 for engaging the converging sides 25 of the blade notches. The lugs 27 by cooperating with the notches on the blade serve to position the latter in operative relation to a blade guard, which latter will now be described.

As illustrated, the blade guard comprises a bar 31 formed with the comb teeth 33 projecting toward the cutting edge 21 of the blade. At each end the bar is provided with a laterally extending member 35, the upper surface 37 of which is curved to conform to the concave side of the blade and thus provide a seat for the adjacent end of the blade. Preferably, as illustrated in Fig. 8, the upper surfaces or blade seats 37 of the members 35 are in slightly overlapping relation to the bottom walls 39 of the grooves 15 to facilitate the ends of the blade entering the grooves, the upper surfaces 41 of the grooves being preferably beveled to facilitate the ends of the blade entering the grooves and for clamping the blade to the seats 37.

As shown, the laterally extending members are provided with laterally projecting pins 43 which enter perforations 45 formed in the ends of the arms, thus forming tongue and slot connections between the blade guard and the adjacent arms, the pins herein being of such length that when the halves 5 and 7 of the handle member are pressed into contact, as shown in Fig. 4, the pins will still remain in the perforations so as permanently to secure the blade guard to the yoke. Preferably the distance between the outer surfaces of the two laterally extending members 35 is such that when the parts are in the position shown by Fig. 1, in which position the blade is clamped between the yoke arms, the blade guard is capable of a limited reciprocatory movement longitudinally of the blade. In the operation of shaving, the guard bar 31 presses against the skin of the user, and it is found that this slight reciprocatory movement facilitates the application of the cutting edge of the blade to the irregularities of the skin.

It will be understood that wide deviations may be made from the specific embodiment of the invention herein described without departing from the spirit of the invention.

I claim:

1. A safety razor having, in combination, a blade having a longitudinal cutting edge, a yoke having relatively movable arms the ends of which are adapted to engage the opposite ends of said blade and clamp the same longitudinally between them, a generally U-shaped blade guard carried by said yoke comprising a bar having narrow

laterally extending end members, said narrow end members projecting between said arms in closely adjacent relation thereto with said bar positioned at the side of said yoke in spaced relation to the blade edge whereby an open space for receiving lather is formed beneath the blade approximately for the entire width and length thereof, and means for attaching said end members of said guard to said arms providing for clamping movement of said arms and providing for limited reciprocatory movement of said bar longitudinally of said blade when said blade is clamped between said arms.

2. A safety razor having, in combination, a spring yoke, the end portions of the arms of which are adapted to engage the opposite ends of a blade to clamp the latter longitudinally between them, a blade guard comprising a bar carried by said yoke at one of its lateral sides adjacent the ends of said arms in spaced relation to the plane of the blade, said bar formed with laterally projecting end portions having tongue and slot connections with said arms providing for limited reciprocatory movement of said bar longitudinally of the blade when the latter is clamped between said arms.

3. A safety razor having, in combination, a spring yoke the arms of which have inclined end surfaces, the opposed sides of said arms having grooves approximately paralleling said end surfaces in closely adjacent relation thereto, each groove intermediate its ends formed with a lug, a blade the ends of which are adapted to be received in said grooves, said blade formed at each end surface with a notch adapted to receive said lugs, a blade guard bridging said arms comprising a bar at one side of said yoke in spaced relation to the plane of said blade, means forming a tongue and slot connection between each end of said bar and the adjacent arm of said yoke comprising a narrow member carried by said bar in closely adjacent relation to the adjacent arm, said narrow member having a surface forming a seat for the end of the blade in overlapping relation to the adjacent groove.

4. A safety razor having, in combination, a spring yoke, the end portions of the arms of which are adapted to engage the opposite ends of a blade to clamp the latter longitudinally between them, a blade guard comprising a bar carried by said yoke at one of its lateral sides adjacent the ends of said arms in spaced relation to the plane of the blade, said bar formed with laterally projecting end portions which form seats for the ends of the blade, said laterally projecting portions having tongue and slot connections with said arms providing for limited reciprocatory movement of said bar longitudinally of the blade when the latter is clamped between said arms.

5. A safety razor having, in combination, a longitudinally split handle member, means yieldingly urging the halves of said handle member away from each other, a yoke arm rigidly carried by each half of said handle member, the opposed sides of said arms having grooves approximately paralleling said end surfaces in closely adjacent relation thereto, each groove intermediate its ends formed with a lug, a blade the ends of which are adapted to be received in said grooves, said blade formed at each end surface with a notch adapted to receive said lugs, a blade guard bridging said arms comprising a bar at one side of said yoke in spaced relation to the plane of said blade, means forming a tongue and slot connection between each end of said bar and the adjacent arm of said yoke comprising a narrow member carried by said bar in closely adjacent relation to the adjacent arm, said narrow member having a surface forming a seat for the end of the blade in overlapping relation to the adjacent groove.

6. A safety razor having, in combination, a blade holder comprising parts movable toward each other for engaging the ends of a blade and clamping it longitudinally between them, each of said parts having a groove for receiving the end of the blade, a blade guard comprising a bar extending between said parts at one side of the plane of the blade, means providing a tongue and groove connection between said guard and said parts comprising laterally extending members at the ends of said bar projecting between said parts, said laterally extending members having surfaces forming seats for the ends of the blade, said surfaces overlapping the adjacent edges of said grooves for receiving the ends of the blade.

7. A safety razor having, in combination, a blade holder comprising parts movable toward each other for engaging the ends of a blade and clamping it longitudinally between them, each of said parts having a groove for receiving the end of the blade, a blade guard comprising a bar extending between said parts at one side of the plane of the blade, means providing a tongue and groove connection between said guard and said parts comprising laterally extending members at the ends of said bar projecting between said parts, said laterally extending members having surfaces forming seats for the ends of the blade, said surfaces overlapping the adjacent edges of said grooves for receiving the ends of the blade, and the opposite sides of said grooves being beveled for forcing the blade toward said seats.

FRANK W. MERRICK.