

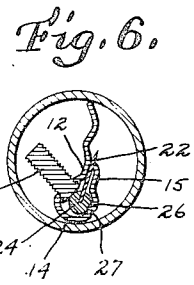
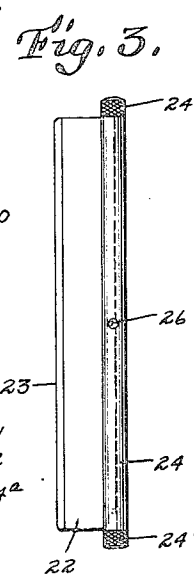
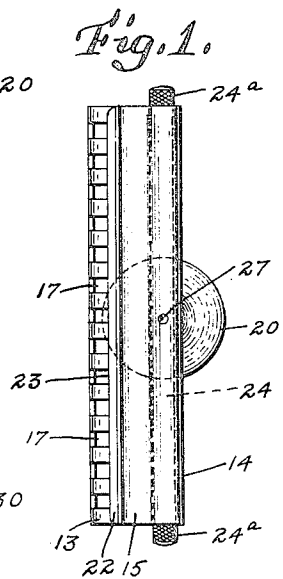
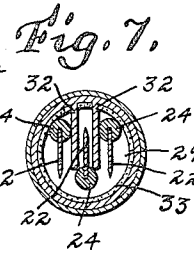
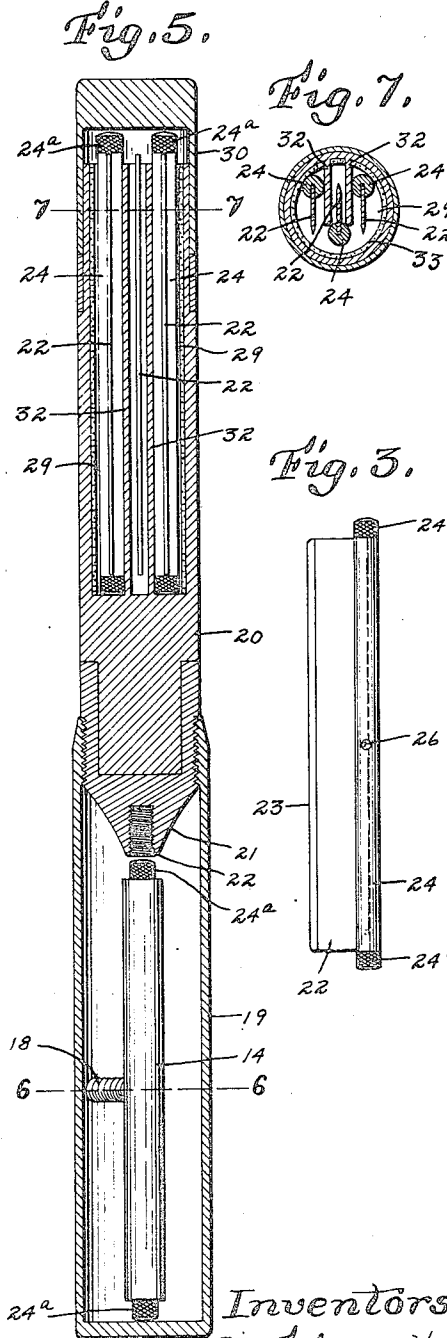
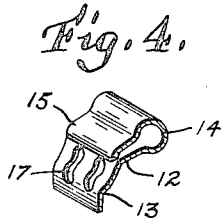
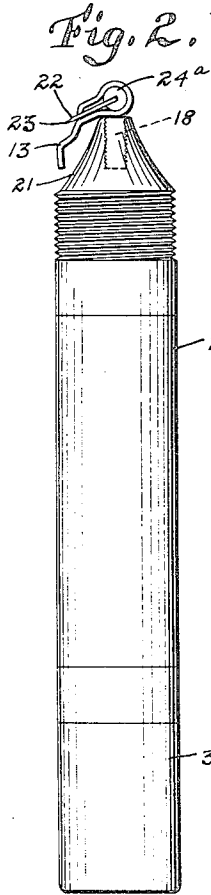
April 15, 1924.

N. H. FAIRWEATHER ET AL

1,490,458

SAFETY RAZOR

Filed April 18, 1922



one inch

Inventors:
 Nelson H. Fairweather
 Leroy H. Crosby
 by *Highmore Lundy May*
 Attys.

UNITED STATES PATENT OFFICE.

NELSON H. FAIRWEATHER, OF EVERETT, AND LEROY H. CROSBY, OF WALTHAM, MASSACHUSETTS; SAID FAIRWEATHER ASSIGNOR OF HIS ENTIRE RIGHT TO SAID CROSBY.

SAFETY RAZOR.

Application filed April 13, 1922. Serial No. 554,760.

To all whom it may concern:

Be it known that we, NELSON H. FAIRWEATHER and LEROY H. CROSBY, citizens of the United States, residing at Everett and Waltham, respectively, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Safety Razors, of which the following is a specification.

This invention is embodied in a safety razor of improved construction, adapted to be carried in a garment pocket, when not in use, and to be readily converted into an operative razor, the construction being such that the blade-holding head may be stored in one end portion of the structure, and a plurality of blades in the opposite end portion.

Of the accompanying drawings forming a part of this specification,—

Figure 1 is an end view of a razor embodying the invention, adapted for use.

Figure 2 is a side view of the same.

Figure 3 is a side view of the blade.

Figure 4 is a fragmentary perspective view, showing a portion of the head.

Figure 5 is a longitudinal section showing the entire structure, including the head-containing sheath hereinafter described, adapted for carriage in a pocket.

Figure 6 is a section on line 6—6 of Figure 5.

Figure 7 is a section on line 7—7 of Figure 5.

The same reference characters indicate the same parts in all of the figures.

The head or blade-holding portion of our improved razor is preferably made from a blank of resilient sheet metal, bent to form a blade-rest portion 12, a guard portion 13, extending downward and forward from the rest portion, a resilient partially tubular neck 14, forming a socket portion, adapted to receive the reinforcing back of the blade hereinafter described, and a clamping lip 15, which is normally held by the resilience of the neck in yielding contact with the rest portion 12. The socket portion or neck 14, and the guard portion 13, form opposite longitudinal edges of a head, the length of which is much greater than its width, or the distance between said longitudinal edges. The guard portion is apertured for the passage of lather through it, preferably by slots

17, as shown by Figure 4, so that the guard portion has a continuous lower edge. The clamping lip is immediately over the ridge formed by the junction of the rest portion 12, and the guard portion 13.

Projecting inward from, and rigidly secured to the rest portion 12, is a shank 18, which is obliquely arranged or inclined relatively to the rest portion. The width of the head between the socket and guard portions is such that the head is adapted to be inserted in a cylindrical sheath 19, of a diameter suitable for carriage in a vest pocket, the longitudinal edges of the head bearing upon, or being in close proximity to opposite sides of the internal surface of the sheath, and the shank occupying a portion of the interior of the sheath at one side of the head, as shown by Figure 6. We are enabled by this arrangement, not only to enable a shank of sufficient operative length to be stored in a relatively small sheath, but also to enable the shank when engaged with a cylindrical handle 20, in accordance with our invention, to stand with the head inclined relatively to the longitudinal axis of the handle, as shown by Figure 2.

The handle 20 has a reduced portion 21 at one end, containing a socket 22, which is coaxial with the handle, and is adapted to detachably engage the shank 18, the socket and shank being preferably screw-threaded. The reduced portion 21 permits the insertion of the shank in the handle socket without contact between the guard portion and the handle, as shown by Figure 2.

The blade 22 is flat-sided, and has a single cutting edge 23, its opposite or back edge being inserted in a slot in a cylindrical reinforcing back 24. Said slot is formed to receive the back edge and minor portions of the sides of the blade, so that the major portions of the blade sides are exposed. The blade is therefore adapted to occupy a space of minimum width between the rest 12 and the clamping lip or ear 15. The back and blade are formed to be engaged with the head by sliding the back into the socket portion 14, and the blade between the rest portion 12 and the clamping ear 15. This operation expands the socket and raises the ear, which exerts a clamping pressure on the blade. Displacement of the blade in all directions, excepting endwise, is prevented by

the head. To prevent accidental endwise displacement, we provide the back 24 with a positioning depression 26 (Figure 3), and form an inwardly projecting positioning boss 27 (Figure 1) on the socket wall, adapted to spring into the depression when the blade is in its operative position, so that endwise pressure on the back is required to displace the blade from said position.

10 The blade is narrow and its cutting edge projects slightly forward from the rest 12, and over the inner portion of the guard. To permit the convenient removal of the blade from the head, the back 24 is longer than the blade, so that its ends project from opposite ends of the socket sufficiently to form short handle portions 24^a, adapted to be grasped, these portions being preferably knurled, or otherwise corrugated.

20 The handle 20 has a tubular end portion forming a cavity 29, adapted to receive several blades. A cap 30, forming an extension of said cavity, is removably engaged with the handle. The depth of the cavity 29 is such that when the cap is removed, portions of the blades project therefrom, so that they may be grasped and removed.

As here shown, the handle is adapted to contain three blades, which may be arranged as shown by Figure 7. Injurious contact of the blades with each other is prevented by spacing members 32, which are semi-partitions fixed to the handle. A lining 33 of thin sheet cork, inserted in the cavity, prevents injury to the cutting edges of the blades.

It will now be seen that the head, the handle, and the sheath constitute a safety razor structure, the head and a set of blades of which are adapted to be housed in the handle and sheath, these forming a structure adapted to be carried in a pocket like a fountain pen, and that the razor is adapted for use by removing the sheath and screwing the shank 18 into the socket 22.

We claim:

1. A pocket safety razor, comprising a relatively narrow elongated head including a socket portion, forming one longitudinal edge of the head, a blade rest portion, a guard portion, forming the opposite longitudinal edge, and extending outward and downward from the blade rest portion, a blade-clamping lip, projecting from the socket portion over the blade rest portion, and a shank fixed to and extending obliquely inward from the blade rest portion, and adapted to detachably engage a handle member, and support the head transversely inclined relative to the longitudinal axis thereof; and a flat-sided blade having a single cutting edge, and a reinforcing back, formed to occupy the socket portion, the blade being releasably confined by the socket portion and the clamping lip against the

rest portion with its cutting edge projecting over the guard portion, and movable endwise to and from its operative position.

2. A pocket safety razor, comprising a relatively narrow elongated head including a socket portion, forming one longitudinal edge of the head, a blade rest portion, a guard portion, forming the opposite longitudinal edge, and extending outward and downward from the blade rest portion, a blade-clamping lip, projecting from the socket portion over the blade rest portion, and a shank fixed to and extending obliquely inward from the blade rest portion, and adapted to detachably engage a handle member, and support the head transversely inclined relative to the longitudinal axis thereof; and a flat-sided blade having a single cutting edge, and a reinforcing back, formed to occupy the socket portion, the blade being releasably confined by the socket portion and the clamping lip against the rest portion with its cutting edge projecting over the guard portion, and movable endwise to and from its operative position, the relative arrangement of the head and shank being such that the said head, a blade engaged therewith, and the shank are adapted to be stored in a tubular holder, having an internal diameter approximately equal to the width of the head between said longitudinal edges.

3. A pocket safety razor substantially as specified by claim 1, the said head being composed of a sheet metal blank, bent to form a resilient neck, connecting the blade rest portion with the clamping lip, and constituting a resiliently expansible socket portion, whereby the clamping lip is pressed against the blade, the guard portion projecting downward and outward from the rest portion, and being apertured for the passage of lather.

4. A pocket safety razor comprising a substantially cylindrical handle, having a reduced end portion, and a shank-receiving socket therein, coaxial with the handle; a relatively narrow elongated head including a socket portion forming one longitudinal edge of the head, a blade rest portion, a guard portion, forming the opposite longitudinal edge, and extending outward and downward from the blade rest portion, a blade-clamping lip, and a shank fixed to and extending outward and downward from the blade rest portion, and adapted to detachably engage said handle socket; and a flat-sided blade, having a single cutting edge, and a reinforcing back formed to occupy the socket portion of the head, the blade being releasably confined by the socket portion and the clamping lip against the rest portion, with its cutting edge projecting over the guard portion, the shank being inclined relatively to the blade seat

portion, so that when the head is engaged with the handle, the head is transversely inclined relatively to the axis of the handle, the guard portion standing in close proximity to the reduced portion of the handle.

5 5. A pocket safety razor substantially as specified by claim 4, the said handle having an elongated tubular blade-receiving cavity, blade-confining members therein, and a removable blade-confining cap, the cavity being adapted to receive a plurality of blades, and to protect the cutting edges thereof.

10 6. A pocket safety razor substantially as specified by claim 4, comprising also a tu-

bular sheath, adapted to detachably engage 15 the socketed end of said handle, and formed internally to receive the said head and its shank, the internal diameter of the sheath being such that the longitudinal edges of the head are in close proximity to 20 opposite sides of the internal surface of the sheath, the inclination of the shank permitting the latter to occupy a portion of the sheath at one side of the head.

In testimony whereof we have affixed our 25 signatures.

NELSON H. FAIRWEATHER.
LEROY H. CROSBY.