Aug. 13, 1940. V. O. DODGE 2,211,200

SAFETY RAZOR

Filed July 5, 1938

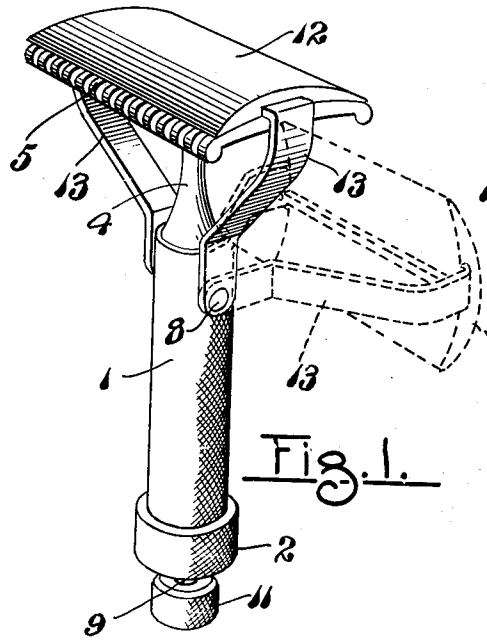


Fig. 1.

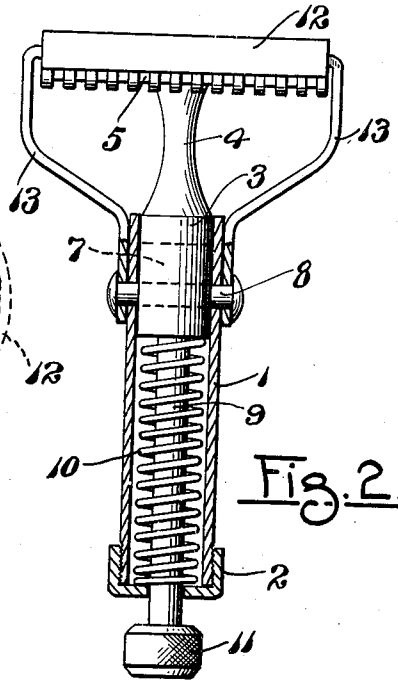


Fig. 2.

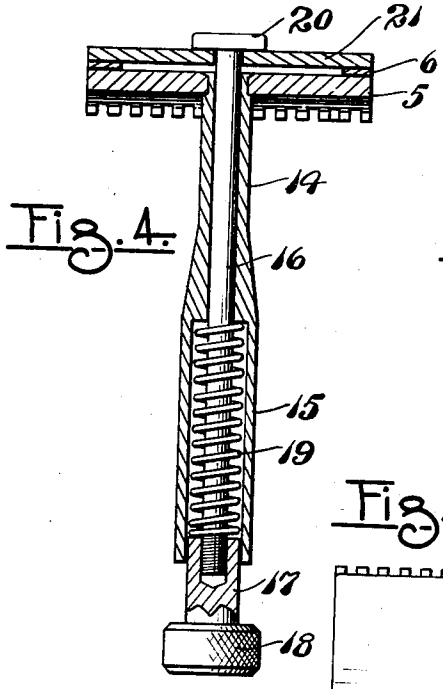


Fig. 4.

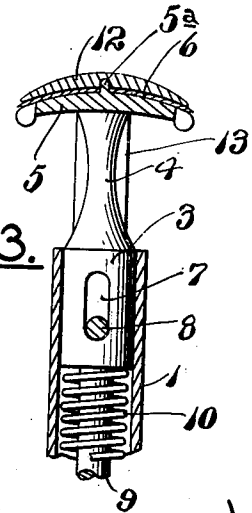


Fig. 3.

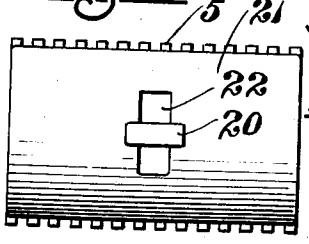


Fig. 5.

Inventor
Verne O. Dodge
By Lowrance and
Van Antwerp
Attorneys

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SAFETY RAZOR

Verne O. Dodge, Grand Rapids, Mich.

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6 Claims. (Cl. 30—59)

This invention relates to safety razors, and it is an object and purpose of the present invention to produce a construction of safety razor of a very simple and practical form and one which can be made economically and in which the razor blade is held firmly in position when the razor is in use but can be instantly removed when desired for cleaning or replacement. The invention consists of a novel structure for obtaining the objects stated, as well as many others not specifically enumerated at this time, but which will appear as an understanding of the invention is had from the following description, taken in connection with the accompanying drawing, in which:

Fig. 1 is a perspective view of one form of structure embodying my invention.

Fig. 2 is a partial side elevation and vertical section through the razor 1.

Fig. 3 is a fragmentary vertical section of the upper part of the razor, the plane of the section being at right angles to that shown in Fig. 2.

Fig. 4 is a vertical section through a modified form of structure of razor in which operation of the parts is reversed, and,

Fig. 5 is a plan view of the structure shown in Fig. 4.

Like reference characters refer to like parts in the different figures of the drawing.

The handle of the razor is provided by a length of tubing 1 which may be knurled or otherwise roughened at its outer side, the lower end of which is exteriorly threaded and equipped with a screw-threaded cap 2. In the upper end of the tubular handle 1 a cylindrical body 3 is mounted for vertical movement, having a reduced upper extension 4, at the upper end of which is a head 5 of rectangular form and of usual construction upon which a razor blade 6 may be placed. The body 3 has a vertical slot 7 therein through which a pin 8 passes, the ends of the pin extending through and beyond the sides of the tubular handle 1. A rod 9 is connected to or is integral with the body 3, extends lengthwise of and within the handle 1 and passes freely through an opening in the cap 2. A coiled compression spring 10 is located around the rod 9 within the handle, bearing at its opposite ends against the inner side of the body 3 and the upper side of the bottom of the cap 2, the effect of which is normally to move the body 3 and the head 5 in an upward direction. A knurled knob 11 is fastened at the lower end of the rod 9 below the cap 2.

A covering and blade clamping member 12 of a shape at its lower side to fit against the upper side of the blade 6 is mounted upon two arms 13 at its ends, which arms extend downwardly and are bent in toward the handle 1 terminating in vertical sections which lie against opposite sides of the handle, the ends of the pin 8 passing therethrough and being riveted over to provide a pivotal mounting for the part 12.

By grasping the handle 1 in one hand and pulling upon the knob 11 with the other, the spring 10 may be compressed and the head 5 drawn downwardly, permitting a placing of a razor blade 6 thereover and then by release of the head at 11, spring 10 will move the blade upwardly to press snugly against the underside of the member 12. Preferably there will be a cooperating projection 5a on the head 5 to enter a suitable notch in the under side of the member 12, locking the parts together as shown in Fig. 3. In such position the razor is operative and may be used in the usual manner. At the end of a shaving operation the head 5 supporting the blade 6 is drawn downwardly in the manner described and the member 12 may be turned about the axis of the pin 8 to the dotted line position shown in Fig. 1. The blade is readily removed and the parts of the razor may be very quickly and easily cleaned. The member 12 may be returned to its upper position and releasably locked in such position by the engagement of the projection 5a in the recess thereof.

In Fig. 4 the head 5 over which the blade 6 is placed is rigidly secured at the upper end of the handle member 14, the lower portion 15 of which is of tubular form as shown. A rod 16 extends axially of the handle 14, 15, and is threaded at its lower end, onto which the shank 17 equipped at its lower end with a knob 18 is secured, compressing a spring 19 housed within the tubular portion 15 of the handle between the shank 17 and the shoulder provided at the upper end of said tubular section 15. The rod 16 at its upper end beyond the upper end of the handle member 14 is equipped with a rectangular head 20. The holding or clamping member 21 for the razor blade has a rectangular opening 22 therein slightly larger in dimensions than the head 20. With this structure after the member 21 has been removed the razor blade 6 may be placed upon the head 5 and the spring 19 compressed by pushing upwardly upon the knob 18, thereby elevating the head 20 to an upper position, whereupon the clamping member 21 may be placed over the head 20 in a position at right angles to that which it occupies when in use.

After it has been placed over the head 20 by a passing of said head 20 through the opening 22, the clamping member 21 is turned to parallel the head 5 and then the pressure against the knob 18 released, whereupon the head 20 will extend across the slot 22, as shown in Fig. 5, the spring 19 drawing the clamping member 21 snugly against the blade 6. Equivalent cooperating locking projections and recesses on the parts 5 and 21 may be used the same as shown in Fig. 3 to hold the head 5 and clamping member 21 in operative position. The release and removal of the blade 6 after a shaving operation has been performed is quick and easy, requiring merely the reversal of the operations which have been described in putting the blade in place and releasing the clamping member against it.

With this construction a safety razor is produced of few parts very simply and easily manufactured and assembled, and in which the blade may be removed for either cleaning or replacement and replaced very quickly and expeditiously.

The invention is defined in the appended claims and is to be considered comprehensive of all forms of structure coming within their scope.

I claim:

1. A razor construction comprising a tubular handle, a closing cap secured to the handle at its lower end, a rod having an enlarged upper portion extending lengthwise through the handle the lower portion of the rod passing freely through said cap and said enlarged upper portion having a vertical slot therein closed at both ends, a member shaped to have a razor blade placed at its upward side secured to one end of the rod, a pin extending through said handle and through the slot in the enlarged portion of the rod, arms pivotally mounted one at each end of said pin, a second member connected to and extending between the opposite ends of said arms and adapted to be swung over the first member and a razor blade thereon, and a compression spring around the lower portion of the rod between said cap and the enlarged portion of the rod for moving said rod and said attached member to press the razor blade against the second member as specified.

2. A construction containing the elements in combination defined in claim 1, combined with interlocking means on said members for holding the pivotally mounted member against movement said means being released on movement of said rod and its connected member in a downward direction.

3. A razor construction comprising, a tubular handle, a closure member at the lower end thereof, a rod having an enlarged upper portion extending lengthwise through the handle and passing freely through said closure member, a vertical slot in said enlarged upper portion, a member shaped to have a razor blade placed at its upper side secured to one end of said rod, a pin extending through said handle and said slot, a second member adapted to be placed over the first member and a razor blade thereon, means for swingably mounting said second member with respect to said handle, and a compression spring around the lower part of the rod between said closure member and the enlarged portion of the rod for moving said rod and attached member to press the razor blade against the second member, as specified.

4. A construction containing the elements defined in claim 3, combined with interlocking means on said members for holding the swingably mounted member against movement, said means being released on movement of said rod and its connected member in a downward direction.

5. A razor construction comprising, a tubular handle, a closing cap secured to the handle at its lower end, a rod extending lengthwise through the handle and passing freely through said cap at its lower end, a member shaped to have a razor blade placed at its upper side secured to one end of said rod, a vertical slot in the upper portion of said rod, a pin extending through the handle and said slot, arms pivotally mounted one at each end of said pin, a second member connected to and extending between the opposite ends of said arms and adapted to swing over the first member and a razor blade thereon, a compression spring around the lower end of said rod, and means extending outwardly from the upper portion of said rod against which the upper end of said spring abuts, the lower end of said spring bearing against said cap for moving said rod and said attached member to press the razor blade against the second member, as specified.

6. The combination of elements defined in claim 5, combined with interlocking means on said members for holding the pivotally mounted member against movement, said means being released on movement of said rod and its connected member in a downward direction.

VERNE O. DODGE.