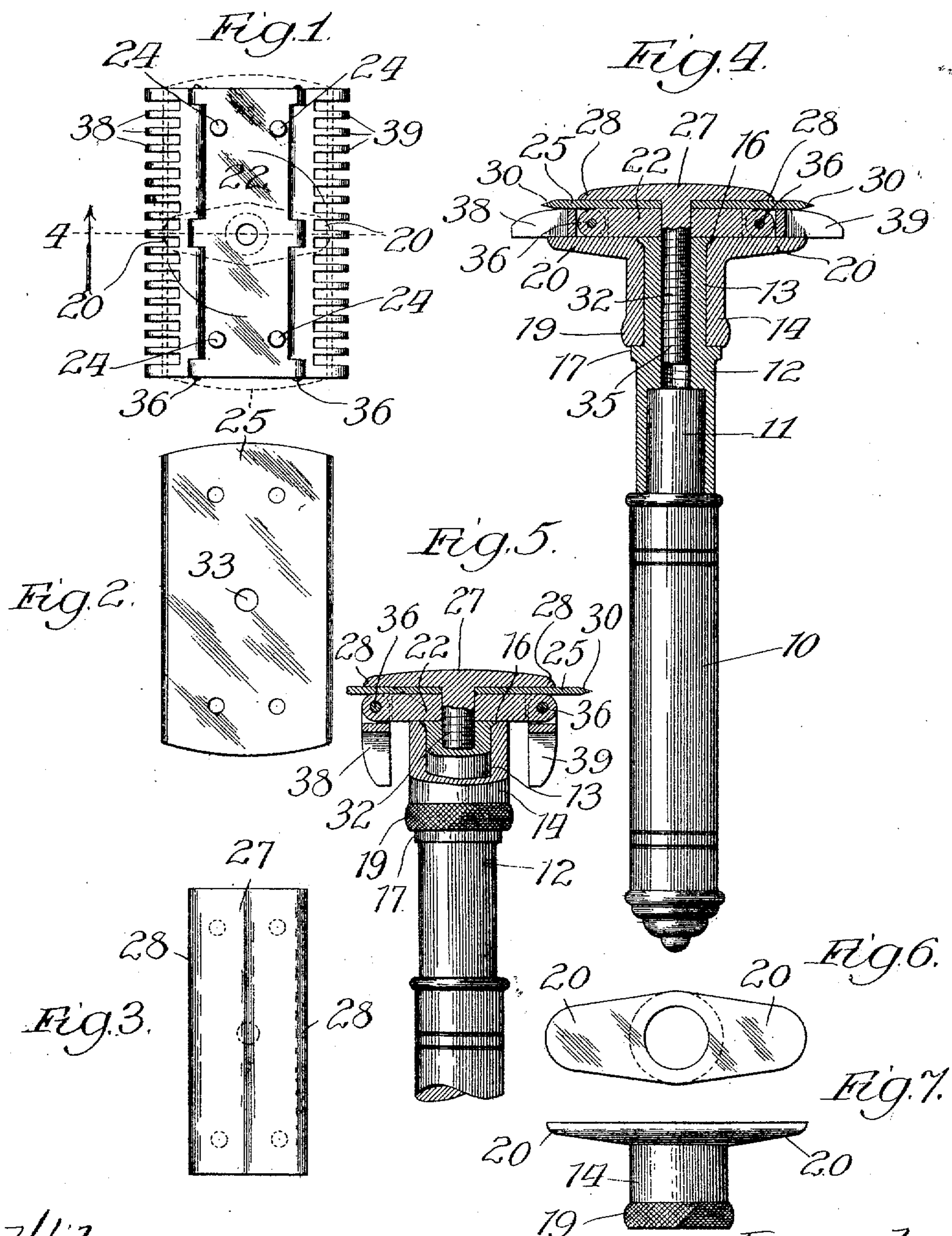


D. E. GOE.
SAFETY RAZOR.
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UNITED STATES PATENT OFFICE.

DAVID E. GOE, OF MADISON, WISCONSIN.

SAFETY-RAZOR.

No. 858,649.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, DAVID E. GOE, a citizen of the United States, residing at Madison, in the county of Kane and State of Wisconsin, have invented a certain new and useful Improvement in Safety-Razors, of which the following is a specification.

In all the forms of safety razors heretofore devised, it has been necessary after each shaving operation to remove the easily rustable steel blade from the holder or handle device in order to dry it. This involves in most cases considerable work and is accompanied by dangers of injuring the delicate edge of the blade, or of cutting the operator or the material with which the blade is wiped.

The object of my invention is to provide a holder for permanently grasping or clamping a portion of the blade, in a double edged blade of the common commercial form the central portion, the same being provided with mechanism which may be moved temporarily into a position to guard the edge of the blade for shaving thereby rendering it a safety razor, and the same being also adapted to be moved to another position in which it is entirely out of the way of the edge of the blade, whereby the edge of the blade may be wiped or otherwise dried.

My invention consists in mechanism capable of accomplishing the above objects; also more in detail in a permanent blade-holder equipped with hinged members resembling table-leaves, which can be swung by any suitable mechanism, to a position where they guard the blade-edge, and can be moved to another position in which they clear the blade edge.

More in detail, my invention consists in mechanisms for manipulating these temporary guards or table leaves and holding them in proper position for guarding the blade, and in other details of construction which will more fully appear as the specification proceeds.

In the drawings: Figure 1 is a plan view of a holder embodying my invention, the blade being shown in dotted lines; Fig. 2 is a plan view of the blade for use in the device of my invention; Fig. 3 is a plan view of the clamping member for holding the blade on the table. Fig. 4 is an end elevation, partially in section of a handle and blade holding device embodying my invention, taken on line 4 of Fig. 1, showing the parts in the position which they assume when the device is ready for use in shaving. Fig. 5 is the device of Fig. 4 with the parts moved to proper position for cleaning the edges of the blade. Fig. 6 is a plan, and Fig. 7 is a side view of the cam mechanism for moving the movable parts of the device from the position of Fig. 4 to that of Fig. 5.

In the preferred form of my invention I provide a suitable handle 10, of bone, wood, metal, or other suitable material, adapted to be grasped by the operator, having in its upper end a shank 11 over which a prefer-

ably metallic portion 12 is permanently secured by any suitable means. Rotatably mounted upon a journal bearing 13 formed on this handle portion 12 is a cylindrical hub 14 held in position against longitudinal movement with reference to the handle by the flanges 16 and 17, as is clearly shown in Fig. 4. This hub 14 is knurled at 19, so that the operator may take hold of it and rotate it freely upon its bearing 13. Upon the upper portion of this hub 14 are two horizontally extending cam members 20, best illustrated in Figs. 6 and 7.

Separably mounted upon the upper end of the handle portion 12 is a permanent table member 22, so located that the cams 20 slip freely against its lower surface. Extending from this stationary blade table 22 are one or more suitable pins 24 adapted to enter a blade 25 placed upon the blade table for the purpose of holding the blade in fixed position.

Above the blade 25 is a clamping plate 27 of such a width that, as shown, its edges 28 approach, but do not cover, the cutting edges 30 of the blade 25, which is to be used in my device. Extending downwardly from this clamping blade 27 is a shank 32 passing through a hole 33 in the blade 25 and a hole in the blade table 22 into the handle portion 12 to which it is screw threaded in the screw threads 35, as shown.

Hinged to the permanent blade table 22 in the pivotal bearings 36 are two tiltable members 38 and 39, resembling in their relation to the main blade 22 the hinged leaves of a table. These leaves 38 and 39 are so constructed, as shown, that when the cams 20 are moved to the position of Fig. 4, they press said leaves up against the under sides of the outer edges of the blade 25; thereby protecting or guarding the blade edges 30 and rendering the device a safety razor of the ordinary type; and that when the cams 20 are moved to the positions of Fig. 5, the cams cease to support these leaves, and they drop of their own weight or if they do not move freely for this, they may be moved by hand to the position of Fig. 5, in which position they are entirely clear of the cutting edges 30 of the blade 25. The pivots 36 of these leaves should, as shown, be a distance from the center of the handle less than the distance between the edges 28 of the clamping plate 27, so that the exposed portions of the upper and lower sides of the blade 25 may be equal, when the parts are in the position of Fig. 5, this so that a towel or other drying cloth may be moved freely along both sides of the blade adjacent to its edges.

In practice, I make the portion of the blade 25 which is under the clamping member 27 and upon the permanent table 22 with a silver-plated coating, so that if water does in fact get in under the clamping member 27 it does not rust the portion of the blade permanently held between the clamping member 27 and the table 22. It is manifestly impossible to silver-plate the cutting edge or edges of the blade, while keeping said edges sharp

enough for shaving, and consequently it is necessary to provide the construction here described so that the unplated edge portions of the blade may be wiped dry after each shaving operation.

5 In the operation of the device, assuming that no blade is in the holder, the operator unscrews the handle 12 from the shank 32, and removes the clamping member 27. He now places the blade 25 in position and inserts the shank 32 through the hole 33 and rotates the 10 handle 12 until the parts are in the position of Fig. 5. When this has been done the leaves 38 and 39 should be in the position of Fig. 5, and the cams 20 in corresponding position. The operator now takes hold of the knurled portion 19 of the hub 14 and rotates the cam 15 from the position of Fig. 5 to that of Fig. 4, thereby raising the leaves 38 and 39 to the position of Fig. 4, and rendering the device ready for shaving. When the shaving operation has been completed the operator takes hold of the knurled portion 19 and moves the 20 cams from the position of Fig. 4 to that of Fig. 5, and if necessary manually drops down the leaves 38 and 39 to the position of Fig. 5, after which he wipes the cutting edge or edges 30 of the blade, and puts the device away without the inconvenient necessity of removing the 25 blade from the holder. When the blade becomes dull, and it is desired to put in another blade, the operator reverses the operations just described.

While I have shown and described the device of my invention as applied to a double edged blade it is manifest that only one tilting table leaf may be provided and a single edged blade used therewith without departing from my invention or a two edged blade may be used with but one shaving guard leaf.

Having thus described my invention, what I claim 35 as new and desire to secure by Letters-Patent of the United States, is:

1. In a safety razor, in combination with a permanent blade table, a razor blade and means for securing the blade, a movable member mounted adjacent to one edge of 40 the holding device and adjacent to the edge of the blade, and mechanism for moving said movable member to two different positions, in one position guarding the edge of the blade in the other position clearing it so that it may be cleaned

2. In a safety razor, in combination with a permanent 45 table, a safety razor blade and means for holding it on the table; a movable member pivoted adjacent to the edge of the permanent supporting member and adjacent to the edge of the razor blade and mechanism for moving said movable member to two different positions, in one position 50 guarding the edge of the razor blade for safety shaving and in the other position clearing it so that it may be cleaned.

3. A safety razor holding device comprising a permanent 55 table, means for securing a safety razor blade thereon, a movable member pivoted to the main support adja-

cent to normal position for the edge of the blade, a handle attached to said permanent holding device, and a cam mounted upon the handle adapted to be moved to two different positions, in one position holding said movable 60 member in such a position that it will guard the edge of a razor blade in the table and in the other position permitting a blade edge on the table to be wiped.

4. In a safety razor, in combination with a permanent table, a razor blade and means for securing the blade 65 on the table; a table leaf pivoted to the main table adjacent to the edge of the blade, a handle attached to the permanent table and a cam mounted upon the handle adapted to be moved to two different positions, in one position holding said table leaf in such a position that it 70 guards the edge of the blade for safety shaving and in the other position permitting said blade edge to be cleaned.

5. In a safety razor, in combination with a permanent table, a razor blade and means for securing the blade 75 on the table; a table leaf pivoted to the main table adjacent to the edge of the blade, a handle attached to the permanent table and a cam pivotally mounted upon the handle adapted to be moved to two different positions, in one position holding said table leaf in such a position that it 80 guards the edge of the blade for safety shaving and in the other position permitting said blade edge to be cleaned.

6. In a safety razor, in combination with a permanent blade table and a handle attached thereto; a razor blade, 85 a clamping device passing through said blade table and screw-threaded into said handle, adapted to hold the blade on the table, a movable table leaf pivoted to the main blade table near its edge adjacent to the edge of the razor blade, and a cam mechanism mounted upon the handle below the permanent blade table adapted to be moved to two 90 different positions, in one position holding said table leaf in position to guard the edge of the blade for safety shaving, and in the other position permitting the blade edge to be cleaned.

7. In a safety razor in combination with a permanent blade table and a handle attached thereto; a blade, a 95 clamping device passing through said blade table and screw-threaded into said handle adapted to secure the blade on the table a movable table leaf pivoted to the main blade table near its edge, adjacent to the edge of the razor blade, and a cam mechanism pivotally mounted upon 100 the handle below the permanent blade table adapted to be moved to two different positions, in one position holding said table leaf in position to guard the edge of the blade upon the table for safety shaving and in the other position 105 permitting the blade edge to be cleaned.

8. In a safety razor for a double edged razor blade in combination with a permanent table, a double edged blade 110 and means for securing the blade upon the table, movable members adjacent to the edges of the permanent blade-table and to the positions of the cutting edges of the blade, and means for moving said movable members to two different positions, in one position guarding said 115 blade edges to render them safety razors, and in the other position being out of the way of the edges of the razor blade.

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses.

DAVID E. GOE.

Witnesses:

DWIGHT B. CHIEVER,
C. J. CHRISTOFFEL.