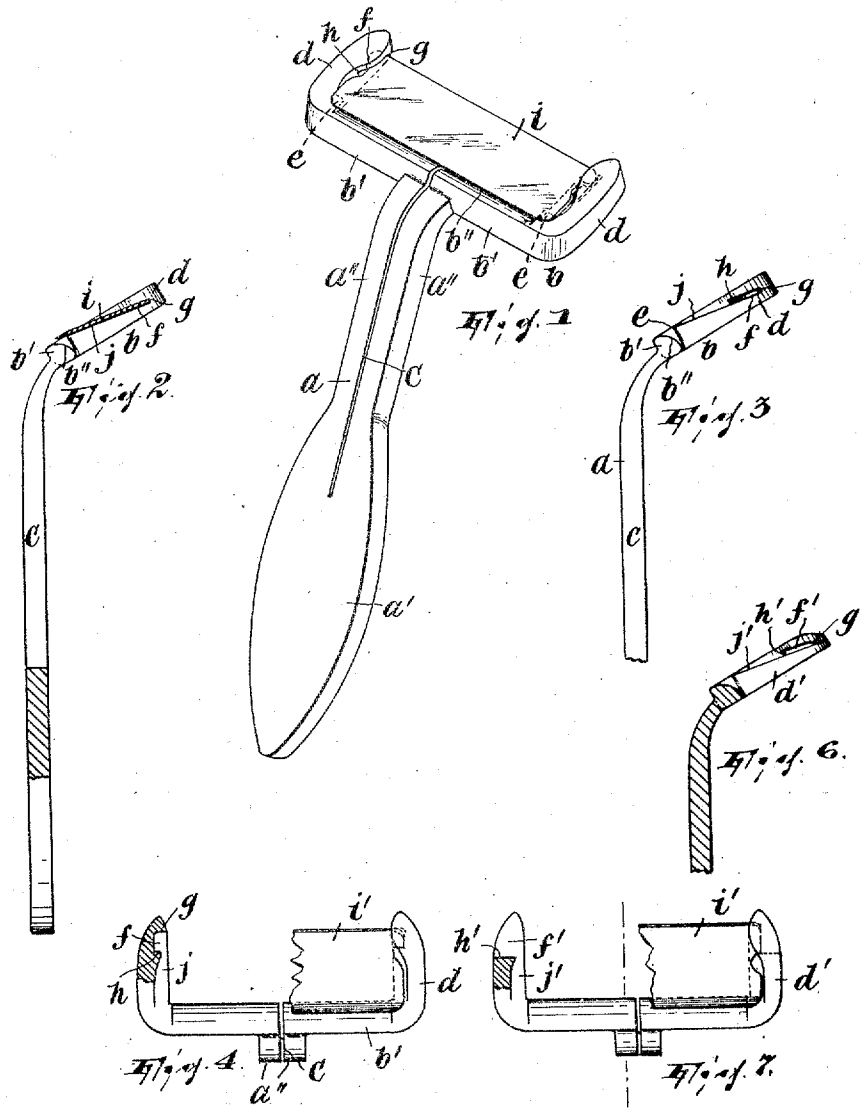


1,174,932.

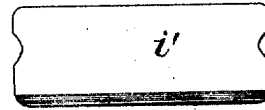
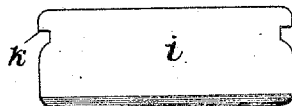
Patented Mar. 7, 1916.



WITNESSES

Wm. Drell.
Elio Kaufmann.

Fig. 5.



INVENTOR,

Henry J. Grenier

BY *John Steward,*
ATTORNEY.

UNITED STATES PATENT OFFICE.

HENRY J. GRENIER, OF PATERSON, NEW JERSEY, ASSIGNOR, BY MESNE ASSIGNMENTS,
OF ONE-HALF TO FRANKLIN J. KELLER, OF PATERSON, NEW JERSEY.

SAFETY-RAZOR.

1,174,932

Specification of Letters Patent.

Patented Mar. 7, 1916.

Application filed January 21, 1915. Serial No. 3,470.

To all whom it may concern:

Be it known that I, HENRY J. GRENIER, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

The object of this invention is to provide a safety razor which may be manufactured at little expense and the construction of which shall not only be simple but calculated to facilitate shaving, not only in respect to the operations directly concerned in shaving but in respect to the subsequent operations involved in removing the blade from the frame, cleaning and drying the parts and returning the blade.

The invention will be found fully illustrated in the accompanying drawing, wherein,

Figure 1 is a perspective view of the improved safety razor; Fig. 2 is a side elevation showing the razor mainly in longitudinal central section; Fig. 3 is a view of the frame similar to the upper portion thereof as it appears in Fig. 2; Fig. 4 is a plan view of the razor shown in Figs. 1, 2 and 3, with one arm of its fork shown in section and the blade broken away; Fig. 5 is a plan view of the blade used in the frame shown in Figs. 1, 2 and 3; and, Figs. 6, 7 and 8 are views substantially like Figs. 3, 4 and 5, but illustrating a modification of the invention.

The frame consists of a preferably flat handle *a*, suitably widened in one end portion, as at *a'*, to afford a convenient grip, and having integral with its other end a resilient fork *b*. The handle *a* is split centrally and lengthwise, as at *c*, from its forked end a suitable distance toward the other end thereof. The aforesaid fork consists of two opposite extensions *b'*, each projecting at right angles from one of the legs *a''* of the handle formed by splitting the same, as at *c*, said extensions having their free end portions bent in the same direction so as to stand substantially parallel to each other and thus form the arms *d* of the fork.

Viewed in side elevation, the fork stands at an obtuse angle to the handle *a*.

At the bend produced in each extremity *b'* for the forming of the arm *d* thereof and on the upper side of said bend as shown

in the drawings there is provided a shoulder *e*. Between these two shoulders the extremities *b'* are beveled, as at *b''*.

Each arm has on the inner side thereof near its outer end an elongated recess in the form of a groove *f* which at its outer end is formed with a stop *g* and at its inner end preferably has a shoulder *h*. The grooves extend substantially lengthwise of the arms and are adapted to receive a thin blade *i* with the cutting edge of the latter adjoining the handle and with the corners thereof at the ends of its cutting edge resting on the shoulders *e*; it is preferable that the grooves be inclined slightly, as best shown in Fig. 3, so that all points in the bottom side of each groove and the point of contact of the blade with the corresponding shoulder *e* will lie in a common plane. It is also preferred that between its groove and the shoulder *e*, and forming a continuation of the lower side of the groove, each arm shall have a platform *j*; these platforms facilitate the assembling of the blade with the frame, affording guides for the back of the blade in the operation of introducing it into the grooves.

On account of the split *c* in the handle the arms may be sprung apart somewhat on introducing the blade, and when the blade is in place they may if necessary exert pressure thereon toward each other to preserve the blade (which will be then backed by the stops *g*) against working forward; but I prefer to utilize the stops *h* for positively holding the blade against working forward, and to this end shoulders *k* may be formed on the blade to engage these stops.

It will be noted that the beveling of the extremities *b'*, as at *b''*, leaves the cutting edge of the blade standing clear of the frame.

The forming of the frame may be simplified if it is constructed as shown in Figs. 6 and 7. Here, the blade-receiving recesses *f'* are produced by splitting the end of each arm *d'* in the plane of the platform *j'* a suitable distance inwardly, and then pressing the extremities of the split portion together to produce the back stop *g'* for the razor, the front stop *h'* being afforded by the forward end of the split. The blade *i'* adapted for this frame is substantially the same as the blade *i* already described.

It will be observed that the frame of the

improved razor may be formed by the simplest operations. That since its forked end stands at an obtuse angle to the handle thereof, the implement becomes one that is
5 extremely handy to use, its shape being calculated greatly to facilitate shaving. That, further, it is an extremely easy matter to remove and replace the blade.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:

A safety razor consisting of a frame having a handle and an integral fork projecting from one end of the handle at an obtuse
15 angle thereto and formed on the inner side of each arm of the fork with a blade-receiv-

ing groove extending substantially lengthwise of the arm and having a blade-stop at its outer end, and a blade arranged with its side edges in the grooves and its cutting
20 edge adjoining the handle, the blade being removable from said grooves longitudinally of the latter and in the direction of the handle and said arms being resilient and resiliently coacting to oppose the movement
25 of the blade in said direction.

In testimony whereof I affix my signature in presence of two witnesses:

HENRY J. GRENIER.

Witnesses:

• JOHN W. STEWARD,
WM. D. BELL.