(Model.)

H. B. LEACH.

SAFETY RAZOR.

No. 385,636. Patented July 3, 1888.

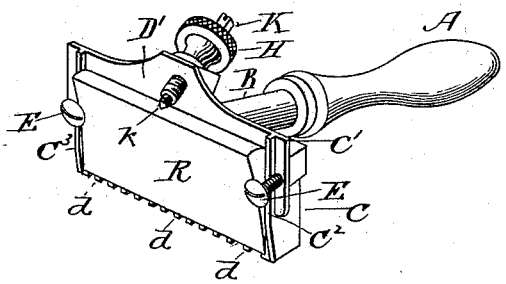

Fig. 1.

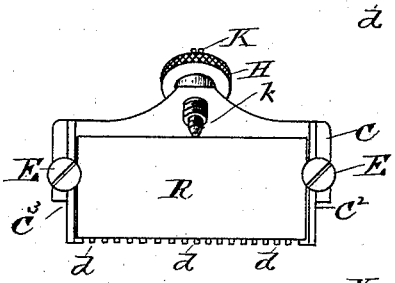

Fig. 3.

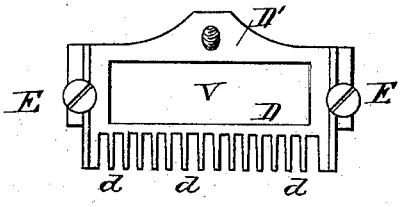

Fig. 4.

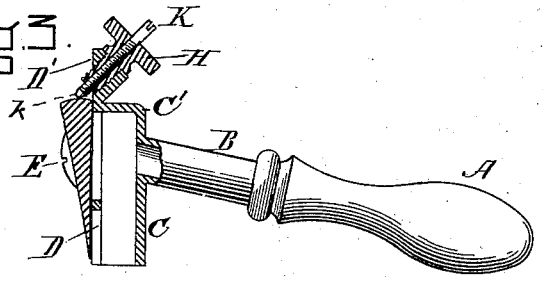

Fig. 2.

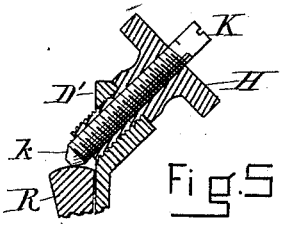

Fig. 5.

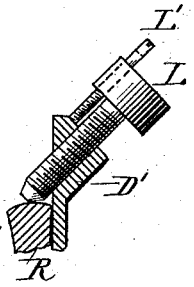

Fig. 6.

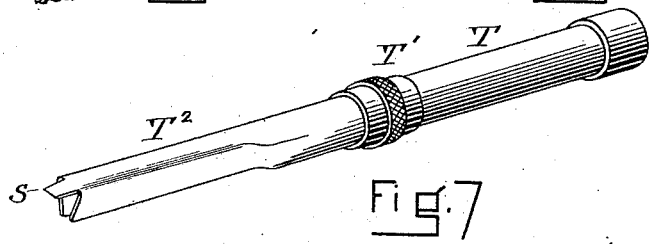

Fig. 7.

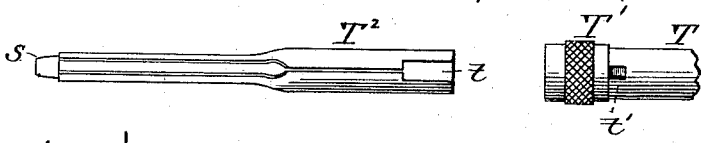

Fig. 8.

WITNESSES.

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HENRY B. LEACH, OF BOSTON, MASSACHUSETTS.

SAFETY-RAZOR.

SPECIFICATION forming part of Letters Patent No. 385,636, dated July 3, 1888.

Application filed February 16, 1888. Serial No. 264,259. (Model.)

To all whom it may concern:

Be it known that I, HENRY B. LEACH, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Safety-Razors, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of my invention is to provide a safety-razor with a gaged clamping screw, so that there is no danger of forcing the clamping-screw too hard down; also, to provide adjusting-screws having heads nearly flat underneath, adapted to hold the razor-blade so that its cutting-edge shall be parallel to and at the required distance from the edge of the guard.

Another object of my invention is to provide the handle, which is to be used in honing the razor, with an extension or lip that will enable the user to operate the slotted headed screws.

I attain these objects by the mechanism shown in the accompanying drawings, in which—

Figure 1 is a perspective view of one of my razors complete. Fig. 2 shows the frame or holder in vertical cross-section and the handle in side elevation. Fig. 3 is a front elevation. Fig. 4 is a front elevation of the frame or holder of the razor, the blade being removed. Fig. 5 is an enlarged detail view. Fig. 6 is an enlarged detail view showing a modification of clamping-screw-gage device. Fig. 7 is a perspective view of my handle for holding the blade while being honed, and Fig. 8 shows a method of connecting the two parts of the handle.

Referring to the drawings, A B, Figs. 1 and 2, show the handle of the razor-blade frame or holder, which may be made of any desired shape and of any suitable material.

To the handle A B, I attached the frame part C C′ D D′. (See Figs. 1 and 2.) The frame or case is formed of a back piece, C, to which the handle is attached, a top part, C′, end pieces, C^2 C^3, and a front piece, D D′, the part D′ forming the top of the front, and, being re-enforced or thickened, serves as a housing for the clamping-screw K *k*. (See Figs. 1, 2, 3, and 5.) The lower edge of the front plate, D D′, may, if desirable, have teeth *d d*, as shown, or it may form a smooth guard. V, Fig. 4, shows an opening made in the front plate to allow the surplus gatherings to be easily removed from the interior.

I will now proceed to describe the parts of my device that I think are new.

The clamping-screw K *k*, Figs. 1, 2, 3, and 5, impinges on the back of the razor-blade R and keeps it in place. In order to prevent the user from inadvertently turning the clamping-screw K *k* too far down, and thus cause injury to the device, I have in connection with it a gage-screw, H, Figs. 1, 2, 3, and 5, which is made hollow and has an internal thread to correspond with the thread on the screw K *k*, so that the screw K *k* can be moved by turning independently of the gage-screw H. In other words, the screw K *k* may be considered as an adjustable extension of the screw H. By the combination of the clamping-screw K *k* and the gage-screw H, I am enabled to set the two in such a manner that the shoulder on the gage-screw H will come in contact with the rear of the part D′, and thus prevent any further movement of the screw H by the user; but if the user finds that the gage-screw H will not permit the point *k* of the clamping-screw K *k* to bear sufficiently hard on the back of the razor-blade to firmly hold it then the screw-driver may be applied to the slotted head of the screw K *k* and said screw screwed down to the desired point for this adjustment. Now, in taking out or replacing the razor-blade the user need not use the screw-driver, but simply the thumb-screw H, which takes with it the clamping-screw K *k*.

The ends of razor-blade R are held in place by means of screws E E, Figs. 1, 3, and 4. Each of these screws has its head flat on the under side, so as to bear flangewise on the face of the razor-blade, as shown at E, Fig. 2. This flange-bearing of the screws E E allows them to be used as adjusting-screws for limiting the downward motion of the wedge-shaped razor-blades, and as the screws are adjustable independently of each other it is obvious that, although the razor should be worn or honed down unevenly, the screws may be so adjusted as to bring the cutting-edge of the blade parallel to the edge of the guard. Another use of the adjusting-screws E E is that as they have projecting heads that act as flanges to

bear upon the face of the razor-blade, and thus hold it, the length of the blade may be slightly varied without making it unfit for my frame. This feature is important from the fact that the makers of safety-razor blades find much difficulty in making a large number of blades of the same length.

In Fig. 6 I have shown a modification of my gaged clamping-screw. In this modification I have the gage-screw L′ at one side of the clamping screw (L of Fig. 6) instead of surrounding it, (K of Fig. 5,) as shown in other figures.

The handle that I use for holding the razor-blade while being honed, for convenience, consists of two parts, T T^2, of about even length, one part, T^2, to fit into the end T′ of the part T. To prevent one part of the handle from turning independently of the other, I make a slot, *t*, Fig. 8, in the part T^2, and a corresponding depression or lug, *t*′, on the interior of the part T.

S, Figs. 7 and 8, is an extension or lip formed on the end of the part T^2, to act as the point of a screw-driver to be used in operating the screws K, E, E, and L′.

I claim—

1. In a safety-razor, the combination of the razor blade, its frame or holder, the clamping-screw K *k*, bearing directly on the back of the razor-blade, and the gage screw H, through which the clamping-screw passes, said gage-screw being screwed through a portion of the holder or frame, as set forth.

2. The combination, with the razor-blade and its frame or holder, of the adjustable screw-holders E E, whose heads or flanges bear on the outer face of the blade and press it to the holder, as described.

3. In a handle adapted to receive a safety-razor blade for honing, the combination of the blade-holding tube T^2 with the lip adapted to operate as a screw-driver, substantially as described, and for the purpose set forth.

4. In a safety-razor, the combination of a handle and a frame with the clamping-screw K *k*, bearing directly on the back of the blade, and the gage-screw H, through which the clamping screw passes, together with holding devices bearing on the outer face of the blade and pressing it to its holder, substantially as described.

HENRY B. LEACH.

Witnesses:
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JAS. J. CASEY.