J. H. PACE.

SAFETY RAZOR.

APPLICATION FILED APR. 18, 1911.

1,001,769. Patented Aug. 29, 1911.

Fig. 1.

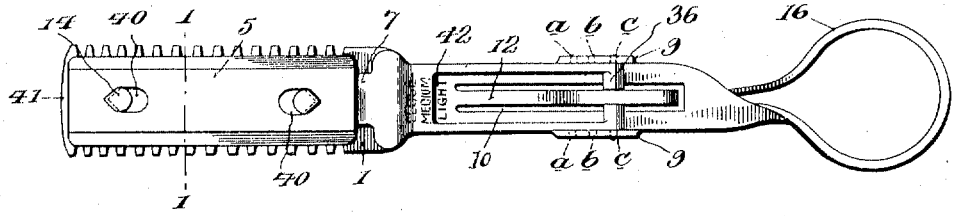


Fig. 5.

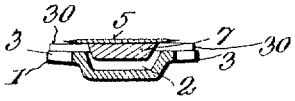
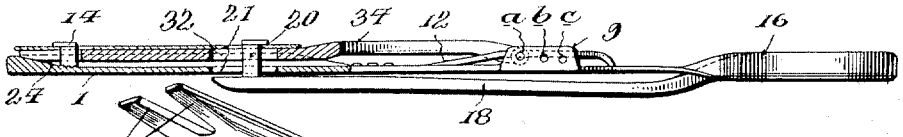


Fig. 2.



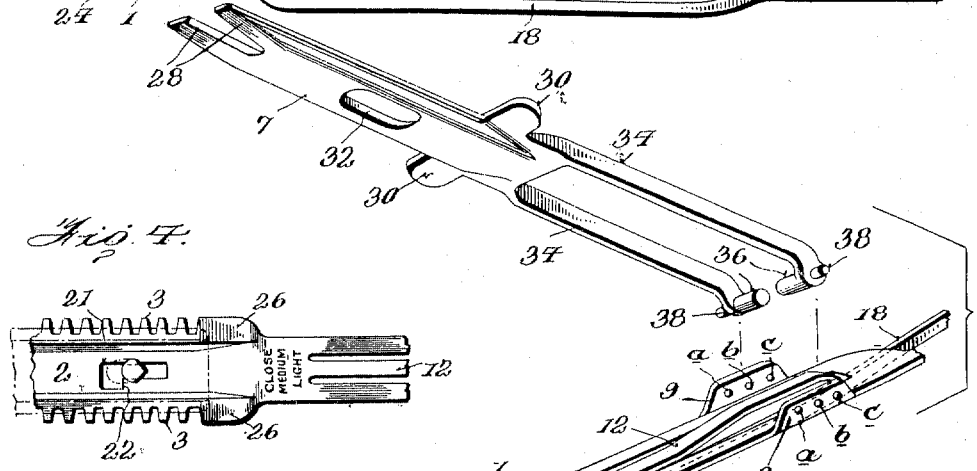
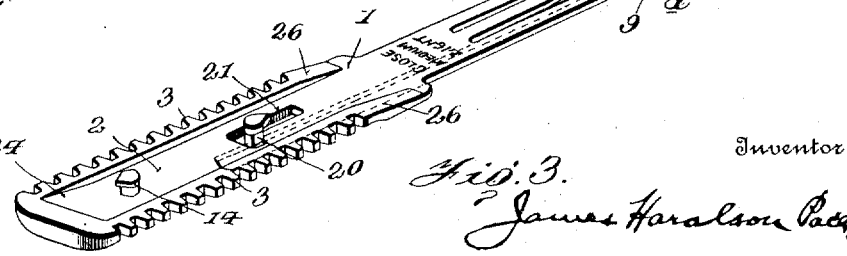


Fig. 4.



Inventor

Fig. 3.

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Witnesses

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UNITED STATES PATENT OFFICE.

JAMES HARALSON PACE, OF BLUE RIDGE, GEORGIA.

SAFETY-RAZOR.

1,001,769. Specification of Letters Patent. Patented Aug. 29, 1911.

Application filed April 18, 1911. Serial No. 621,824.

To all whom it may concern:

Be it known that I, JAMES HARALSON PACE, a citizen of the United States, residing at Blue Ridge, in the county of Fannin and State of Georgia, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

This invention relates to safety razors, and more particularly to safety razors employing a thin, but rigid and comparatively unyielding blade.

The invention relates to certain improvements upon the safety razor shown, described and claimed in my prior Patent No. 991,533, dated May 9, 1911, and an object of the present invention is to simplify the construction shown in said application by reducing the number of parts while preserving at the same time the valuable features for adjusting the blade, and for locking the blade to its holder, which are claimed broadly in said prior application.

Another object of the invention is to provide a very effective and simple means for locking and unlocking the blade which embodies ease of operation, and is at the same time effective in maintaining the blade in rigid engagement with its holder, in any position of adjustment; said means is, moreover, not liable to get out of order and possesses durability to a high degree.

Other objects of the invention will appear from the detailed description of the several parts which are illustrated in the accompanying drawings.

With the above and other important objects in view, the invention consists in the construction and combinations of parts which will be hereinafter more fully described and claimed.

In the drawings: Figure 1 represents a plan view of a safety razor embodying the present invention; Fig. 2 shows partly in side elevation, and partly in longitudinal section, the device illustrated in Fig. 1; Fig. 3 is an enlarged detail perspective view showing, respectively, the holder and blade-elevating leaf; Fig. 4 is a detail plan view of a portion of the holder, illustrating in particular the means for holding the blade-locking hook or lug in inoperative position; and Fig. 5 is a cross section on the dotted line 1—1, Fig. 1.

The main frame or holder 1 of the razor comprises a body portion provided with the usual guard teeth, or comb 3, which teeth are herein shown as being upon opposite sides of the longitudinal edge thereof. The teeth 3 which form the guard are located longitudinally of the main portion of the frame, and between these teeth is a recess 2 to receive that portion of the blade-elevating leaf 7 which lies directly underneath the blade, and has bodily movements imparted to it for raising or lowering the blade, relatively to the guard, to adjust the depth of cut, as in the blade-elevating leaf disclosed in my prior application above referred to. The body portion 1 extends beyond the comb, and is provided at a suitable distance therefrom with two upwardly projecting ears 9, 9, which are provided with a series, (herein shown as three) of perforations, *a*, *b*, *c*, which are directly opposite each other, as indicated in Fig. 1. The holder is also herein shown as being provided with a slot 10, and a leaf spring 12 is rigidly connected with the holder at that portion of the slot nearest the guard, said spring extending to the rear a suitable distance in the plane of the holder, and thence extending upwardly and downwardly in the form of a bow where it passes the ears 9, 9.

A rigid lug 14 projects upwardly near an end portion of the holder, in the recess 2, and is provided as shown in the drawings with a forwardly projecting hook. The holder 1 extends beyond the ears 9, 9, and is bent into a loop 16, thence extends beneath the body of the holder in a forward direction in the form of a shank 18 and has at or near its forward end an upwardly projecting lug 20 which passes through an angular slot 21 formed in the holder, said lug terminating in a rearwardly projecting hook. That portion of the holder which is bent to form the loop handle portion 16 of the razor is of resilient material, and is so constructed that its normal tendency is to draw the lug 20 to the rear and cause said lug to hold the blade in locking engagement with the lug 14, or to exert a tension against the lug 20 for holding it in engagement with the shoulder 22 which is formed by the angular portion of slot 21. The extreme forward, or left hand portion of the recess 2, as viewed in Fig. 2 of the drawings is beveled up-

wardly, as indicated at 24, and the extreme rear portions of the guard are beveled in the same direction, as indicated at 26.

The blade-elevating leaf 7 is forked at 28 (see Fig. 3) and the lower sides of the branches of the fork are beveled to correspond with the bevel 24. The leaf 7 is shown as provided with two laterally projecting wings 30, whose lower surfaces are beveled to correspond with the beveled portions 26, upon which said wings normally rest, as indicated in Fig. 1. The blade-elevating leaf is also provided with a slot 32 which is arranged to encompass the lug 20, and is of sufficient length to permit the necessary play of this lug in its movements for locking the blade to its holder, and for unlocking the blade; the leaf 7 is furthermore provided with two rearwardly extending arms 34, which terminate in inwardly projecting lugs 36, and outwardly projecting locking pins 38, the lugs 36 being normally spaced apart a distance which is substantially that of the width of the locking spring 12. The arms 34 of the blade-elevating leaf are formed of resilient material. In the normal position of these parts, the pins 38 occupy any one of the several pairs of holes, *a*, *b*, or *c*, in the ears 9, 9, and the bowed spring 12 is between the inner ends of the lugs 36 so that movement of these lugs to release the pins from the holes is prevented. The blade-elevating leaf 7 is thus retained in hinged engagement with the holder, and may be swung up above the holder, or allowed to drop down so that its forward portion will occupy the recess 2, as shown in Fig. 2.

At the proper position on the holder, the words Close, Medium, Light, may be printed as indicated in Figs. 1, 3 and 4, these words being arranged at the same distance apart in the longitudinal direction of the razor, as are the several pairs of holes *a*, *b* and *c* in the ears 9, 9.

Preferably the blade 5 is of thin steel, and has two cutting edges as shown, and is also provided with slots 40 of a size to receive the hook heads of the lugs 14 and 20. Preferably, also, the ends of the slots 40 are inclined or V-shaped, as indicated in the drawings, and the lugs 14 and 20 are similarly shaped in order to snugly engage the ends of the slots when said lugs are in locking engagement with the blade. As shown in Fig. 5 a space is provided between the blade-elevating leaf 7 and the recessed portion 2 of the holder in order to allow a free passage for the soap and cut beard. This is a valuable feature of the razor as it prevents clogging of the parts when in use.

The leaf 7 being positioned in the holder as shown in Fig. 1, the handle 16 and the opposite end 41, of the holder are grasped and moved toward each other, which slightly compresses the spring handle 16, moving forward the lug 20 in its slot 21 until the lug reaches the shoulder 22, the normal tendency of the lug to move laterally causing it to engage the shoulder, when the tension on the handle 16 may be released, and the reaction of the spring will draw the lug against the shoulder, and hold it there. The blade is then placed with its apertures 40 over the lugs 14 and 20, the lug 20 is disengaged from the shoulder 22 and located in the longitudinal portion of the slot 21, when the reaction of the spring 16 immediately draws the lug toward the end of the slot 40 which it occupies, and the blade is pulled against the lug 14 and firmly locked to its holder. The razor is then in condition for use. The reverse of these operations unlocks the blade.

To adjust the blade for a close, medium or light shave, at the will of the user, the blade is first unlocked from its holder in the manner above described. The bowed portion of the spring 12 may then be depressed below the plane of the lugs 36, the arms 34 are then bent inwardly until the pins 38 are removed from the holes which they occupy in the ears 9, 9, and upon movement of the leaf to that position where the words Close, Medium or Light indicate the kind of shave desired, the arms 34 are released and the pins will reënter the holes which correspond with the adjustment for the word which is expressed by the edge 42 of the leaf 7, as indicated in Fig. 1. It will be understood, that when the blade-elevating leaf is moved to its rearmost position so as to expose the word Light, the inclined or beveled portions of the holder will ride down upon the coöperating inclined portions 24, 26 of the holder, thereby permitting the blade to move close to the comb; on the other hand, when the leaf is moved in an opposite direction for a medium, or a close shave, the coöperating portions of the holder and leaf will cause the leaf to rise, and move the blade a greater distance from the comb, so as to produce a closer shave than in the adjustment first described. When the blade has been adjusted in such manner to give the required depth of cut, after the pins 38 are located in the proper holes, the spring 12 is released and moves between the lugs 36 so as to obstruct their inward movement, and to lock the leaf in adjusted position. The blade is then placed with its apertures 40 over the lugs 14, 20, the lug 20 is moved laterally away from the shoulder 22, and the locking action of the spring handle 16 draws the lug again into engagement with the end of the slot 40, thereby locking the blade tightly to its holder.

It will be seen from the above description, in connection with the accompanying drawings that this razor is composed of only two separate parts, in addition to the ordinary blade, and the several adjustments are accomplished by the operator's hands in simple movements which are capable of being very quickly carried out. The razor therefore is very easily cleansed, and is not apt to get out of order.

It will be also understood that I do not limit myself to the exact details of construction as shown in the drawings, and as described in the foregoing description, but reserve the right to make such changes as lie within the scope of the following claims.

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

1. A safety razor, having in combination, a blade holder provided with a guard and a rigid hook, a resilient handle member extending from the guard rearwardly in a plane parallel with the blade and thence forwardly and terminating in a longitudinally movable locking hook, and a blade having apertures registering with said hooks.

2. A safety razor, having in combination, a blade holder provided with a guard and a hook rigid therewith, and having a slot, a bowed spring handle extending from said holder rearwardly in a plane parallel with the blade and having a forward member provided with a longitudinally movable locking hook arranged to enter said slot, and a blade having apertures registering with said hooks.

3. A safety razor having, in combination, a blade holder provided with a guard, a rigid abutment and a slot, and a rearwardly extended resilient handle lying in a plane parallel with the blade and having a forward prolongation carrying a locking hook located in said slot, and a blade provided with apertures registering with said abutment and hook.

4. A safety razor, having in combination, a blade holder provided with a guard and a recess, a blade supported upon said holder and a blade-elevating leaf occupying said recess for causing bodily movement of the blade relatively to the guard to adjust the depth of cut, and means on said holder and leaf to permit detachable engagement of said parts.

5. A safety razor, having in combination, a holder provided with a guard and inclined portions, a blade-elevating leaf having cooperating inclined portions and provided with means for permitting detachable engagement with the holder for adjustment to vary the elevation of the blade relatively to the guard, and a blade supported by the leaf and secured to the holder.

6. A safety razor, having in combination, a holder provided with a guard, a recess, and inclined surfaces, a blade-elevating leaf occupying said recess and having coöperating inclined surfaces, means whereby said leaf is detachably connected with its holder, said means being constructed and arranged to permit adjustment of the leaf to various positions for controlling the distance of the blade from the guard, and a blade supported by said leaf.

7. A safety razor, having in combination, a holder provided with a guard, inclined surfaces, and ears having a series of alined apertures, a blade-elevating leaf having cooperating inclined surfaces and resilient arms provided with pins to detachably engage said apertures, and a blade supported upon said leaf.

8. A safety razor, having in combination, a holder provided with a guard, inclined surfaces, and ears having a series of alined, longitudinally arranged apertures, a blade-elevating leaf having coöperating inclined surfaces and resilient arms provided with pins to engage said apertures, spaced lugs projecting inwardly from said arms, a locking spring carried by the holder and arranged normally in the space between said lugs, and a blade supported upon said leaf.

9. A safety razor, having in combination, a holder provided with a guard, a recess, and inclined surfaces, ears projecting upwardly from said holder and having a series of alined, longitudinal perforations, a blade-elevating leaf fitting said recess and having inclined surfaces to engage the inclined surfaces of the holder, said leaf having rearwardly extending resilient arms provided with locking pins to engage said perforations, inwardly projecting spaced lugs at the ends of said arms, a bowed locking spring arranged to play in a slot of the holder and normally occupying the space between said lugs, and a blade supported upon said leaf.

10. A safety razor, having in combination, a frame or holder having thereon a guard and a rigid locking hook and formed with a slot, a bowed spring handle integral with the holder and having a forwardly projecting member carrying a hook which is arranged for free movement in the slot in the holder, said handle lying in a plane substantially parallel with the plane of the blade, and a blade having apertures registering with said hooks.

11. A safety razor, having in combination, a holder provided with a guard, a rigid hook, and a slot formed to provide a lateral shoulder, a resilient handle member having a locking hook entering the slot and arranged for lateral movement to engage the shoulder, and a blade provided with aper-

tures registering with said hooks, said parts being so arranged that when the locking hook is in engagement with the shoulder the blade may be removed but when said hook is out of engagement with the shoulder it will be moved into locking engagement with the blade.

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

JAMES HARALSON PACE.

Witnesses:
WM. M. WILSON,
J. F. WISER.