

H. E. S. HOLT.

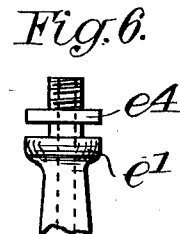
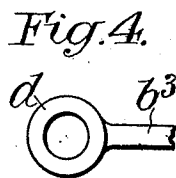
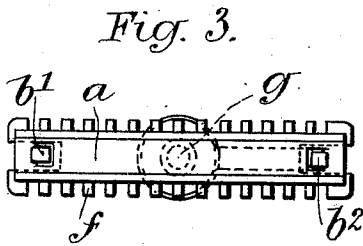
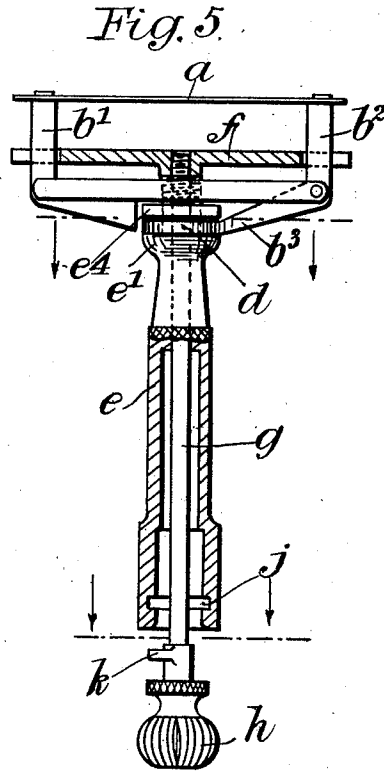
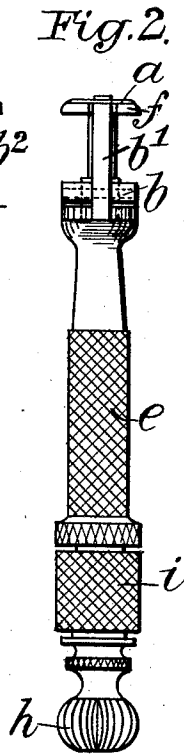
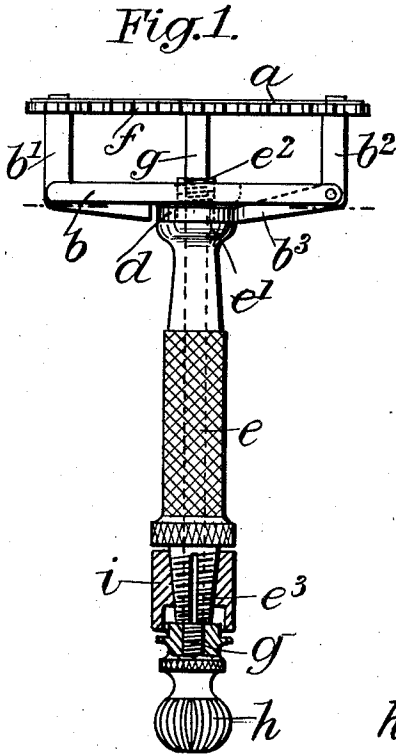
RAZOR.

APPLICATION FILED AUG. 10, 1909.

1,016,267.

Patented Feb. 6, 1912.

2 SHEETS—SHEET 1.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 9.

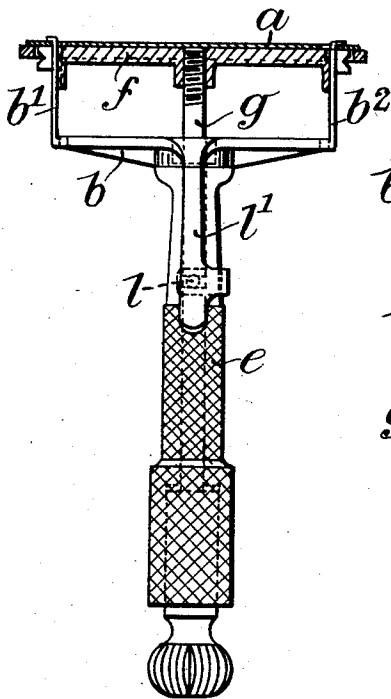


Fig. 10.

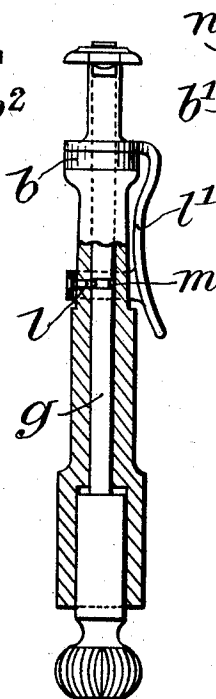


Fig. 12.

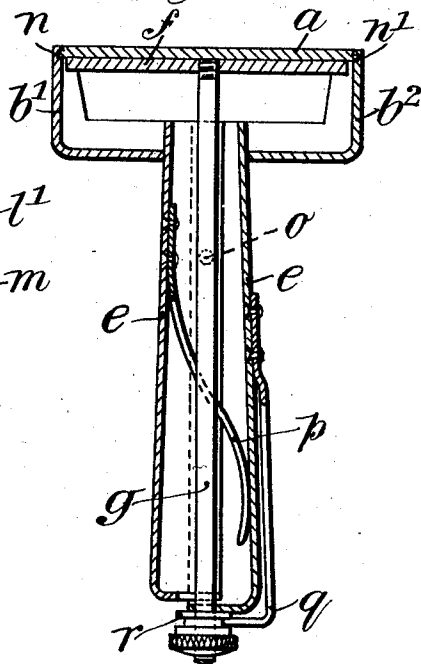


Fig. 11.

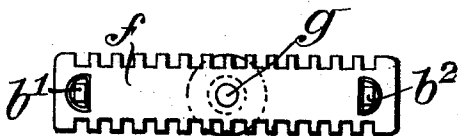
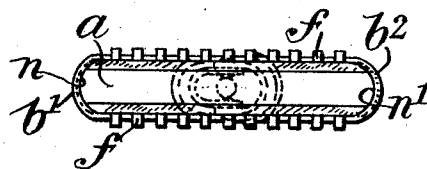


Fig. 13.



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RAZOR.

1,016,267.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed August 10, 1909. Serial No. 512,173.

To all whom it may concern:

Be it known that I, HAROLD EDWARD SHERWIN HOLT, a subject of the King of Great Britain and Ireland, residing at The Grange, Farnborough, Hants, England, have invented certain new and useful Improvements in Razors, of which the following is a specification.

Hitherto in razors in which a very thin blade has been used it has been the practice to employ a rigid backing or support to impart the necessary rigidity to the blade, or to hold the thin blade by its ends on spring arms arranged to exert sufficient end tension on the blade to keep it rigid without any intermediate support or backing.

Now this invention has for its object to provide a simple form of blade holder or frame and handle for holding a thin blade by its ends and rendering the same rigid by end tension, or likewise holding a thick or rigid blade, but applying thereto either end tension or end pressure as desired.

Another object of this invention is to provide the handle and blade holder with a guard adapted to be easily and quickly moved away from the blade to allow the blade to be wiped, or with equal facility moved toward the blade and correctly positioned for shaving, the guard being held in parallel relation to the blade, both longitudinally and transversely, and moved parallel to itself and in a direction at right angles to the plane of the blade during the adjustment to insure perfect safety.

According to one practical form of this invention the ends of the blade are held on the branches or arms of a fork shaped holder, and one of such arms is capable of being adjusted relatively to the other arm to apply tension to the blade or pressure as the case may be, by suitably operating a handle adjustably connected with the back of the fork. The guard is mounted between the blade and the back of the fork, being guided by the arms of the fork and adjusted by a stem which passes through the handle and is fitted with a positioning stop. In a slightly modified form of construction the guard is guided by the arms of the fork during a small portion only of its movement or preferably just sufficient to allow it to be adjusted in relation to the cutting edge and when drawn back beyond this limit is automatically released from the guides enabling

it to move or be moved outward away from the blade.

In the accompanying drawings: Figures 1 and 2 are elevations taken at right angles of a safety razor constructed according to this invention. Fig. 3 is a plan and Fig. 4 a detail view, of the inwardly extending end of the movable arms. Fig. 5 is an elevation partly in section of a safety razor of slightly modified form of construction and Figs. 6, 7, and 8 are detail views of the handle, inwardly extending portion of the movable arm, and locking means, of the form shown in Fig. 5. Figs. 9 and 10 and 11 are sectional elevations at right angles and plan respectively of a further modified form of razor. Figs. 12 and 13 are section and plan respectively of a safety razor showing another modified form of construction.

Referring to Figs. 1 to 4 the blade *a* is attached to a fork shaped holder *b* whose arms *b'* *b''* enter openings in the blade near its ends, the extremities of the arms being reduced to form shoulders against which the blade rests and suitably notched to prevent the blade slipping off. The arm *b'* is formed integral with the back of the holder but the arm *b''* is pivotally mounted in the holder being connected with another arm *b'''* at an angle so that the arms *b''* *b'''* constitute an angle lever which is pivoted to the holder at *c* and terminates in an eye piece *d* interposed between the back of the blade holder *b* and a shoulder *e'* on the handle *e*. The end *e''* of the handle *e* passes through the eye piece *d* on the arm *b'''* and screws into a tapped opening in the back of the holder *b*. By screwing in the handle *e* tension is applied to the blade *a* through the angle lever *b''* *b'''* by which means the blade is securely and rigidly held on the holder. Between the blade and the back of the holder, the guard plate *f* is arranged its ends engaging and being guided by the arms of the holder. To the center of the guard plate *f* is fixed an adjusting stem or rod *g*, which extends through a central bore in the handle *e* and terminates in an operating knob *h* which is adjustable and by limiting the inward movement of the stem affords a permanent and quick adjustment for the guard *f* in relation to the blade *a*. By pulling the stem *g* outward the guard *f* is moved away from the blade, enabling the blade to be wiped thoroughly dry after shaving without removing

it from the holder. This is an important advantage as compared with known safety razors, where owing to the arrangement of the guard it has been difficult if not impossible to thoroughly wipe the blade without removing it from the holder. In order to lock the guard the outer end e^3 of the handle is split and is clamped on the guard stem g by a slightly tapered locking nut i screwing on the split end.

In Figs 5 to 7 a holder is shown for holding the blades a either by tension or compression. For this purpose the end d of the arm b^3 which in this case is preferably fork shaped Fig. 7 engages between the shoulder e' and the handle e and a collar e^4 . It will thus be evident that by turning the handle e to the right tension will be applied to the blade, and by turning it to the left the blade will be under compression. Fig. 5 also illustrates a simple method of stopping and locking the guard f in the correct position for shaving. This consists in forming a groove j in the interior of the handle e near the end and providing a catch or projection k on the stem g which snaps into the groove and thus secures the stem and guard, but can be disengaged by pulling on the knob h . The guard f is shown adjustably connected with the stem g which screws into an opening in the guard, so that the distance between the catch k and guard may be varied to insure the correct positioning of the guard in relation to the blade.

In the razor shown in Figs. 9 to 11, the arms b' b^2 of the holder b are spring arms and do not require to be actuated by the handle e to tension the blade, the spring action of the arms being sufficient for this purpose. The guard f is operated by a stem g as before described which may be locked by any of the methods described or as shown by a pin l engaging in an annular groove m in the stem g and carried on a spring finger piece l' attached to the holder b .

Another method of holding the blade a by compression is illustrated in Figs. 12 and 13. In this case the holder arms b' b^2 are formed with concaved seatings n n' for receiving the rounded ends of the blade a and are fixed to or form part of separate handle members e e pivotally connected at o and normally pressed apart below the pivot by a spring p which thus causes the arms b' b^2 to grip the blade. The operating stem g of the guard f is in this case locked in the op-

erative position by a spring catch q engaging in a grooved collar r on the stem.

What I claim and desire to secure by Letters Patent is:—

1. A safety razor comprising a blade having openings near its ends, a blade holder having substantially parallel arms projecting from the ends thereof and engaging the openings in the blade, one of said arms being pivoted to the blade holder and having an inwardly extending portion, said blade holder having a central threaded opening, a handle having a portion screwing into said threaded opening and having an annular shoulder bearing against the end of said inwardly extending portion of the movable arm, a guard guided by said parallel arms, and means for moving the guard toward and from the blade.

2. A safety razor comprising a blade having openings near its ends, a blade holder having substantially parallel arms projecting from the ends thereof and engaging the openings in the blade, one of said arms being pivoted to the blade holder and having an inwardly extending portion, said blade holder having a central threaded opening, a handle having a portion screwing into said threaded opening and having an annular shoulder bearing against the end of said inwardly extending portion of the movable arm, a guard guided by said parallel arms, said handle having an axial passage there-through, a rod connected to the guard and extending through said passage, means at the outer end of the handle for moving the rod longitudinally of the handle, and means carried by the handle for locking the rod in place.

3. A safety razor comprising a blade holder having substantially parallel arms at the ends thereof, a blade having openings engaged by said arms, a tubular handle connected to said blade holder, a guard slidable on said arms toward and from the blade, a stem secured to the guard and extending through the tubular handle, and means for locking the stem against longitudinal movement within the handle.

In testimony whereof I have affixed my signature, in presence of two witnesses.

HAROLD EDWARD SHERWIN HOLT.

Witnesses:

F. L. RAND,

B. N. WILLIAMS.