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No. 783,660. PATENTED FEB. 28, 1905.

A. WILLIAMS.

SAFETY RAZOR.

APPLICATION FILED MAY 4, 1904.

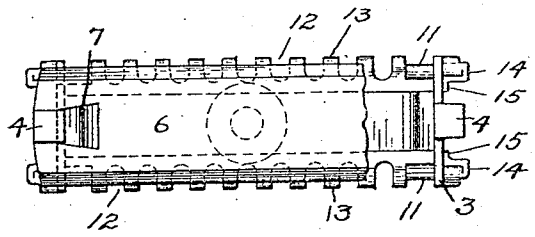


Fig. 3

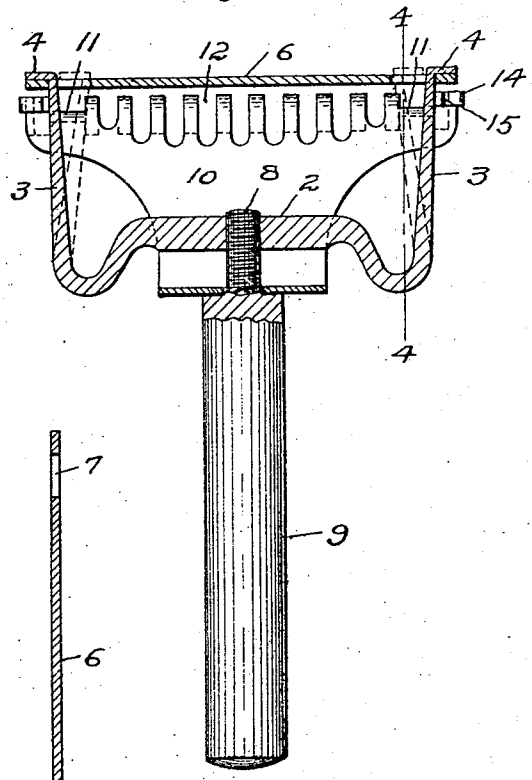


Fig. 1

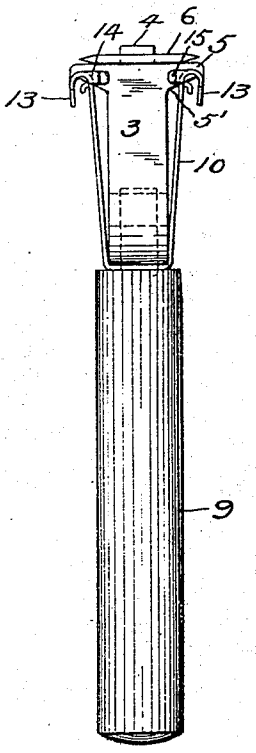


Fig. 2

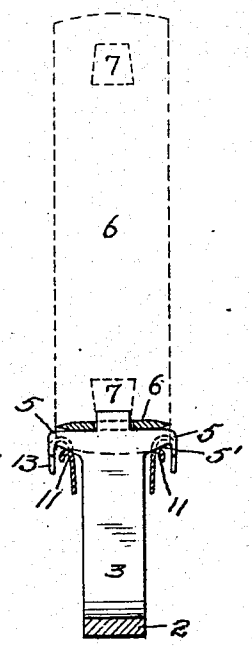


Fig. 4

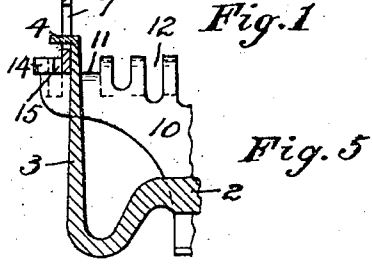


Fig. 5

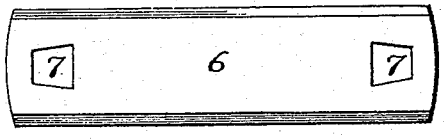


Fig. 6

Witnesses
Lindsay & B Little
Vinnie M. Myers.

Inventor
Anthony Williams
By Jno. Habit
Atty.

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No. 783,660. Patented February 28, 1905

UNITED STATES PATENT OFFICE.

ANTHONY WILLIAMS, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JESSE B. LEVY, OF CHERRYVALE, KANSAS.

SAFETY-RAZOR.

SPECIFICATION forming part of Letters Patent No. 783,660, dated February 28, 1905.

Application filed May 4, 1904. Serial No. 206,266.

To all whom it may concern:

Be it known that I, ANTHONY WILLIAMS, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to safety-razors, and particularly to that type wherein the head is of double construction and the blade formed with two cutting edges and so held that either edge may be used at the pleasure of the operator.

The general object of the invention is to improve and simplify the construction and adjustments of the razor and render the same more substantial and efficient than heretofore.

A further object is to provide improved means for securing the blade, also for holding the same raised from the razor-head in convenient position for cleaning.

Still a further object is to so construct the razor that the blade may be removed and replaced without disturbing the adjustment of the guards.

In the accompanying drawings, Figure 1 is a vertical longitudinal sectional view of the improved razor. Fig. 2 is an end view of the same. Fig. 3 is a top plan view. Fig. 4 is a vertical cross-section taken on line 4 4 of Fig. 1. Fig. 5 is a sectional view of a portion of the razor, showing the blade turned upward. Fig. 6 is a detail view of the blade.

Referring to the drawings, the blade-holding head is of general **U** form, and consists of horizontal body portion 2 and opposite upright spring-arms 3. The upper extremity of each arm is turned outward at 4, and just below this extremity the arm is formed with opposite lateral extensions 5, which form a bearing-surface for blade 6, the latter being formed near each end with a slot or opening 7, through which the extremities 4 of arms 3 are adapted to pass when the arms are contracted by hand-pressure, thus permitting the blade to rest on arm extensions 5. Upon being released arms 3 spring outward into the outer and narrower ends of slots 7, thus accurately centering the blade, which is securely held by arm extremities 4.

Body 2 is formed with a central threaded aperture, which receives threaded shank 8 of handle 9. Confined on the handle at the base of the shank is the double-**U**-shaped guard member 10, which embraces body 2 and arms 3, as shown, and at opposite ends extends upward beneath the upwardly and outwardly sloping bottom edges 5′ of arm enlargements 5, the guard being preferably rounded or curled at 11 for this engagement. The opposite sides of the guard are of toothed or serrated form, as shown at 12, the outer extremities of the teeth being turned outward and then backward or downward to form the guard-fingers 13. The fingers on each side are in line and extend in close proximity to the inner face of the blade and laterally slightly beyond the edges thereof, so as to engage the face of the user and hold the blade at a proper angle for shaving. This double-guard member is formed of spring metal, and the opposite sides thereof normally spring inward or toward each other; but by rotating and advancing the handle and guard by means of threaded shank 8 the opposite sides of the guard are caused to spread by moving upward and outward over inclines 5′, thus moving the opposite sides of the guard to any desired position or adjustment with respect to the cutting edges of the blade. This adjustment having been once secured, it remains undisturbed so long as the handle is not turned.

Projecting from the opposite end edges of the adjacent guard members are the inturned lugs 14, which have their extremities turned to form stops 15, which are immediately above the edge faces 11, the purpose of these stops being to form a backing against which the blade may be held in upright position by one of spring-arms 3, with the end of the blade resting on guard edges 11, as shown in Fig. 5. The blade may be thus conveniently and securely held in raised position for cleaning or other purposes without being entirely removed from the razor-head.

With the razor constructed as herein shown

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l described the blade may be conveniently
noved and replaced without disturbing the
ustment of the guard by simply contract-
the opposite spring-arms of the razor-
ad, and when in place the blade is accu-
ely centered and securely held.

While the improvements are here shown
ied to a razor of double form, they may
lifferently embodied without departing
n the spirit and scope of the invention.

claim—

1. A safety-razor comprising a holder adapt-
at its upper end to support a blade, a blade,
wardly and downwardly sloping projections
n the holder beneath and adjacent to the blade-
supporting surface thereof, and a guard ad-
justable over said sloping projections.

2. A safety-razor comprising a holder adapt-
ed at its upper end to support a blade, a blade,
inwardly and downwardly sloping projections
on the guard beneath and adjacent to the blade,
an inwardly-springing guard bearing against
said projections, and means for moving the
guard for the purpose of varying its position
with relation to the blade.

3. A safety-razor comprising a blade formed
with openings, a holder, yielding blade-secur-
ing projections on the holder adapted to be
deflected for entering the blade-openings, and
a guard.

4. A safety-razor comprising a blade formed
with openings, a holder, spring-arms on the
holder adapted to be deflected and enter the
blade-openings and secure the same, and a
guard.

5. A safety-razor comprising a blade formed
with openings, a holder, arms on the holder
adapted at their outer ends to enter the blade-
openings and secure the same, blade-supports
on the arms, and a guard.

6. A safety-razor comprising a blade formed
with openings, a holder, yielding arms on the
holder adapted to be deflected for entering
the blade-openings, lateral projections on the
arms for overhanging the blade, blade-sup-
ports on the arms adjacent said projections,
and a guard.

7. A safety-razor comprising a blade formed
with openings, a holder, opposite spring-arms
on the holder having their extremities turned
laterally to overhang the blade after passing
through the openings thereof, blade-supports
n the arms below said extremities, and a
uard.

8. A safety-razor comprising a holder hav-
ng sloping surfaces, a guard adjustable with
relation to the holder over said surfaces, and
a removable blade having fixed position on the
holder with respect to said sloping surfaces.

9. A safety-razor comprising a holder
adapted to support a blade, a blade, a handle
having an adjustable connection with the
holder, and a guard movable with the handle
and adapted to be adjusted thereby with re-
lation to the blade.

10. A safety-razor comprising a holder, a
double-edge blade accessible at opposite sides
of the holder, a double guard, and means for
adjusting the guard with relation to the blade.

11. A safety-razor comprising a holder
adapted at its upper end to support a blade, a
double-edge blade having position thereon and
accessible from opposite sides of the holder,
and a laterally-adjustable double guard car-
ried by the holder beneath and adjacent to the
blade-supporting end thereof.

12. A safety-razor comprising a holder hav-
ing upwardly-projecting arms, a double-edge
blade adapted to be secured to the outer ends
of the arms, a U-shaped guard adapted to em-
brace said arms, and means for adjusting the
guard with relation to the blade.

13. A safety-razor comprising a holder hav-
ing opposite upwardly-projecting arms, blade-
supporting surfaces at the outer ends of the
arms, a double-edge blade adapted to be se-
cured on said surfaces, a normally contracted
U-shaped guard adapted to embrace the arms,
and means for expanding the guard and for
moving the same toward and from the blade.

14. A safety-razor comprising a U-shaped
holder having the opposite spring-arms, a dou-
ble-edge blade formed with openings to re-
ceive the arm extremities and adapted to be
secured thereby, a U-shaped guard adapted to
embrace the holder, and means for moving the
guard toward and from the blade and for ad-
justing the same laterally.

15. A safety-razor comprising a holder, a
spring-arm thereon, a blade having an open-
ing to receive the spring-arm and adapted to
be secured in operative position at right an-
gles to the arm, and a stop adjacent the spring-
arm against which the latter is adapted to hold
the blade in upturned position, and a guard.

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

ANTHONY WILLIAMS.

Witnesses:
J. M. NESBIT,
ALEX. S. MABON.