

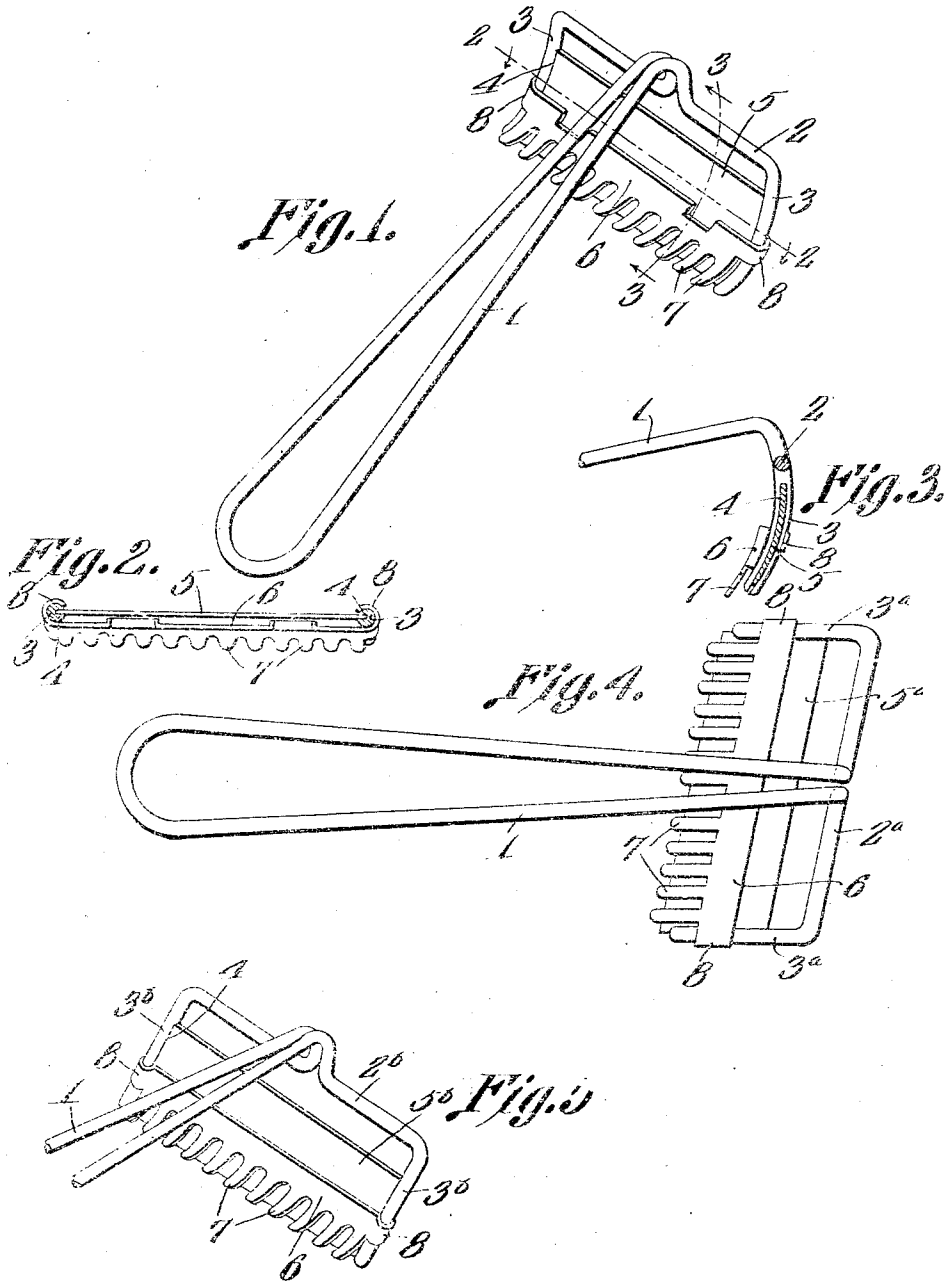
T. A. BELL.
SAFETY RAZOR.

APPLICATION FILED SEPT. 24, 1912.

1,069,668.

Patented Aug. 12, 1913.

2 SHEETS--SHEET 1.



Witnesses

J. P. Jones
J. H. Jones

Thomas A. Bell,

Inventor

by

C. A. Snow & Co.

Attorneys

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Fig. 7.

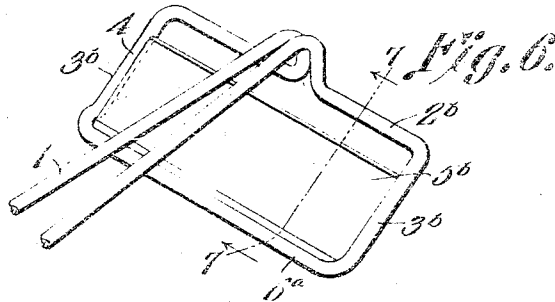
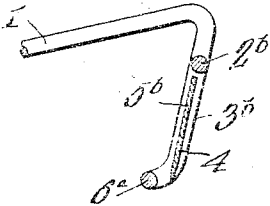


Fig. 8.

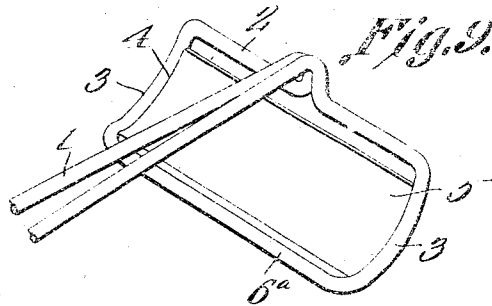
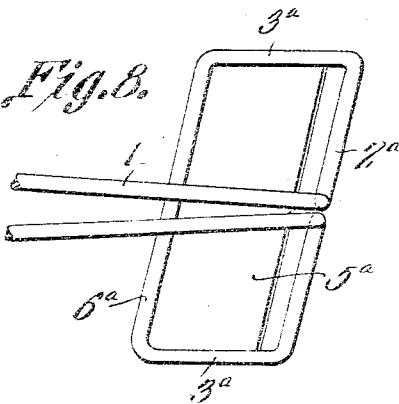


Fig. 10.



Fig. 11.

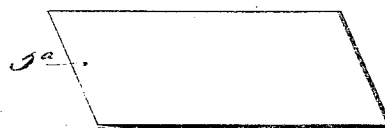


Fig. 12.

Witnesses

J. J. G. Meier
L. H. Wilson

Thomas A. Bell,

Inventor

by

C. A. Snow & Co.

Attorneys

UNITED STATES PATENT OFFICE.

THOMAS A. BELL, OF NEW YORK, N. Y.

SAFETY-RAZOR.

1,069,668.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS A. BELL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Safety-Razor, of which the following is a specification.

The present invention appertains to safety razors, and aims to provide a novel and improved safety razor of simple, compact, inexpensive and durable construction, and which shall be characterized by ease, convenience and efficiency in the use thereof, as well as being hygienic.

This object is carried out primarily by the provision of a handle and blade holder constructed of a length of suitable wire, in connection with other details of construction as will hereinafter more fully appear, it being understood that this device is susceptible of many modifications within the scope of what is claimed, without departing from the spirit of the invention or sacrificing from the benefits derived.

The preferred embodiments of the invention have been illustrated in the accompanying drawings, wherein like reference characters have been employed to denote corresponding parts, and wherein:—

Figure 1 is a perspective view of one form of the invention. Figs. 2 and 3 are sectional views on the lines 2—2 and 3—3 of Fig. 1, respectively. Fig. 4 is a plan view, of another form. Fig. 5 is a fragmental perspective of a third form of the invention. Fig. 6 is a fragmental perspective of a fourth form. Fig. 7 is a sectional view taken on line 7—7 of Fig. 6. Fig. 8 is a fragmental plan view of another form of the invention. Fig. 9 is a fragmental perspective of still another form of the invention. Fig. 10 is a plan view of one form of blade. Fig. 11 is a plan view of another form of blade. Fig. 12 is an end elevation of either of the blades shown in Figs. 10 and 11.

Referring specifically to the drawings, and particularly to Figs. 1, 2 and 3, the handle and blade holder are constructed from a length of resilient or flexible wire of suitable gage and quality, the wire being bent and doubled to form a looped handle 1. The blade holder comprises the ends 3 having the upper angular extensions 2 which converge or project toward each other and which are connected to the ends or terminals of the handle 1. The blade holder illus-

trated in this form is rectangular in contour, and the ends 3 are curved or bent into arcuate form, the said ends being provided with inner longitudinal arcuate grooves 4, in order that the ends 3 may provide keepers for the razor blade. With the construction of handle and blade holder as above described, it will be noted that the end keepers are adapted to yield or spread apart, the tension of the wire or other material from which the handle and holder are constructed serving to force the keepers inwardly or toward each other.

The blade has been designated by the numeral 5, the same being thin and rectangular in contour and being convexed from end to end corresponding with the curvature of the keepers. This blade may have one or both edges sharpened, it being desirable to sharpen both edges, in order that the blade may be reversed, as will be understood. This blade may be engaged in the holder by inserting the ends of the blade into the grooves 4 of the keepers, the inward tension of the keepers serving to compress the blade endwise between the keepers, thus preventing the casual or accidental displacement of the blade without manually or otherwise spreading the keepers apart. The upper edge of the blade is protected from injury or accidental contact with the flesh by the top of the blade holder, this being of particular advantage with a reversible blade.

A detachable and adjustable guard 6 has been provided the same being provided with the usual teeth 7 to project along the active edge of the blade and in advance thereof. The guard 6 is provided with the curved portions or hooks 8 at its ends, which are designed to engage the keepers of the blade holder. The hooks 8 engaging the keepers, permit the guard to be adjusted relative to the blade and to provide for a fine or rough cut, the said hooks also permitting the removal of the guard, and when the guard is removed, the keepers are permitted to yield for the removal of the blade, the keepers ordinarily being locked against yielding when the guard is attached thereto.

The form illustrated in Fig. 4 is somewhat similar to the above, with the exception that the extensions 2^a of the keepers are arranged diagonally of the handle, the ends or keepers 3^a of the blade holder being arranged parallel with the handle, so that the blade holder is of parallelogram contour.

The blade 5^a is also of parallelogram contour to correspond with the blade holder, it being noted that the active edge of the blade will be arranged diagonally of the handle so that an oblique stroke of the blade is possible. This angle of the blade provides an effective action for severing the beard, as will be apparent to those skilled in the art.

10 In the form illustrated in Fig. 5, the extensions 2^b of the keepers are at right angles to the handle 1, and the ends or keepers 3^b of the blade holder are straight, a fiat and rectangular blade 5^b being employed in connection with said form.

15 In the form shown in Figs. 6 and 7, the lower ends of the keepers 3^b of the blade holder are connected by an integral wire guard 6^a, the said guard being offset forwardly so as to lie in advance of the active edge of the blade 5^b.

The form illustrated in Fig. 8, combines the features of the forms shown in Figs. 4 and 6, as will be understood, while the form 25 illustrated in Fig. 9 combines the features of the forms illustrated in Figs. 1 and 6.

From the foregoing, it will be evident that the blade holder and guard may be constructed in a variety of ways according to the whim of the user, the blades being modified according to the various forms of the blade holders. The blades may also be provided with a single or a double sharpened edge or edges, and may be constructed of 35 relatively stiff or flexible metal, the flexible blades being designed to engage the arcuate keepers as well as the convex blades.

In the forms shown in Figs. 6, 8, and 9, the integral guard prevents the lower ends 40 of the keepers from yielding, it being preferable to insert the blades between the keepers from the top, the upper ends of the keepers being spread apart to accommodate such action, and the said upper ends being designed to be compressed against the blades 45 to hold the blades in proper position. Thus, also, when the guard 6 of the forms shown in Figs. 1, 4 and 5, is slid to the lower ends of the keepers and detached therefrom, the 50 ends of the blades may be readily inserted between the keepers or may be withdrawn from the keepers, in a manner apparent to those familiar with the art.

The use of the various forms and modifications, will be apparent to those familiar with safety razors, and the advantages of the various forms of the present device will be apparent. The parallelogram blade is particularly useful in that it provides a 60 diagonal cutting edge. The convex blade is particularly useful for the reason that the convex side of the blade may be first brought into engagement with the flesh, and the blade holder may then be swung upon the 65 blade as a fulcrum until the active edge

engages the beard and thus, by bringing the convex side of the blade into engagement with the flesh and then rolling the blade until the cutting edge engages the beard, the use of the guard may be eliminated, if 75 desired, for the reason that the majority of hacks or cuts are usually made when the unguarded blade first comes into contact carelessly with the face. This feature is provided by the provision of the arcuate end keepers engaging the ends of the convex blade, which leaves the back of the blade free from obstruction. It is also to be noted that the upper or unactive edge of the blade is in each case protected by the angular 80 extensions of the keepers.

The present safety razor is of utmost simplicity and durability, the same being devoid of securing members or other numerous parts which encumber and complicate the 85 average razor of this class. The simple construction of this safety razor enables the same to be manufactured at a comparatively low cost, this razor also being neat so as to provide for perfect sanitation. The numerous other advantages of the present device will be apparent to those skilled in the art, and further comment is therefore thought unnecessary.

Having thus described the invention, what 85 is claimed is:—

1. In a safety razor, a wire blade holder including yieldable end keepers tending to move toward each other and having inwardly facing grooves, a blade having its 100 ends engageable within the grooves so that the keepers press against the ends of the blade, and a guard having terminal portions embracing the keepers to maintain them in engagement with the ends of the 105 blade.

2. In a safety razor, a wire blade holder including end keepers having inwardly facing grooves and having upper angular extensions converging toward each other, and 110 a loop terminally connected to the extensions, in combination with a blade terminally engageable within the grooves with its unactive edge protected by said extensions. 115

3. In a safety razor, a wire blade holder including end keepers having inwardly facing grooves and having upper angular extensions converging toward each other, and a handle connected to the respective extensions, in combination with a blade engageable within the grooves so that the keepers press against the ends of the blade, and a guard connecting the lower ends of the 120 keepers. 125

4. In a safety razor, a blade holder embodying end keepers having upper angular extensions converging toward each other, a looped handle terminally connected to the said extensions, and a blade terminally en- 130

engageable within the grooves so that the keepers press against the ends of the blade with the unactive edge of the blade protected by the said extensions.

5 5. In a safety razor, a blade holder embodying end keepers having upper angular extensions converging toward each other, a handle connected to the respective extensions, and a blade terminally engageable by
10 the keepers so that the keepers press against the ends of the blade with the unactive edge of the blade protected by the said extensions, a guard terminally engaged to the lower ends of the keepers.

15 6. In a safety razor, a blade holder bent from a length of wire and embodying arcuate grooved end keepers having upper angular extensions converging toward each

other, a looped handle terminally connected to the respective extensions, a blade convexed laterally from end to end, and having both edges sharpened with its ends engageable within the end keepers so that the keepers press against the ends of the blade, the said extensions protecting the unactive edge
20 of the blade, and a guard having terminal hooks adapted to detachably and adjustably embrace the keepers. 25

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses. 30

THOMAS A. BELL.

Witnesses:

ROBERT S. SLOAN,
G. A. NICKLAS.