

C. E. A. GRONBECH,
SAFETY RAZOR.
APPLICATION FILED SEPT. 9, 1919.

1,376,759.

Patented May 3, 1921.

Fig. 1.

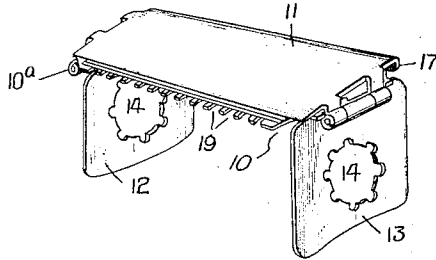


Fig. 2.

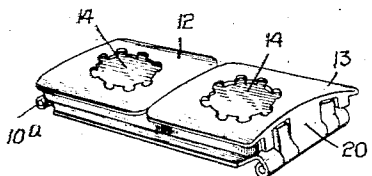


Fig. 3.

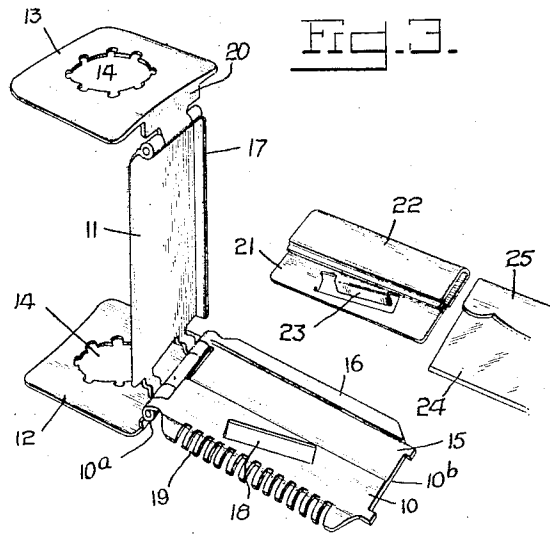


Fig. 4.

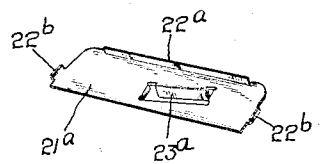
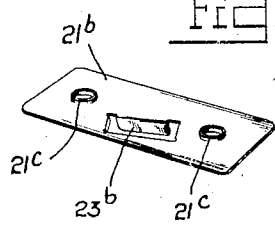


Fig. 5.



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CHRISTIAN E. A. GRONBECH, OF WOODHAVEN, NEW YORK.

SAFETY-RAZOR.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHRISTIAN E. A. GRONBECH, a citizen of the United States, residing at Woodhaven, Queens county, Long Island, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

My invention relates to an improved safety razor wherein different types of blades may be interchangeably used with equal facility.

The principal object of the invention is to provide a neat, simply constructed and compact safety razor designed to interchangeably receive different kinds of blades, without requiring any adjustment or rearrangement of the parts of the razor. Another object is to provide in a razor of this kind, simple means for adjusting the depth or protrusion of the cutting edge of the blade so as to secure a more or less close shaving action, as may be desired.

The invention comprises the structural features and combinations hereinafter claimed, and fully described with reference to the accompanying drawing in which,

Figure 1 is a perspective view of the improved safety razor in condition for use; Fig. 2 is a similar view of the razor folded into inoperative condition; Fig. 3 is a similar view of the razor with the parts in extended position, and showing also a blade and holder for receiving the latter; Figs. 4 and 5 are perspective views of two types of holders for receiving two different kinds of blades.

In carrying my invention into practice I preferably provide a separate holder for each different kind of blade to be used, and construct the razor so that it may, with equal facility, receive any one holder at a time without necessitating any adjustment, reconstruction or rearrangement of the parts of the razor.

Referring in detail to the accompanying drawing, 10 denotes a base plate having a clamping plate 11 hinged to one end thereof, on the pintle 10^a. Mounted for pivotal movement on the same pintle is a handle section 12 which is approximately one-half as long as the clamping plate 11. At the end opposite the pintle 10 the clamping plate carries a hinged handle section 13 which is in all respects like the section 12. Each of the handle sections 12 and 13 is provided with an approximately central orifice 14

having a serrated perimeter to receive and securely hold the ball of a finger and thumb of the user when the razor is being used for shaving.

Extending lengthwise of the base plate 10 is a depression 15 which is approximately one-half the width of the base plate, and the edge of the latter adjacent one side of the depression 15 is provided with a flat rib 16. One edge of the clamping plate 11 is provided with a flange 17 designed to cooperate with the rib 16 as hereinafter described.

Formed in the non-depressed half of the base plate 10 is a slot 18 which is inclined with respect to the longitudinal axis of the plate 10, and the edge of plate 10 opposite the rib 16 may be provided with curved guard teeth 19.

The edge of the base plate 10 opposite that carrying the pintle 10 is undercut as indicated at 10^b so as to snugly receive therein the hinge structure by means of which the handle section 13 is secured to the plate 11. Each handle section is mounted on its pintle by means of a web 20 extending at right angles, or substantially so, to the plane of the handle section, so that when the handle sections are moved into the position shown in Fig. 1 the pressure exerted by the finger and thumb of the user on the handle sections will tend to force these webs against the under face of the base plate 10 and enhance the clamping effect of the plate 11 on a blade supported by the plate 10.

Holders for three types of blades are shown in the drawing. The holder of Fig. 3 is designed to receive a blade with a thickened or reinforced back; the holder of Fig. 4 is designed to receive a blade having lugs extending outwardly from its opposite upper corners, and the holder of Fig. 5 is designed to receive the ordinary flexible double-edged blade having two orifices therein. The holders of Figs. 3 and 4 are more particularly adapted for single-edged blades. Any of these holders may be adjustably positioned and secured in the razor shown in Figs. 1 to 3.

The holder of Fig. 3 comprises a body portion 21 having a socket 22 at one edge thereof. Struck out of the metal of the body portion 21 is a downwardly directed finger 23 which is inclined in relation to the longitudinal axis of the body portion 21 in the same degree as the slot 18 is inclined with respect to the longitudinal axis of the base

plate 10. The form of holder just described is constructed to receive a razor blade 24 having a reinforced or thickened edge 25 which may be slid into and out of the socket

22. To use this form of blade and holder, the blade is inserted in the holder and the latter placed on the plate 10 with the socket 22 in the depression 15, the finger 23 extending through the slot 18, and the cutting edge of the blade resting over the guard teeth 19. By moving the holder 21—22 lengthwise of the plate 10 the cutting edge of the blade may be caused to protrude to a greater or less extent toward the outer edges of the guard teeth, by reason of the coaction between the finger 23 and the walls of slot 18, and when the desired adjustment has been secured the clamping plate 11 is moved toward the base plate 10 and the handle sections 13 and 14 turned into the position of Fig. 1. In this position of the parts the holder and blade are securely held in position, as will be obvious.

In Fig. 4 the body portion of the holder is denoted 21^a, and is provided at one of its longer edges with an upstanding flange 22^a and at each of its opposite shorter edges with an upstanding lug 22^b. The body portion has struck therefrom a downwardly turned inclined finger 23^a. This form of holder receives a blade having projecting edge lugs which are positioned between the ends of the flange 22^a and the lugs 22^b when the blade is placed on the body portion 21^a. The holder of Fig. 4 is placed on the base plate 10 with the finger 23^a extending through the slot 18, and is held in position by the clamping plate 11.

The holder of Fig. 5 comprises a body portion or plate 21^b having oppositely disposed hollow studs 21^c struck up therefrom, and a downwardly extending inclined finger 23^b. A double edged blade may be placed on this holder, with the two holes in the blade taking over the studs 21^c. When the holder and blade are placed on the base plate 10 one edge of the blade (that not used for shaving) will lie on the flat rib 16 in position to be engaged and clamped by the flange 17 when the plate 11 is in clamping position.

It will be understood that adjustment of the cutting edge of the blades in the forms of Figs. 4 and 5 is obtained in the same manner as described with relation to the

form of Fig. 3 and a repetition of this operation is believed to be unnecessary.

I claim:—

1. A safety razor comprising a base plate and a clamping plate movably connected therewith, holding members movably mounted at the ends of said clamping plate, and means whereby different kinds of blade holders may be received, movably retained, and clamped, between said plates.

2. A safety razor comprising a base plate, a clamping plate movably connected therewith, handle members movably connected to each end of said clamping plate, and blade holding means adapted to be clamped to or released from the base plate by greater or less pressure on said handle members.

3. A safety razor comprising a base plate and a clamping plate having one end pivoted to said base plate, handle members pivoted to the ends of said clamping plate and complementary means adjacent the rear edge of said plates adapted to limit the lateral movement of a blade holder confined therein.

4. A safety razor comprising a base plate, a clamping plate pivoted thereto, handle sections pivotally mounted at opposite ends of said clamping plate, and webs projecting from said handle sections and adapted, when the razor is closed, to press against the end and under face of said base plate and to lock said clamping plate in position.

5. The combination with the base plate of a safety razor, of a blade-holder adapted to be received by said base plate, an inclined slot formed in one of said members, and an inclined finger carried by the other member and designed to enter said slot.

6. A safety razor comprising the combination with a base plate having a lengthwise depression and an inclined slot therein and a rib at one edge thereof, of a clamping plate pivoted to said base plate and having a flange positioned to align with and engage said rib, and a blade-holder adapted to be clamped between said plates, said blade-holder having a projecting inclined finger designed to extend through said slot.

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

CHRISTIAN E. A. GRONBECH.

Witnesses:

CLARICE FRANCK,
PAULA WEBBER.