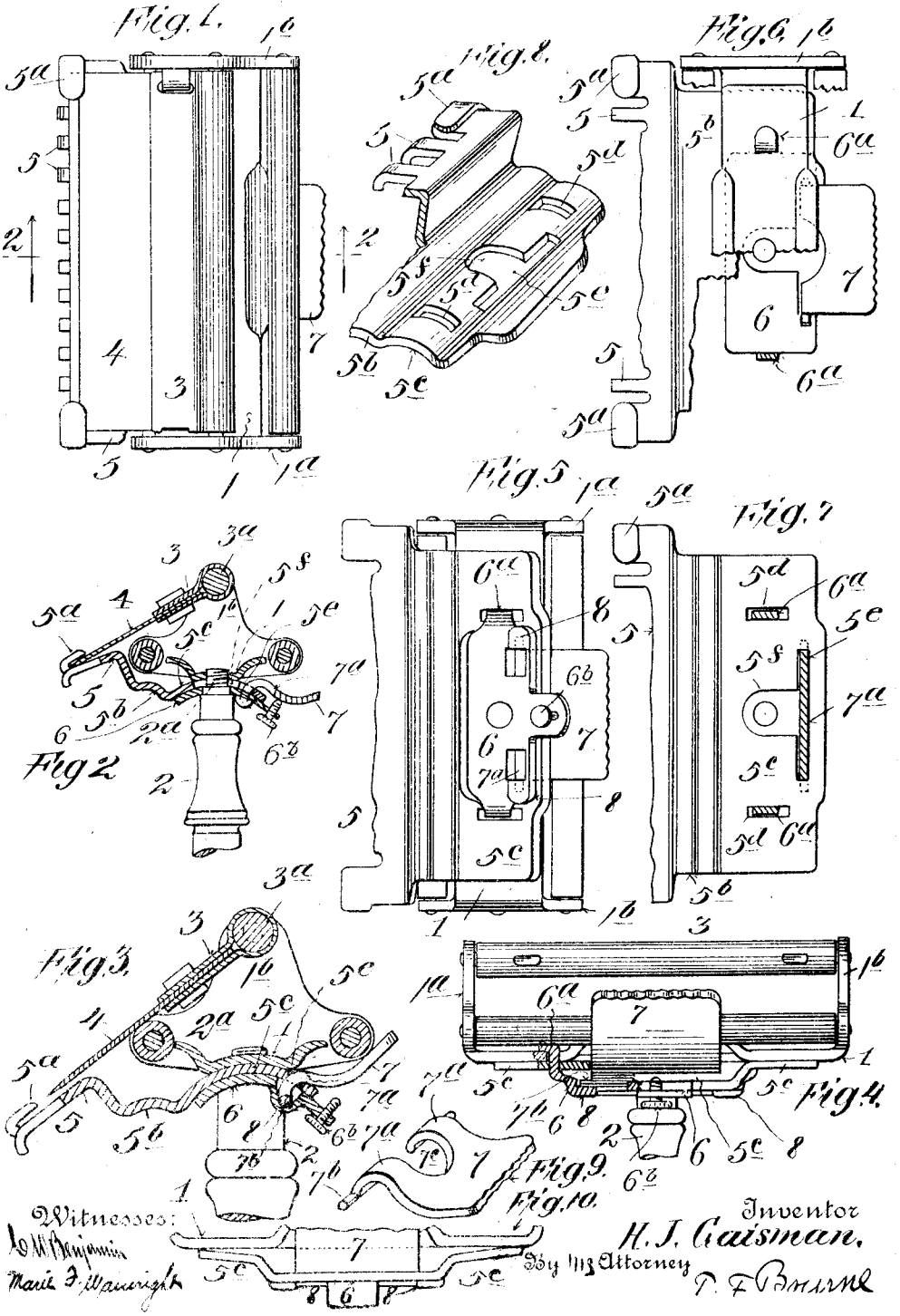
H. J. GAISMAN.

SAFETY RAZOR.

APPLICATION FILED MAR. 22, 1912.

1,171,604. Patented Feb. 15, 1916.



UNITED STATES PATENT OFFICE.

HENRY J. GAISMAN, OF NEW YORK, N. Y., ASSIGNOR TO AUTO STROP COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

SAFETY-RAZOR.

1,171,604. Specification of Letters Patent. Patented Feb. 15, 1916.

Application filed March 22, 1912. Serial No. 685,419.

To all whom it may concern:

Be it known that I, HENRY J. GAISMAN, a citizen of the United State, and resident of New York city, borough of Manhattan, in the county of New York and State of New York, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

My invention relates to improvements in the class of safety razors having guards that are movable with respect to the blade, whereby engagement with the blade and disengagement therefrom may be effected, and the object of my invention is to provide simple and efficient means for movably supporting the guard, and to enable the guard to be retained in set position.

My invention comprises novel details of improvement and combinations of parts that will be more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming part hereof, wherein,

Figure 1 is a plan view of a safety razor embodying my invention; Fig. 2 is a cross section on the line 2, 2, in Fig. 1; Fig. 3 is a section similar to Fig. 2, enlarged, showing the guard in a different position; Fig. 4 is a rear view of the razor, part being broken away; Fig. 5 is a face view of the underside of the razor, the handle being removed and the guard partly broken away; Fig. 6 is a fragmentary plan view, the blade holder and parts of the guard and frame being removed; Fig. 7 is a plan view of part of the guard, other parts being shown in section; Fig. 8 is a partly broken perspective of the guard; Fig. 9 is a detail perspective of the guard-operating member or thumb piece, and Fig. 10 is a detail edge view of part of the guard and its holding member.

Similar numerals of reference indicate corresponding parts in the several views.

The frame or holder of the razor illustrated comprises a base 1 and opposed end uprights 1^a, 1^b rising therefrom.

2 indicates a handle, shown projecting from the under side of frame 1 and which may be secured thereto in any suitable manner, as by the threaded stem 2^a.

3 indicates a blade holder, which may be of any suitable construction, adapted to detachably retain blade 4. Holder 3 is shown pivotally supported upon uprights 1^a, 1^b, by shaft 3^a, so that the holder and blade may rock.

At 5 is a guard for the blade edge, said guard being shown provided with hooks or lugs 5^a adjacent its front corners. Guard 5 is provided with an extension 5^b having a curved portion 5^c fitting against the substantially correspondingly curved portion of base 1 and held movably thereto by a curved retaining member or plate 6. Member 6 is shown provided with lugs or ears 6^a adapted to pass freely through slots 5^d in curved part 5^c of the guard extension, said lugs or ears also passing through slots in base 1 and being turned over upon the base (Figs. 4 and 6) to retain said member in position below the curved part 5^c of the guard extension, thus slidably retaining the guard extension upon the frame or holder in the guideway between the parts 1 and 6. As a convenient means for causing the curved portion 5^c of the guard extension to slide between base 1 and retaining member 6 I have shown an operating member or handle 7 having a curved or cam-like portion 7^a fitted in a slot 5^e of the extension 5^b, member 7 being swiveled to rock with relation to the main frame or holder. For the latter purpose member 7 is provided with pivots or studs 7^b journaled in bearings 8 struck out from the adjacent metal of retaining member 6, so that pivots 7^b rest between the parts 6 and 5^c, enabling member 7 to be operated. Member 7 is shown provided with an opening 7^c to permit said member to swing freely with respect to the screw stem 2^a of the handle, and slide 5^b is provided with an opening 5^f through which stem 2^a passes, whereby the guard extension 5^b may slide. In order to regulate or control the extent of movement of the guard toward the blade edge I have shown means to limit, as desired, the extent of downward movement of the guard-operating member 7. For this purpose the retainer 6 is shown provided with a screw 6^b (Figs. 2, 3 and 4) in position to be engaged by member 7. By adjusting screw 6^b as required the member 7 may be stopped in its downward movement to cause the guard to be set with reference to

the blade edge. In other words, the movement of the guard toward the blade edge may be regulated and controlled for a close or coarse shave as desired, and the guard will remain in such set position.

The arrangement described is such that when member 7 is pushed up, as in Fig. 3, its curved portion 7^a, riding in the slot 5^c of blade extension 5^b acts in the manner of a cam to cause the guard to be moved laterally with respect to the holder, and away from the blade edge, moving in a generally curved or curvilinear direction by reason of the curvature of the parts 5^c, 6 and base 1, thereby releasing the guard hooks or lugs 5^a from the blade, and by moving the member 7 downwardly, as in Fig. 2, the movement of the guard is reversed, causing it to approach the blade edge to engage the hooks or lugs 5^a with the blade.

An advantage of my invention is that the guard may be set more or less forwardly with respect to the blade edge, providing for a coarse or close shave as desired, and yet will be retained in such position by reason of the clamping effect of the parts 1 and 6 upon the guard extension.

To provide for a more positive spring-like or frictional clamping of the guard extension portion 5^c between the parts 1 and 6, the part 5^c in Fig. 10 is shown as curved in its longitudinal direction, causing thereby spring pressure against the parts 1 and 6 when the retaining member 6 is, by its lugs 6^a, secured against the under surface of the curved part 5^c of the guard extension.

Changes may be made in the details of construction and arrangements of parts set forth, within the scope of the appended claims, without departing from the spirit of my invention.

Having now described my invention what I claim is:—

1. A safety razor comprising a frame having a curved portion, a guard having an extension provided with a curved portion opposed to the curved portion of the frame, and means for retaining said curved portions in curvilinearly movable relation.

2. A safety razor comprising a frame having a curved portion, a guard having an extension provided with a curved portion opposed to the curved portion of the frame, and means for retaining said curved portions in curvilinearly movable relation, the guard having means for engaging a blade to retain the blade in shaving relation to the guard in different positions of adjustment.

3. A safety razor comprising a frame, a guard having a portion thereof provided with an aperture, said guard being mounted to move with relation to the frame, a member pivotally mounted with relation to the frame and curved to form a cam extending into the aperture of a portion of the guard and operative to move said guard with relation to the frame.

4. A safety razor comprising a frame having a curved portion, a guard having an extension provided with a curved portion coacting with the curved portion of the frame and having curvilinear movement thereon, and a retainer below the guard extension and having a curved portion coacting with the curved portion of said extension.

5. A safety razor comprising a frame having a curved portion, a guard having an extension provided with a curved portion coacting with the curved portion of the frame and having curvilinear movement thereon, and a retainer below the guard extension and having a curved portion coacting with the curved portion of said extension, the guard having means to coact with a blade, to retain the blade in shaving relation to the guard in different positions of adjustment.

6. A safety razor comprising a frame having a curved portion, a guard having an extension provided with a curved portion opposed to the curved portion of the frame and having curvilinear movement thereon, means for retaining said curved portions in slidable relation, and a member movably mounted with relation to the frame and connected with the guard extension to move the guard relatively to the frame.

7. In a safety razor, a frame, a guard, means for supporting the guard for curvilinearly sliding movement with relation to the frame, said guard having a portion provided with an aperture, a member having a curved portion, the sides of which constitute cams, means for pivoting the said member with relation to the frame, said curved portion lying in the aperture of the guard and the cam surfaces of said member engaging the edges of the said aperture, whereby movement of the said member communicates motion to the guard.

8. A safety razor comprising a frame having a curved portion, a guard having an extension provided with a curved portion opposed to the curved portion of the frame and having curvilinear movement thereon, means for retaining said curved portions in slidable relation, the guard having blade engaging hooks to retain a blade upon the guard to retain the blade in shaving relation to the guard in their different positions of adjustment, and a member movably mounted on the retainer and connected with the guard extension to move the guard relatively to the frame.

9. A safety razor comprising a frame having a curved portion, a guard having an extension provided with a curved portion coacting with the curved portion of the

frame and having curvilinear movement thereon, and a retainer below the blade extension and having a curved portion coacting with the curved portion of said extension, and a member movably mounted on the retainer and connected with the guard extension to move the guard relatively to the frame.

10. A safety razor comprising a frame having a curved portion, a guard having an extension provided with a curved portion coacting with the curved portion of the frame and having curvilinear movement thereon, a retainer below the blade extension and having a curved portion coacting with the curved portion of said extension, the guard having means to coact with the blade, and a member movably mounted on the retainer and connected with the guard extension to move the guard relatively to the frame.

11. A safety razor comprising a frame having a curved portion, a guard having an extension provided with a curved portion opposed to the first named curved portion, said extension having a slot, a retainer having a curved portion fitted to the curved portion of the guard extension, and a member mounted to rock with relation to the frame, and passing through the slot of said extension.

12. A safety razor comprising a frame, a guard having an extension coacting with the frame and movably mounted therewith, said extension having a slot, means for holding the guard, extension and frame in operative relation to each other, a member with a curved portion operating in the slot of the extension for moving the said guard, and means for pivotally mounting the member in operative relation with the extension of the guard.

13. A safety razor comprising a frame, a guard having an extension opposed to the frame, said extension having a slot, a retainer fitted to the guard extension, and a rocking member carried by the retainer and passing through the slot of said extension, said member being pivotally supported by said retainer.

14. A safety razor comprising a frame, a guard having an extension opposed to the frame, said extension having slots, a retainer beneath the extension having lugs passing through the slots of the extension and attached to the frame, whereby the extension is slidably supported, said extension having another slot, and a member pivotally carried by the retainer and passing through said last named slot.

15. A safety razor comprising a frame, a guard having an extension opposed to the frame, said extension having slots, a retainer beneath the extension having lugs passing through the slots of the extension and attached to the frame, whereby the extension is slidably supported, said extension having another slot, and a member having a curved portion passing through said slot, said member being pivotally supported by the retainer.

16. A safety razor comprising a frame, a guard having an extension opposed to the frame, said extension having slots, a retainer beneath the extension having lugs passing through the slots of the extension and attached to the frame, whereby the extension is slidably supported, said extension having another slot, and a member having a curved portion passing through said slot, said member having pivots and said retainer having bearings for said pivots.

17. A safety razor comprising a frame having a transversely curved portion, a blade holder carried by the frame, a guard having an extension provided with a curved portion to coact with the curved portion of the frame, means to slidably retain said curved portions together, and means to operate the guard extension whereby it will slide in the direction of the curve of the guard and frame.

18. A safety razor comprising a frame having a transversely curved portion, a blade holder carried by the frame, a guard having an extension provided with a curved portion to coact with the first named portion, a retainer fitted below the curved portion of the extension and carried by the frame, said extension having a slot, and a member pivotally supported by the retainer and passing through said slot.

19. A safety razor comprising a frame having a transversely curved portion, a blade holder carried by the frame, a guard having an extension provided with a curved portion to coact with the first named portion, a retainer fitted below the curved portion of the extension and carried by the frame, said extension having a slot, and a member pivotally supported by the retainer and having a curved portion passing through said slot.

20. A safety razor comprising a frame, having a curved portion, a guard having an extension provided with a curved spring-like portion, movable circumferentially of the curved portion of the frame, and a retainer secured to the frame and coacting with the spring-like portion of the guard for retaining the extension in set position.

21. A safety razor comprising a frame, a guard, means for oscillatably supporting the guard, an oscillatable member movably connected with the guard for operating the latter, and means to control the extent of movement of such member to regulate the movement of the guard.

22. A safety razor comprising a frame, a guard having an extension slidably supported, with relation to the frame, a member

oscillatably connected with said extension for moving the said guard and means to control the movement of said member to regulate the movement of the guard.

23. A safety razor comprising a frame, a guard therein having an extension slidably supported, in operative relation with the frame, said extension having a slot, a member oscillatably supported with relation to the frame and having a portion passing through said slot, and means to control the movement of said member to regulate the movement of the guard.

24. A safety razor comprising a frame, a guard therein having an extension, a retainer fitted to the guard extension, a member oscillatably supported in relation to the frame and connected with said guard extension to operate the latter with relation to the frame, and a screw connected with said retainer to coact with said member to regulate the movement of the guard.

Signed at New York city, in the county of New York and State of New York, this 20th day of March, A. D. 1912.

HENRY J. GAISMAN.

Witnesses:
MARIE F. WAINWRIGHT,
T. F. BOURNE.