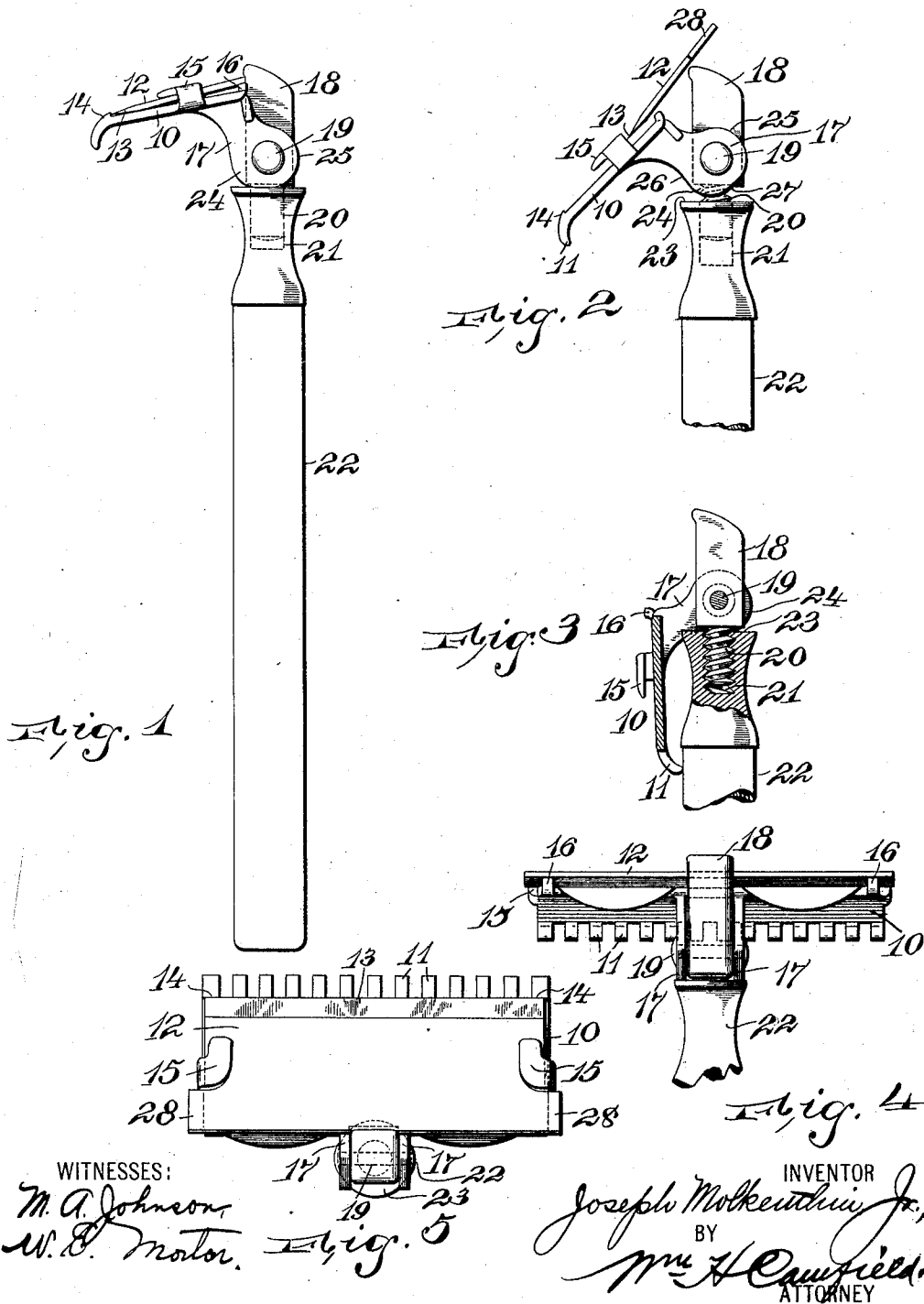


J. MOLKENTHIN, JR.
SAFETY RAZOR.
APPLICATION FILED MAR. 13, 1911.

1,005,274.

Patented Oct. 10, 1911.



UNITED STATES PATENT OFFICE.

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SAFETY-RAZOR.

1,005,274.

Specification of Letters Patent.

Patented Oct. 10, 1911.

Application filed March 13, 1911. Serial No. 613,955.

To all whom it may concern:

Be it known that I, JOSEPH MOLKENTHIN, Jr., a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Safety-Razors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention relates to a safety razor and relates to a razor that comprises a guard on which the blade is supported, the guard having the usual fending edge composed of teeth or their equivalents, and a handle which is pivotally attached to the guard so that the guard and the handle are in swinging relation, one end of the handle being adapted to engage the back of the blade and hold it in place on the guard, the handle and the guard having co-acting means to lock the handle and the guard in their different positions in relation to each other.

The invention is particularly designed to cover a razor of this type in which the handle swings on the guard so as to engage the blade directly from the back and not put any breaking or twisting strain on the blade when such blade is made of thin, frangible steel, and the locking of the handle and the guard in their different swinging positions is accomplished by screwing the grip of the handle tightly against the bearings in which the handle swings.

The invention is illustrated in the accompanying drawing, in which—

Figure 1 is a side view of the razor ready for shaving. Fig. 2 is a view of the top part thereof showing the device having its guard tilted to permit the insertion or withdrawal of the blade. Fig. 3 is a section of the razor with the guard swung down to the position in which it is left when it is packed. Fig. 4 is a back view of the razor, and Fig. 5 is a top view thereof.

The invention consists of a guard 10 which is provided with a fending edge which in the illustration is shown consisting of teeth 11, the guard acting as a support for a blade 12, which blade is preferably a thin flat blade, but I can use other types of blades.

The cutting edge 13 of the blade 12 is in proper shaving position on the teeth 11 when this cutting edge abuts on the shoulders 14 on the flanking or outside teeth, as will be seen from Figs. 1 and 5. To hold the blade down on the guard I construct fingers 15 which project inwardly over the top surface of the guard and the blade is slid underneath these fingers when it is pushed forward to seat it on the guard. This method of inserting the blade is illustrated in Fig. 2.

I have found that it is advantageous to tilt the blade slightly and not let it lie entirely flat on the guard, since when it lies flat its cutting edge is raised too much from the guard, and to accomplish this tilting I provide the back edge of the guard with protuberances 16 which are preferably formed by striking up lips from the guard, the whole guard, the fingers and the lips being made of sheet metal. Secured to the guard are the ears 17 which form a bearing for a stud 18, which stud is part of the handle, a pin 19 passing through the ears and through the stud acting to hold them in swinging relation. A screw-threaded shank 20 extends from the stud 18 and is screwed into a screw-threaded recess 21 of the grip 22 of the handle. The end 23 of the grip engages, on its opposite sides, the peripheries of the ears 17, and when the grip is turned and screwed up tight, the end 23 is forced against the peripheries of the ears tight enough to lock the guard and the stud, and consequently the whole handle, in any of their adjusted positions.

When a blade is placed on the guard and under the fingers, as shown in Fig. 2, and then the guard is swung up to the position shown in Fig. 1, the back end of the blade is brought in contact with the front of the stud 18 and the blade is locked against withdrawal and seated in its normal shaving position, and a turn on the grip 22 locks the guard and the handle in proper shaving position. When the razor is to be packed away in a box it can be made to consume very little space by swinging the guard down to the position shown in Fig. 3, after unscrewing the grip 22, this swinging position being shown in Fig. 2. A screwing up of the handle then seats or locks the parts together as shown in Fig. 3, and the guard not being free to swing, a steady and compact device is presented for storage or packing. The

end 23 of the grip 22 and the peripheries of the ears 17 can be roughened or provided with any suitable surface to insure their locking together against movement when they are brought in close contact. The way I prefer to lock them together, however, is shown in the drawing in which is illustrated a nose 24 which is eccentric to the pivotal pin 19, this nose projecting slightly beyond the concentric part 25 of the peripheries of the ears 17, and this nose provides just enough of a projecting portion to prevent any slipping or movement of the guard on the handle when the parts are in the position shown in Fig. 1 or in the position shown in Fig. 3. This nose forms a cam surface flanked by substantially tangential edges 26 and 27 which are engaged respectively in the two above mentioned positions, and any swing of the guard on the handle is prevented when the handle is screwed up tight.

To prevent unnecessary jamming of the cutting edge of the blade against the shoulders 14, when the back end of the blade is swung against the stud as shown in Fig. 1, I provide shoulders 28 on the blade, the forward edges of which are adapted to contact with the back edges of the fingers 15 and thus limit the movement of the blade in a forward direction. These shoulders are so proportioned that they engage the fingers 15 when the cutting edge 13 engages the shoulders 14.

I am aware that other means may be employed for securing the blade on the guard, and I am also aware that other means than the nose illustrated can be employed to lock the handle and the guard in different positions to vary the angle between them, without departing from the scope of my invention, and I wish to be understood as including in my invention any structure in which the handle and the guard are in swinging relation to each other, the handle in one position engaging the blade to lock it in position, after being swung on the guard, and co-acting means between the guard and the handle operated from the grip of the handle for locking the guard and the handle in proper position for shaving.

Having thus described my invention, what I claim is:—

1. A safety razor consisting of a guard, a handle, the guard and the handle being secured in swinging relation, a blade for which the guard acts as a support, fingers on the guard, the blade being slid under the fingers, the front edge of the blade being its cutting edge, means for limiting the forward movement of the blade, a grip forming part of the handle, said grip being rotatable, the handle when swung engaging the back edge of the blade and forcing and locking the blade in position on the guard, and

means on the guard adapted to be engaged by the grip of the handle when the grip is rotated to lock the guard and the handle in position.

2. A safety razor consisting of a guard, a blade having its front edge its cutting edge, the guard acting as a support for the blade and having means for limiting the forward movement of the blade, fingers on the guard under which the blade is slid, a handle secured in swinging relation on the guard and adapted to swing toward and from the cutting edge of the blade, the upper end of the handle being adapted to engage the back edge of the blade to lock the blade in one position and to uncover the back edge of the blade to permit its removal when swung to another position, a rotating grip forming part of the handle, and means on the guard for engaging the grip when the grip is turned to lock the handle and the guard in position.

3. A safety razor consisting of a guard, a blade, the guard acting as a support for the blade, the guard having means thereon for limiting the forward movement of the blade, a handle consisting of a stud and a grip, the stud being secured to the guard so as to swing thereon, the grip being rotatably secured on the stud, the stud being adapted to be brought in engagement with the back edge of the blade to force and lock the blade in position, and means on the guard for engaging the grip when the grip is rotated to lock the guard and the handle in position.

4. A safety razor consisting of a guard, a blade for which the guard acts as a support, fingers on the guard for engaging the top edge of the blade, ears on the guard, a stud pivoted to the ears, a grip rotatably secured in extension of the stud, the grip and the stud forming the handle of the razor, the stud acting to force and lock the blade in position when it engages the back edge of the blade, and coacting means on the top end of the grip and on the periphery of the ears for locking the guard and handle in position when the grip is rotated.

5. A safety razor consisting of a guard, a blade for which the guard acts as a support, means for limiting the forward movement of the blade, ears on the guard, a stud pivoted between the ears, a screw-threaded shank on the bottom of the stud, and a grip having a screw-threaded recess which receives the shank, the grip and the stud forming the handle of the razor, the stud being adapted to engage the back edge of the blade for forcing and locking it in position, the grip being adapted to have its top edge frictionally engage the periphery of the ears to lock the guard and the handle in position.

6. A safety razor consisting of a guard, a

blade for which the guard acts as a support,
means for limiting the forward movement
of the blade, ears on the guard, a stud piv-
oted between the ears, the ears having a
5 nose thereon to form a cam, and a grip in
screw-threaded engagement with the stud
and arranged to extend from the stud, the
stud and the grip forming a handle, the stud
being adapted to be swung to engage the
10 back edge of the blade to lock the blade in
position on the guard, the end of the grip

being adapted to engage the periphery of
the ears on the surfaces tangential to the
cam to lock the guard and the handle in
position.

In testimony, that I claim the foregoing,
I have hereunto set my hand this 4th day
of March, 1911.

JOSEPH MOLKENTHIN, JR.

Witnesses:

WM. H. CAMFIELD,

M. A. JOHNSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."