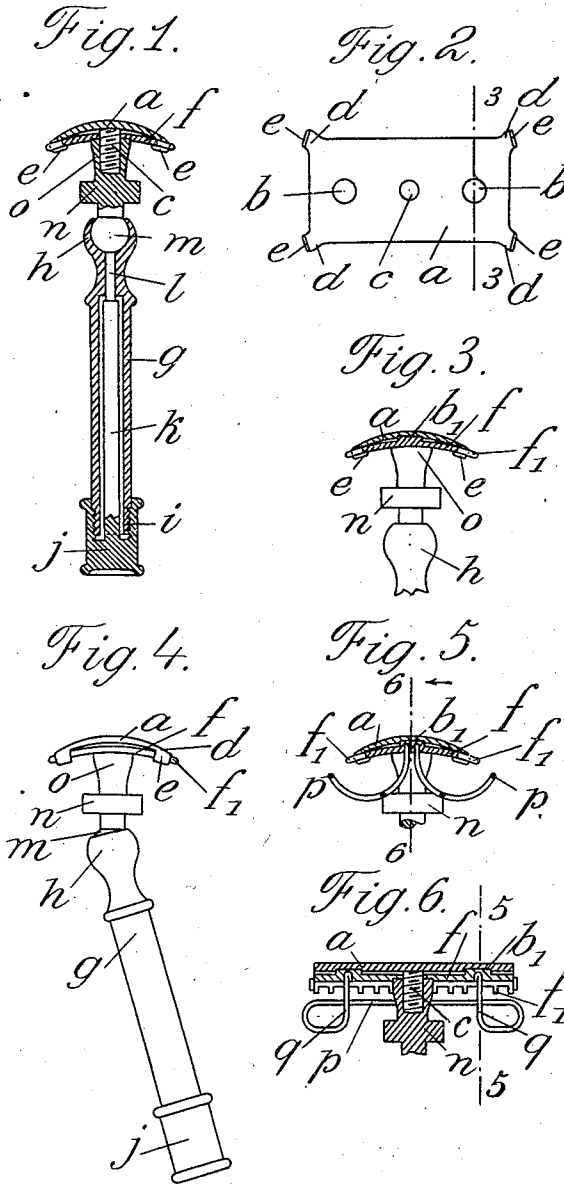


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SAFETY RAZOR.
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Patented Aug. 8, 1911.



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UNITED STATES PATENT OFFICE.

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SAFETY-RAZOR.

1,000,235.

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To all whom it may concern:

Be it known that I, RAMON CASTELLÓ CABRERAS, a subject of the King of Spain, residing at Barcelona, Spain, 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.

This invention relates to safety razors and has for its object to provide an improved safety razor consisting in a new and useful arrangement of parts which will be herein after fully described and represented in the annexed drawing.

My invention embodies certain improvements consisting: in elongating the corners of the top plate so as to cover the corners of the blade for protecting same at the comb edge; in furnishing the inner face of the top plate with recesses or sockets suitably disposed and the inner face of the comb with projections or pins which fit into said sockets after passing through holes suitably bored out in the razor blade, so that the latter may be firmly held in place; in avoiding or eliminating the guide-pins carried by the top plate in the usual apparatus, and the holes bored out in the comb through which said guide-pins pass to the outer face of the comb; in providing the handle of the apparatus with a spherical connection to permit the blade to be held, respectively to the handle, at any desired angle, in order to place the apparatus in the most convenient position during the shaving operation; and in providing a wire before the comb to be in frictional contact with the skin so as to cause it to be stretched and thus facilitate the shaving.

My improved safety razor is shown in the accompanying drawing, in which like reference letters represent like parts throughout the several figures.

Figure 1 is a sectional longitudinal view of the apparatus. Fig. 2 is a plan view of the underside of the top plate. Fig. 3 is a sectional view taken on line 3 3 of Fig. 2. Fig. 4 is a side elevation of the apparatus, the handle being inclined to the right. Fig. 5 is a sectional view taken on line 5 5 of Fig. 6. Fig. 6 is a sectional view on line 6 6 of Fig. 5.

The top plate *a* to be placed upon the blade (not shown in the drawing) is fur-

nished at each of its four corners with a tongue *d* which projects diagonally and is normally bent downward to form a corner square *e* which covers the corner of the comb *f*. Thus it will be seen that the projection *d* of the top plate cover the blade corners and the bent form *e* given thereto, will prevent the blade corners from contacting the face of the person who is shaving himself and so there is no risk for cuttings.

The top plate *a* is provided at its inner face with two sockets *b* suitably disposed and with a threaded central rod *c* whereby it is fastened to the handle hub *o*, by causing it to rotate through the nut *n*. The sockets *b* of the top-plate are disposed to register with holes similarly disposed in the blade, and with pins *b*₁ of the comb *f*, which pins pass through the corresponding holes of the blade and fit into the sockets *b* of the top-plate *a* as aforesaid, thus keeping the blade firmly held in place.

The handle of the apparatus is composed of two parts, viz., the hub *o* interiorly threaded, which carries a nut *n* and a ball *m*; a tubular rod *g* with its lower end *i* externally threaded, a spherical socket at its upper end *h* to receive the ball *m* of the hub; and a rod *k* centrally disposed in the tube *g*, said rod terminating in a spindle *l* at one end and in a threaded hub *j* at the other end, whereby it is secured to the rod *g*. Owing to the spherical connection *m n* the handle may be held in any desired inclination, as shown in Fig. 4, to give the blade the most convenient position for shaving. The rod *k* serves to hold the ball *m* at any desired position as by screwing the hub *j* to the end *i* of the rod *g*, the pin *l* will press against the ball *m* and keep it firmly held in place.

During the shaving operation it is necessary to stretch the skin for the blade to be passed over. To this end, a spring wire *p* is placed at a slight distance from the comb teeth *f*₁, so that during the shaving operation it grazes on the face and stretches the part thereof which is to be operated upon. For fixing the wire *p* in place it is bent to form the arms *q*, the ends of which fit into holes in the pins *b*₁ of the comb. In order that the wire *p* may be easily taken out and replaced, its ends are bent so as to form a spring and thus will be retained by their own elasticity in the holes of the pins *b*₁.

My improved safety razor above de-

scribed is of simpler construction than that of the usual apparatus and, as compared therewith, it has many advantages, viz: the top-plate *a* carries no pins passing beyond the outer face of the comb *f*; the projections *d* downwardly bent in the form of corner squares *e*, cover the corners of the blade, thus avoiding the risk of cuttings; the ball-connection *m n* permits to give the handle any desired inclination respectively to the blade, thus facilitating the razor movements, and the wire *p* placed before the comb teeth *f*₁ maintains the skin quite stretched and much facilitates the operation.

Having thus described my said invention what I claim and desire to secure by Letters Patent, is:

1. In a safety razor, the combination of a handle, one part of the handle being movably connected to the other, means for securing the movable part in a desired position, a comb, a blade, the blade having guide-holes, a top plate having diagonally elongated and downwardly bent corners for covering the upper face and side edges of the blade corners, the top-plate being provided with sockets corresponding with said

guide-holes, pins on the inner face of the comb and passing through the holes of the blade and entering the sockets in the top-plate, and means for stretching the skin before the blade, substantially as described.

2. In a safety razor, the combination of a handle one part of the handle being movably connected to the other, means for securing the movable part in a suitable position, a comb, a blade, a top-plate having elongated and downwardly bent corners for covering the upper face and sides of the blade corners, the blade being provided with guide-holes, the top-plate having sockets corresponding with said guide-holes, pins on the inner face of the comb and passing through the guide-holes of the blade and entering the sockets in the top-plate, and a spring wire in front of the comb-teeth and having its free ends bent for inserting into holes in the under side of the comb, substantially as described.

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

RAMON CASTELLÓ CARRERAS.

Witnesses:

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