To all whom it may concern:

Be it known that I, Hugo S. Hasselquist, a citizen of the United States, residing at Oak Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Razor-Blade Guards and Face Plates, of which the following is a specification.

My invention concerns novel features of construction in razors, but pertains more particularly to the guard and face-plate associated with a revolvable, round, sharp-edged, disc razor-blade to protect and shield the face of the user from an undue cutting action of the blade, the relative positions of the guard and face-plate determining the degree of exposure and depth or extent of cut of the edge of the razor-blade. The improved construction is especially adapted, though not restrictedly, for advantageous employment with a rotary-razor having a hollow handle containing a spring-motor by means of which the blade is revolved during use.

It has heretofore been proposed to employ round toothed guards for such razors, the construction permitting of ready adjustment of the guard toward and from the blade edge to determine or fix the closeness of the shave. I have found, however, that such a structure may be improved to advantage by giving the guard a smooth or unserrated or untoothed edge, and the employment of such an improved style of guard facilitates the shaving operation because there are no radially-directed teeth or projections pointing or extending in different directions to act on the hairs.

In association and co-operation with such guard I employ a round, convex, circularly-corrugated, sheet-metal disc or face-plate, over the blade and secure it to a fixed or stationary mounting. Heretofore, it has been suggested to use a smooth, convex, face-plate in the same position, but experience has shown that such a plate is likely to adhere or fit too closely to the face of the user and to create more or less of an objectionable and detrimental suction action tending in small degree, at least, to cause the skin of the user to follow the course of travel of the razor. Stated somewhat otherwise, a rotary razor equipped with such a smooth face-plate is inclined to adhere to the face of the user and to retard the smooth and ready travel of the razor over the face of the operator. By making such face-plate roughened and preferably by the employment of circular corrugations, the air has entrance or access between the face and face-plate, hence overcoming or eliminating any such undesirable tendency to suction or adhering action. The employment of the new face-plate with the guard of the type described, facilitates the easy and proper action of the razor and does away with the disadvantages of the older types of construction.

To enable those skilled in this art to have a full and complete understanding of the invention and its several advantages, I have illustrated a preferred and desirable embodiment of the same in the accompanying drawing to which reference should be had in connection with the following detailed description of the construction and mode of operation of the razor-structure depicted in such drawing:

In this drawing:

Figure 1 is a fragmentary, central, vertical section through a rotary-razor structure equipped with the improved guard and face-plate; and

Figure 2 is a plan view of such face-plate.

Referring to the drawing, it will be seen that the round, sharp-edged, disc razor-blade 10 is mounted on a supporting-plate 11 resting on a circular flange 12 forming part of a sleeve 13 fitted over the upper end of and rotated by a revolvable sleeve 14 operated by the spring-motor (not shown) contained in the pear-shaped handle of the razor (not illustrated). The blade 10 is securely held in position on the element 11 by a perforated clamp-plate 15 bearing against its upper face and provided with a hollow, externally-screw-threaded, hub portion 16 screwed into the upper internally-threaded part of the rotary sleeve 13. It will be perceived, therefore, that by fully screwing home the plate 10, the blade 10 may be firmly clamped or secured between the companion co-operating elements 11 and 15.

Inside of the sleeves 13 and 14 there is a stationary post or standard 17 having a screw-threaded cavity 18 in its upper end into which is screwed the threaded stem 19 of a supporting block 20 provided at its upper or outer end with a central cavity 21. A round, slightly-convex, circularly-corru-
gated face-plate 22 is soldered or otherwise secured to the element 20, the recess 21 accommodating a central, depressed, centering boss 23 of the face-plate, all as is clearly illustrated in Figure 1. Such face-plate is stationary during the operation of the razor and its round or circular edge is spaced away slightly from the adjacent face of the revolving disc-blade 10, the position of the plate being determined by a shoulder of block 20 bearing on the end of post 17.

In order to facilitate the attachment of the inner or under surface of such face-plate to the supporting member 20, that part of the face-plate surrounding the central boss 23 is flat at 24 which permits it to be readily soldered or otherwise secured to the correspondingly-shaped outer surface of the element 20.

The appliance includes additionally a stationary, hollow, cylindrical post 25 having an externally screw-threaded part 26 provided with a lengthwise groove or key-way 27 and also having an outstanding, circular rib or flange 28 affording a shoulder 29. The handle of the razor comprises in part a sheet-metal shell or casing element 30 with an inturned flange or circular lip 31 adapted to bear against the shoulder 29 on which it is pressed and against which it is firmly held by a retaining nut 32 screwed on to the threaded part 26 of the stationary post.

Internally such hollow post 25 accommodates the means for rotating the revolving blade and the means for supporting the stationary corrugated face-plate, all as is clearly shown.

A round, smooth-edged blade-guard 33 of the shape in cross-section, as fully illustrated in Figure 1, is soldered or otherwise firmly fixed to a flanged ring support 34 mounted to slide longitudinally on the screw-threaded part 26 provided with a lengthwise groove or key-way 27 and also having an outstanding, circular rib or flange 28 affording a shoulder 29. The handle for the razor comprises in part a sheet-metal shell or casing element 30 with an inturned flange or circular lip 31 adapted to bear against the shoulder 29 on which it is pressed and against which it is firmly held by a retaining nut 32 screwed on to the threaded part 26 of the stationary post.

A threaded retaining collar 36 is screwed on to the end of the post 25, and positioned between it and the guard support 34 I employ a leaf-spring disc 37 having pressed upwardly out of its plane a plurality of curved resilient leaves or strips 38, in the present instance three. By this spring construction the blade-guard and its supporting ring are yieldingly pressed downwardly or away from the razor-blade.

A portion of the element or member 34 is externally screw-threaded as shown, and fitted on such part is an internally-threaded adjustment-sleeve 39 bearing at one end on the face of the adjacent clamp-nut 32. This sleeve has fixed to it, as by soldering or otherwise, a suitably-shaped knurled or 70 roughened cover-member 40 desirably of a width to shield and cover the elements 32 and 39 and a portion of the member 30, all as is clearly shown in the drawing.

It will be understood, therefore, that the support for the razor-blade guard is retained between the spring element 37 and the clamp-nut 32 and owing to the clearance spaces between the parts 32 and 34 and 39 and 33, turning of the sleeve 39 by its cover 80 element 40 may be employed to effect the desired adjustment of the round blade-guard.

Thus in this device we have improved and novel means on both sides of the edge of the blade, the one element being the smooth-edged guard and the other or companion member being the corrugated face-plate, to facilitate the proper and effective and efficient use of the razor.

Those skilled in this art will discern that without departure from the substance and essence of the invention, various minor mechanical changes may be incorporated in the structure, the invention not being limited to the details of construction shown and described.

1. In a razor construction of the character described, the combination of a round disc razor-blade, a corrugated convex face-plate over said blade, a stationary mounting for said face-plate, and a round smooth-edge guard of a larger diameter than and concentric with said blade, substantially as described.

2. In a rotary-razor construction of the character described, the combination of a rotary round disc razor-blade, a corrugated convex sheet-metal face-plate over said blade, and a stationary mounting for said face-plate, substantially as described.

3. In a rotary-razor construction of the character described, the combination of a rotary round disc sharp-edged razor-blade, a round smooth-edge guard of larger diameter than and concentric with said blade, a round, circularly-corrugated, convex, sheet-metal face-plate over said blade, and a stationary mounting for said face-plate, substantially as described.

HUGO S. HASSELQUIST.