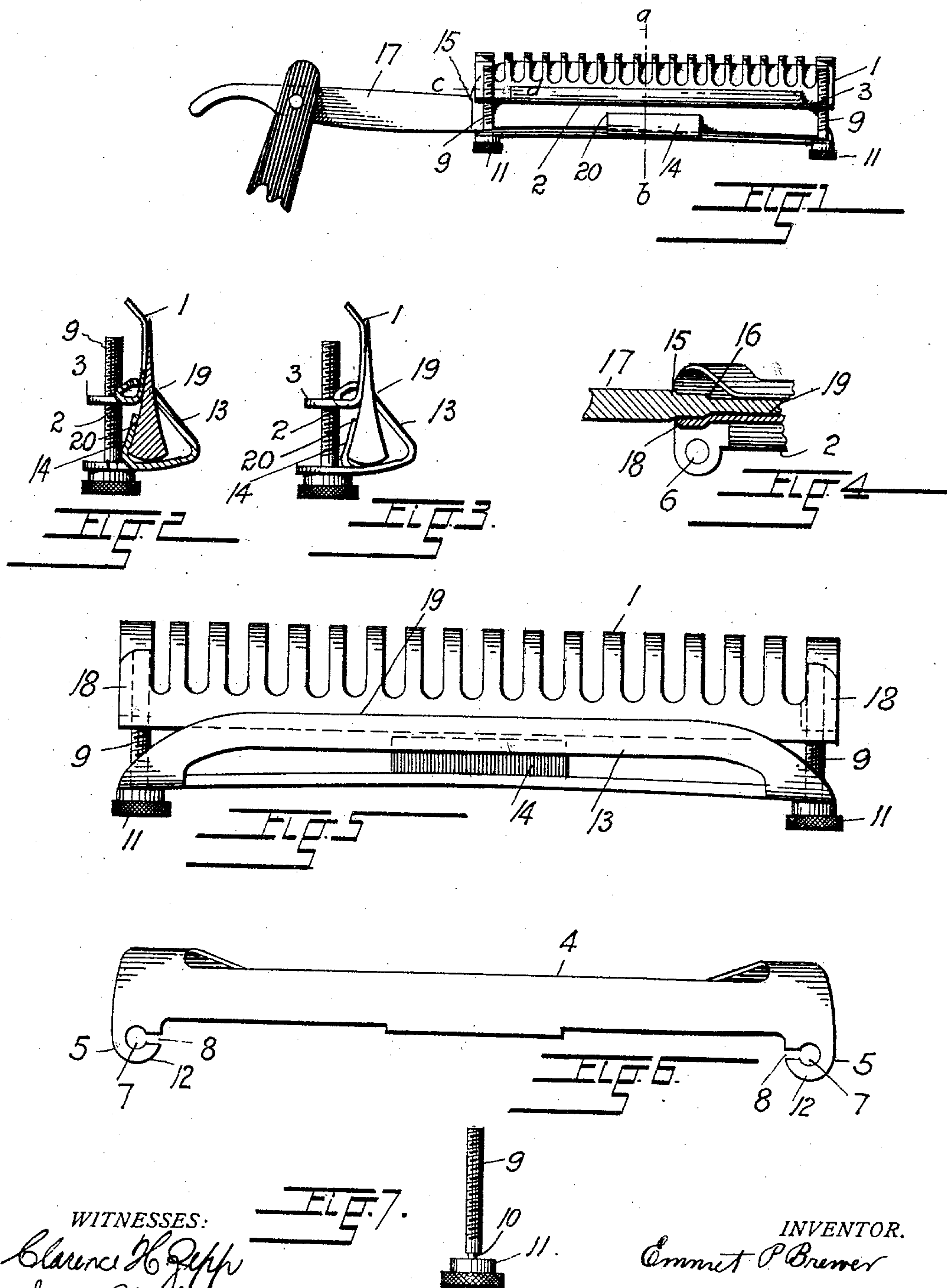


No. 779,580.

PATENTED JAN. 10, 1905.

E. P. BREWER.
RAZOR GUARD.

APPLICATION FILED MAR. 16, 1904.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EMMET P. BREWER, OF DENVER, COLORADO, ASSIGNOR OF ONE-HALF TO
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RAZOR-GUARD.

SPECIFICATION forming part of Letters Patent No. 779,580, dated January 10, 1905.

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To all whom it may concern:

Be it known that I, EMMET P. BREWER, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Razor-Guards; 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.

My invention relates to improvements in razor guards or shields.

My object is to provide a durable and efficient guard having the simplest means of adjustment and attachment to the razor-blade.

In the drawings, Figure 1 shows a rear elevation of my device as applied to a razor. Fig. 2 is a transverse section of the same on the line *a b* of Fig. 1 looking toward the handle end of the razor-blade. Fig. 3 is an end elevation of the same, taken on the line *c d* of Fig. 1 looking toward the handle end of the razor-blade. Fig. 4 is a longitudinal horizontal section of those portions of the razor and guard at which the inner end of the guard abuts the shoulders of the razor-blade and showing the depression in the toothed member of the guard provided for a subshoulder on the razor. Fig. 5 is a front side view of the razor-guard. Fig. 6 is a bottom view of the combined back plate and its integral spring side clamps. Fig. 7 is a side elevation of the headed screw 9.

Referring to the drawings, 1 is the toothed member, consisting of a comb-like plate, the teeth of which are curved rearwardly at their ends, having at its inner bottom edge a substantially right-angular longitudinal bend or shelf 2, at either end of which integral lugs 3 extend farther, Figs. 2 and 3. Between these lugs the metal of the shelf is return bent in an arch back toward and touching the rear side of the toothed plate 1, thus making the plate longitudinally rigid. Below the toothed member is a back plate 4, the plane of which is substantially parallel to the plane of the shelf or bend 2 of the toothed member 1. At either end this back plate is provided with lugs 5, which project in the same direc-

tion as the lugs 3 of the toothed member. The lugs 3 of the toothed member are provided with threaded bearings 6, Fig. 4. The lugs 5 of the back plate are provided with non-threaded bearing-holes 7, which have openings 8 leading from their inner sides. The back plate is secured to the toothed member, as shown, by means of the headed screws 9. The stem of these screws 9 has a circumferential groove 10 at its headed end, the side walls of said groove being perpendicular to the axis of said stem. One wall of this groove is formed by the head 11. The depth of the groove is such that the diameter of its walls is about the same as the diameter of the bearing-holes 7 in the back plate. The width of the groove is just a little greater than the thickness of the lugs 5 of the back plate. The inner side openings 8 leading to the bearing-holes 7 are slightly narrower than the diameter of the bottom of the groove 10.

The headed screws 9 are first secured in the holes 7 of the back plate, and this is done by pushing the screws sidewise with their grooves 10 meeting the inner side openings 8 in the lugs until they pass through the inner side openings 8 into the bearing-hole 7 in the lug. As stated above, the side openings 8 are slightly smaller than the diameter of the bottom of the groove 10, and therefore the outer lip 12 of the lugs 5 would have to be sprung a little to allow the screw to pass through the opening 8; but as soon as the screw is pushed clear into the bearing-holes 7 the outer lip 12 will fly back again to its normal position, thus locking the screws 9 within the holes 7. After being secured in the back plate, as stated, the screws 9 are screwed into the threaded holes 6 in the lugs 3 of the toothed member 1. The parts are then assembled, as shown in the drawings, and are adjustable to and from each other on the stem of the screw by turning the screw.

On one side of the back plate, which side corresponds to the front side of the toothed member, the back plate has an integral side clamp 13, which is only integral with the plate for a short distance from both ends. (Shown in Fig. 5.) This integral spring side

clamp 13 rises from the side of the back plate and curves inward toward the front of the toothed member 1, for a purpose presently stated. On the other side of the back plate, 5 which side corresponds to the rear side of the toothed member, a back rest 14 rises and curves inward toward the spring side clamp 13. This back rest 14 is comparatively short and rises only from the middle portion of the 10 back plate 4. The back plate itself is preferably curved from end to end toward the toothed member. The toothed member is convexly curved from top to bottom on its front edge, and the contour of such curve is 15 approximately the counterpart of the concave side of the ordinary razor, as shown in Figs. 2 and 3. The purpose of this is to make the razor fit closely the sides of the toothed member at the various relative adjustments 20 of the toothed member and back plate.

Many razor-blades, especially very thin ones, are made with two shoulders, 15 the main shoulder and 16 the subshoulder, where the razor-blade merges into the shank or handle end 17. In Fig. 4 and also in Fig. 5 I 25 show a means of accommodating such a razor to my guard—to wit, I provide in the front of the end tooth of the toothed member 1 a depression 18, into which the subshoulder 16 30 of a razor may rest. Without this depression a razor having a subshoulder would not closely fit the face or front of the toothed member of the guard, because in unskilled hands a subshouldered razor might be pushed 35 into the slide between the toothed member and the spring-clamp 13, so as to force its subshoulder past or over the end tooth, in which case the razor would be held away from the several next adjacent teeth for a distance 40 equal to the thickness of the subshoulder, and thereby prevent the razor-blade from lying perfectly flat against the face or front of the rigid toothed member 1. Such a depression 18 will in no wise alter the adjustment be- 45 tween the guard and a razor having only one shoulder.

It will be noted that the top 19 of the spring-clamp 13 bears against the outside of the razor at a higher point than the top 20 of the back 50 rest 14, so that whatever the adjustment of the toothed member to and from the back plate the edge of the razor will always be spring-pressed by the spring of the clamp 13 toward the face or front of the toothed mem- 55 ber. Thus I am enabled to maintain the proper adjustment between the edge of the razor and the face of the toothed member with all ordinary widths of razors.

I claim—

60 1. In a razor-guard, a toothed member rearwardly curved at its upper edge, a rearward and return bend of its bottom edge, a rearwardly-projecting lug at each end of its bottom edge, a threaded bearing-hole in each of 65 said lugs, in combination with a back plate

parallel to the rearward bend of said toothed member, rearwardly-projecting lugs at each extremity of said back plate corresponding with the lugs of said toothed member and provided with non-threaded bearing-holes, 70 slots in the opposing edges of the back-plate lugs leading to the holes thereof, headed adjusting-screws grooved near their heads to fit the back-plate holes and adapted to enter therein through said slots, a short rest-plate 75 rising integral from the rear edge of said back plate toward the toothed member and a narrow spring-plate rising integrally from each end of the front edge of said back plate and extending above and along said plate from 80 end to end, substantially as described.

2. A razor-guard consisting of a rigid toothed member rearwardly curved at its upper edge and convex on its face or front from top to bottom, lugs projecting rearwardly 85 from each extremity of its bottom edge, a rearwardly return-bend of its bottom edge between said lugs, threaded bearing-holes in said lugs, a back plate, lugs rearwardly projecting therefrom parallel to the lugs of the toothed mem- 90 ber, an integral back rest rising from the rear edge of the back plate and inclined inwardly, a longitudinal integral spring side clamp rising from the ends of the opposite edge of the back plate and bearing inwardly whereby to 95 form an end-opening spring razor-clamp, and adjusting-screws having a loose fixed bearing in the lugs of the back plate and a threaded adjusting-bearing in the lugs of the toothed member, substantially as described. 100

3. A razor-guard consisting of a rigid toothed member rearwardly curved at its upper edge convex on its face from top to bottom, depressions in its face at the bottom corners of both ends, lugs projecting rearwardly 105 from each extremity of its bottom edge, a rearwardly return-bend of its bottom edge between said lugs, threaded bearings in said lugs, a back plate, end lugs rearwardly projecting therefrom parallel to the lugs of the toothed 110 member, an integral back rest rising integral from the rear edge of the back plate and inclined inwardly, a longitudinal integral spring side clamp rising from the ends of the opposite side edge of the back plate and bearing 115 vertically and longitudinally inwardly whereby to form an end-opening spring-clamp, and adjusting-screws having a loose fixed bearing in the lugs of the back plate and a threaded adjusting-bearing in the lugs of the toothed 120 member, substantially as described.

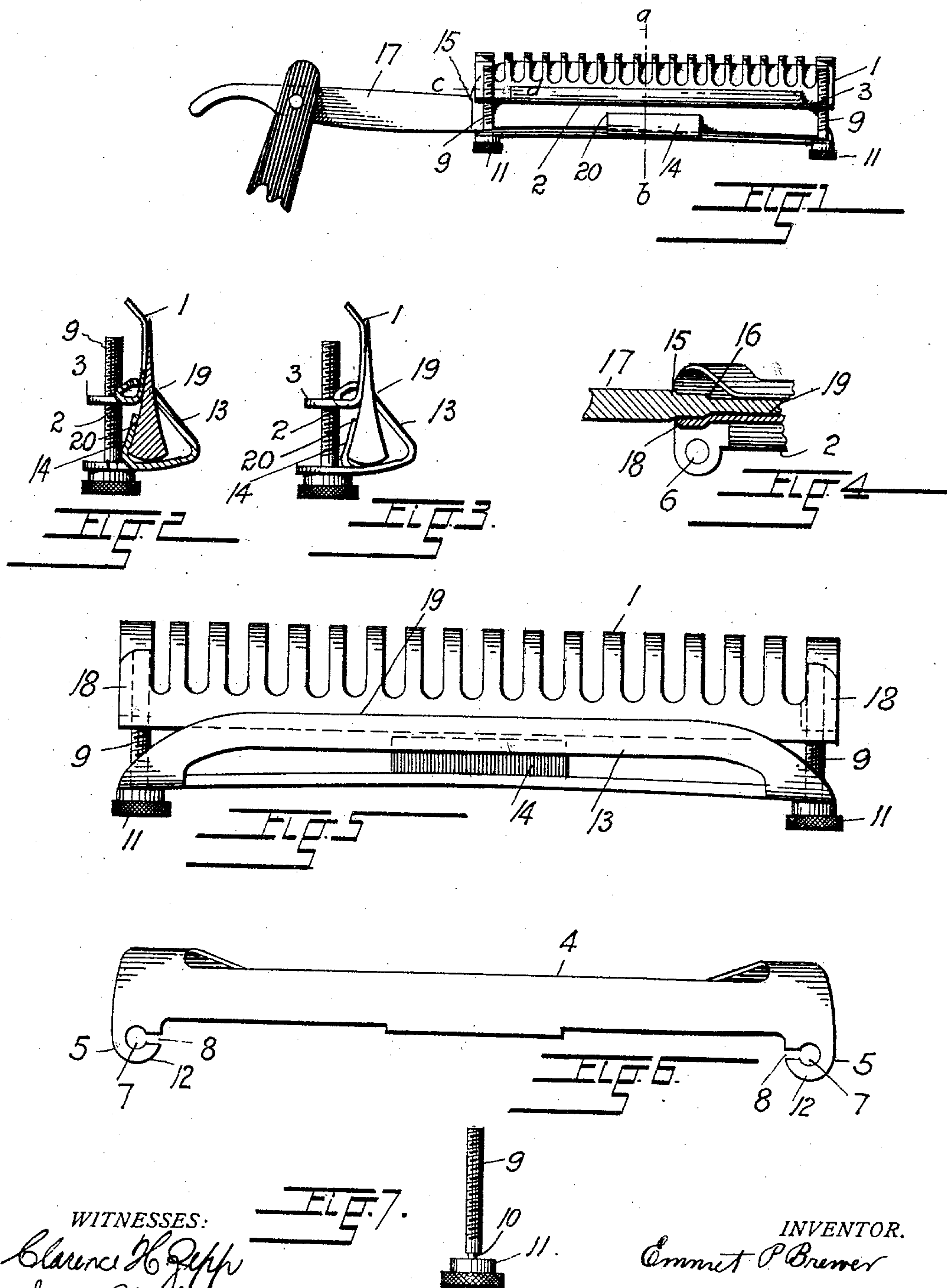
4. In a razor-guard, a rigid toothed member consisting of a comb-like plate the teeth of which are curved rearwardly at their ends and against which the razor-blade bears, a sub- 125 stantially right-angular shelf or bend extending from the inner bottom edge of said toothed member, a second bend of the metal thereof curving from the edge of the right-angular bend toward the rear face, integral lugs extend- 130

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