CLAIMS

1. A razor comprising:

a cartridge comprising a housing, said housing including a guard structure in front of a plurality of blades, said guard structure comprising a plurality of rows of elongated hard plastic protrusions having rounded tips arranged on a tip curved profile, and

more than half of said guard structure is unsupported and extends beyond said housing in an overhanging manner, and

wherein said protrusions comprise valleys between said protrusions, said valleys are arranged on a valley curved profile different than said tip curved profile, and said valley curved profile provides said valleys with different cross sectional areas for improving shaving aid retention.

2. The razor of claim 1 wherein said valleys are rounded.

3. The razor of claim 1 wherein an inner protrusion volume of said valleys encompassed under said tip curved profile at a front end of said guard structure are larger volumes than the volumes at a back end of said guard structure.

4. The razor of claim 1 wherein inner protrusion volumes range from 0.044 mm^3 to 0.098 mm^3.

5. The razor of claim 1 wherein said curved profile of said guard structure is represented by the equation

$$y = 0.0348x^5 - 0.3058x^4 + 1.0288x^3 - 1.7226x^2 + 1.6388x$$

where x is a distance from a front end of the guard structure towards the blades and y is a height of said protrusions relative to a first protrusion at the front of the guard structure.

6. The razor of claim 1 wherein said plurality of blades are formed within a housing and said guard structure extends between 1 mm to 3 mm beyond a front end of said housing.

7. The razor of claim 1 wherein said protrusions range in height from 1.50 mm to 2.50 mm measured from a bottom of said guard structure to said rounded tips.

8. The razor of claim 1 wherein each of said rounded tips comprises a tip radius ranging from 0.05 mm to 0.20 mm.

9. The razor of claim 1 wherein a distance between said protrusions ranges from 0.4 mm to 0.6 mm.

10. The razor of claim 1 wherein there are at least four protrusions on an upper surface of said guard structure.

11. The razor of claim 1 wherein there are six protrusions on an upper surface of said guard structure.

12. The razor of claim 1 wherein a first protrusion tip from a front end of a guard structure is 0.4 mm lower than a second protrusion tip.

13. The razor of claim 1 wherein said hard plastic is comprised of high impact polystyrene, polyphenylene oxide, polystyrene, polypropelene, acrylonitrile butadiene styrene, or any combination thereof.

14. The razor of claim 1 further comprising a plurality of rows of elongated hard plastic protrusions having acute tips and arranged on said tip curved profile.