

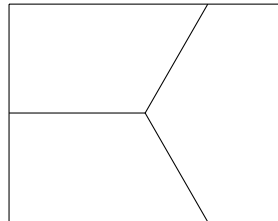
Appendix – A regular shrinkers gallery (courtesy of Tom Ilmanen)

The following figures of regular shrinkers with their Gaussian density are based on numerical computations due to J. Hättenschweiler (see [40] where one can also find other positive and negative examples and several conjectures) and T. Ilmanen. We remark that this is not an exhaustive list, only the shrinkers with at most one bounded region are completely classified, by the work of Chen and Guo [17] (and actually they are the only ones in this gallery whose existence is rigorously proved). Moreover, all the shrinkers shown below have at least one symmetry axis, we do not know of examples without any symmetries at all.

No regions:

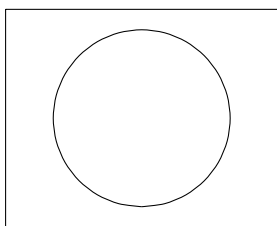


Line
 $\Theta = 1$

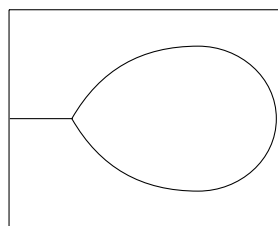


Triod
 $\Theta = 1.5$

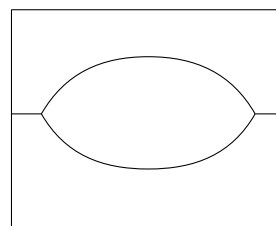
1 region:



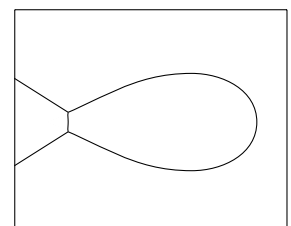
Circle
 $\Theta = \sqrt{2\pi/e} \approx 1.520$



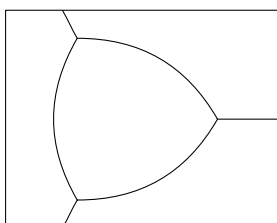
Spoon
 $\Theta \approx 1.699$



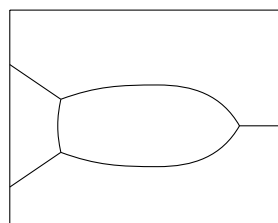
Lens
 $\Theta \approx 1.789$



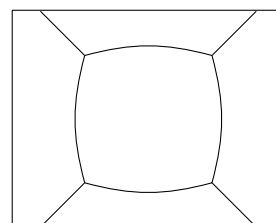
Fish
 $\Theta \approx 2.026$



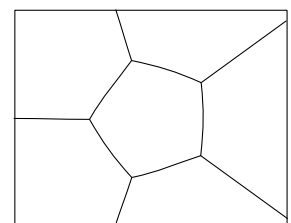
3-ray star
 $\Theta \approx 2.031$



Rocket
 $\Theta = ?$

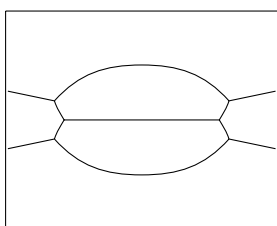


4-ray star
 $\Theta \approx 2.295$

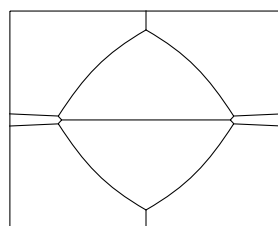


5-ray star
 $\Theta \approx 2.606$

2 regions:

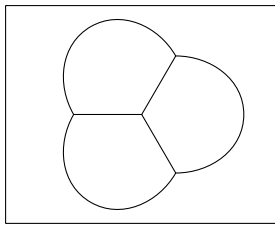


Ciscgeminate eye
 $\Theta = ?$

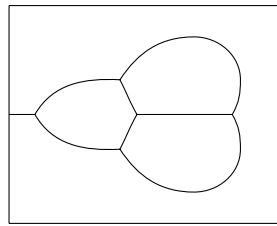


Ciscgeminate 4-ray star
 $\Theta = ?$

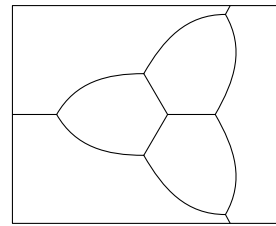
3 regions:



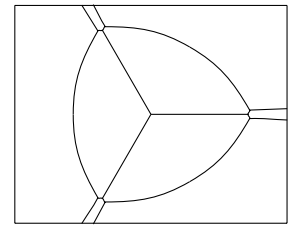
Mercedes-Benz
 $\Theta \approx 2.532$



1-ray Mercedes-Benz
 $\Theta \approx 2.598$

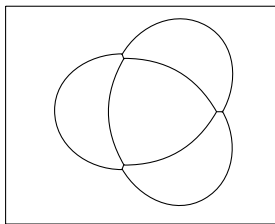


3-ray Mercedes-Benz
 $\Theta \approx 2.762$

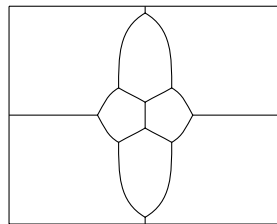


Cisgeminate 3-ray star
 $\Theta = ?$

4 regions:

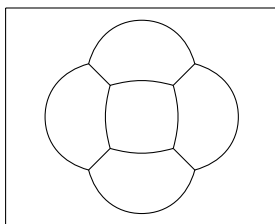


3-leaf clover
 $\Theta \approx 3.064$

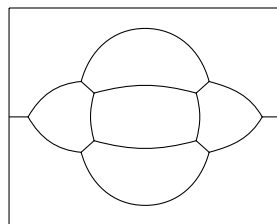


2-ray 2-floc
 $\Theta \approx 3.249$

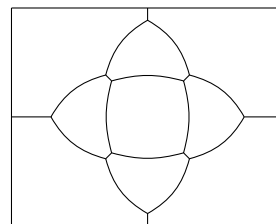
5 regions:



4-leaf clover
 $\Theta \approx 3.234$

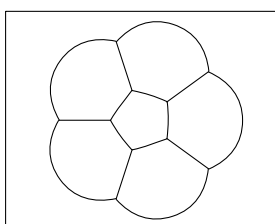


2-ray 4-leaf clover
 $\Theta \approx 3.365$

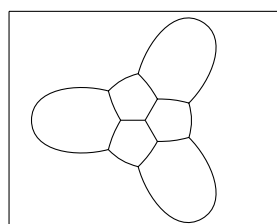


4-petal flower
 $\Theta \approx 3.474$

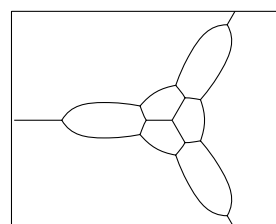
6 regions:



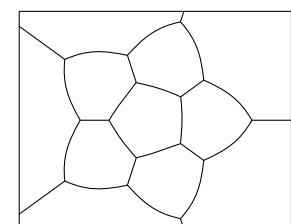
5-leaf clover
 $\Theta \approx 3.455$



3-floc
 $\Theta \approx 3.477$

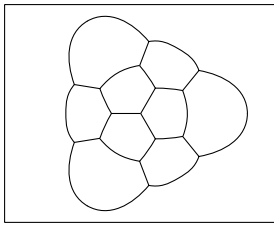


3-ray three-floc
 $\Theta \approx 3.517$

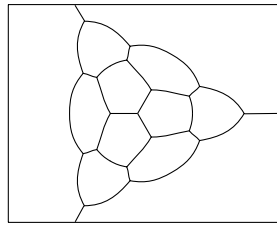


5-petal flower
 $\Theta \approx 3.907$

9 regions:

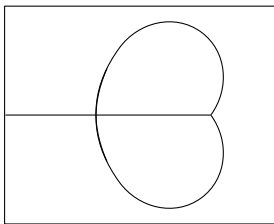


9-floc
 $\Theta \approx 4.194$

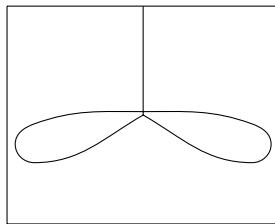


3-ray 9-floc
 $\Theta \approx 4.321$

Non-embedded regular shrinkers:

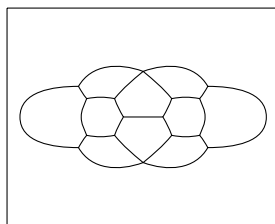
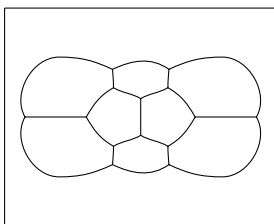
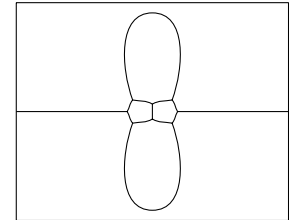
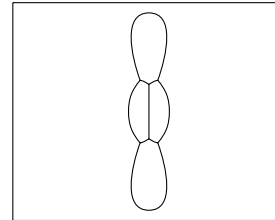
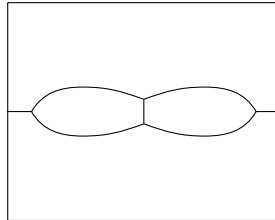
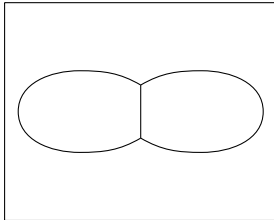


Antispoon
 $\Theta \approx 2.365$



Bowtie
 $\Theta \approx 2.503$

Impossible regular shrinkers:



Conjecturally, by numerical evidence in [40], there are no regular shrinkers with these topological shapes. The only one whose non-existence is rigorously proved is the first one, the Θ -shaped (double cell) shrinker, in [10].