We describe an algorithm for filling a region of the plane with progressively smaller copies of a motif. For simplicity we take the region to be a circle and the motifs to be discs, though the algorithm can be naturally modified to work with other shapes. After placing the first $i$ discs, random locations are tried for a placement of the next disc until a position is found such that the disc does not intersect any previously placed disc. After having placed $i$ discs, we call the remainder of the bounding circle the gasket. At this point we let $A_i$ and $P_i$ be the area and perimeter (boundary) of the gasket respectively. Thus $A_i$ decreases and $P_i$ increases with increasing $i$. We choose the radius of the next disc by $r_{i+1} = \gamma(A_i/P_i)$, where $\gamma$ is a dimensionless parameter between 0 and 2 that is chosen a priori. As $\gamma$ approaches 2, it becomes more likely that the algorithm will halt, but it rarely halts for $\gamma = 3/2$. By examining log-log plots of the areas of the discs versus $i$, which seems to be linear for large $i$, we conjecture that the areas of the discs obey an inverse power law. That power $c$ seems to be given by the equation $c = -(4 + 2\gamma)/(4 + \gamma)$ (verified to several significant digits). (Received September 25, 2017)