Abstract: Building off ideas developed by Agol, we construct a family of hyperbolic knots $K_n$ whose complements contain no closed incompressible surfaces (i.e., they are small) and have Heegaard genus exactly $n$. These are the first known examples of small knots having large Heegaard genus. In the first part of the talk we will describe a beautiful construction due to Agol for building hyperbolic 3-manifolds that decompose into a union of regular ideal octahedra. Using this technology, we will then show how to build the knots $K_n$, and outline the proof showing that they have the desired properties.