Abstract: The study of finite-sheeted covering spaces of 3-manifolds has been invigorated in recent years by the resolution of several long-standing conjectures by Kahn-Markovic, Agol and Wise. In this talk, I will discuss how using this work one can reformulate some of the central open questions in the field in terms of objects called solenoids. These objects are formed by taking inverse limits of families of finite-sheeted covering spaces of a compact manifold $M$, and they can be thought of as pro-finite analogues of covering spaces of $M$. While such an object can in general be quite complicated, I will show in this talk that if $M$ is a compact aspherical 3-manifold, then the solenoid given by taking the inverse limit of the family of all finite-sheeted connected covering spaces of $M$ has the Cech cohomology of a disk. I will then talk about the relevance of this result to concrete questions about finite-sheeted covers.