Abstract: Let $\varphi : \mathbb{R} \times X \to X$ be a dynamical system, an $\mathbb{R}$-action, defined on the metric space X. A nonempty, closed invariant set is *minimal* if it contains no proper, nonempty, closed invariant subset. We will show a construction yielding dynamical systems with a nested sequence of invariant sets whose intersection is empty on non-compact boundaryless 3-manifolds, matchbox manifolds and 2-dimensional surfaces.