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Robert Connelly* (connelly@math.cornell.edu), Dept. of Math., Malott Hall, Cornell University, Ithaca, NY 14853, and **Jean-Marc Schlenker**. *On the infinitesimal rigidity of weakly convex polyhedra.*

The main motivation here is a question: whether any polyhedron which can be subdivided into convex pieces without adding a vertex, and which has the same vertices as a convex polyhedron, is infinitesimally rigid. We prove that it is indeed the case for two classes of polyhedra: those obtained from a convex polyhedron by “denting” at most two edges at a common vertex, and suspensions with a natural subdivision. (Received February 26, 2007)