962-05-1307 **Robert G. Donnelly*** (donnelly@math.mursuky.edu), Department of Mathematics and Statistics, Faculty Hall Suite 6C, Murray State University, Murray, KY 42071, **Scott J. Lewis** (slewis@math.mursuky.edu), Department of Mathematics and Statistics, Faculty Hall Suite 6C, Murray State University, Murray, KY 42071, and **Robert Pervine** (bpervine@math.mursuky.edu), Department of Mathematics and Statistics, Faculty Hall Suite 6C, Murray State University, Murray, KY 42071. *Reiner-Stanton Lattices are Rank Symmetric, Rank Unimodal, and Strongly Sperner.*

Two infinite families of distributive lattices parameterized by positive integers n and k are considered. The first family of lattices, which we denote $RS(k, 2n)$, was introduced by Reiner and Stanton as the distributive lattices $Good(k, 2n)$ of certain partitions. Reiner and Stanton showed that these lattices are rank symmetric and rank unimodal and conjectured that they are strongly Sperner. We introduce a related second family of lattices which we denote $Mol(k, 2n)$ because of its connection to certain representation constructions of the odd orthogonal Lie algebras obtained by Molev. For fixed n and k, the two lattices have the same rank generating function. The lattices $RS(k, 2n)$ and $Mol(k, 2n)$ are used to produce two different constructions of the same odd orthogonal representations. These constructions together with a result of Proctor imply that both lattices are rank symmetric, rank unimodal, and strongly Sperner. (Received October 03, 2000)