ABSTRACT. Let Γ be a subgroup of the group of affine transformations of the affine space $\mathbb{R}^{2n+1}$. Suppose Γ acts properly discontinuously on $\mathbb{R}^{2n+1}$. The paper deals with the question which subgroups of $\mathrm{GL}(2n+1,\mathbb{R})$ occur as Zariski closure $\overline{\ell(\Gamma)}$ of the linear part of such a group Γ. The two main results of the paper say that $\mathrm{SO}(n+1,n)$ does occur as $\overline{\ell(\Gamma)}$ of such a group Γ if n is odd, but does not if n is even.