1047-20-262 **Tadeusz Januszkiewicz*** (tjan@math.ohio-state.edu). *Some quotients of Coxeter groups.* Preliminary report.

Let (W, S) be a Coxeter group; let $\mathfrak{m}$ be an ideal in the ring of algebraic integers spanned by the coefficients of the Tits representation of W; let $\mathcal{F}$ be a family of subsets of S. Denote $W_{\mathfrak{m}}(\mathcal{F})$ the group obtained by reducing mod $\mathfrak{m}$ all subgroups spanned by subsets of S belonging to $\mathcal{F}$.

We study groups $W_{\mathfrak{m}}(\mathcal{F})$, where W is a Coxeter group of large type (all $m_{st} \geq 3$, and finite), and $\mathcal{F}$ is a family of 3 element subsets of S.

For almost all ideals $\mathfrak{m}$, these groups act on systolic spaces. This allows to understand several geometric properties such as hyperbolicity, isoleted flats property, being virtually torsion free. (Received January 30, 2009)