Arrangements of linear spaces with symmetries

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 $\mathcal{A} = \bigcup_{i=1}^{k} L_i \subseteq \mathbb{P}^n \text{ a } G\text{-invariant arrangement of linear spaces,}$ where G = reflection group generated by coordinate hyperplanes.

- Describe the image of \mathcal{A} under the quotient $\mathbb{P}^n \to \mathbb{P}^n/G$.
- Which polynomial functions vanish on the arrangement \mathcal{A} ?

On which combinatorial structure do the answers depend?