Abstract. For any odd prime p we consider representations of a group of order p in the symplectic group $\mathrm{Sp}(p-1, \mathbb{Z}[1/n])$ of $(p-1) \times (p-1)$-matrices over the ring $\mathbb{Z}[1/n]$, $0 \neq n \in \mathbb{N}$. We construct a relation between the conjugacy classes of subgroups P of order p in the symplectic group and the ideal class group in the ring $\mathbb{Z}[1/n]$ and we use this relation for the study of these conjugacy classes. In particular we determine the centralizer $C(P)$ and $N(P)/C(P)$ where $N(P)$ denotes the normalizer.