$n \le 24$ there is only one Λ_n, $\Lambda_{13}^{\text{mid}}$, that is not contained in a Λ_{n+1}. The proof of Theorem 1 depends heavily on the next two theorems, the first of which collects known results.

THEOREM 2. *For* $n = 0, 1, \ldots, 8$ *the densest lattice packing in* $\mathbf{R}^n$ *is isomorphic to* A_0, $A_1 \cong \mathbf{Z}$, A_2, $A_3 \cong D_3$, D_4, D_5, E_6, E_7, E_8 *respectively. The laminated lattices* $\Lambda_0, \Lambda_1, \ldots, \Lambda_8$ *are unique and are isomorphic to these lattices. Their determinants and covering radii are shown in Table* I.

Proof. For the first assertion see [6], [35], [36]; for the second see [24], [26]; and for the covering radii see for instance [15], [17].

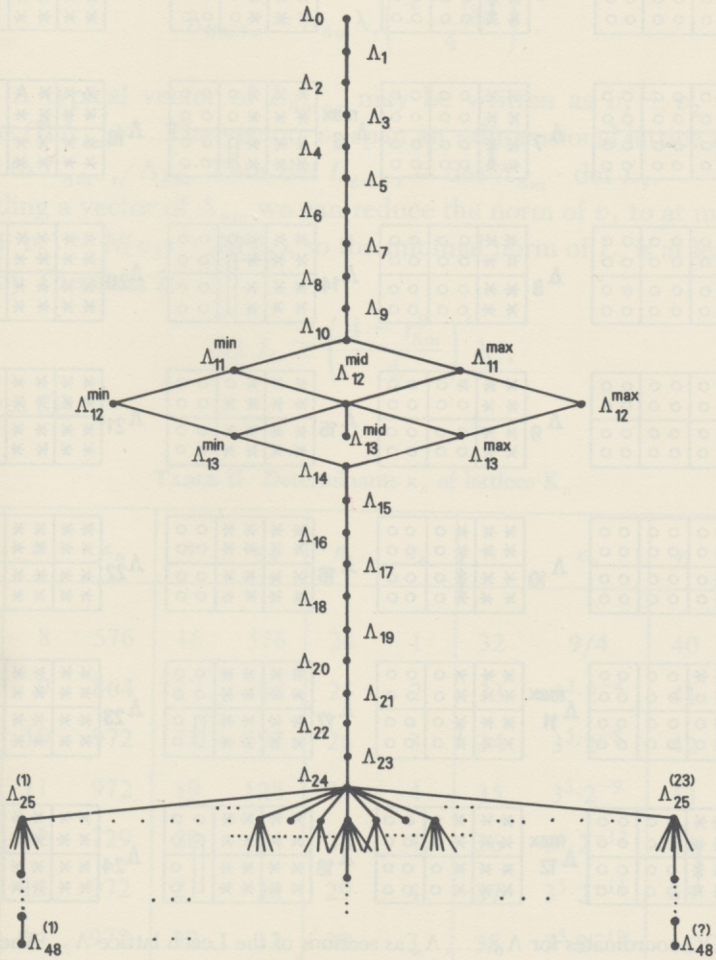

FIGURE 3. Graph showing inclusions among the laminated lattices Λ_n. All Λ_n for $n \le 24$ are shown, while there are 23 Λ_{25}'s and a large number of Λ_{26}'s. At least one Λ_n is known for $27 \le n \le 48$.