Why did Planck Take $\varepsilon = h\nu$ in the theory of Blackbody radiation? Why not the classical value for a harmonic oscillator, $\varepsilon \sim \nu^2$, or some other dependence?

His hand was forced by the well-established Wien displacement law: $\lambda_{max}T = 2.898 \times 10^{-3} m - K$. This result follows from the derived scaling law of the electromagnetic energy density inside a blackbody. Wien showed that the energy density must be of the form $u(\nu) = \nu^3 F\left(\frac{\nu}{T}\right)$. This scaling behavior immediately gives the fact that the ratio $\frac{\nu}{T}$ must be the same at the maximum point of $F(x)$, leading to the Wien displacement law.

When doing the statistical mechanics of energy occupation of the states of the atoms in the walls of the box one uses the Boltzmann factor $g_n = Ae^{-E_n/k_B T}$, where Planck assumed quantized energy levels in the atoms: $E_n = n\varepsilon$. When putting the atoms in thermodynamic equilibrium with the electromagnetic fields one is then force to assume that ε/T in the Boltzmann factor must be replaced with the known scaling variable for the electromagnetic fields, namely $\frac{\nu}{T}$, leading to the identification that $\varepsilon \sim \nu$. Planck used a “fudge factor” to complete the equation: $\varepsilon = h\nu$.