Figure 16.5: This graph implies that $E(\mathrm{a},\mathrm{b},\mathrm{c},\mathrm{d},\mathrm{e},\mathrm{f})$ can be written as $E_{\mathrm{a,b}}(\mathrm{a},\mathrm{b}) + E_{\mathrm{b,c}}(\mathrm{b},\mathrm{c}) + E_{\mathrm{a,d}}(\mathrm{a},\mathrm{d}) + E_{\mathrm{b,e}}(\mathrm{b},\mathrm{e}) + E_{\mathrm{e,f}}(\mathrm{e},\mathrm{f})$ for an appropriate choice of the per-clique energy functions. Note that we can obtain the ϕ functions in figure 16.4 by setting each ϕ to the exponential of the corresponding negative energy, e.g., $\phi_{\mathrm{a,b}}(\mathrm{a},\mathrm{b}) = \exp(-E(\mathrm{a},\mathrm{b}))$.