Loudspeakers are interesting physical systems that are often misunderstood. A bit of psychoacoustics explains why a "flat frequency response" is one of the main targets in speaker design. Most speakers approach this target using a clever strategy (over 100 years old!) that automatically produces a flat response over a limited frequency range, but the approach is inherently inefficient. We will also show how a two-degree-of-freedom coupled mass-spring system helps boost the efficiency of most speakers today.