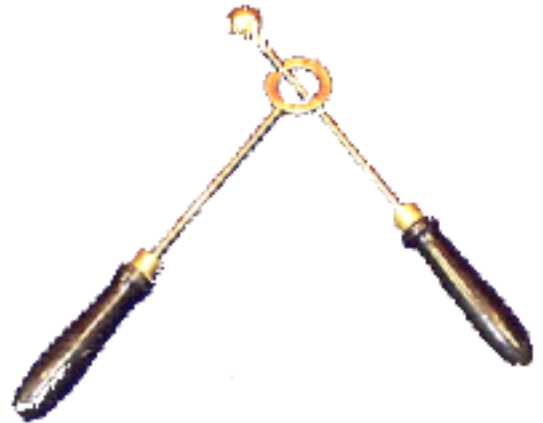


Thermal Expansion

When matter is heated, the particles move faster and move apart from each other. This causes the volume to increase. We call this expansion. When matter is cooled, the opposite happens and we get contraction.

Examples-ball and ring demo

Before heating the ball fits through the ring.



After heating the ball no longer fits through the ring since it has expanded

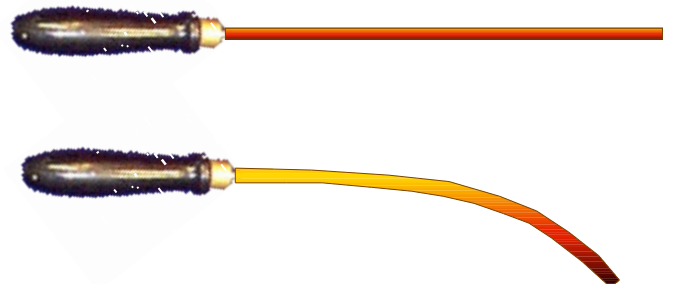


Bimetallic strip-

before heating:straight

after heating:bent

each of the metals in the strip expand differently, with the one on the top edge expanding more, and causing the strip to curve down.



Thermometer-liquid rises due to expansion

On bridges and in buildings designers build in expansion joints to allow for expansion and contraction.