

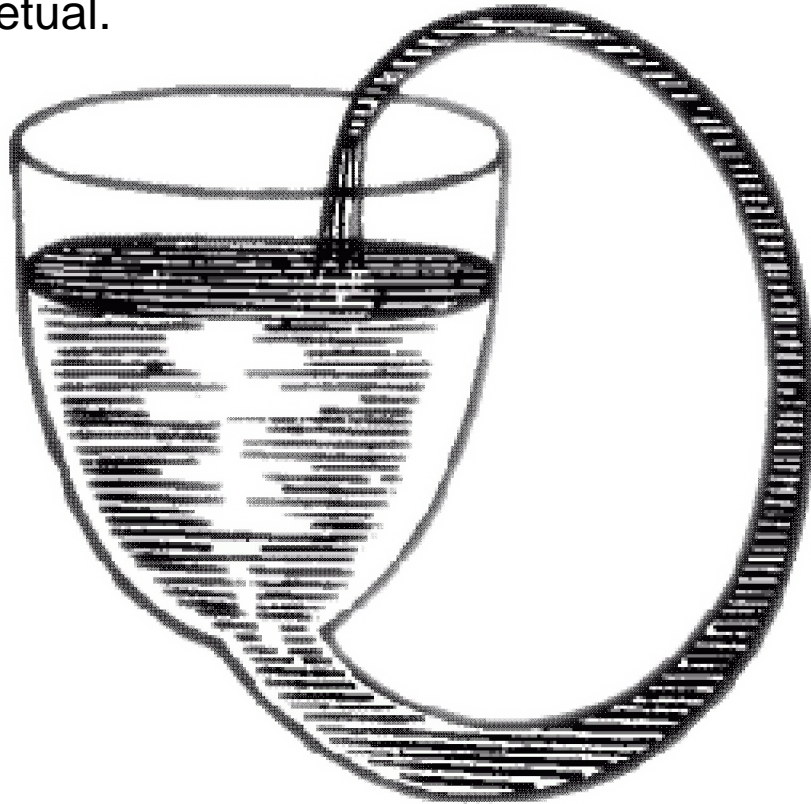
Perpetual Motion

Perpetual Motion ?

- the motion of a theoretical mechanism that, without any losses due to friction or other forms of dissipation of energy, would continue to operate indefinitely at the same rate without any external energy being applied to it.

Capillary Bowl

It was thought that the capillary action would keep the water flowing in the tube, but since the cohesion force that draws the liquid up the tube in first place holds the droplet from releasing into the bowl, the flow is not perpetual.



Why it can't happen...

- A perpetual motion machine violates the law of conservation of energy or the second law of thermodynamics or both.
- A perpetual motion machine of the first kind produces energy from nothing, giving the user unlimited 'free' energy. It thus violates the law of conservation of energy.
- A perpetual motion machine of the second kind is a machine which spontaneously converts thermal energy into mechanical work. Since only one single heat reservoir is involved that is being spontaneously cooled without involving a transfer of heat to a cooler reservoir it violates the second law of thermodynamics.

Why it can't happen cont'd...

- A perpetual motion machine of the third kind, is usually (but not always) defined as one that completely eliminates friction and other dissipative forces, to maintain motion forever. This can't happen because it is impossible for dissipation to reach 100%.