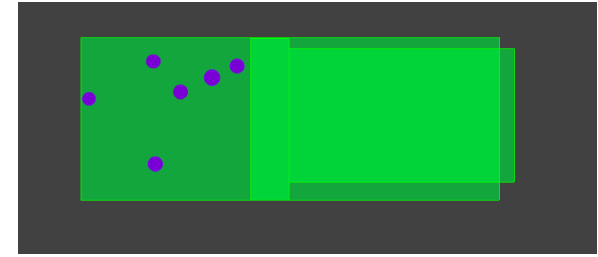


The Law was formulated empirically, that is, when it was written it fitted in with observations and experiment. The kinetic theory of gases offers an explanation.

The molecules of a gas move around constantly. As they hit the sides of the container the change in momentum exerts a force on the container which is what causes the pressure of the gas.



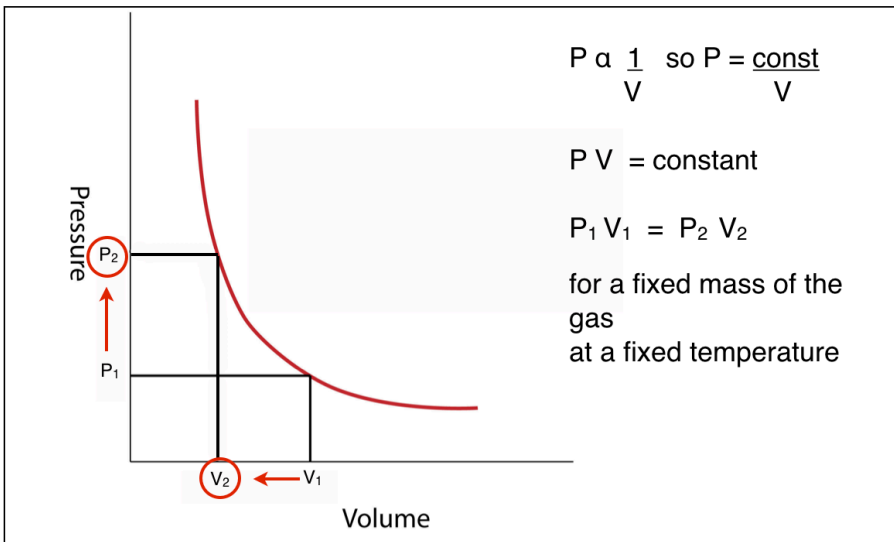
**Boyle's Law** is that: *for a fixed mass of gas at a constant temperature the pressure is inversely proportional to the volume.*

If the temperature remains the same the molecules move with the same average speed.

However, the container is made smaller, they hit the sides more often and therefore the pressure is higher.

**Boyle's Law**  
The Fizzics Organisation

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The law is often written in the form of a "before and after" equation. That is the pressure multiplied by the volume before the change equals the pressure multiplied by the volume after.

