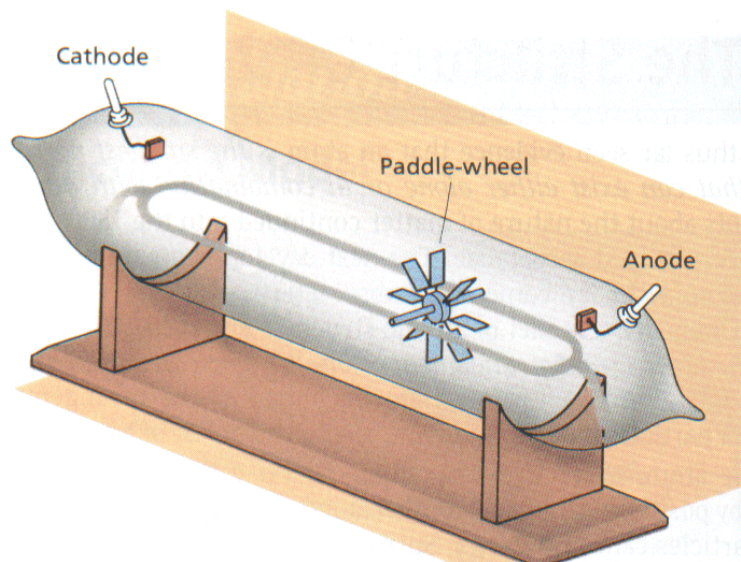


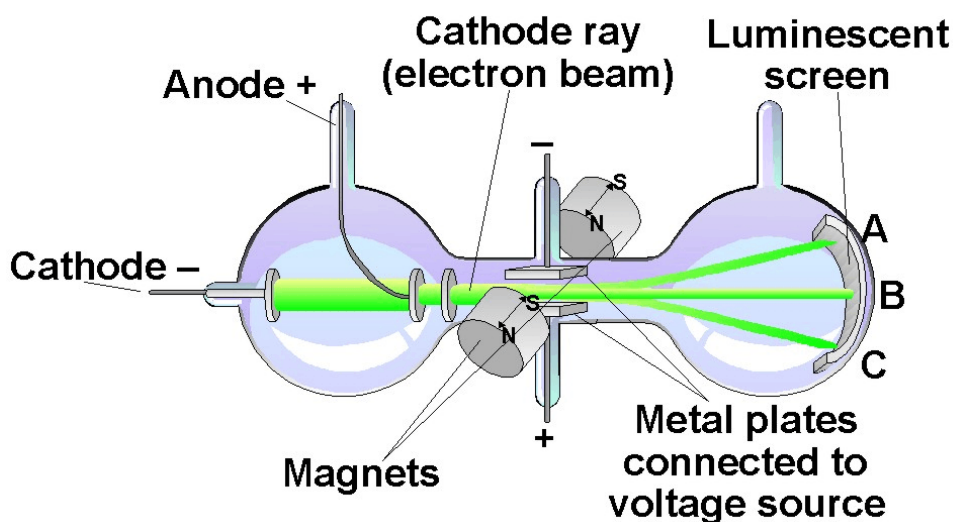
Discovery of Electrons



A Cathode Ray Tube

- [1] All metals produce a beam of light called a cathode ray in a low pressure gas tube when electricity passes from metal electrode to metal electrode through the gas
- [2] Different gases glow different colors as current passes through them
- [3] The part of the tube directly opposite the cathode glows
- [4] An object placed between the cathode and the opposite end of the tube casts a shadow on the glass
- [5] A paddle wheel between the electrodes rolls along on its rails from the cathode toward the anode

- [6] Cathode rays are deflected by a magnetic field
- [7] Cathode rays are deflected away from a negative electrode
- [8] Thomson concluded that cathode rays are negatively charged particles
- [9] These negatively charged particles are called *electrons*



- [A] Magnetic field only**
[B] Both magnetic and electric fields
[C] Electric field only