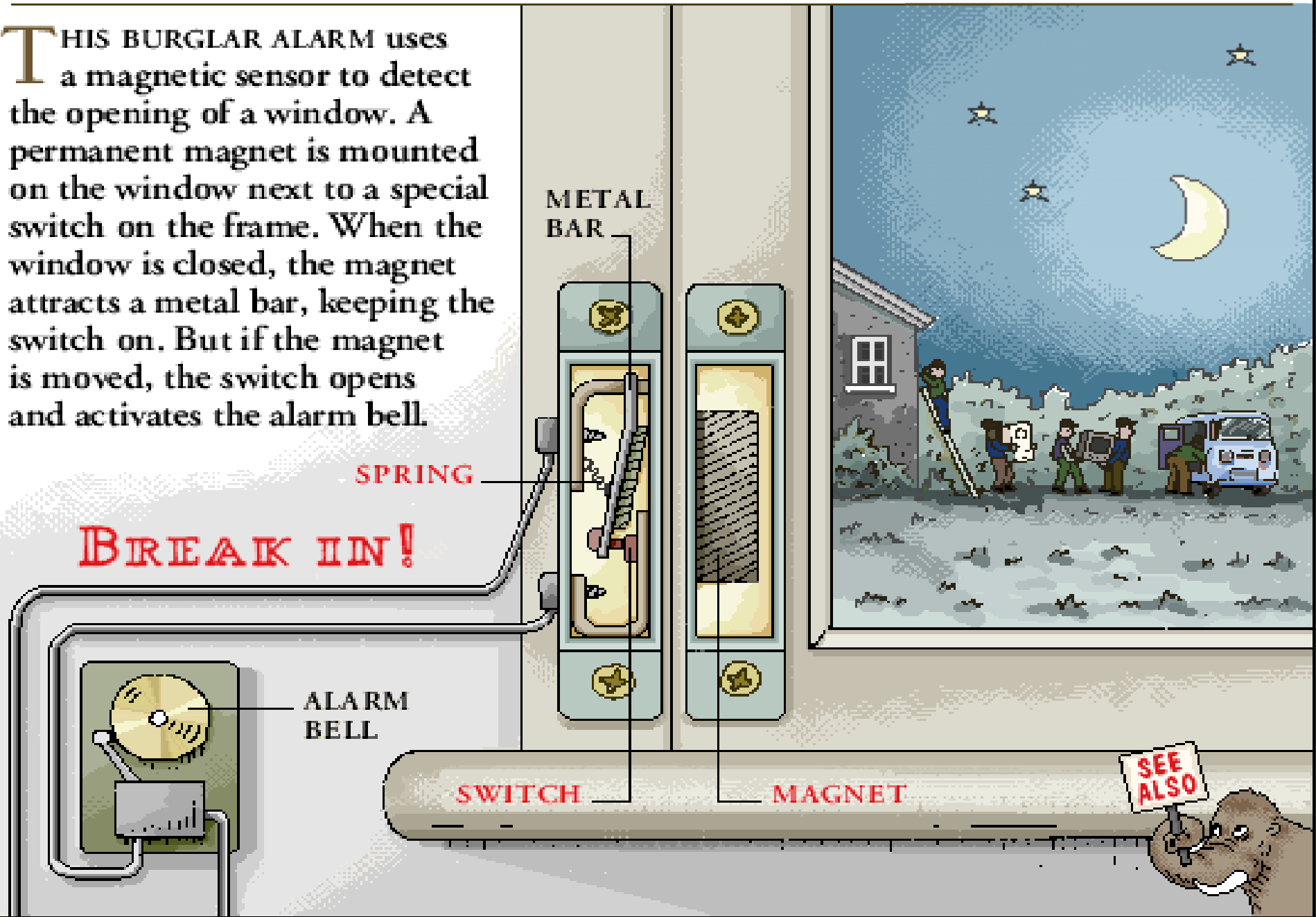


BURGLAR ALARM

THIS BURGLAR ALARM uses a magnetic sensor to detect the opening of a window. A permanent magnet is mounted on the window next to a special switch on the frame. When the window is closed, the magnet attracts a metal bar, keeping the switch on. But if the magnet is moved, the switch opens and activates the alarm bell.



BREAK IN!

SPRING

METAL BAR

ALARM BELL

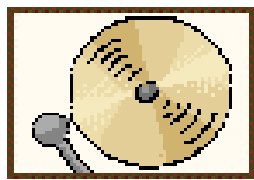
SWITCH

MAGNET

SEE ALSO

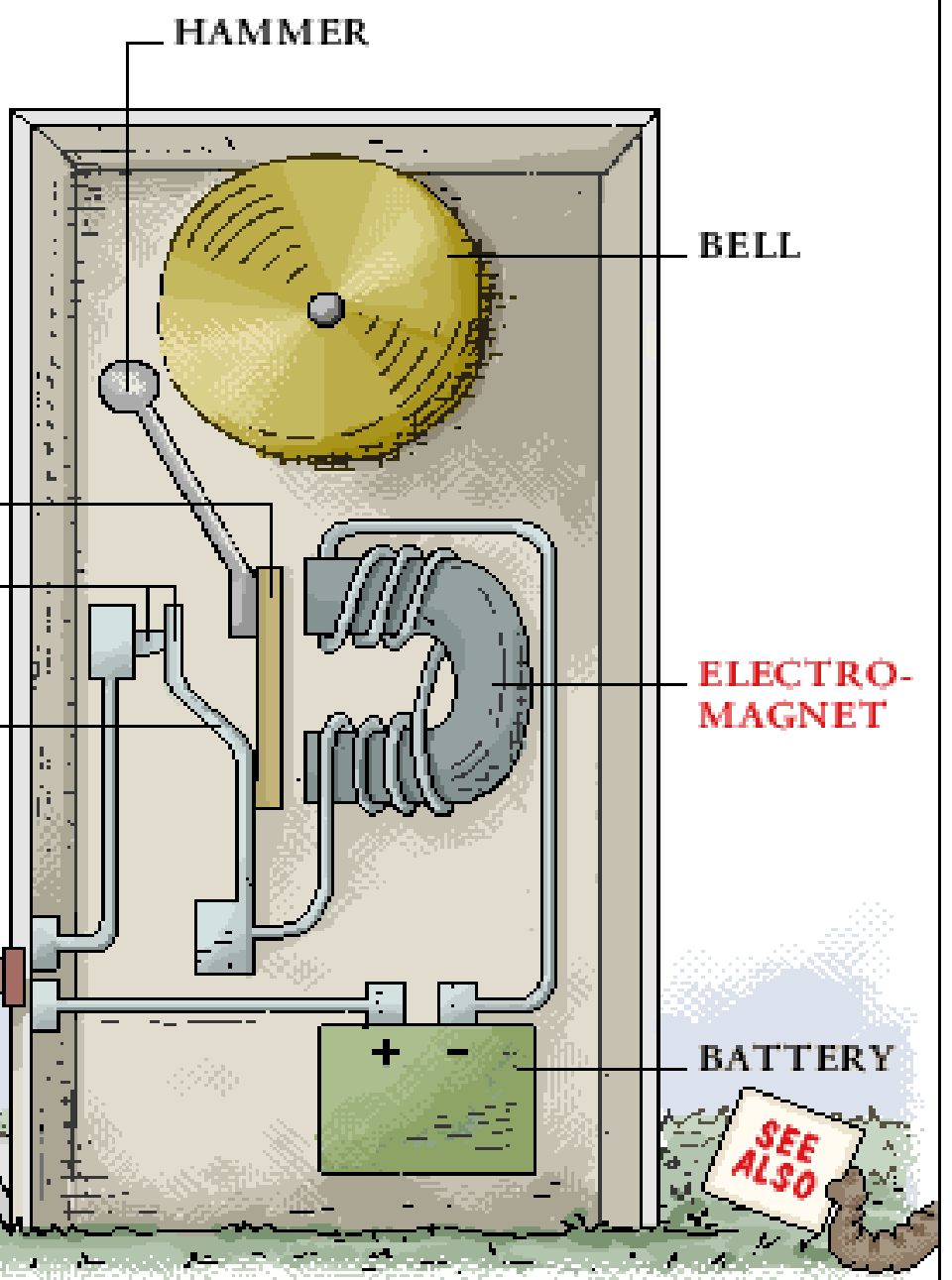
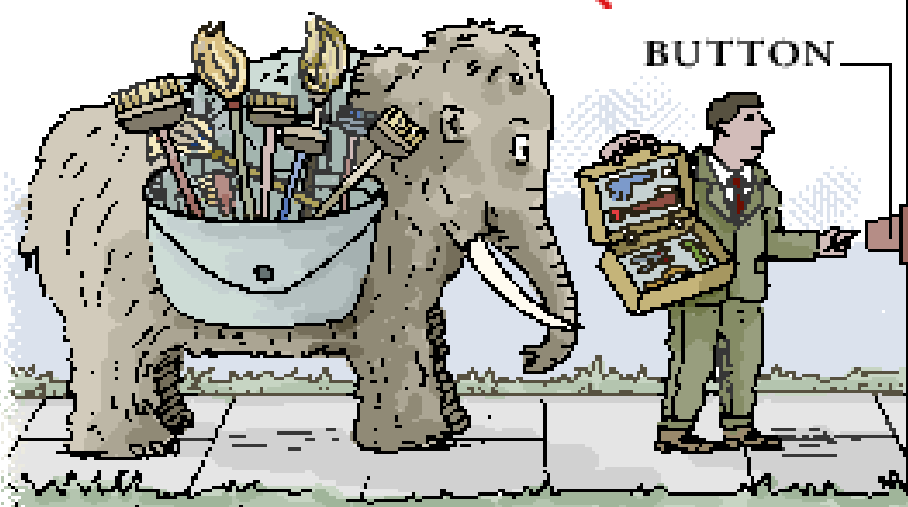
ELECTRIC BELL

ONE OF THE EVERYDAY uses of electromagnetism is the electric door bell. When you press the button at the door, you connect two electrical contacts. This allows **current** to flow around a circuit. An electromagnet and a spring pull the hammer to and fro so that it repeatedly strikes a metal bell.



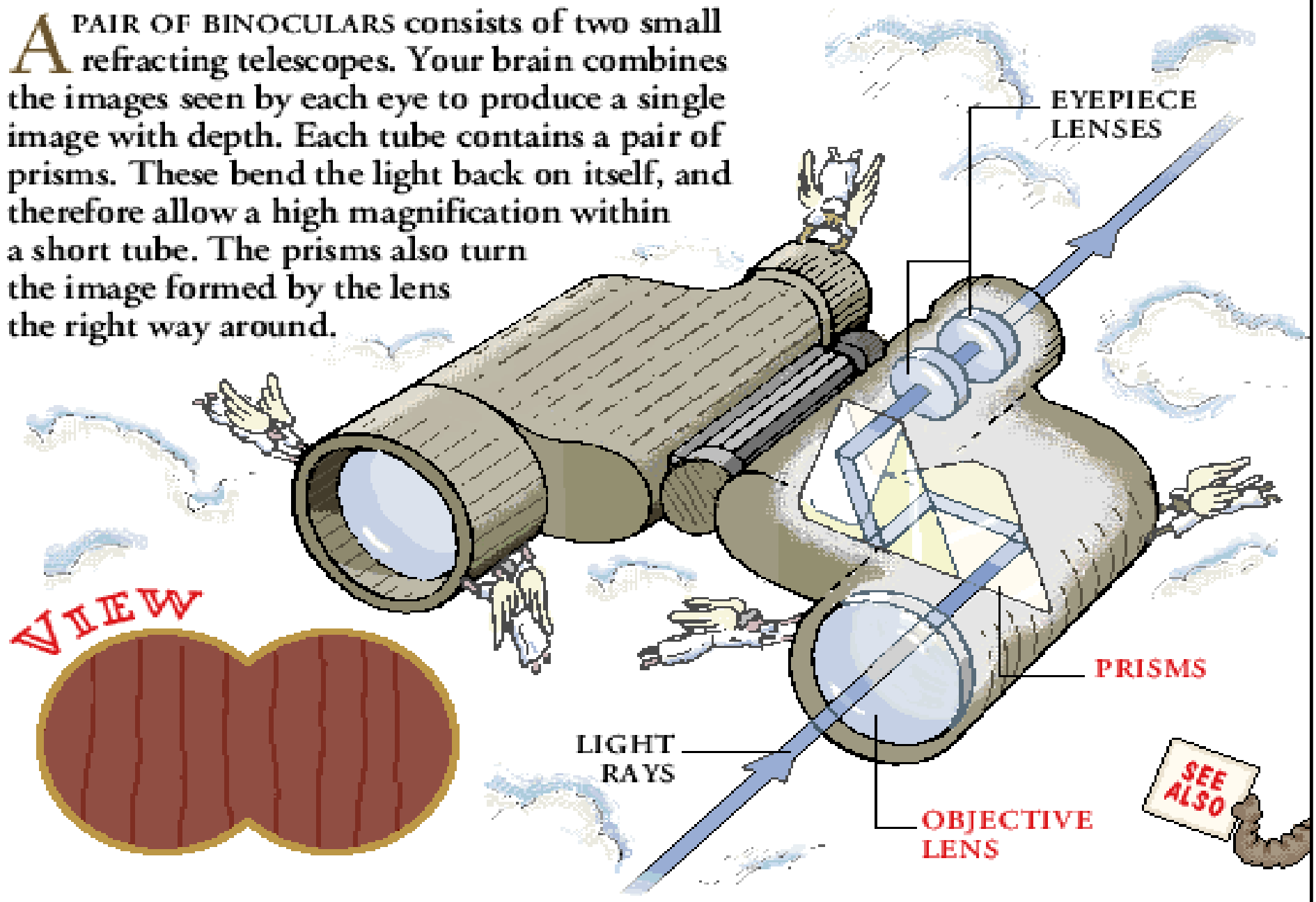
How It Works

PUSH



BINOCULARS

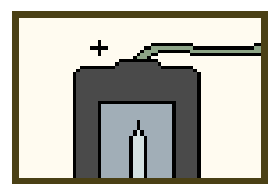
A PAIR OF BINOCULARS consists of two small refracting telescopes. Your brain combines the images seen by each eye to produce a single image with depth. Each tube contains a pair of prisms. These bend the light back on itself, and therefore allow a high magnification within a short tube. The prisms also turn the image formed by the lens the right way around.





BATTERY

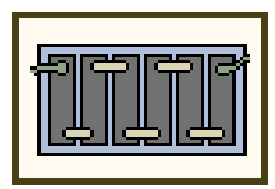
BATTERIES USE A CHEMICAL REACTION to put **energy** into electric circuits. A **chemical reaction** in the battery produces a **force** on **electrons**. The greater the force, the more energy the electrons have. This force is measured by the battery's **voltage**. All batteries have two electrodes and contain an electrolyte, which helps to produce the chemical reaction.



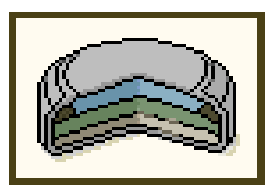
How a Battery Works

POWDERED ZINC

ABSORBENT SEPARATOR



Car Battery



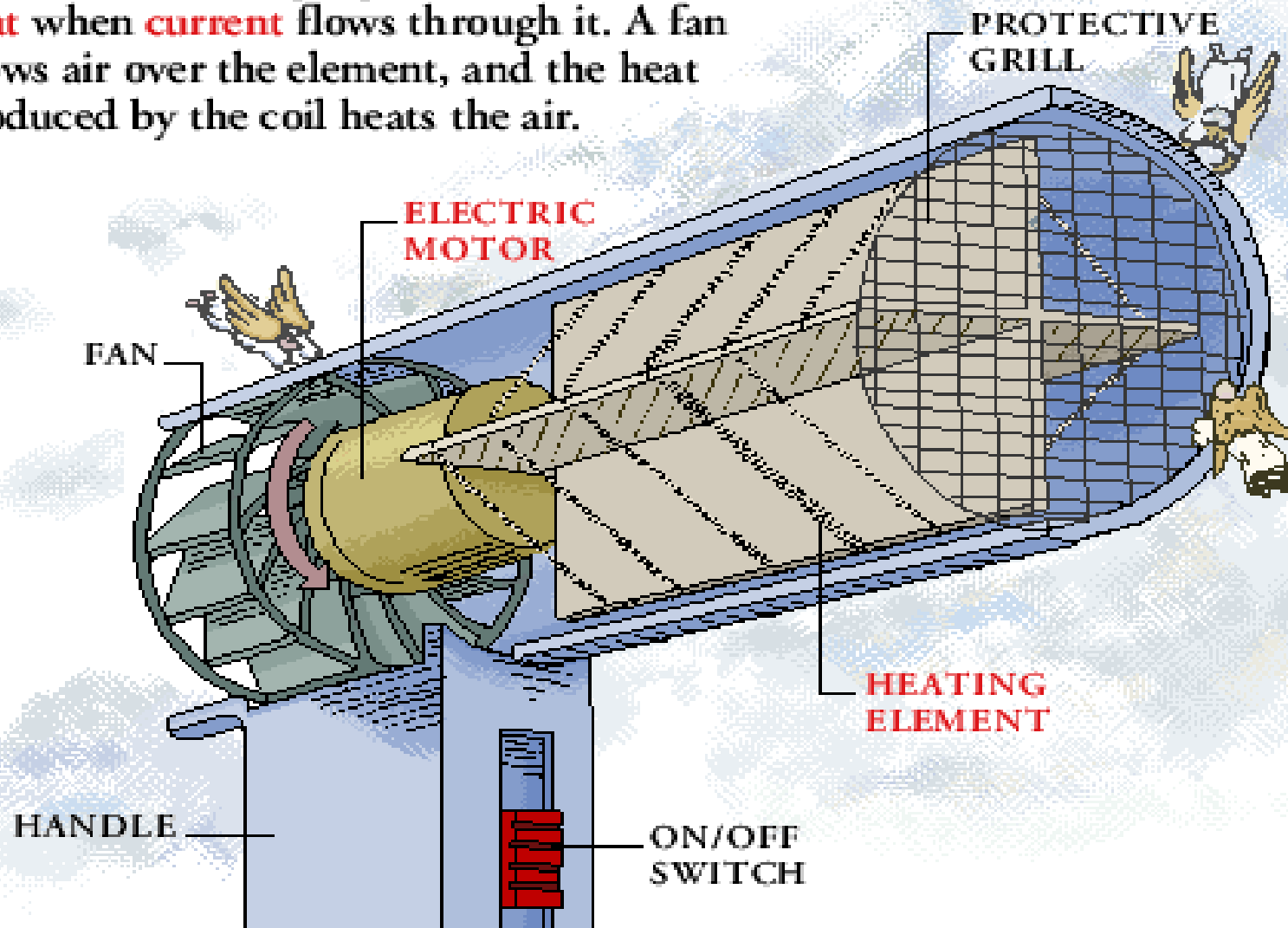
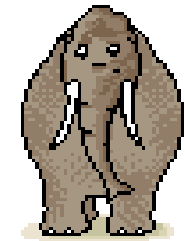
Button Battery

NEGATIVE ELECTRODE

SEE ALSO

HAIR DRYER

A HAIR DRYER produces an instant blast of hot air at the flick of a switch. A long, thin coil of wire acts as a heating element, producing a great amount of heat when current flows through it. A fan blows air over the element, and the heat produced by the coil heats the air.



SEE ALSO

