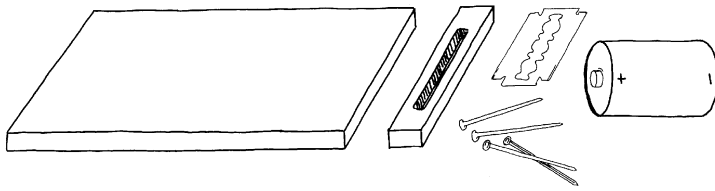
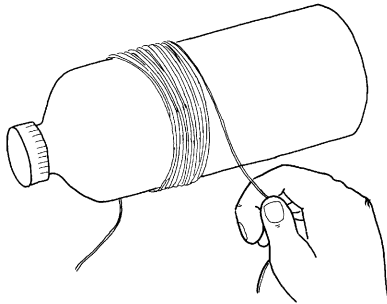


MAGNETISM FROM ELECTRICITY

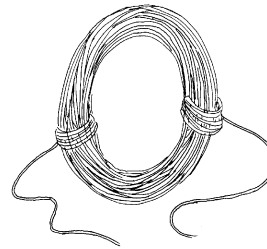
When an electric current flows through a coil it becomes an electromagnet and can align a blade in the direction of the magnetic field.



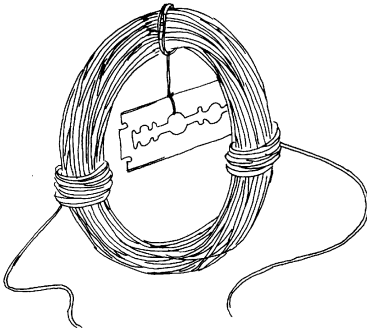
1. You will need a wooden board, a wooden strip with a cut in it, an old shaving blade, nails, 1.5-volt battery, 20-gauge insulated copper wire (used for motor rewinding) and ordinary hand tools.



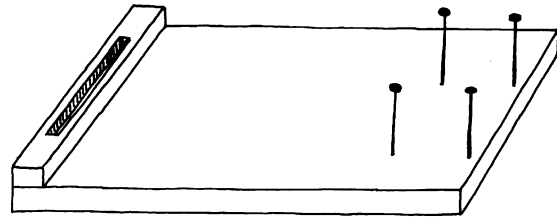
2. Wind 50 turns of 20-gauge copper wire on an old plastic water bottle.



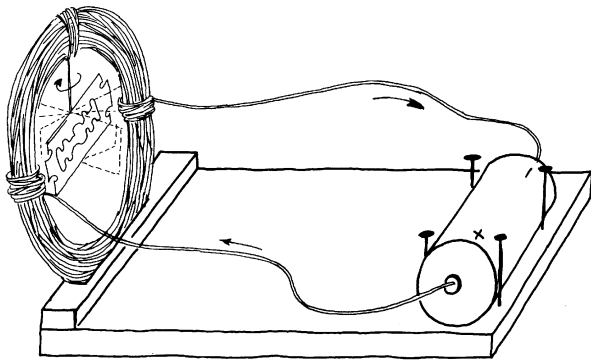
3. Tie the two ends to anchor the loops of the coil. Scrape the ends of the coil to expose shining copper.



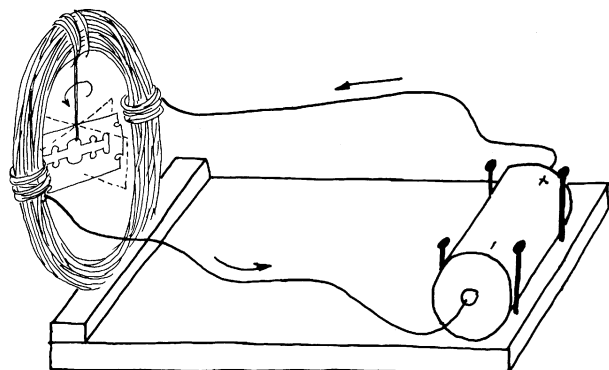
4. Hang a used shaving blade with a thin thread as shown. The blade should be aligned parallel to the coil.



5. Prepare the wooden board as shown. Stick a wooden piece with a cut section to hold the coil. On the other end hammer four nails to hold a 1.5-volt battery in place.



6. Now connect the copper ends of the coil to the battery. The hanging blade which was parallel to the coil will turn at right angles to the coil in one direction.



7. Now reverse the terminals of the battery. Again connect the copper ends of the coil to the battery. The hanging blade will once again turn at right angles to the coil but in the other direction.