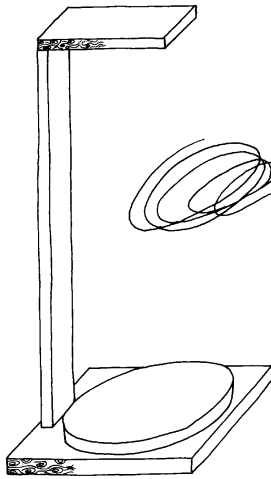
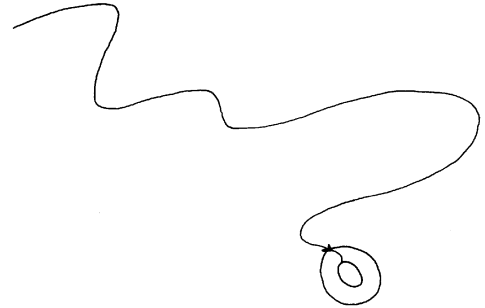


## INVISIBLE BRAKE

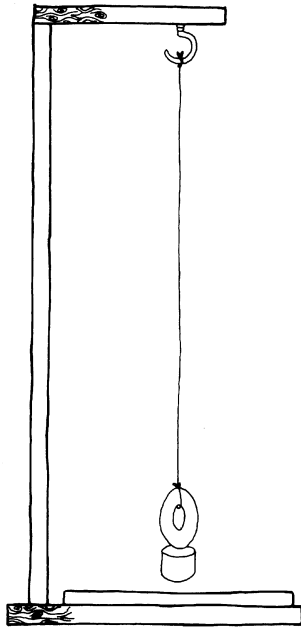
As a swinging magnet goes past a thick aluminum plate it suddenly brakes!



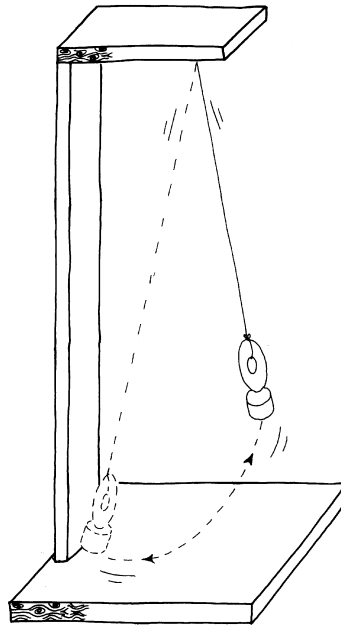
1. You will need a 40-cm high wooden frame, thin thread, screw hook, metal washer, a strong rare earth cylindrical magnet and a thick aluminum disk.



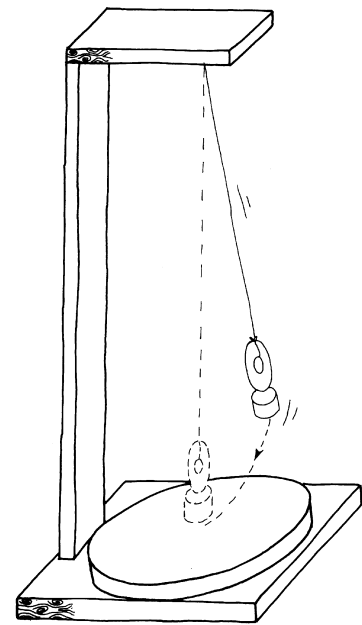
2. Tie one end of the thread to the metal washer.



3. Tie the other end of the thread to the screw hook in the wooden stand. Stick the strong magnet to the metal washer. In this position there should be a little gap between the magnet and the aluminum disk.



4. Now remove the aluminum disk pull away the magnet and leave it. The magnet will swing like an ordinary pendulum. It will make a few oscillations and gradually stop because of air friction.



5. Now swing the magnet again, but this time with the thick aluminum disk in place. As soon as the magnet will reach the aluminum plate it will slow down as if an invisible force is braking it. This is because of "eddy current". The magnet's strong magnetic produces a current in the aluminum disk. This current produces a force which impedes the motion of the magnet. This no-touch "magnetic brake" is used in speedometers and many other industrial applications.