A Foucault pendulum to show the rotation of the earth
A G-clamp with a ball bearing soldered to the inside of the jaw makes a good support for a Foucault Pendulum. It is best hung indoors with the ball bearing resting on a stout razor blade or some other hard surface. When such a pendulum is set in motion, the plane of swing is altered after a few hours, as will be noticed if a mark is made on the ground at the time of release. It is, of course, the earth rotating underneath the 'bob' which gives this effect. Unspun nylon fishing line should be used for suspending the bob, which can be a cricket ball. The length of the pendulum is not important; anything from 3 m to 30 m will do. Care must be taken that the pointer, a short knitting needle driven into the ball, is continuous with the suspending thread. A reference line drawn on a piece of white card can be fastened to the floor with drawing pins. This must be positioned accurately under the pointer when the ball is at rest. To set the pendulum in motion, attach a long cotton thread to a tintack driven into the bob, and align it so that it lies along the direction of the reference line; then burn the thread near the tack. It is not easy to get good quantitative results without many refinements, but it is not difficult to observe the effect.