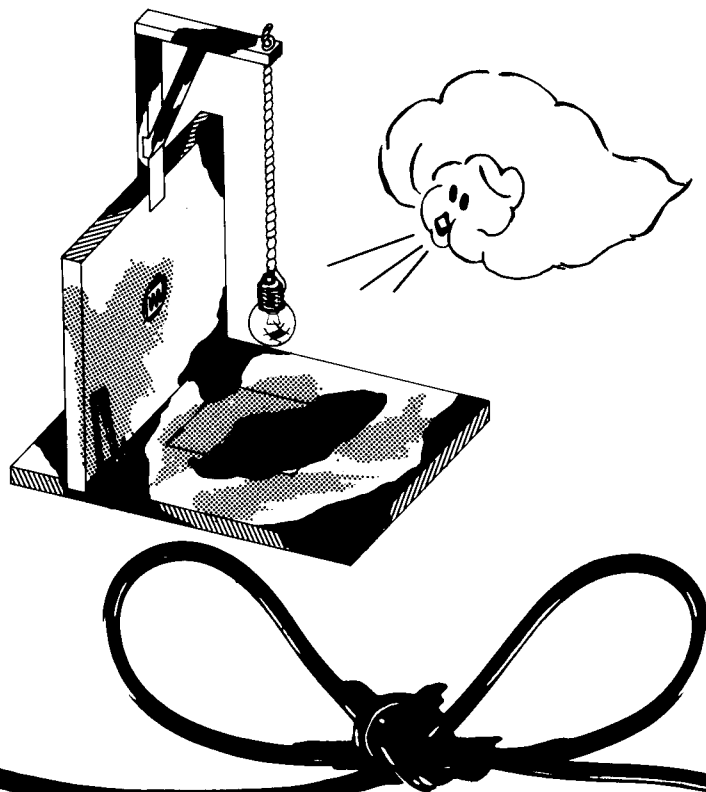
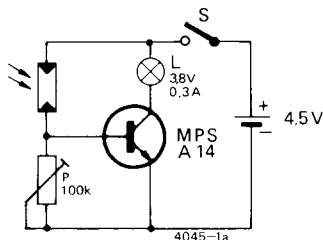


P. Engelmann

## Electronic candle



This candle is a simple electronic toy. It can also be used for conjuring tricks. The circuit is designed around an incandescent lamp which can be ignited with a match and can be blown out.

Figure 1 shows the circuit and figure 2 the mechanical construction. The LDR is mounted in the side wall at lamp level. The side wall is covered with a translucent material to hide the LDR. If a burning match is held close to the lamp, the LDR is illuminated and the lamp lights. From now on the LDR is illuminated by the lamp, so the lamp continues to burn. If we blow against the lamp, so that it swings away from the LDR, the lamp is extinguished.

The sensitivity can be adjusted with the 100 k preset potentiometer. For the prototype the darlington transistor MPS A 14 was used. Owing to the high current gain of this transistor the circuit is very simple. Of course, a darlington made from discrete transistors will also do.

The box below the 'LDR-wall' accommodates the electronics as well as the battery. The bottom of this box is fitted with a pin which operates a spring contact when the box is placed on the table. This spring contact is the battery switch.

*Santatronics*