

Light Box

This handout deals with only with construction of a light box, and not with the myriad of activities for which it can be used. These are dealt with separately.

Materials

- standard cardboard file box and lid from office supply store
- clear 60 watt light bulb with single vertical filament, or vertical v-shaped filament; candle-shaped bulbs (see bulb in Figure 1 and Figure 2) with vertical v-shaped filaments work well, and are easy to find; bulbs with horizontal filaments won't work well
- extension cord with flat-sided outlet that can be glued to box lid -- length suitable for your own needs (6 ft and 9 ft are very common lengths) -- see Figure 1
- plug-in light socket -- see Figure 1 and Figure 2
- blank sheet of overhead transparency material, 8 1/2" x 11"
- 2 brass fasteners
- hot glue gun and glue sticks
- scissors
- 4"x 6" card
- rubber band
- utility knife
- masking tape

Notes & Comments

- see Figures 1-3 for general assembly, measurements, etc.
- use a sharp utility knife to cut the openings in the box and lid
- the vent hole is important to help prevent heat buildup in the box; you must cut through BOTH the bottom of the box and the flap inside the bottom; use masking tape to tape the flap to the bottom so the flap doesn't fall on the light bulb -- see Figure 3
- if the light bulb has a v-shaped vertical filament, screw in the bulb until it is lit, and the plane of the v-shaped filament is perpendicular to the long sides of the box; the filament should then look almost like a straight line when seen through the opening that has been cut in the side of the box
- poke the brass fasteners through the box so that they lie on a line along the top of the window opening, and are about 8" apart -- see Figure 3; then stretch a rubber band between them so that it is held in place behind the heads of the fasteners -- see Figure 3; the rubber band will keep the holders with the masks and filters in place -- see Figure 4
- cut the overhead transparency sheet in half so that each half is 5 1/2" x 8 1/2" ; then fold the pieces in half so their size when folded is 5 1/2" x 4 1/2"; these will be holders for masks and colored filters that you can use with the light box ; see Figures 4, 5 and 6
- thanks to Chris deLatour, whose elegant light box designs and activities inspired this simple version

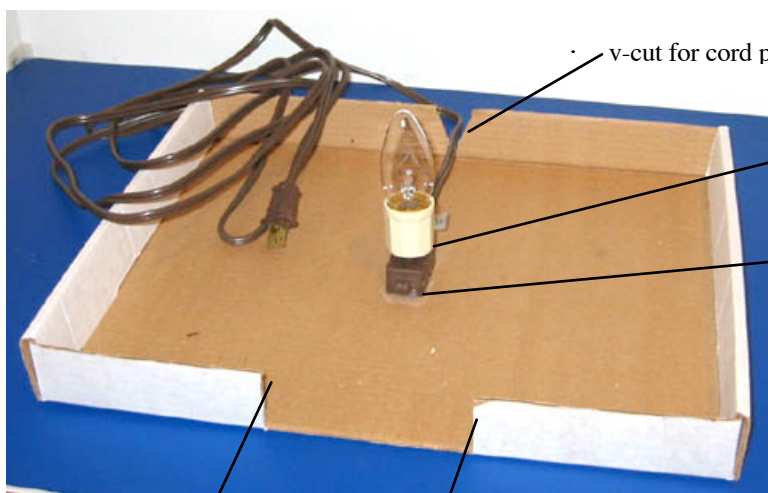


Figure 1

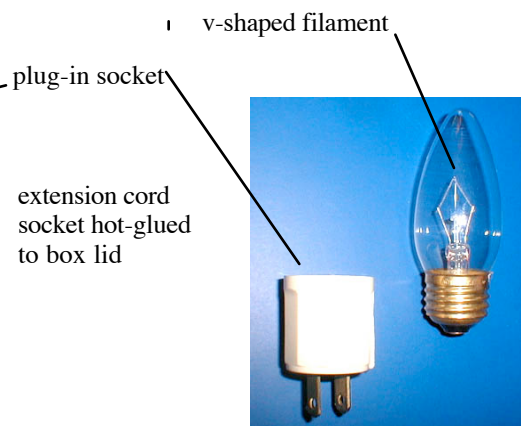


Figure 2

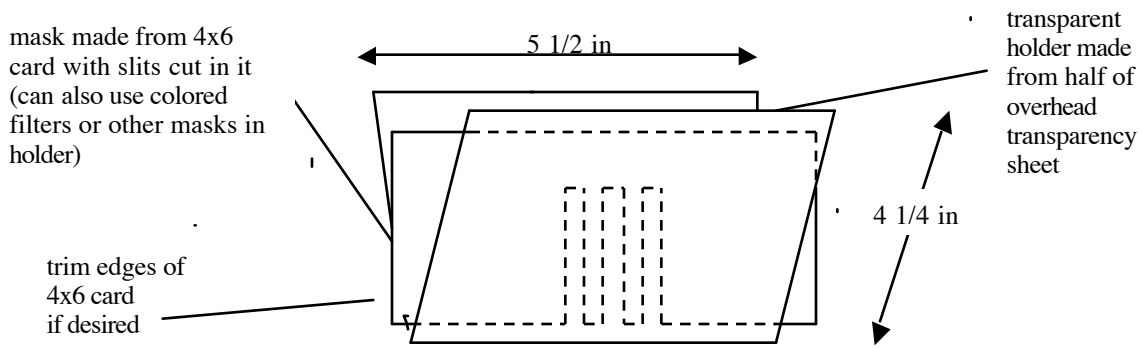


Figure 5

Making a transparency of the template below is an alternative to cutting slits in a 4 x 6 card.

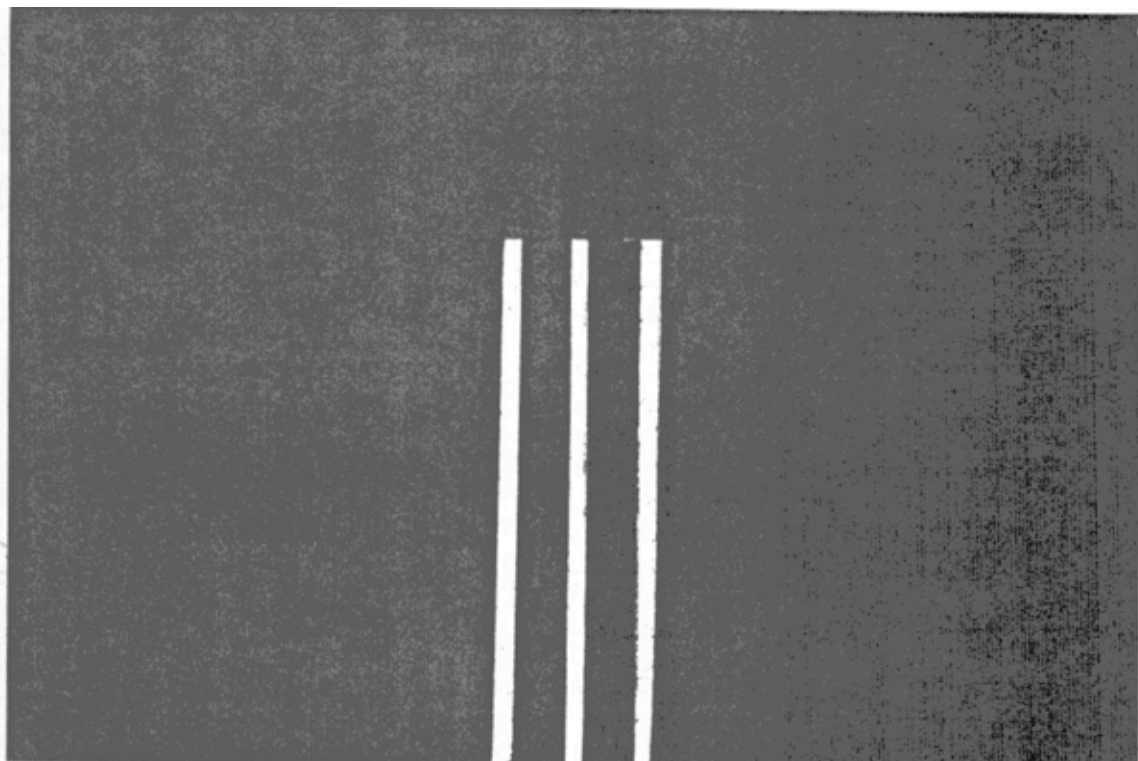


Figure 6