

1932

EC1170 Lighting the Home

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1932

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W. H. Brokaw, Director, Lincoln

LIGHTING THE HOME

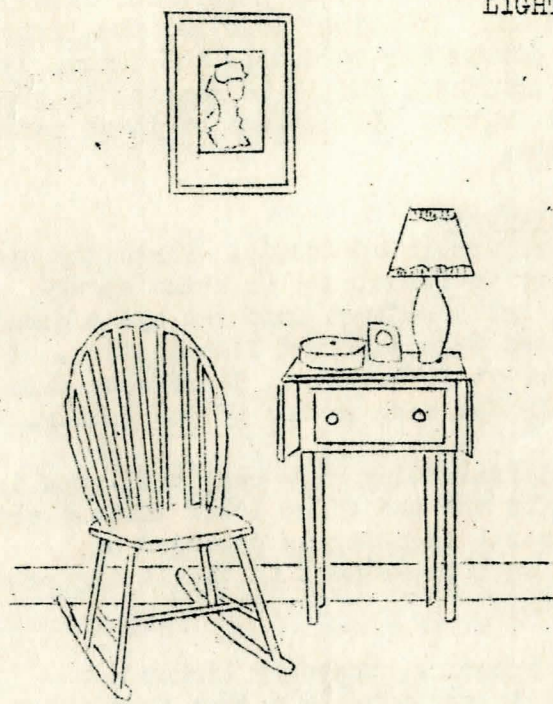


Fig. 1

"Where light and shade repose, where music dwells," wrote Wordsworth, and immediately there comes to mind a picture of a delightful place. Charm, a feeling of delight, coziness, a sense of peace and well-being may be coaxed into a shabby, awkward room by the subtle rays of light. Conversely, the most beautiful room may be ruined by stark, unharmonious illumination which pervades every nook and cranny and leaves nothing to the imagination.

History of the Lamp

The development of lighting is probably one of the most interesting studies of history. The earliest lamp was a shell or skull of an animal which held oil in which a bit of dried burning moss provided the flame. Later, covered receptacles with a wick hanging out of a small opening, were made of clay and other earth materials. During the 18th century the use of the candle came into prominence. The lamps for holding the oil or candles developed into very beautiful candelabras, metal brackets and lanterns. We see the inspiration of these

early lighting fixtures in our present day lamps and fixtures.

Upon the opening of the oil fields in Pennsylvania about 1860 kerosene became the accepted fuel for illumination and is still in use in various forms today.

The year 1879 marks the real advance in the development of artificial lighting. This was the beginning of Thomas A. Edison's remarkable discovery of the carbon light which has developed today into the tungsten lamp with the gas filled bulb.

Essentials of Good Lighting

No father and mother would willingly send children out into the world handicapped by poor eyesight. Yet this is happening every day. Statistics show that out of every hundred children of elementary school age, 22 have defective vision. This per cent increases with age. It is found that approximately 50% of the industrial workers have vision below normal.

The serious consequences of defective vision can not be too strongly emphasized. The backwardness of children in school, apparent laziness, lack of interest, nervousness, and faulty digestion often originate in unsuspected eye troubles.

Eyestrain resulting from the wrong use of artificial light is one of the most important causes of eye trouble. Medical men and scientists tell us that older

people are not so liable to eye injury as are the young, undeveloped eyes. Thus parents have a responsibility of providing lighting conditions in the home which protect the vision of the youth.

The eye is a wonderfully delicate and perfect little camera for recording and transmitting to the brain the scenes about us. It brings together the light rays which make the image, it has a sensitive screen for recording the image, it will increase or decrease the amount of light admitted, and it is constantly protected from foreign material entering to cause injury. If any one of these parts is injured or overworked, it will affect the eye.

Causes of Eyestrain

Not enough light is the cause of considerable eyestrain. Since the eye is developed to see in daylight, it is necessary to illuminate or shine enough light on the thing we are looking at so that it will reflect into the eye a quantity of light similar to that which would be reflected from daylight illumination. It is easy to do this with artificial light because it is movable. There should be enough lamps in the room to provide sufficiently for each member of the family.

Probably the most common mistake in illuminating with coal oil lamps is that we use too few of them. Decorators plan for the use of at least three electric lamps in the average living room, and if no central lighting is depended on, usually more. One can add more comfort for a small investment in the living room by adding tables and lamps than in any other way.

Sharp contrasts of dark and light, flickering, unsteady lights are irritating to the eye. If the eye muscles have to continually adjust themselves to the varying light intensities, it is soon fatigued.

Glare is another common cause of eye strain. This may be described in a sense as too much bright light entering the eye directly from the light source. It may also be reflected from some shiny white or light surface, such as a polished table top or light cover, or from a glossy surface of a magazine or book page.

To avoid a harmful glare, no light source should be used unshaded. The slight increase in illumination gained by removing the shade is more than offset by the injury done to the eye. The lamp should be so placed or person so seated that they will not have to look directly at the light. Children, especially, should study so that the light will come from behind without, however, casting a shadow of pen or pencil on their work.

A light source which is hung high is less liable to be glaring than one which is down in the ordinary field of vision. The most effective cure for glare is to equip lamps with suitable shades, reflectors, or globes.

The National Society for the Prevention of Blindness writes, "The important things to remember about lighting are these: Have all lights shaded; never read or work with a strong light shining directly into the eyes; whenever possible have the light fall on what you are reading or on your work from above and behind you or from the sides."

Every homemaker desires to have her home adequately lighted to fulfill the needs of her family - but she also desires to have attractive lamps that lend charm and hospitality to her home. Lamps are also one means of adding a contrasting

color to the room providing it is a color suitable for light.

It is possible to have attractive lights even the one does not have electricity. Simple paper or glazed cloth lamp shades are most appropriate for oil burning lamps. These are not difficult to make at home out of wall paper, brown wrapping paper, and some cotton materials. By following certain requirements the fire hazard is practically eliminated.

Selection of the Shade and the Base for the Lamp

The lampshade should harmonize with the base, not only in color but in size, shape and texture. The shade should not be too large for the height of the base, but the base should appear heavy and strong enough to support the shade. The frame of the shade should be so adjusted that it will cover most of the mechanism of the lamp. If it is placed too far down over the base, the shade will resemble a hat pulled too low over the forehead. A good proportion to use in determining the height of the shade for a table lamp is 2 to 3; that is, the height of the shade including edge finishing when shade is adjusted on base is about two-fifths of the entire height of the lamp. See Figs. 2, 3, and 4. Compare Figs. 3 and 5.

To determine the width of the shade, measure the widest part of the base (line A B) and use that measurement for one-half the width of the shade (line C D), Compare Figs. 2, 3, and 4 with 5 and 6.

Fitting exactly the right size of shade to a base is a problem that can not be solved by rule. Use the suggestions above, cut out a shade of paper, then stand off and look at the relationship of the size of shade with base. If the effect is not satisfying, make the shade larger, smaller, higher, or broader as the base demands.

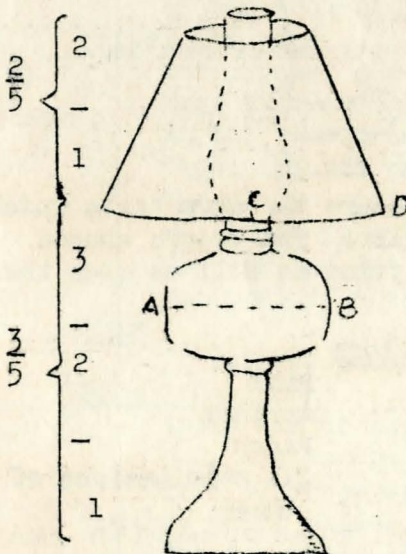


Fig. 2

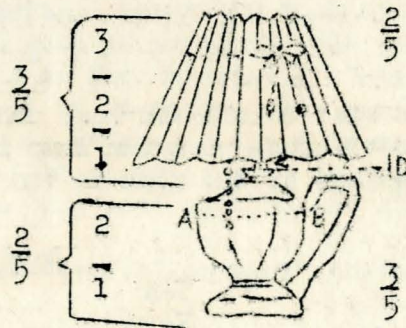


Fig. 3

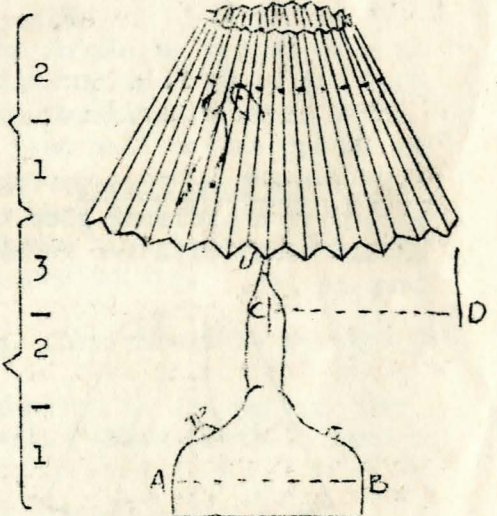


Fig. 4

When selecting a frame to be used for a home made shade, select one that has a few vertical spokes as when the old cover is taken off and it has merely the top and bottom wires, there is nothing to hold them together. To make over a shade for a kerosene lamp, the wires may be bent downward and a new wire soldered in to fit over a chimney. See Fig. 7. One may also bend the two loops to fit over a chimney. Fig. 8 and 9. Also for a pressure oil lamp a new collar may be put on to fit inside the shade already on the lamp. See Fig. 10. If the glass shade of a pressure lamp is broken, pieces of mica may be fastened inside to prevent fire.

See Fig. 11. However, it would be much safer to purchase a new shade instead of using mica to protect the outer shade.

Materials for Shades

Attractive shades may be made of many different materials such as figured cretonne, gingham, dimity, glazed chintz, plain brown wrapping paper, imitation parchment paper, and wall paper. If the shade is to be used on an electric lamp, silk material may be used.

If figured materials are used the figures should be small so they will not seem too large for the size of the shade. The figures should be repeated fairly close together so as not to give a "spotty" effect in the pattern. Some patterns that have figures that are far apart may be used, if pleated, as this will overcome the "spotty" appearance somewhat. A figured shade may be used with a base of solid color or a shade of solid color with a figured base, or plain complementary colors, either both light or both dark may be chosen, for both shade and base.

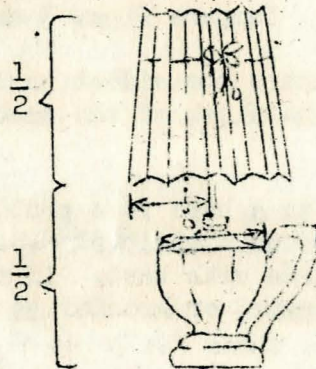


Fig. 5

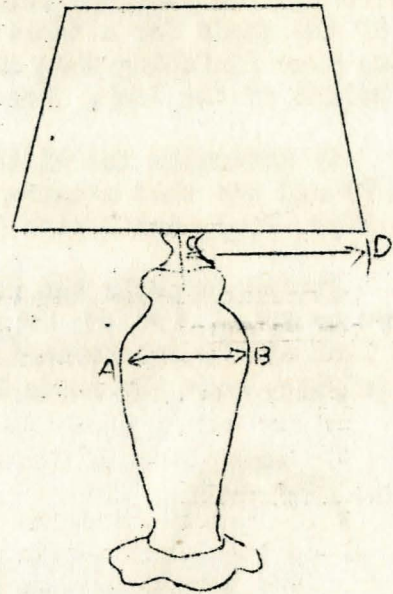
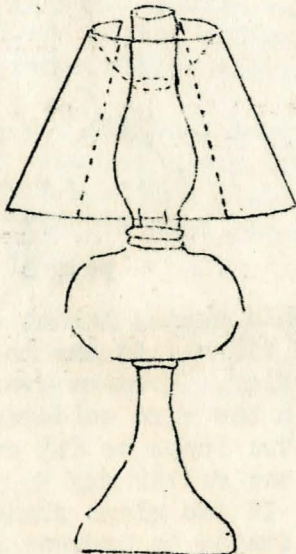


Fig. 6

Colors for Lamp Shades. The best colors for lamp shades are the warm tints which will give a pleasing glow to the room when the lamp is lit. The colors chosen should blend with the furnishings of the room in the daytime as well as when the lamp is lit.



Good Colors

| | |
|--------------|---------------------------|
| Tan | Pink |
| Ecru | Apricot |
| Yellow | Peach |
| Light orange | And combinations of these |
| Deep cream | |
| Rose | |

Colors to Avoid

| | |
|-------|----------------------|
| Blue | Purple |
| Gray | Most shades of green |
| Black | |

Directions for Making Lamp Shades

I. Pleated shades

A. Materials best suited.

1. Wall paper with small figures. This may be left plain or made more transparent by painting with linseed oil or shellac.
2. Brown wrapping paper with bands of color and made transparent with linseed oil or shellac.
3. Brown wrapping paper crushed and then colored with oil paints. Bands of dark color may be used on the edges.
4. Cotton materials shellaced. Figured gingham, dress prints, cretonne, dimity or glazed chintz.

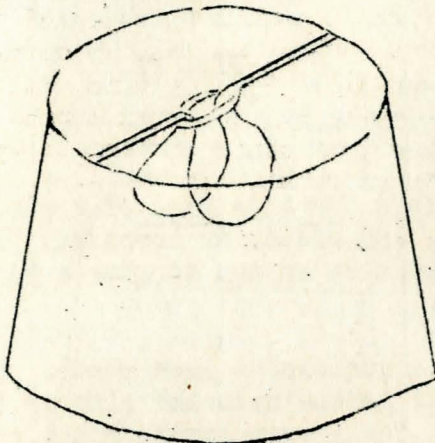


Fig. 8

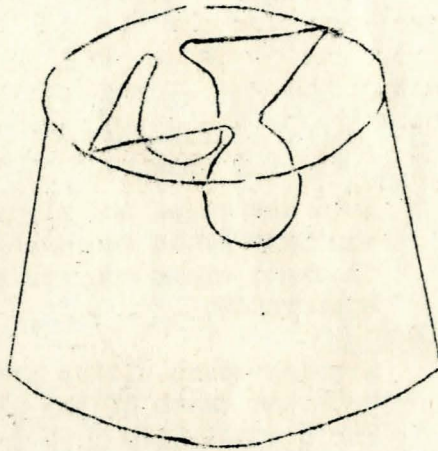


Fig. 9

B. Steps in making pleated shades

Cut the Material

Measure the height of the wire frame, allow about an inch at the top and bottom. Cut a strip of the paper or cloth this width. The length of the strip should be at least 1 and $\frac{2}{3}$ times the largest circumference of the frame. If the material needs piecing, glue the ends together.

Finish the edge

For a paper shade the edges on top and bottom should be turned over to keep them from tearing. About $\frac{3}{8}$ inch at the top and $\frac{1}{2}$ to $\frac{3}{4}$ inch at the bottom is a good proportion. (Be sure to allow for this when measuring the width of the material.) This fold need not be pasted as the pleats will hold it in place. For cloth shades the edges may be scalloped or cut into points. Bias tape may also be used as an edging. Use shellac instead of paste or glue to hold the bias tape. Bind after one coat of shellac has been applied and allowed to dry.

Trim

If colored bands are desired on paper shades, they should be painted next.

Make Translucent

Apply two or three coats of linseed oil or shellac to the paper. Use only shellac on cloth. Allow to dry and pleat. (When cloth is used be sure to press well before applying shellac)

Crushed paper shades

Cut the paper the desired width with several inches added in case the paper tears. Crush the paper between the hands until it forms a ball. Smooth out the paper, laying it on a newspaper. Mix oil paints to a thin consistency and with a cloth pad rub the paint into one side of the crushed wrapping paper. Dry thoroughly and apply a yellow paint to the other side to form a lining. Trim to proper width.

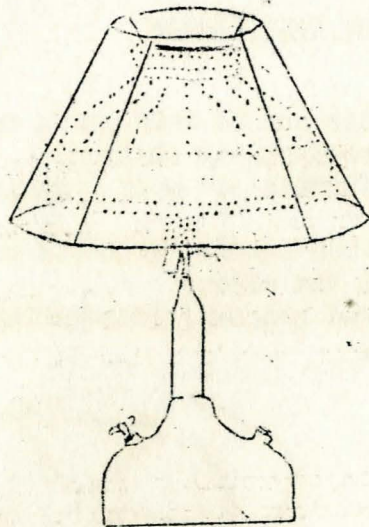


Fig. 10

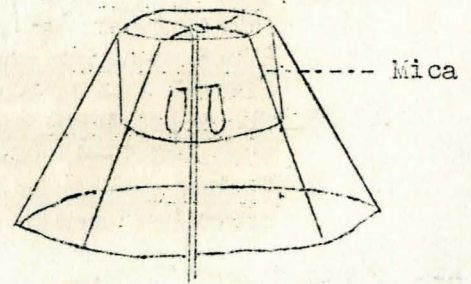


Fig. 11

Fold the edges and pleat. Suitable colors for this kind of a shade are Van Dyke Brown and orange; brown, rose, and green, or lavender. Apply in small areas and rub well into the paper so as not to give a "spotty" appearance.

Pleating

Straight even pleats are essential for a successful lamp shade. Decide upon the depth of the pleats. This will depend upon the size of the lamp. For a small lamp $\frac{1}{2}$ to $\frac{3}{4}$ inch is enough, for larger lamps from $\frac{3}{4}$ to 1 inch. Measure carefully and accurately twice the depth of the pleat all along one edge of the shade. Make a right triangle of heavy cardboard. (The length of one side should be longer than the width of the shade). Lay the triangle so that one edge lies evenly along the edge of the shade. Hold firmly and press in the first fold against it. See Figs. 11 and 12. Repeat until all the folds have been creased. Go over each crease and press firmly. All the pleats are now laying in one way. To get the pleats to go in and out, lay the first two pleats together evenly and press in a new crease. Fig. 13. Repeat until you have all the pleats made. Go over the creases until they stay together.

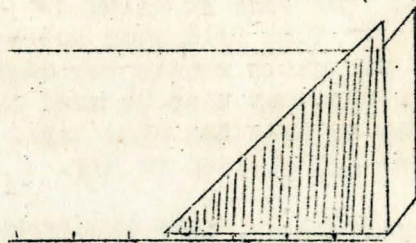


Fig. 12

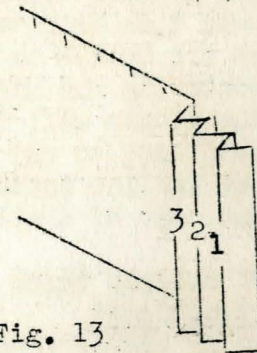


Fig. 13

Punching

Punch holes about $\frac{1}{3}$ of the distance from the top for a cord. At the place where the pleats rest on the frame punch half holes that fit the top edge of the frame. Make this position carefully on the shade for if this is not even it will spoil the whole effect of the shade. Join the shade by pasting the two edges together. Cut the pleats so that the joining edge lies along the in-pleat. This makes the joining almost unnoticeable.

Cord

Twisted or braided yarn, embroidery floss, or soutashe braid in harmonizing colors, finished at the end with a bead or a knot, will help to hold the shade in place and is also a means of adding a contrasting color.

Adjusting the shade to the frame

Place the shade over the frame so that the half-holes coincide with the top wire. Pull the cord tight enough to hold the shade in place and tie in a bow knot. Allow the ends to hang to almost the bottom of the shade.

II. Plain fitted shades.

A. Materials suitable

1. Wall paper with small figures made translucent with oil or shellac.
2. Brown wrapping paper with passe partout at top and bottom for a finish, made translucent and stiff with shellac. A suitable picture pasted on one side will make this more decorative.
3. Glazed chintz, shellacked. The figures in this will need to be close together and small to be attractive.
4. Brown wrapping paper with theatrical gauze shellacked to the top surface. The edges may be bound with passe partout or bias binding.

B. Steps in making a plain shade

1. Cutting pattern. Lay the frame on its side, and roll it on a piece of newspaper. Beginning at one of the prongs, roll it slowly, taking care that it does not slip. As you are rolling, trace the top and bottom of it on the paper beneath. When you have reached the prong when you started, add an extra inch to one end to allow for seam. Cut the pattern out, allowing one inch at the top and bottom. Fasten this to the frame with clips or pinch-on clothes pins and trim to the exact size. This is used as a pattern for the permanent shade.
2. Making shade. Cut the paper or material the desired size and shape. Lay on frame to test size. Bind at the top and bottom with passe partout or bias binding. If passe partout is used, cut the desired width and fold thru the center. Snip the cut edges almost to the fold and about one inch apart. This allows the binding to lie smoothly. Paste to the edges of the lamp shade. Paste the picture at the desired place. Apply at least two coats of shellac. Allow to dry between each coat. Punch holes along the upper and lower edge of the shade about one inch apart and about $\frac{1}{4}$ inch from the edge. Lace the shade to the frame with yarn, floor or imitation leather binding.

III. Silk Shades

A. Materials suitable

1. Light weight taffeta, China silk, georgette, and pongee.

B. Steps in making

1. To prepare the frame, wrap the frame with seam binding or a bias strip with one edge folded under. Select a color to match the material used to cover the shade. Wind the vertical wires first, beginning at the top and turning in the upper edge as the winding progresses so no raw edges show. Then wind the top and bottom wires. Fasten the ends with a few stitches to hold them firmly. See Fig. 14

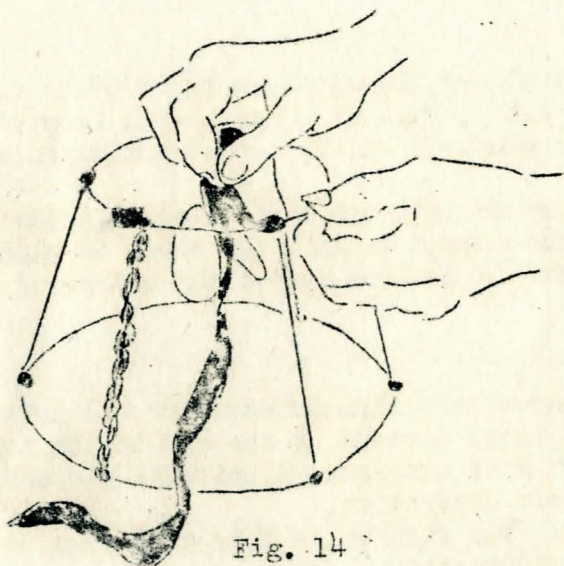


Fig. 14

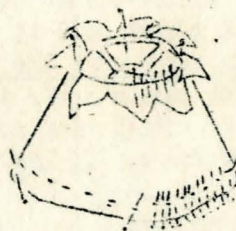


Fig. 15

2. In fastening material to frame, stretch the material tightly over the frame and pin. Sew to the frame with an over and over stitch. See Fig. 15. Trim edges of material as closely as possible. If the shade has several sections, each section will have to be covered separately. An attractive shade may be made of pongee stretched tightly over the frame and a design drawn on with crayola. See supplement No. 5 for suggestions of a design.

C. Finishes for silk shades

1. Ribbon (velvet or silk), bias folds, or simple braids are the most attractive finishes for silk shades. Bias folds or cords of varying shades and widths are simple inexpensive ways to finish the shade. Pin the finish on and tack wherever necessary.

Bases for Lamps

Kerosene. Wide mouthed bean pots, old pickling crocks, jardinières and baskets may be used to conceal the base of a lamp if one wishes. Place the lamp in the container so that it will conceal the old lamp base. If it is too deep, put sand in the bottom to raise the lamp. Old lamp bases can be painted with oil paint in an attractive color. Some will not need concealing or painting unless you wish. Those of clear glass, shining nickel, copper or brass are particularly attractive left as they are.

Electric Bases. Many good looking lamps have been made from vases or bottles which can be fitted up with a cord and socket.

(Prepared by Rizpah A. Douglass, State Extension Agent)