

1946

EC1170 revised 1946 Lighting in the Home

Rizpah A. Douglass

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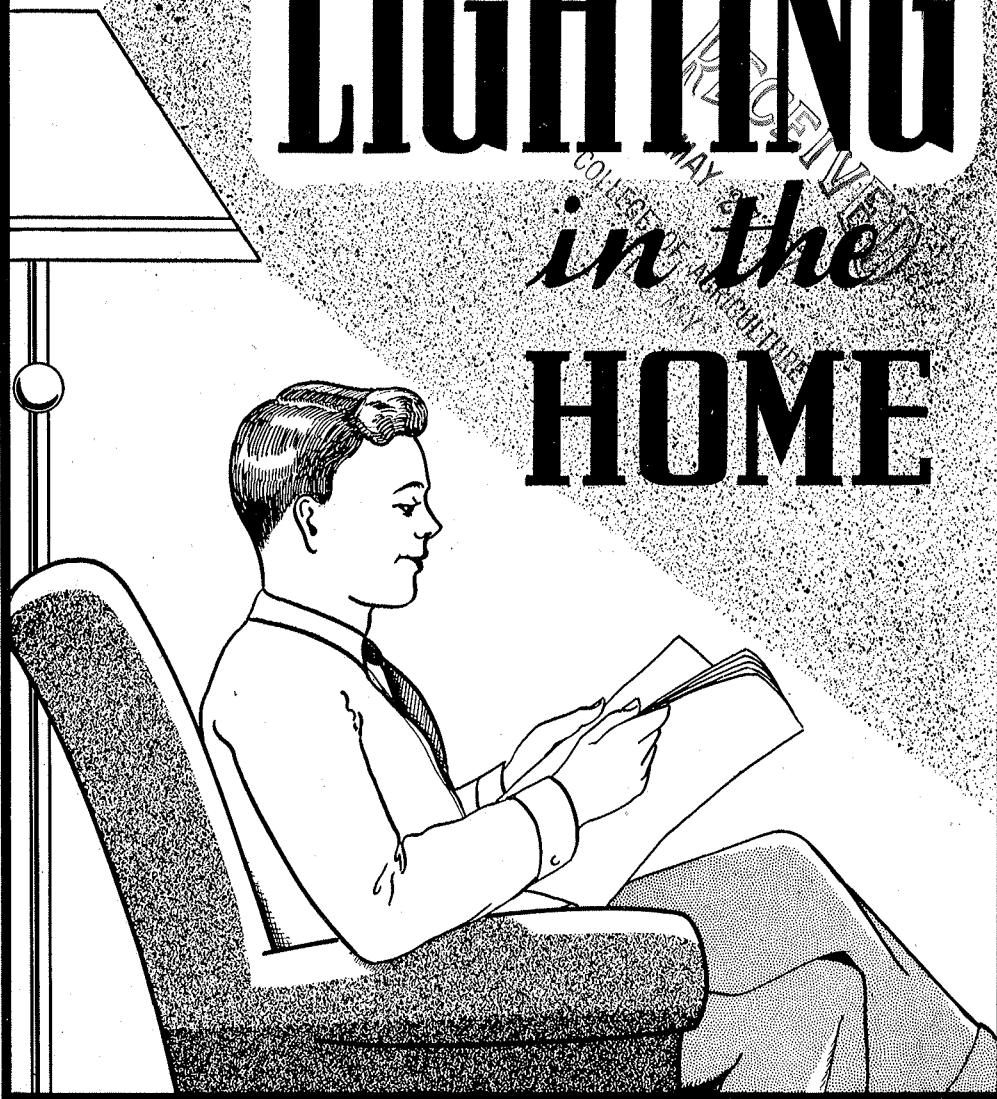
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LIGHTING

in the HOME



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TEN RULES FOR SAFEGUARDING EYESIGHT

1. Have enough light.
2. Light lamps or turn on light early. The fading light of late afternoon and twilight is deceptive.
3. Shade all lights. Avoid harmful glare from a bare source of light. Use shades deep enough to shield the light from your eyes.
4. Avoid shadows. Let the light shine full on your book or writing.
5. Avoid contrast. Distribute some light around the room so that when glancing from work the eye does not need to adjust to much change in light.
6. Sit up straight, assume good posture, then adjust the lamp for that position.
7. Look up frequently, every few minutes. Give your eyes a rest from the strain of prolonged close seeing.
8. Have enough lamps so each person may have sufficient light to adjust according to the seeing task.
9. Go to a doctor for eye injuries.
10. See a vision specialist regularly. Have your eyes examined at least once a year.

Lighting the Home

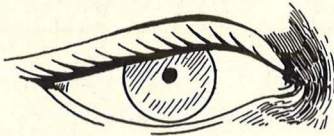
Rizpah A. Douglass

SIGHT IS BY FAR the most precious and useful sense we possess. More than 80 per cent of all the impressions we receive from our surroundings come from sight.

Eyes are rationed—one pair to a lifetime—they must do us.

Americans generally take poor care of the priceless gift of eyesight. In the simpler life of early man, he used his eyes solely out-of-doors. Our eyes are called upon to perform tasks indoors for which they were not intended.

Small wonder, then, that many people have visual defects, and that these defects often occur early in life. At the age when children start to school, approximately seven per cent of them have defective vision. By the time they have finished high school and college courses an additional 24 per cent have acquired eye defects.



The pupil of the eyes is small when reading, to help sharpen the detail.



The pupil of the eye is opened wider for distance-seeing.

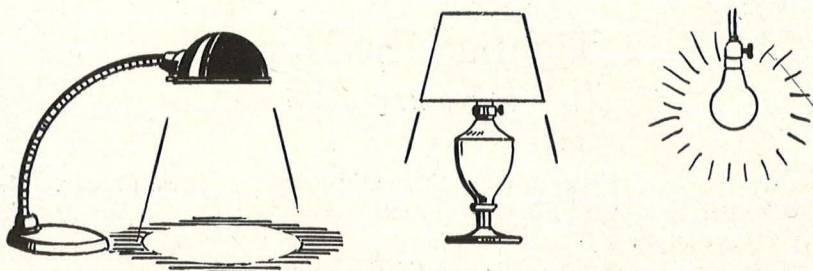
Inadequate light is the biggest single cause of eye strain. It is not the artificial light itself that is bad for our eyes; it is the lack of *enough* of it. Scientific study has shown that adequate light relieves eye strain when the light is properly applied.

THERE ARE three factors involved in seeing—the eye—the task—the light. Light is as essential to vision as are the eyes themselves. Wherever artificial light is needed we should be careful that it is correctly used.

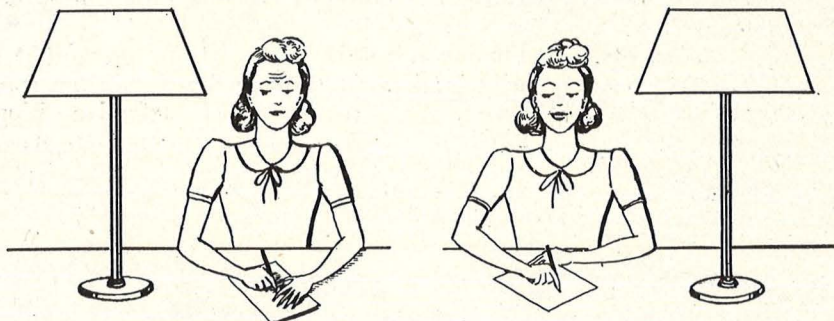
ABC'S of Good Lighting

A Enough light where and when we need it. Some eyes need more light than others. Likewise, some tasks require more light than others. For close work such as studying, reading, writing, and typing, more light is needed than for just sitting,

talking, or listening to the radio. A room is well lighted when every section of it is flooded with light so that work can be done without too much shifting of furniture or lamps. Bring the lamp close to the work to allow it to shed its



Sharp shadows are caused by a bare bulb, the gooseneck lamp, an unshaded lamp, lamp that directs all rays of light to one spot such as old-fashioned bridge lamp.

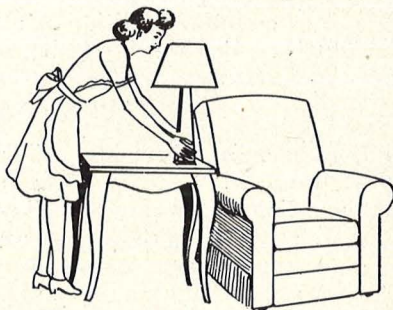


Place light so no shadow will be made by the hand when writing.

light directly on the reading or work surface. Provide enough light in enough places so that each person may do his work. More light is needed when the work is dark, such as sewing on dark cloth, or when there is not much contrast in color.

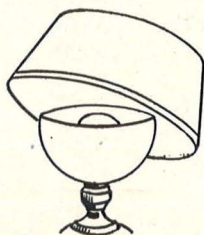
terial and by placing the lamp so that the eye will not see the source of light. Opal or milk glass, diffusing plastics, parchment paper, or light-colored, light-weight silks are good diffusing materials. They not only

B Avoid glare and harsh shadows. No one can look directly at the sun. Light which enters the eye directly interferes with vision. The presence of glare is one of the most common and serious faults of lighting. Unshaded lamps or bare lamp bulbs are the worst offenders. Glare may be reduced by covering the light with some diffusing ma-



Move lamp close to the chair so light will fall on work.

permit light to pass through them, but also soften it. Glare



A lamp equipped with a diffusing bowl or reflector under the shade will help to eliminate glare and sharp shadows.

caused by shiny surfaces on walls, ceiling, or working surfaces, or by glazed paper, glossy desk tops, glass table tops and shiny blackboards, cause eyestrain and should be avoided. Sharp shadows also lead to eyestrain. Any

comparatively bright light source in an otherwise dark area requires the eye to make constant adjustments to the contrasting amounts of light. This becomes tiring and irritating to the eye. To reduce these annoying shadows, distribute lights throughout the room with more light in certain areas for close work.

C Have correct direction of light.

Certain tasks such as writing, sewing, or drawing require the light in a certain position to avoid a shadow of the hand on the work. Whether this be from the right or the left will depend upon the individual. Do not let children read or study in their own shadows. Place the lamp a little to the rear of person sitting in a chair in order to prevent the person from seeing the source of light.

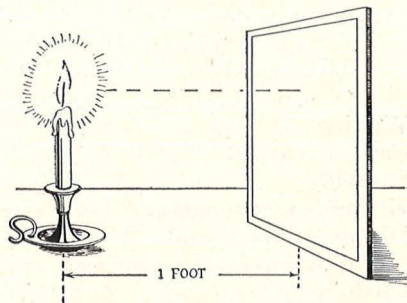
Measuring Light

THE EYE will adjust to the task it is to perform; therefore, determining how much light is needed is

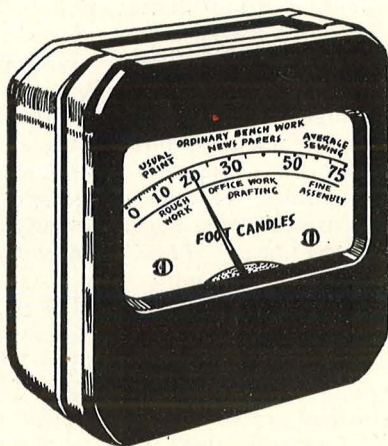
difficult without some mechanical method of measurement. Scientific tests have proved that below certain definite amounts of light there is danger of causing eye strain and fatigue. Scientists have developed a meter that measures the light. A "foot candle" is used as the unit of measure just as a degree is used to measure heat. The illumination produced at a point on a surface one foot away from and perpendicular to a light source of one candle power is called a foot candle. The light meter has a light sensitive cell which causes the needle to indicate the amount of light in foot candles.

Nature provides us with about 1,000 foot candles out-of-doors, at the edge of the porch, or in the shade on a sunny day. In the sunlight at noon, a meter may read as high as 10,000 foot candles. Indoors next to a window, it is reduced to about 200 foot candles. On the opposite side of the room, the amount of light is much less.

Perhaps the time will come when people, aroused to the importance of having the correct measure of light required for eye protection,



A foot candle is that amount of light produced by a light source of one candle-power at a point on a surface one foot distant away from and perpendicular to the rays of the light.



A sight meter.

will use the sight-meter as generally as they do scales and rules.

Through much research, the following recommendations for adequate light have been set up by Illuminating Engineering Society.*

Reading	Foot Candles
Ordinary print.....	10-20
Small print or for prolonged periods	20-50
Sewing	
Ordinary on light goods	10-20
Prolonged on average goods	50-100
dark goods.....	100 or more
At sewing machine	20-50
Writing	10-20
Card Playing	5-10
Studying	20-50
Living Room—general	5-10
Dining Room—general or for eating....	5-10
Kitchen—general	5-10
Work centers—sink, stove, worktable..	10-20

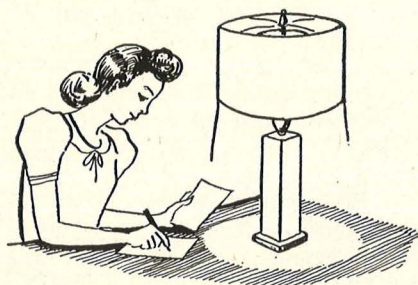
Bathroom—mirror	10-30
Bedroom—general	2-5
Bedlight	10-20
Dresser	10-30
Recreation—general ..	5-10
Special activities	10-20
Work bench	10-30
Laundry—tubs and ironing	10-30
Stairways	2-5

Type of Shade and Height of Lamps

WHENEVER POSSIBLE, select a flare shade in preference to a drum-shaped shade. The flared shade spreads the light over a wider area than the drum shade, which hugs the light around the base, until you have to reach up under it to get your book, paper, or sewing into the meager pool of light. The bottom diameter of the shade should be 8" to 10" for a pin-up lamp; 12" for a bridge lamp; 14" to 16" for table lamps; 18" to 20" for some table and floor lamps. All shades should be deep enough so that the source of light is not visible to the eye.

A white or light lining in shades gives 50 per cent more light by reflecting it rather than absorbing it as a dark color would do. Shades that permit some light to pass through are desirable, but they should never be so thin that the source of light or bowl is visible through the shade. It is important to have the lamps high enough to permit a good spread of light; yet not so high that the source of light is visible when one is in a position to work.

* "Recommended Lighting Intensities for the Home." Transactions of the Illuminating Engineering Society. Vol. 29—July 1934.



Flared shade spreads light over a wider area—drum shade confines light around the base.

Walls and Ceilings Affect Light

THE EFFECTIVENESS of light supplied in any room depends largely on the color and texture of the walls and ceiling. Light walls and light ceilings that are smooth will reflect a greater amount of light and the room will appear lighter than if the walls are dark and rough. Even dark furniture and woodwork absorb light and increase the amount of light needed to illuminate the room. Textures that are too smooth may be shiny and reflect glare which is uncomfortable and undesirable.

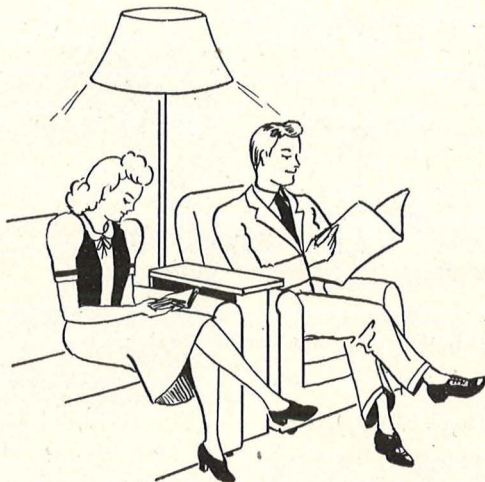
<i>Color of Wall Paper</i>	<i>per cent reflection</i>
White	80
Ivory	75
Tan	61
Light Green	56
Yellow	40
Light Pink	36
Blue	25
Dark Brown.....	13
Red	12
Bluegrass or olive green.....	12
Cobalt	12
Glossy black.....	5
Deep chocolate.....	4
A soiled shade lining.....	50

The ceiling is the most important area because much of the light in a room is directed upward, particularly in modern lighting. A light-colored ceiling will reflect the light, thus adding to the general illumination of the room.

Arrangement of Light and Furniture

THE LIVING ROOM is just what the name implies. It is where much of the living is done—reading, sewing, recreation, writing, listening to the radio, talking, and entertaining guests. Arrange the furniture in groups so that more than one activity can be carried on about a lamp. A floor lamp of adequate height and with a shade wide enough to give a good spread of light may serve one person who is sewing or writing at a table, and one or two other people who are reading. It may also illuminate the floor where the children are playing.

A table or study lamp may supply good light for several persons if it is placed on a table that is small enough and that lifts the lamp high



A floor lamp or table lamp, if tall enough, will serve two people when furniture is placed correctly.

enough to light a wide circle. End table lamps may be used if the lamp is tall enough and the spread of the shade large enough so that light shines on the work.

A pin-up lamp, if placed low enough, will serve over a davenport or chairs that are placed close to the wall. It will also serve a person

working at a desk and one sitting in a chair close to the desk.

A ceiling fixture or lamp in the center of the table can be arranged to give proper illumination if it is high enough to spread light over the entire table and low enough so that the source of light is not visible to the eye.

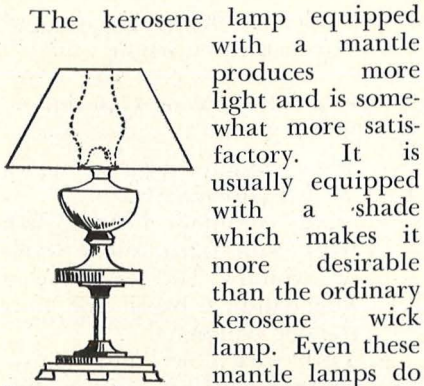
USE OF KEROSENE AND GASOLINE LAMPS

ACCORDING to the 1940 census figures, the effective use of kerosene and gasoline lamps is of interest to 67 per cent of Nebraska farm families. The principles of good lighting as explained in the foregoing section apply to any kind of artificial lighting, whether it be electricity, gas, kerosene, or gasoline.

According to the research work that has been done in lighting, the kerosene lamp quite commonly used is *not* sufficient illumination to prevent serious eye strain. It

may be used for *general* illumination in bedrooms, bathrooms, and kitchens. Where no other kind of illumination is available for close, prolonged work, add more lamps, and observe as many of the principles of good lighting as possible.

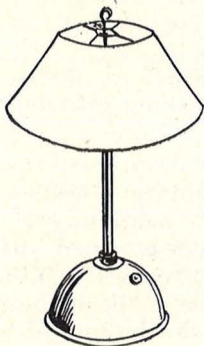
The bracket wall light is the homemaker's chief means of directing light where it is needed. Brackets may be located in different parts of the room so that the lamp may be moved. With the use of a reflector, the light may be directed.



Improve a kerosene or gasoline lamp by providing it with a shade and raising the height for greater area of illumination.

supplemented as soon as possible and used in conjunction with lamps of higher candle power.

Gasoline pressure lamps are a more satisfactory type to use if electricity is not available. They produce a greater amount of light and,



Gasoline pressure lamps are much improved by using a shade.

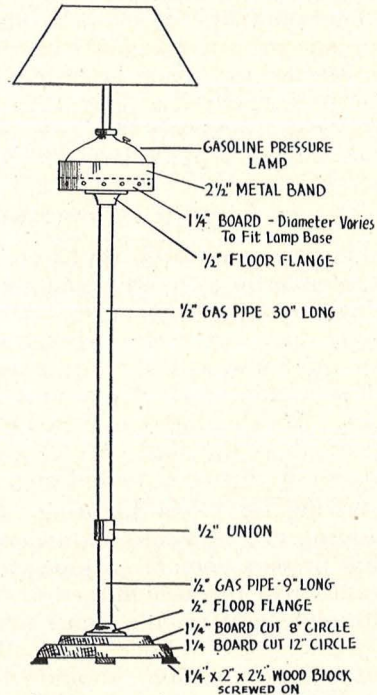
Gasoline is placed in the tank. It is also important that a gasoline lamp be equipped with a shade.

If accidentally tipped over a gaso-

line pressure lamp equipped with a mantle produces more light and is somewhat more satisfactory. It is usually equipped with a shade which makes it more desirable than the ordinary kerosene wick lamp. Even these mantle lamps do not produce adequate illumination for close work or prolonged work and, therefore, should be

line pressure lamp is less likely to cause fire than an ordinary kerosene lamp. A kerosene lamp will leak or spill kerosene and be ignited immediately. A gasoline pressure lamp is so constructed that it will not leak if turned upside down. It can also be carried with greater safety should an accident occur.

Floor Standard for a Gasoline Pressure Lamp. Gasoline lamps may be improved by raising the height so that the light falls on a larger area. A floor standard made from boards, a gas pipe, two floor flanges, and a union or a coupling will improve the useability of a gasoline or kerosene lamp. Care must be taken to get the base of the standard heavy enough to prevent



A gasoline pressure lamp is converted into a floor or table lamp.

it from tipping over. The top of the standard is made the size of the base of the lamp, then a rim of tin is nailed to the edge to hold the lamp in place. Short table standards may be made in the same way by using a shorter length of pipe.

The figure shows the details for making this base. After putting the base together, paint the standard a foundation paint. Let this dry, then paint it black, brown, or ivory, or use a bronze metal paint. An antique finish may be obtained by painting over the ivory paint after it is dry with a thin coat of brown paint, or a thin coat of ivory paint over the bronze. When this is partially dry, rub the paint off, leaving some around the edges and in the creases.

The same type of standard may be made for other lamps, with the size of the top made accordingly. The height will also vary. Plan it so that the light will shine on the work and will cover as large an area

as possible, yet the source of light not be seen while working.

Cleaning Kerosene or Gasoline Lamps

- a. Wipe chimney with soft cloth or soft paper daily.
- b. Wash chimneys at least each week with warm sudsy water or window cleaner. Use a long-handled brush for long slender chimneys.
- c. Turn wick down and remove charred portion with a soft paper. Trim uneven portion or frayed edges with scissors.
- d. Fill lamp and wipe base with paper, then with damp cloth. Never fill a lamp while it is lighted.
- e. Replace broken mantles immediately. A broken mantle cuts down the efficiency of the light and may break the chimney or get too hot for the shade.
- f. Brush shades frequently.

LIGHTING WITH ELECTRICITY

LIGHTING THE HOUSE by electricity, wonderful as it may seem after using kerosene lamps for many years, does not necessarily mean that the house will be well lighted unless a good deal of planning is done. All the lighting principles discussed in the fore part of this circular apply to electric lighting.

Wiring for Good Lighting. In building new houses or in modernizing present ones, it is important to anticipate the need of the future. Although light usually comes first, appliances are needed gradually and their location should be planned when the wiring is done. This saves money, as the cost of

wiring completely at one time is much less than making additions later.

Adequate wiring to carry the current needed is another consideration. If wires too small to carry the required current are used, the voltage will drop excessively with a consequent decrease in the amount of light given by the bulbs which affects the operation of the appliances, reducing their efficiency.

Make sure that the entire electrical installation is in accordance with National Electrical Code requirements, local ordinances, and specifications set up by the service agency.

Four types of outlets are used in wiring: outlets in which light fixtures are permanently installed; convenience outlets for attaching lamps and equipment; power outlets for heavy-duty appliances such as ranges, water heaters, or large motors; and switch outlets for controlling the current of light appliances or power outlets.

Convenience outlets should be placed at points of greatest use. There should be enough to permit the use of lamps or appliances in any part of the room where they may be wanted. Baseboard outlets should be placed in every wall space between two doors, and one should be installed in every six feet of space on longer walls. Place at least one on each side of the room. Watch that the outlet will be placed where it will not interfere with the placement of furniture, for instance, at the ends of the davenport, at the side of the piano or desk, not in the center of the wall space where it would be back of the furniture and out of reach. Recommended height for these outlets is 12" to 18" from the floor. Outlets for such equipment as electric iron, toaster, percolator, and washing or sewing machine, which are disconnected after using, should be placed at elbow height to save stooping. Double outlets rather than single ones are an economy and convenience.

Carefully plan the location of the switch outlets. Each ceiling fixture is controlled by a wall switch.

Three-way switches in halls and rooms with more than one entrance are desirable in order that the light may be turned on as the room is entered and may be turned off without retracing steps. It is a good idea to go from room to room visualizing where the lights will be turned off and on, then writing down the location. Remember to place them at a convenient height for members of the family. A recommended height is 48" to 54" from floor to center line of outlet.

Lighting fixtures are designed to distribute light directly, indirectly, or in both ways. Direct lighting fixtures are often open-reflector type which gives strong sharp shadows and may cause unpleasant glare. Proper shading of direct-type fixture decreases glare and sharp shadows. Indirect lighting fixtures send all the rays to the ceiling and upper walls which diffuse or scatter these rays and reflect them back to parts of the room where needed. This type of lighting fixture is especially suitable for general illumination because it gives a soft, more evenly distributed light throughout the room and with no sharp shadows.

Semi-direct and semi-indirect lighting send part of the light directly to the work and part to the ceiling to be diffused throughout the room. Semi-direct fixtures send a major part of the light rays downward to specific jobs and at the same time furnish some general illumination. Semi-indirect fixtures



Types of electric fixtures showing how light rays are directed.

send the greater portion of the light rays upward, but some are directed downward. This type does not provide sufficient local lighting for close-seeing tasks unless hung low, as over a dining table.

Choosing Fixtures. The question of whether to have overhead lights is often asked. An overhead light fixture which gives plenty of soft, well-diffused light, so that there are no shadows about the room, is recommended for kitchens, dining rooms, bedrooms, halls, and bathrooms. Additional lights placed conveniently over work or activity areas are necessary for the kitchen, bathroom, and bedrooms.

Additional light is not needed in the dining room unless the dining table is used for study.

Many homes do not use ceiling lighting in the living rooms, as floor lamps and table lamps seem to fit the needs of the various activities. If overhead light is used for general illumination, the bulbs should be shaded or the light semi-indirect or indirect.

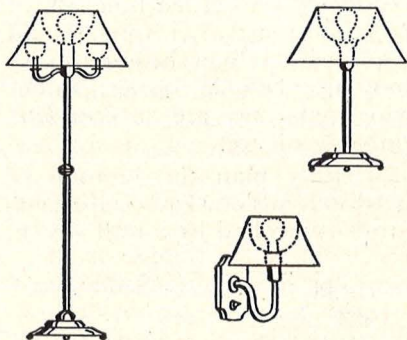
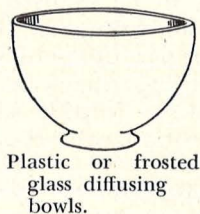
Wall lights that are shaded glass are suitable for the kitchen and bathroom. They direct the light downward onto the working sur-

face. One of these may serve more than one work center if the centers are close together; otherwise, a light may be needed over each work area.

Wall lights placed on each side of the mirror or one at the top of mirror is desirable for the bathroom. Wall lights are not needed in the living room.

Portable lamps are generally used to provide light for such activities as reading, sewing, and studying. These are made in various styles such as floor lamps, table lamps, pin-up and bridge lamps. There has been a great improvement in lamps of this kind. The Illuminating Engineering Society (IES) has developed specifications to meet safety standards and provide light of sufficient quality and quantity. An I.E.S. certification tag may be found on these lamps.

Most portable lamps are designed to give both direct and indirect light. They direct light downward to provide illumination needed for close work, while some light rays are directed upward. This decreases shadows in the vicinity of the worker. All portable lamps need to be equipped with a diffusing bowl of glass or plastic. Its object is to



I. E. S. lamps—Floor lamps, table lamps, pin-up lamps. Observe that each lamp is equipped with diffusing bowl.

soften the downward light and spread it outward and upward, thus reducing the sharp shadows and harsh lighting. These bowls may be obtained in plastic or glass in different sizes. Each size bowl requires a bulb of definite wattage.

Portable lamps should be tall enough to permit the light to shine on a large area. Most table lamps should measure 28" from the top of the shade to the table. A floor lamp should measure 58" to 63" from the top of the shade to the floor.

Shades need to be wide at the base and slightly tapering toward the top to allow a good spread of light, so that work being done need not be directly underneath the lamp, and so that more than one person can use the lamp at the same time.

The depth of the shade is important, too. It should extend far enough below the blub or bowl so that the light does not shine in the eyes of a person sitting in a normal position at work.

The inner surface of the lamp shade should be light in color to reflect the light rather than absorb it as a darker shade would do. Select shades that permit some light to pass through but that are not thin enough to allow the light bulb or bowl to be visible through the shade.

Buy electric bulbs produced by reputable manufacturers who conform to federal specifications for incandescent lamps. Be sure to use a bulb of the wattage recommended for the fixture to get maximum efficiency.

As an economy measure, one bulb of high wattage will give more light and cost less than several small

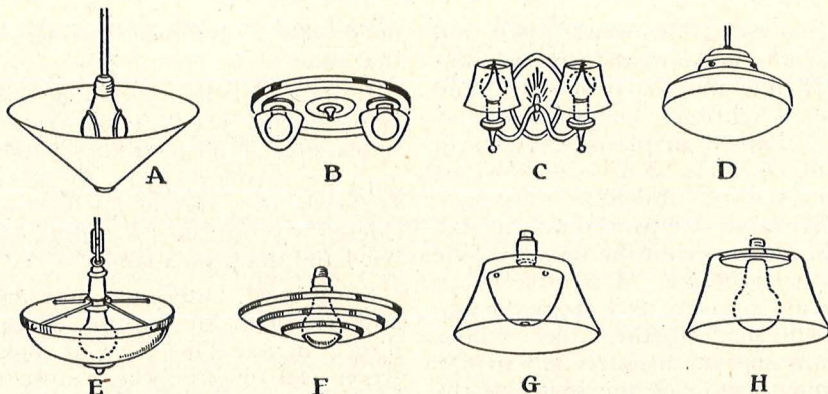
ones whose combined wattage is the same.

Bulbs are made in either clear or inside-frosted glass. Inside-frosted bulbs give a more diffused light and are therefore more desirable. However, they should not be considered a substitute for a diffusing bowl and shade on a lamp.

Silver-bowl bulbs are available and are used in fixtures having direct light. The silvered bowl serves as a reflector which must be used bowl end down to provide indirect lighting.

The three-way bulb is used in floor lamps or large-size table lamps. It has two filaments, each a different wattage. Either or both filaments may be used at one time, making it possible to have three different levels of light from a single bulb. They come in 50-100-150 and 100-200-300 wattage.

Remodeling Old Lighting Installations and Equipment. Many homes need additional convenience outlets before more lamps can be placed in the room. If the wiring in the existing circuits is of sufficient size to take care of the additional load, single convenience outlets may be replaced by double or triple ones. In some instances, a convenience outlet may be installed beside the existing wall switch with a little trouble. A reliable electrician should be employed to determine whether these additions can be made with safety. Many old fixtures and lamps may be modernized effectively. Bare bulbs and fixtures may be covered with shades to prevent glare and to diffuse the light. Small candle shades or shields may be used for wall fixtures.



Adapters that can be used on existing light fixtures.

A.—B. Small parchments cones suitable for shading bare bulbs.

C. Parchment shades or shields suitable for wall fixtures.

D. Semi-direct enclosing globe adapter of opal glass.

E. Semi-direct diffusing bowl.

F. Indirect metal adapter using silvered bowl bulb.

G. Semi-indirect adapter with diffusing bowl and parchment shade.

H. Parchment bridge lamp adapter using silvered bowl bulb.

Adapter-type shades may be used to shade bare bulbs on single-socket ceiling fixtures. Some fixtures may require a silver-bowl bulb as is shown in the illustrations.



An adapter for making over old lamps. This provides a place to hold a diffusion bowl.

Old-fashioned bridge lamps may be converted to an indirect light in two ways. If the fixture will allow, invert the socket and install a diffusing bowl and shade. If the fixture is not movable, a special shade with an adapter and a silver-bowl bulb will do the trick. If this conversion makes the lamp top heavy, add pieces of scrap iron under the base for weight.

A floor or table lamp may be improved considerably by replacing the old socket with an adapter socket and diffusing bowl and by replacing the old shade with one

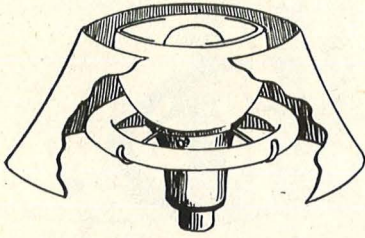
properly shaped. If these lamps are top heavy, add weight under the base.

Recent Developments in Electric Lighting

Fixtures and Lamps. Just before the war, fluorescent lighting had made its debut. At that time, most of the fixtures manufactured went for war factories.

A fluorescent lamp bulb is a glass tube filled with mercury vapor. Current flows from one end to the other giving a soft white light which is less glaring. Fluorescent lamps produce more light than incandescent bulbs for the same amount of energy used.

Floor lamps using both types of bulbs may soon be on the market. Recently the fluorescent bulb has been made circular in shape, which makes it more adaptable for use on lamps and for lighting around a mirror.



Fluorescent floor lamp with circular fluorescent tube.

It is possible to obtain a special adapter-type of fluorescent fixture that fits a 4" ceiling shade holder.

Since the use of fluorescent light for lighting the home is fairly new, it might be well to delay installation until more experimenting has been done.

Lighting for Tomorrow. Much change in the placement of the light will be seen in the house of tomorrow. Concealing the light behind a cornice placed at the ceiling where the moulding is ordinarily placed will create a different effect in the room. Placing lights behind the valance board over the window is also being suggested. Placing lights underneath the cupboards so the light shines directly on the work surface is a practice that is rapidly gaining favor.

Germicidal and ultraviolet lamps used in killing air-borne bacteria and mold may soon be used in homes and schools. They are useful in preventing the spread of contagious respiratory diseases. They may also be used in home refrigerators and as air purifiers.

Care of Lighting Equipment. To obtain the most economical and efficient use of the lighting fixtures, keep them in good condition. Here

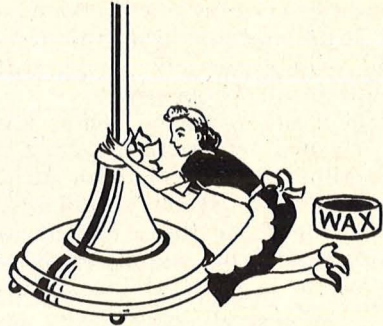
are some of the things that can be done at home:

Replace blackened bulbs. Use them in closets, storage rooms, or attic where they are used only occasionally. A blackened bulb is still usable, but it wastes as much as 25 per cent of the light.

Keep lamps clean. Disconnect lamp from outlet. Remove the reflector bowl from the lamp. Wash it in warm (not hot) soapy water. Rinse and dry.



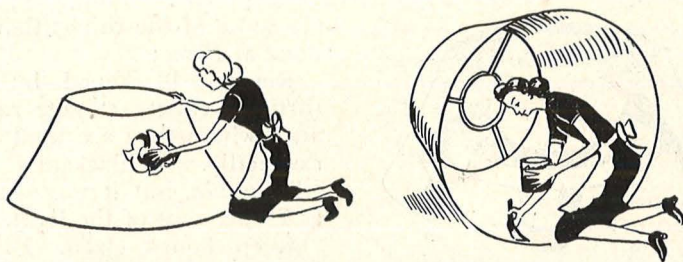
Keep lamp bulbs, bowls and shades clean.



Dust and wax the base of the lamp.

Wipe the glass bulbs with a damp soapy cloth, remove suds and dry well. Never completely submerge a lamp bulb, as the base is cemented to the glass. If the cement gets wet, the base may loosen.

Dust metal, leather, or wooden bases with a soft, dry cloth, then apply a thin coat of wax. After a few moments, polish with a soft cloth. Do not use liquid furni-



Dust the shade and paint the inside a light color.

ture polish, except on the wooden base. Other kinds of bases such as glass, porcelain, pottery, etc., may be washed with warm soapy water. Turn the base upside down and shake gently to remove small insects that get between the bulb socket and the reflector frame.

Clean lamp shades. Remove cellophane wrapping from a lamp shade when it is put into use. The heat from the bulb and the climatic conditions cause the cellophane to shrink and may bend the frame and wrinkle the silk. Brush with a soft brush frequently.

Some silk or rayon shades can be cleaned by careful washing if the trimming is stitched (not glued) to the frame. If the trimming is glued, or if the shade is made of painted silk, has appliqued ornaments, or is made of fabrics that will shrink, it should be dry cleaned.

Wash the shade by first brushing with a soft brush. Then make a solution of warm water and mild soap. Be sure soap is completely dissolved. Use a large container so the shade can be easily immersed. Laundry tubs are ideal. Fill one with soapy water and another with clear warm water. Hold shade by the wire across the top. Douse the

entire shade up and down several times. Stroke downward with a very soft brush if necessary. Rinse several times in the clear water by dipping up and down. Dry rapidly to prevent rust spots from the frame marking the shade. In warm weather, tie the shade to the clothes line. If dried indoors, put shade near register or radiator and turn the fan on it to dry it rapidly.

Paper or parchment shades cannot be washed but should be dusted frequently with a clean cloth. Some shades may be wiped with a damp cloth.

Metal and parchment shades are usually ivory or white on the inside. When this becomes soiled or discolored, it may be painted again. Be sure surface is clean and free from oil. Apply one or two coats of flat white paint. If the inside of a parchment shade is oily, apply a thin coat of shellac then one or two coats of flat white when shellac is dry.

See that ceilings and walls are kept clean, as clean walls and ceilings give more light.

Clean the permanent fixtures frequently also. Unscrew the bowl and bulb and clean as directed for lamps. Dust or wash the rest of the fixture.