

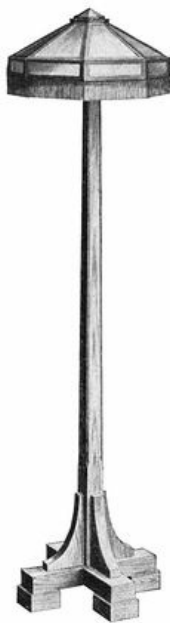
Easy-to-Make
ARTS AND CRAFTS
Lamps and Shades

JOHN D. ADAMS



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ARTS-CRAFTS LAMPS

INTRODUCTION

THAT really artistic lamps—portable ones for reading, pendant lamps for the porch, domes for the dining room, lanterns for the den, in fact, all manner of lamps that are usually made from expensive leaded glass—can be made from paper, cardboard and wood, may seem a trifle strange; but still stranger will it seem when it is stated that these results may be accomplished by almost anyone who has ever used a saw, plane and pocket knife, and is still in possession of a fair amount of patience. But, you will say, it is quite impossible that from cardboard and colored paper a shade can be produced that will be as beautiful as one of leaded art glass.

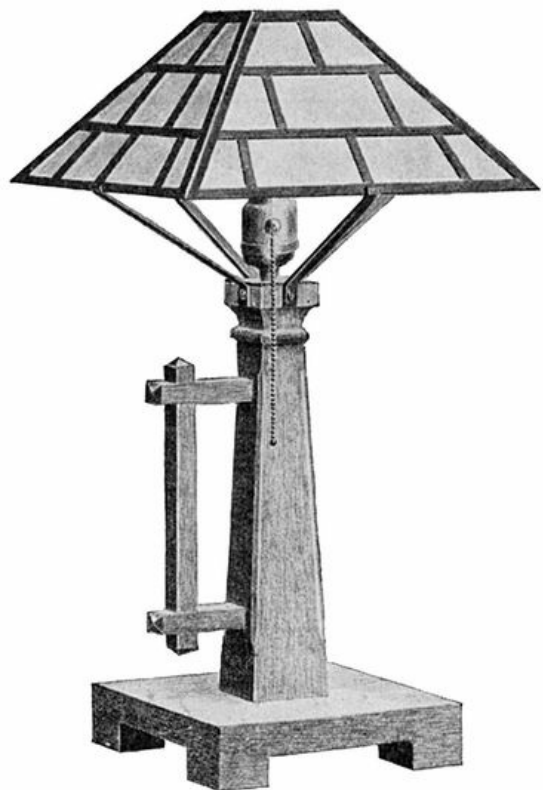
Of course, there is a difference, but it is very much less than would be imagined, and is hardly noticeable when the shade is illuminated. During the day time the colored paper is quite attractive, whereas the colored glass is very dull and often decidedly unattractive when not illuminated. But once more, you will object that the cardboard shade must be very frail. True enough, they will not stand as much crushing as a metal frame, but then shades usually break by falling, and falling can not harm our cardboard-paper shade, so that under ordinary conditions the latter is safer. However, be this as it may, cardboard formed into angles, properly braced and connected, becomes very rigid. Like a roof truss, its strength lies more in its shape than in the amount of material employed.

To restate our original proposition: Anyone with sufficient patience to avoid all hurry can, at home, at an almost negligible expenditure, produce a great variety of lamps, that will, nine times out of ten, be mistaken for the product of a professional rather than of an amateur. In this line of work, the results are invariably delightfully surprising.

Handicraft work is becoming more popular every day, and outfits for metal etching, perforated brass work, hammered copper and various other crafts, are now supplied by the large department stores. But none of these hobbies finds such a wide or important application in the home as the subject of lamps; and after the reader has become familiar with the general system of construction, and has gained the confidence that comes with some little actual experience, the work will be found intensely interesting. The effect on the eyes of a properly shaded lamp, the artistic effect in the combinations of various colors, the opportunities presented for individual ingenuity in adapting the color scheme to that of the room, will all be duly appreciated as the work proceeds. The largeness of the field will also prove attractive to the amateur craftsman. A hanging lantern for the porch, a chandelier for the living room, a dome for the dining room, a pair of bracket lamps for the den, a portable for the library table and shades for a drop light here and there about the house, will all be required.

Through all this work the general method is largely the same, so that after a few lamps have been made, the enterprising amateur will find ample opportunity to exercise his or her ingenuity in the way of adopting and combining such attractive features observed in other lamps that have struck the fancy, and finally will have the satisfaction of designing and constructing a lamp entirely from original ideas.

About all the tools necessary are those required for the little carpentry work in connection with the stands. A good sharp pocket knife with a large handle should be provided, and its point must always be kept particularly sharp, else the edges of the cardboard will be irregular and frayed. A roll of black passe-partout tape, some drop-black paint, a bottle of liquid glue, a box of brass paper fasteners, are all the necessary supplies required besides the cardboard and colored papers.



CHAPTER I

A ONE-LIGHT PORTABLE LAMP

LET us first consider a one-light portable lamp—a lamp suitable for a desk or small table. The first thing to do is to lay out the pattern for one of the sides of the shade, which should be done on a flat and rather heavy sheet of paper, after which it should be carefully cut out with a sharp knife. A sheet of cardboard, 16 by 18 in., should now be procured. The reader should be cautioned against trying to work with too heavy a grade of cardboard. Select a moderate weight and test it by lightly scoring one side with a knife and bending it to a right angle, the knife mark always being on the outside of the bend. If the cardboard is cheap and short-fibered, the fact will be evident when so tested. Place the paper pattern on the cardboard and mark it off with a sharp pencil. Then move the pattern over one space, that is, move it until one edge exactly coincides with the outer pencil line of the first position, and mark off again, continuing the operation until the fourth and last side has been marked off. In this manner we obtain the complete pattern on our sheet of cardboard as shown. The dotted lines indicate those that are to be scored with the knife for bending, and the full lines those that are to be cut clear through. It is advisable that the cutting be done over a hardwood board, and in making the first pass with the knife do not press too hard, as the hand or straight edge is more apt to slip at this stage than when the cut has reached some depth. Any rough or torn edges should be smeared with glue and sandpapered when dry. When all the cutting has been done, place the line of bend directly over the sharp edge of a table or board and the straight edge over that portion remaining on the table, then bend gradually all the way along. The last edge of the fourth section has a connecting strip which should be covered with glue and then fastened to the first edge of the first section. The extra strips at the top and bottom should finally be bent inward to a horizontal position and fastened with a paper fastener at each corner. The corners of all bends should be reinforced with passe-partout tape. The entire framework is now to be painted a dull black, which, in anything but broad daylight, will be invariably mistaken for the usual iron work. Select some paper of the desired shade and color, and before attaching it, try the effect after dark by bending it around a light. Sometimes two or even more thicknesses may be necessary. Generally, in a tapering shade like this, the upper portion, which is nearer the light, appears brighter than the lower portion, in consequence of which a very pleasing and attractive blend from a lighter to a darker shade is obtained.

In making the stand, prepare the square base first, and then glue on a square block at each corner, taking due care to keep all corners sharp and square. An 1½-in. square hole should be cut in the center. The main post, which will require some little care, can be worked out in the rough by means of a small scroll saw. When the top and the proper taper have been formed, work out the tenon on the lower end to fit the square hole in the base, after which cut the small mortises for the handle, and bevel the edges. The making of the handle will be largely a

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Details of Tamp



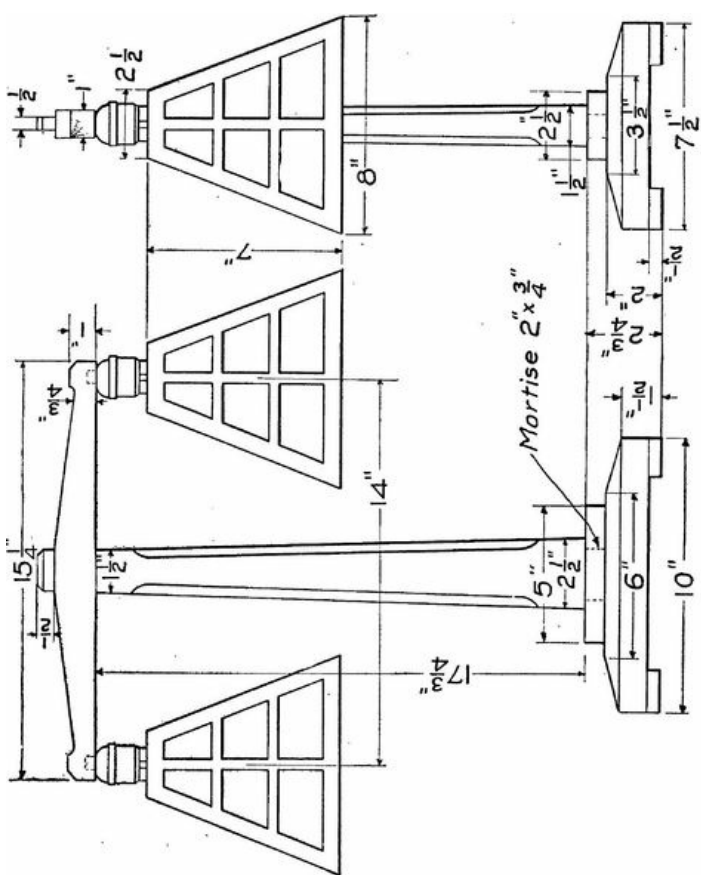
Layout for Shade

CHAPTER II

TWO-LIGHT PORTABLE LAMP

IN this two-light portable lamp we have an excellent design for the center of the library table. The shades are deep and the lamp is hung well up, so that anyone writing, drawing, or doing any sort of work requiring the use of a table, will find that the light is thrown just where it is required, while the eyes are completely shaded. The shades are of a much used pattern, and those that do not care to undertake the construction of the stand will find them very useful in hiding the common unshaded and glaring drop lights, so harmful to the eyes.

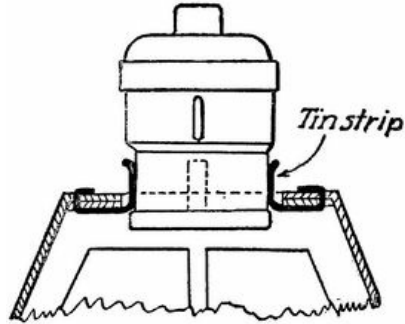
The shades are constructed in the same general manner as the one described in the previous chapter. Procure a piece of tough cardboard about 12 by 24 in. Lay out the pattern for one side with a sharp pencil on a piece of thick paper, and then cut it out with a sharp knife. Apply the paper pattern to the cardboard and mark it off, then move it one space and mark off again, continuing the operation until all four sides are drawn out, as shown. It will be noted that the last edge has an extra strip, which is for the purpose of connecting the first and last sections together. There are also extra strips along the top and bottom of each section. The dotted lines indicate those that are to be merely scored with the knife for bending, and the full lines are those that are to be cut clear through. When ready to bend into shape, place the line of each bend over the sharp edge of a table, hold the portion on the table down with a piece of wood, and then gradually bend along the entire line. The two ends may be fastened with paper fasteners or by glue, in which case means should be provided to keep the connection tight for an hour or so until set. Bind the corner edges of all bends with passe-partout tape. The extra strips on the lower edges should now be bent inward and connected at the overlapping corners with paper fasteners. The extra strips at the top are then to be bent inward and fastened to a square of cardboard closely fitted into the top from underneath. In the center of this square cut a hole $1\frac{5}{8}$ in. in diameter, and near each corner push the knife blade clear through. Cut out four strips of tin, measuring $\frac{1}{4}$ by $1\frac{1}{2}$ in., and fasten them to the top through the slits made with the knife, in the manner shown in the detail view. All this is for the purpose of connecting the shade to the existing socket, which should now be placed in position and the four strips of tin fitted closely around it, and when the shade is ready to be hung up for good, bind tightly with a piece of light cord. It only remains now to place the colored paper on the inside. As the effect when illuminated cannot be judged by daylight, the paper should be tried after dark, and if it proves too light use two or more thicknesses.



Details of the lamp



provision should be made for the wires. The simplest way is to pass the cord from each light directly through the end of the top bar and connect them together so as to form a Y with a single cord running to the source of supply. The better way is, of course, to entirely conceal the wires and have the cord leave the lamp from underneath the base. This method necessitates the boring of rather long holes, a matter which, in the absence of the necessary tools, can be readily disposed of at the nearest electrical shop.



Method of Attaching Shade to Socket



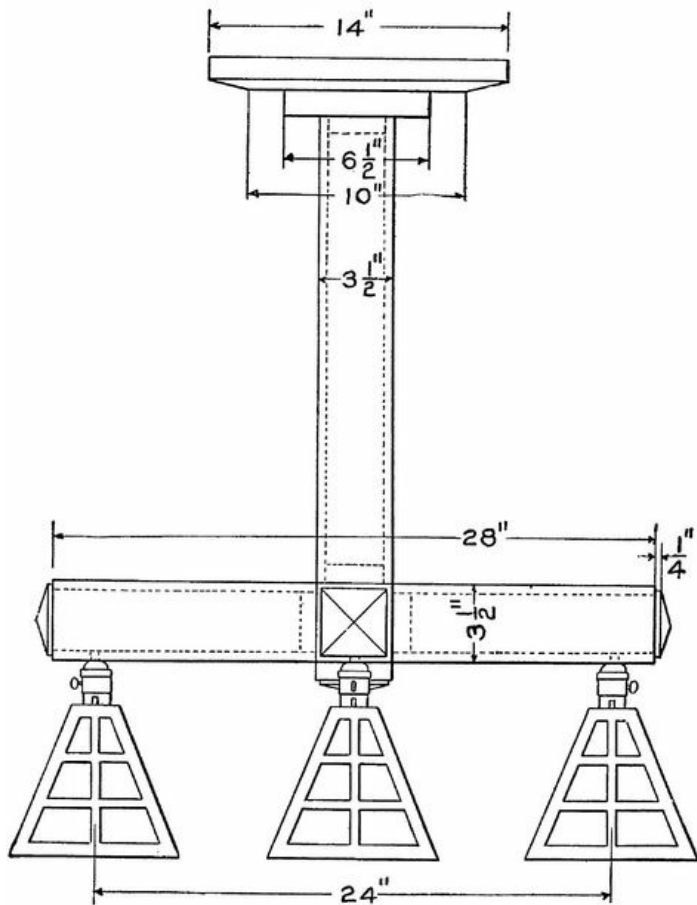
CHAPTER III

FOUR-LIGHT CHANDELIER

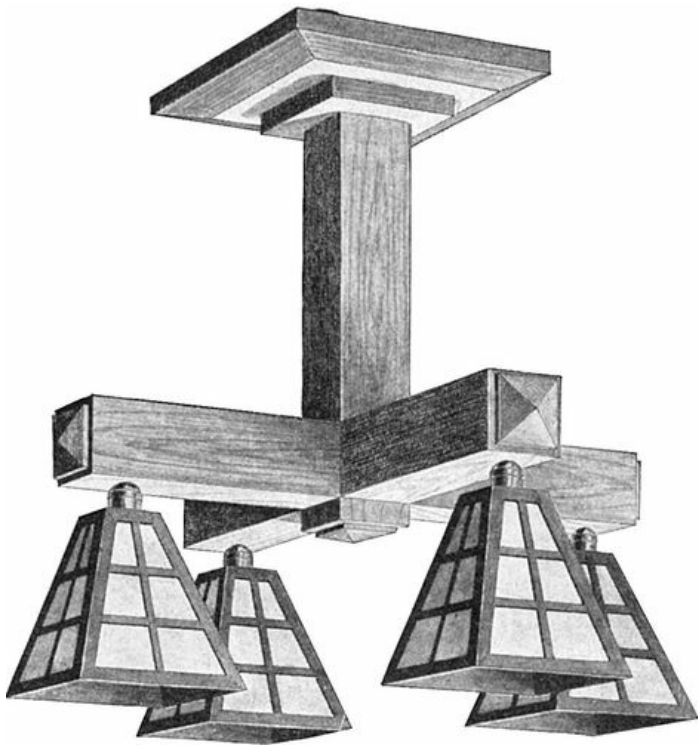
IN this mission chandelier we make use of the same design of shade as in the two-light portable lamp described in a previous chapter—shades of paper and cardboard and nothing more; and as for the wood work, let not its seeming massiveness frighten the reader from undertaking its construction, for the timbers are not solid—they are all built up of light boards nailed together.

When the woodwork is stained to match that of the room, and the shades are painted a dull black around the framework and lined with an appropriate color of paper, the effect is very attractive, even in daylight, which is often more than can be said of colored glass shades. If a warm green tone of paper is used, when illuminated, the upper portion will appear almost an orange, which will gradually taper off into the true green at the bottom of the shade. After ordinary green tissue paper is used for some time, this effect becomes more pronounced, due to some effect that the greater heat of the upper portion has on the paper.

The method of making this form of shade having been already described, nothing more need be said in this regard except to suggest that the same outside dimensions may be retained while the simple cross bars may be replaced with any simple design or pattern required. Occasionally a simple monogram is capable of being concealed in an artistic manner, or else the main motif of the stenciling used on the walls or frieze may be used as a model.



Details of Four-Light Chandelier Construction



Four-Light Chandelier

The woodwork should start with the ceiling plate, which is simply a square piece with beveled edges, upon which is fastened a square block. Procure from the mill two or three lengths of $\frac{1}{2}$ -in. dressed lumber. From the height of the ceiling, determine the necessary length of the center post, and then simply make a long narrow box, or rather square tube, $3\frac{1}{2}$ in. to the side, of this length. Then make another one, 28 in. long, so as to form two of the horizontal arms in one piece. Two shorter sections must then be made for the two remaining arms. It is absolutely imperative that all the ends of these wooden tubes be perfectly square, which will necessitate a liberal use of the steel try-square.

Next prepare four square blocks, 1 in. thick, of such a size as will exactly fit into the ends of the wooden tubes—that is about $2\frac{1}{2}$ in. Nail and glue one to the center of the ceiling plate. The remaining three are to be attached to the long horizontal section at its middle point and on three of its sides. The object of these blocks will now be apparent. Slip each of the short horizontal sections over a block and make it fast—this forms the horizontal cross. Now set the center post on the third block and make it fast.

Finally set the ceiling plate bottom side upon the bench, and then slip the upper end of the center post over the small block and secure it firmly. This completes the assembling of the

larger pieces. At all joints use glue and wire nails, the heads of which should be deeply set and puttied over. Procure a short piece of 3 by 3-in. stuff, and work up one end to a dull point as shown, after which saw off a slice so as to form a little block. Repeat the operation until five blocks have been made, four of which are then to be used in closing up the open ends of the four horizontal arms. These short sections of “end” wood render the deception quite complete, as the chandelier looks as though it were composed of solid timbers with specially shaped ends. The fifth block is to be attached at the center, below a second block of the same size as the main timbers.

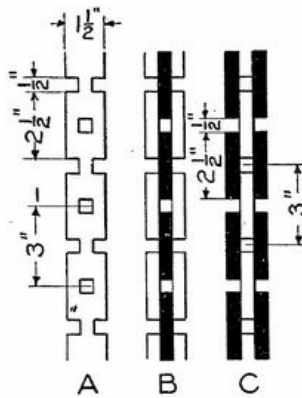
On account of the hollow nature of the structure, the wiring will be found a very simple matter, provided it is attended to before the end blocks are nailed in position permanently.



CHAPTER IV

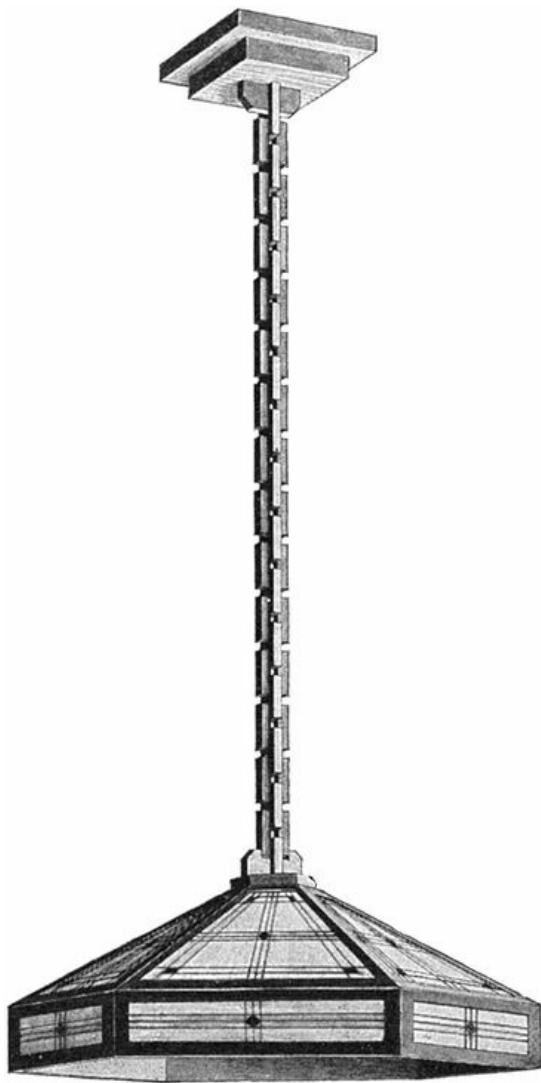
DINING-ROOM DOME

IN the construction of this dome, we introduce an entirely new feature—the wooden chain, the making of which will, at first sight, strike the reader as a very tedious and lengthy operation. But such is not the case, for our chain is merely an imitation one and is as stiff as a stick. Such chains are now quite largely used in mission-finish interiors, and may be used to hang almost any form of shade. The method of making them is as follows :



Detail of the Wooden Chain

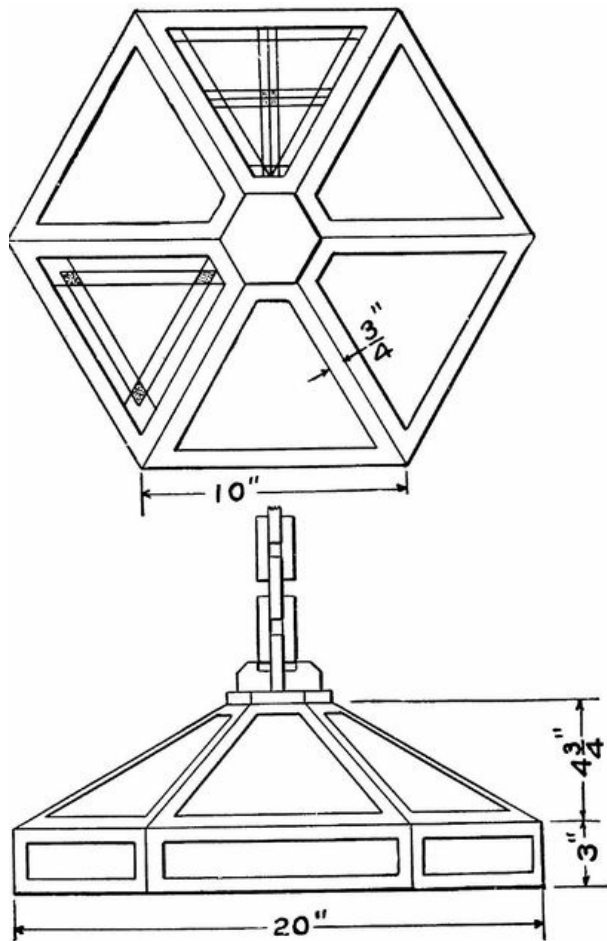
Plane up a strip of $\frac{1}{2}$ by $1\frac{1}{2}$ -in. stuff, as long as the required chain, and then cut $\frac{1}{2}$ -in. square holes every 3 in., as shown at A in the detail sketch, after which cut $\frac{1}{2}$ -in. square notches in the sides. Next plane up one or two $\frac{1}{2}$ -in. square strips, and cut them into $2\frac{1}{2}$ -in. lengths. Place the strip A on the bench and fasten on the little blocks in a row, each block occupying the space between two square holes, as indicated at B, where the attached blocks are shown black. Now turn the strip over and attach a similar row of blocks on the other side, and our chain is complete. Use glue and two wire nails for each block.



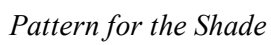
Dining-Room Dome

For the shade, a piece of cardboard measuring not less than 27 by 30 in. will be required. On this draw a circle of $11\frac{1}{2}$ -in. radius, and then step off six 10-in. chords around it—10 in. because our shade is 10 in. on each of its six sides. From each of the 10-in. points draw radial lines to the center, and then draw lines parallel to these at a distance of $\frac{3}{4}$ in. on each side. The lines of the six oblong side panels should now be drawn in, due care being taken that the ends of each panel are at exactly right angles with the 10-in. chord that forms its upper side. The dotted lines in the pattern drawing indicate those that are to be merely scored

with the knife for bending, and those that are drawn full are to be cut clear through. Do not attempt to cut too deep with the knife at the first passage, as the hand is apt to slip. The matter of scoring with the knife had better be tried on a piece of the cardboard, as the mark should be no deeper than is necessary to get a good sharp bend. Bend at all the different places before joining the two ends. This bending is best done by placing the line of bend directly over the sharp edge of a table or board and holding the portion on the table down with the straightedge. Any rough or torn edges should be smeared with glue and sandpapered when dry. When all is ready, connect the first and last of the triangular faces with glue. If the cardboard is inclined to be porous, give all the joints a preliminary coat of glue to act as a filler. The shade having assumed its dome shape, bend down the side panels and connect the adjoining edges of adjacent sections with passe-partout tape, which should also be applied to the connection already made. Go over the entire frame with the drop black. A hexagonal block is now to be prepared, and the six flaps at the top of the dome should be bent inward and fastened with glue and tacks to the under side of the hexagonal block. This completes the shade proper, with the exception of the colored paper triangular panels. If a leaded-glass effect is desired, select some simple design like that shown, and draw it out with the drop black, or still better, with aluminum paint. Among the better class of shades the grape design is often found, and if the reader is something of a water colorist, the decoration of this shade will afford an excellent opportunity for a little talent along that line. In any event, use paper that comes in flat sheets, as rolled paper never can be made to look real flat unless it is dampened and placed in a letter press. The penetration of the light almost always exceeds one's expectations, which makes it advisable to experiment a little before attempting anything elaborate. After the proper color has been obtained, the intensity can be altered by adding one or more thicknesses of paper, or else by the addition of a sheet of heavy drawing paper. For ordinary purposes, a three-light outlet should be procured and fastened to the under side of the hexagonal block, the wires running up the angles of the wooden chain. This completes a very attractive lamp.



Detail of Frame for Shade



CHAPTER V

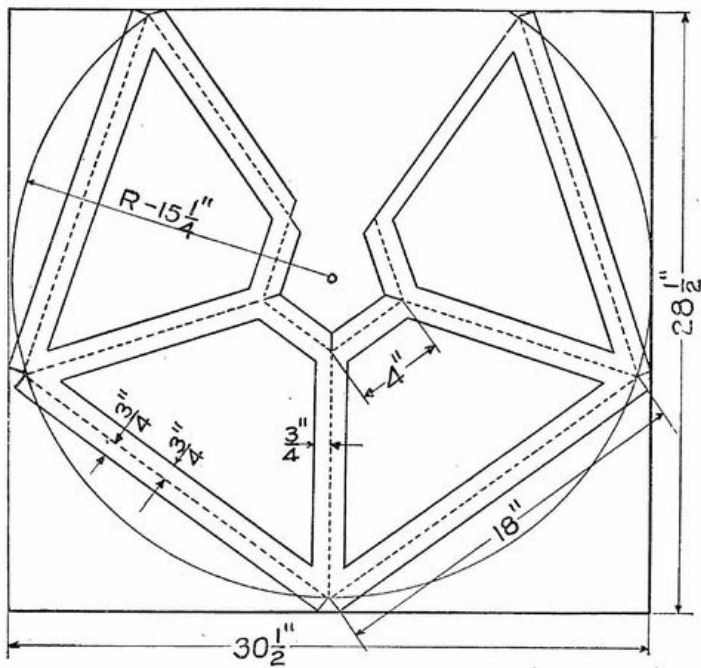
READING LAMP

WHILE the making of this lamp will require some little time and considerable care, there are no particularly difficult features or anything requiring the use of special tools, and the amateur craftsman, with his saw, plane and jack knife, will be able to work it out from start to finish, and that at a total cost of hardly one dollar.

Start the construction with the baseboard, taking particular care to get the “end” wood smooth and perfectly flat. Next prepare the two 5-in. blocks, and after trimming them up to size, accurately mark off the positions of the four mortises for the ends of the four corner posts. These four posts should now be smoothed up, cut to a length, and a tenon formed on each of the ends to fit the mortises already made. Four little mortises should then be cut in each of the posts to receive the ends of the eight crosspieces to which the small vertical slats are attached. Fit the top and bottom blocks and the four corner posts all together, and determine the exact length of these crosspieces, which should then be gotten out and tenoned to fit the mortises already made in the corner posts. If all these pieces fit properly, proceed with the putting together. Attach the lower block to the base with glue and screws, set in from below. Connect the corner posts with the crosspieces, and fit the latter to the lower block, after which the top block should be placed in position. Use glue and a few small wire nails at each connection. The three slats for each side should now be attached, using a large-headed brass nail at each end. On top of the whole, fit a block measuring $\frac{1}{2}$ in. thick by $3\frac{1}{2}$ in. square, and make the four bracket arms that support the shade, which are then to be fastened with glue and a screw in each one.

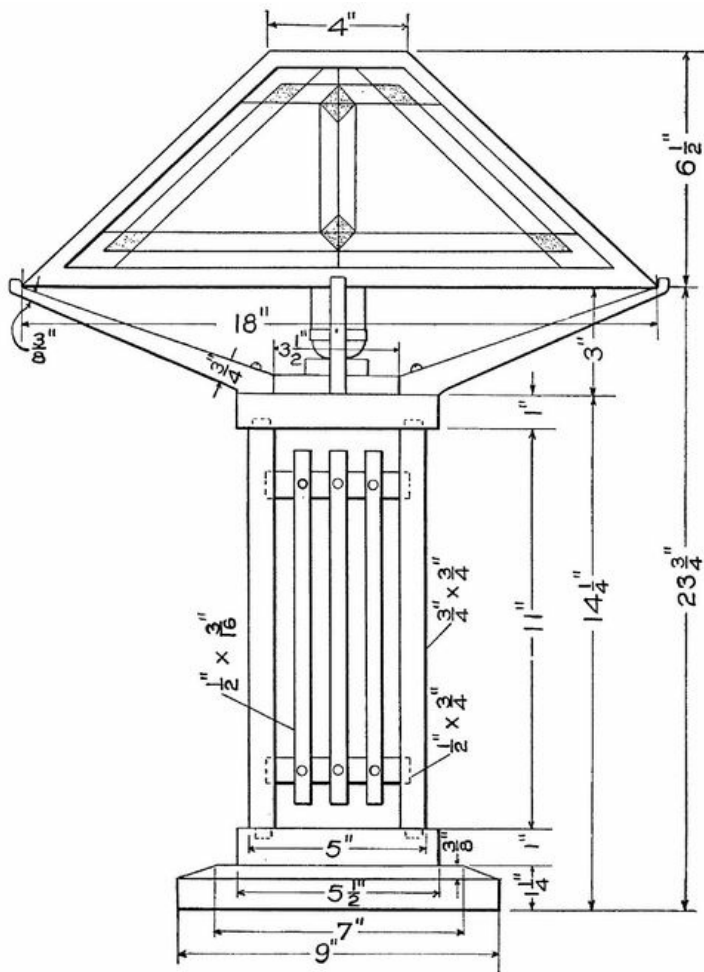


Electric Table Lamp



Layout for the Shade

In order to make the cardboard frame for the shade, it will be necessary to have a sheet measuring $28\frac{1}{2}$ by $30\frac{1}{2}$ in. The pattern is very simple, and after drawing the large circle on the cardboard and spacing off four chords of 18 in. each, the remaining lines can be drawn in a few moments. If the cardboard is rather light, the reader may exercise his ingenuity in working out a design requiring the use of several cross strips, which will materially stiffen the framework. As in the previous drawings, the dotted lines indicate those that are to be merely scored for bending, while the full lines are to be cut clear through. After giving all the angles a preliminary bend over the sharp edge of the table, connect the first and last sections with glue, holding the connection firmly with weights for an hour or so.



When set, bind this and the other three edges with passe-partout tape, after which bend the extra strips at the top and bottom inward to a horizontal position, and connect them with a paper fastener at each corner. After binding all the angle edges, paint a dull black. The colored paper should now be shaped up and receive whatever design is desired. As previously suggested, a heavy drawing paper with the design worked out in water colors presents an excellent opportunity for artistic treatment. On a large surface, such as a side of this shade, always use paper that comes in sheets, so that there will be no unevenness. One or more lights, as desired, may be used, the cord from which should be run down the center and out to one side through a groove in the bottom of the base.

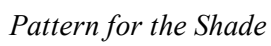


CHAPTER VI

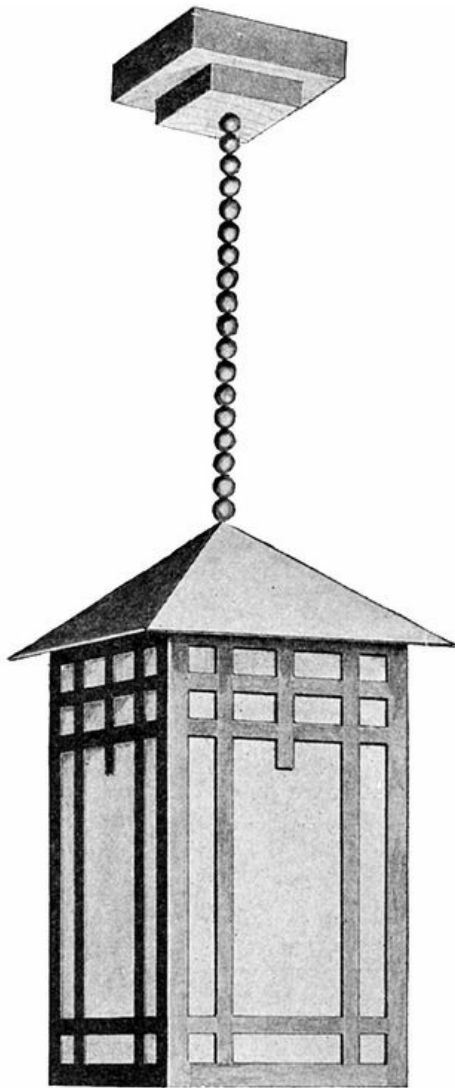
PARLOR OR DEN LANTERN

OF all the various forms of lamps, probably the cardboard lantern gives the greatest decorative effect in proportion to the amount of labor. As these lanterns may be made in an almost endless variety of shapes, we will only describe two or three, after which the reader should be able without instruction to make other forms to suit his own fancy.

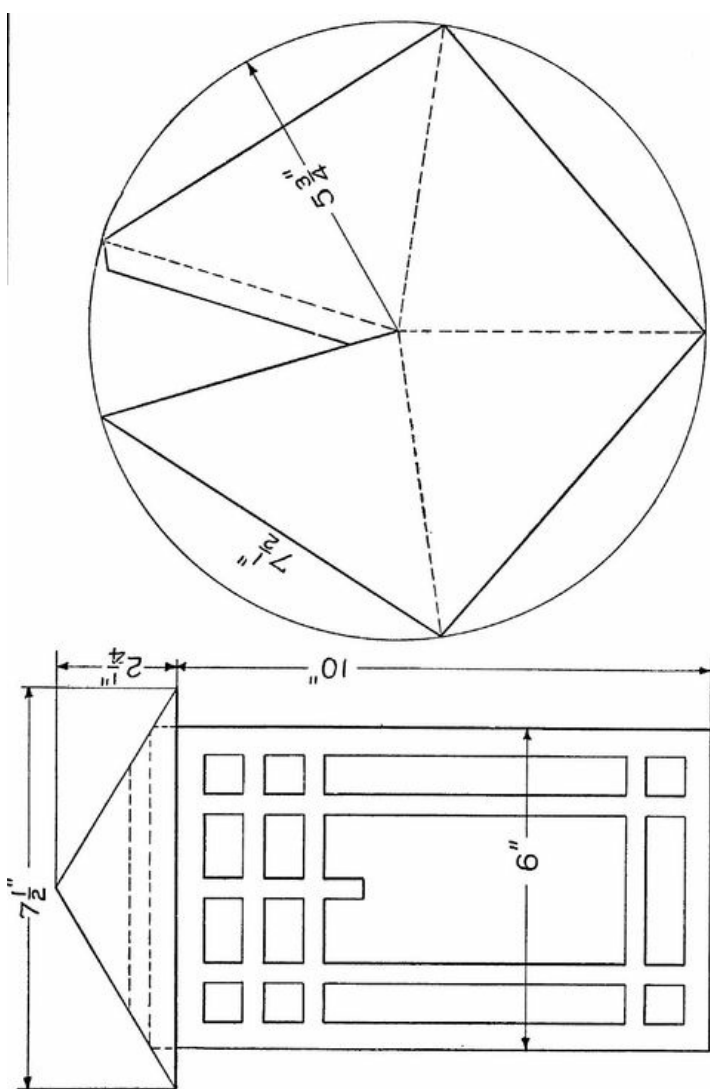
The material need not be very heavy. Four-ply bristol board is almost heavy enough. Lay out the pattern for one of the sides on a piece of heavy, flat paper, and then cut it out with a sharp knife. Mark this pattern off on the cardboard sheet with a sharp pencil, shifting the pattern over one space and marking off again, until all four sides are drawn in a continuous row, as shown. Each section or side should have an extra strip along the bottom, for stiffening, and a flap at the top, for making the connection with the slanting top. Before bending the framework, attach the colored paper, which may be all of the same color, or of various colors in different openings. There are great possibilities for artistic combinations, and a little preliminary experimenting will not be amiss. The bends, which are indicated by the dotted lines, should all be made over the sharp edge of a table or board. Connect the first and last sections with glue or paper fasteners, covering the corner edge with passe-partout tape. Then bend the extra strips at the bottom inward and connect them at each corner with a paper fastener.



Pattern for the Shade



Parlor or Den Lantern



Pattern for the Shade and Cover

The top is made in the following manner: On a second piece of cardboard draw a circle $5\frac{3}{4}$ in. in diameter, and space off four chords of $7\frac{1}{2}$ in. each, as shown. Cut out and bend the pattern into shape and connect the first and last sections.

Finally bend in the flaps at the top of each side of the lantern to an angle corresponding with the slope of the top, which is now fitted on. With one hand inside, put in three or more paper fasteners on each side through the top and flap, clinching them inside, and the lantern is complete. An 8-cp. lamp is strong enough for ordinary purposes. The cord may be left plain,

or large wooden beads, or even small spools (such as silk comes on), painted black, may be strung on it.



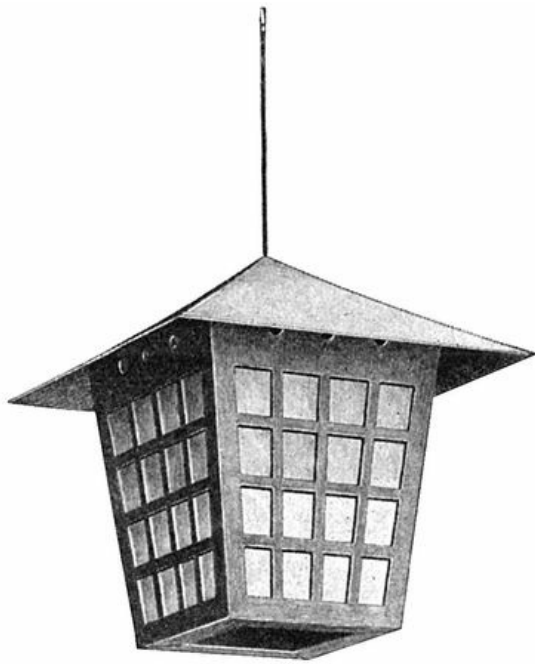
CHAPTER VII

LANTERN

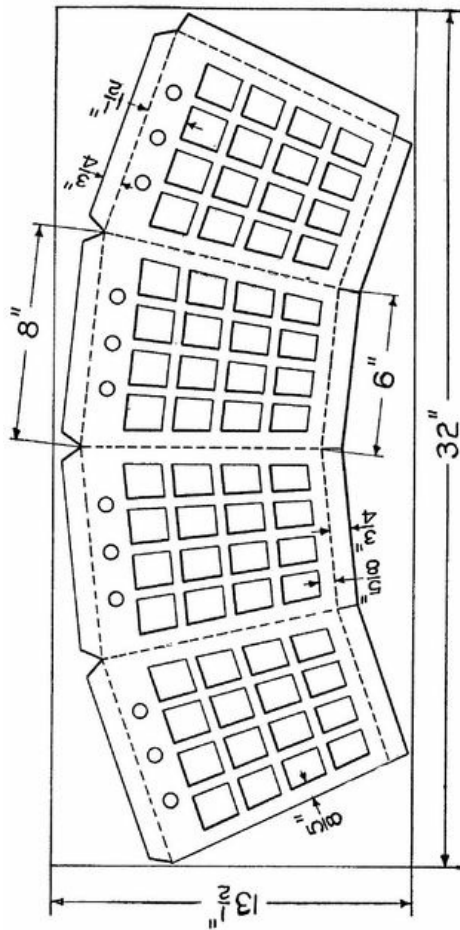
ALTHOUGH there is no outward similarity between this lantern and the one described in Chapter VI, the method of construction is much the same. As previously mentioned, do not attempt to work with too heavy a grade of cardboard, particularly for lanterns. Carefully lay out the pattern for one side on a piece of heavy, flat paper, which should then be cut out with a sharp knife. Mark this off four times on the large sheet of cardboard, thus obtaining the pattern for all four sides in a continuous row as shown. Cut out the various openings with a sharp knife, and then score along the dotted lines for bending. Do all the knife work from one side and over a hardwood board, in order that sharp, clean-cut edges may be obtained.

When all the cutting has been done, paste the colored paper on what will be the inside, and then carefully bend into shape, connecting the first and last sections by means of the extra strip, using glue and passe-partout tape. The extra strips at the bottom should now be bent into a horizontal position and a paper fastener put in at each of the four overlapping corners.

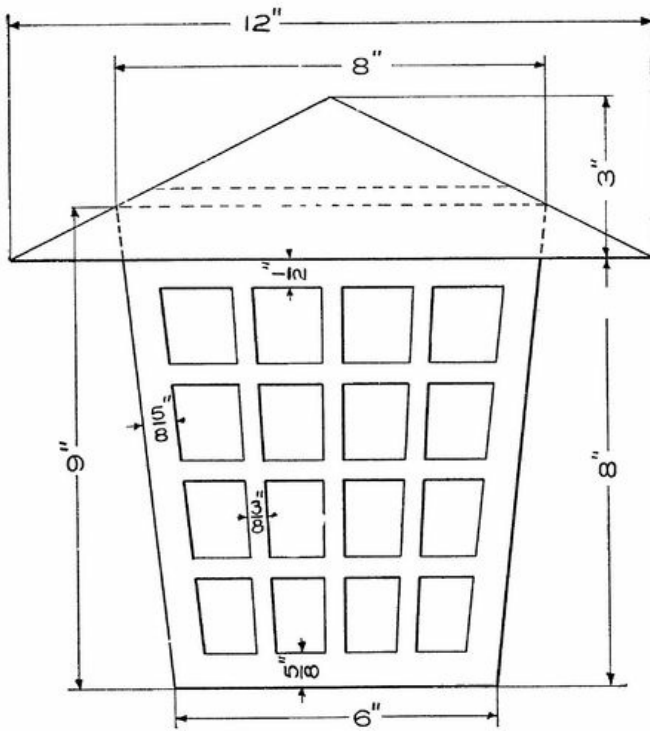
The method of laying out the top is very simple. Draw a circle of 9-in. radius and space off four 12-in. chords. Draw a radial line from each of the points on the circumference, and the pattern is ready to cut. Bend into shape, and make the connection with glue and passe-partout tape as usual. The extra strip at the top of each of the four sides should now be bent into an angle corresponding to the slope of the top, which is then to be placed in position and attached with glue and paper fasteners.



Lantern Complete

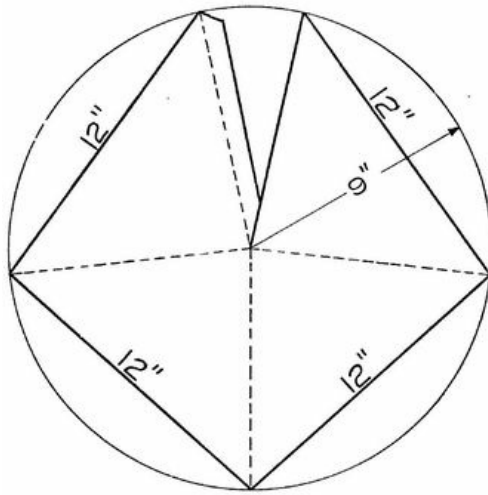


Detail of the Sides



General Dimensions

Ordinarily such a lantern is hung high up and is operated by means of a wall switch, so that it will only be necessary to make a small hole in the top and run the cord through, allowing the lantern to hang on top of the socket. If it is desired to turn off and on directly at the lantern, a socket operated by a little hanging chain may be used, or else a 1½-in. hole may be cut in the top and the shade attached to the socket at a point just below the socket key, by means of four little strips of tin.



Layout for the Top



CHAPTER VIII

ONE-LIGHT PORTABLE

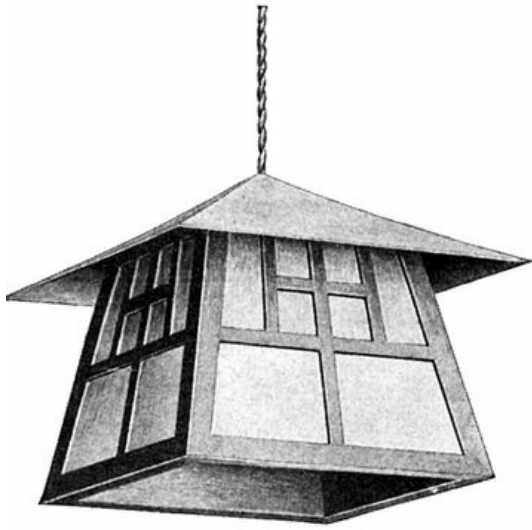
THE construction of the shade for this little portable lamp is so simple that it is hardly necessary to give any pattern for the cardboard frame. All that is necessary is to lay out the four sides in a row on a sheet of cardboard, allowing an extra strip of $\frac{1}{2}$ in. at the top and bottom. After the shade is bent into the square form, these stiffening strips are bent inward and fastened where they overlap at the corners with paper fasteners. This form of construction, when properly carried out, gives the shade the rigidity of a cardboard box. While the simple pattern shown may savor somewhat of the sentimental, it is quite attractive when the cross lines are painted black on a heavy drawing paper and the heart is colored an appropriate shade of red. Cardboard of about $\frac{1}{16}$ in. in thickness will be found amply heavy. After binding the edges with passe-partout tape, the entire frame should be painted a dull black.

The construction of the stand should commence with the baseboard, which, after having been trimmed off squarely and to size, should be uniformly beveled on all four edges. A $\frac{1}{4}$ -in. block is then to be fastened on the under side at each corner. The four square uprights are now to be planed up smoothly and cut to exactly the same length. Two blocks measuring $2\frac{1}{2}$ in. square are now to be gotten out, and four notches cut in each to receive the ends of the vertical pieces, all of which will have to be attended to with some care in order to avoid any open seams. The top block is next in order, after which the small block in the center should be prepared and receive a hole in its center for the cord to pass through. The putting together may now be proceeded with. The two top blocks should be first glued together, and then the lower notched block fastened to the base. Place two diametrically opposite vertical sticks in position and secure them to the blocks with glue and a nail at each end. Place the small center block in position and then the remaining two verticals. To cover the nail heads, procure a dozen upholsterer's nails with large brass or copper heads and drive them in as shown. The projection on the end of the socket should be tightly fitted into the top block, and the cord passed downward through the base and out at one side. Prepare four strips of brass, or galvanized iron painted a dull black, and after bending their upper ends so as to support the shade, fasten them onto the top block with screws.

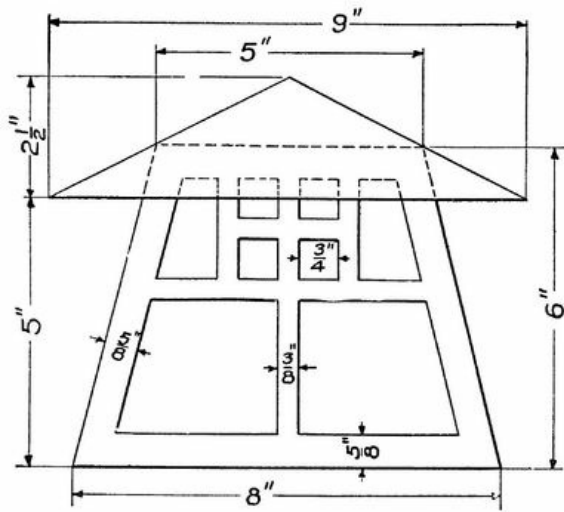
CHAPTER IX

SHADE FOR DROP LIGHT

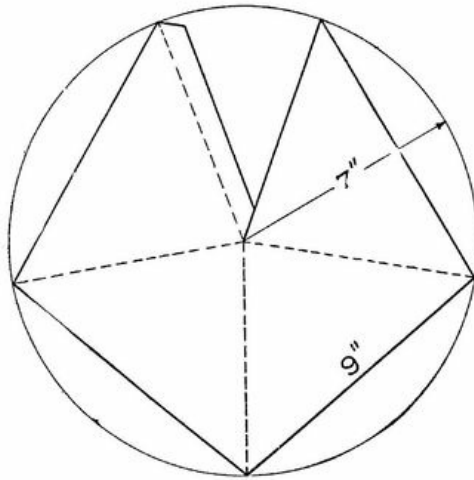
THIS is a shade of simple yet rather attractive pattern that may be used on any ordinary drop light, and is also well adapted for use in a mission chandelier, one of which will be next described. The same outside and general dimensions may be retained, while any desired design may be substituted for the simple crossbars shown. A monogram, college initial or some heraldic device often may be worked up in an artistic manner. Accurately lay out the design decided upon on a sheet of rather heavy flat paper, and after cutting it out with a sharp knife mark it off four times on the sheet of cardboard, which will have to measure at least 12 by 28 in. Proceed rather slowly at first with the cutting out of the cardboard, so there will be no danger of the knife slipping. Any frayed or torn edges should be smeared with glue and sandpapered smooth when dry. All the bends are indicated by dotted lines, which should be scored with the knife on the outside, but for no greater depth than will allow a good sharp bend. Attach the colored paper with mucilage, and then bend into shape, connecting the first and last sections by means of glue applied to the extra strip shown on the left-hand section. The extra strips on the four lower edges should all be bent inward and connected at the overlapping corners with paper fasteners. The pattern for the top, which is next in order, should now be marked off and cut. Bend into shape and fasten the first and last sections with glue applied to the extra strip shown. All bends should finally be bound with passe-partout tape. Bend the extra strips at the tops of the four sides inward to an angle corresponding to the slope of the top, and then fasten on the top by means of paper fasteners and glue. Paint the entire framework and top a dull black. If the light is not controlled by a wall switch and only an ordinary socket is available, a 1½-in. hole will have to be cut in the top of the shade in order that the socket may protrude from the operating key upward. Four small strips of tin should be provided and one end of each clinched through the top of the shade and the other end bent upward so as to fit along the socket. The shade is then attached by binding the four upward projecting ends to the socket with string or wire.



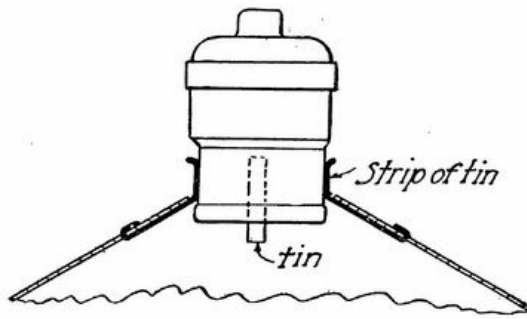
Shade



General Dimensions



Pattern for the Top



One Method of Attaching Shade to Socket

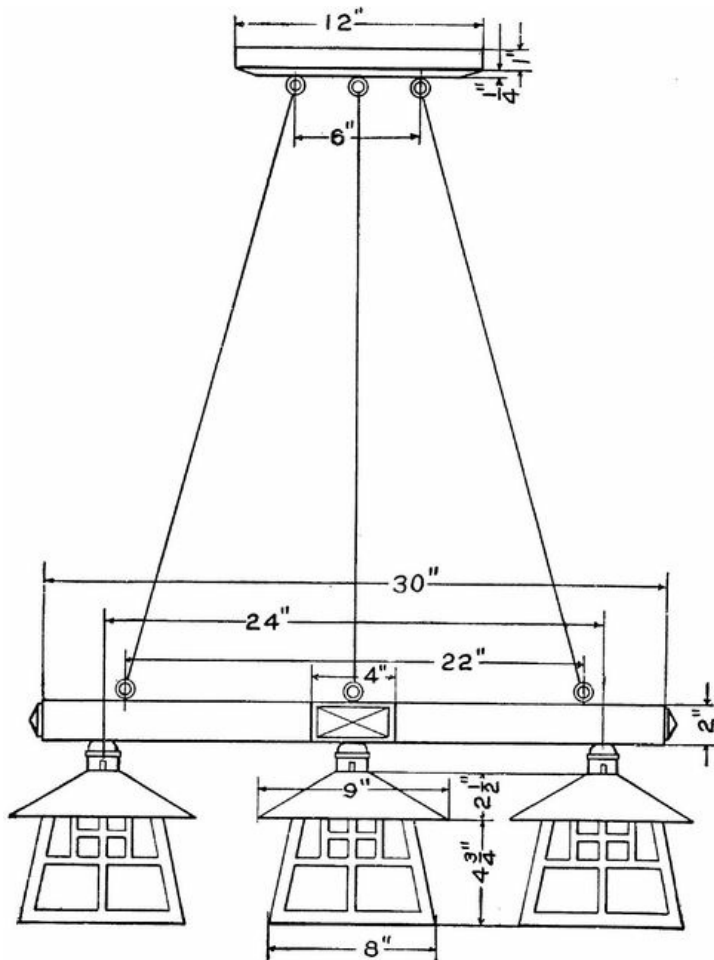


CHAPTER X

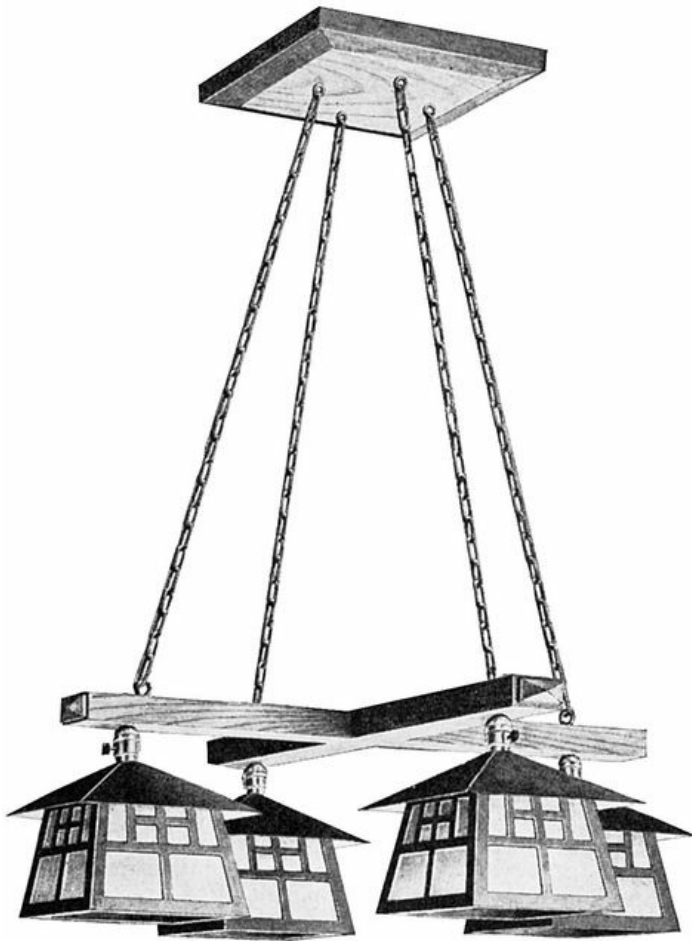
FOUR-LIGHT, CHAIN-HUNG CHANDELIER

AT the first glance this mission chandelier will strike the reader as a rather elaborate undertaking. It will, of course, necessitate some little time, but there is really nothing about it that is difficult or that requires the use of special tools. The shades used are of the simple pattern for the drop light described in Chapter IX, and consist of only cardboard and paper. The chains can be had at any hardware store and may be connected to the wood with screw eyes or staples. The woodwork consists of two pieces of dressed 2 by 4-in. pine in the form of a cross, the connection between the two being made by cross lapping, that is, notching out each piece to one-half its thickness at the place of crossing. This connection, however, should not be undertaken until the two pieces have been planed up smoothly and trimmed off on their ends to the exact length. When all the cutting has been done, apply glue and set in a few screws from the upper side. The shaping up of the four ends of the cross, to the form of a dull point as shown, means some little labor, which can only be avoided by sawing off each end perfectly square and then tacking on a small pyramid-shaped block, a procedure which is a rather poor imitation, at best, of the natural end wood.

Before boring the holes through each end for the wires from the sockets, run the ½-in. bit in for a short distance, so that the ½-in. projection found on the top of all sockets will go clear into the wood. The hole for the wires should be about ¼ in. in diameter, and is to be plugged up tightly from above with a wooden peg after the wires are in place so that the socket will be held firmly.



General Dimensions



Four-Light Chandelier

The ceiling plate consists of but one piece of wood, the edges of which are rather liberally beveled. From the height of the ceiling determine the necessary length of chain, and then proceed with fastening them in place. If the reader is not familiar with the simple wiring necessary, it would be well to have the local electrician attend to this feature and at the same time make the ceiling connection. All this, however, should be attended to before the shades are attached to the sockets.



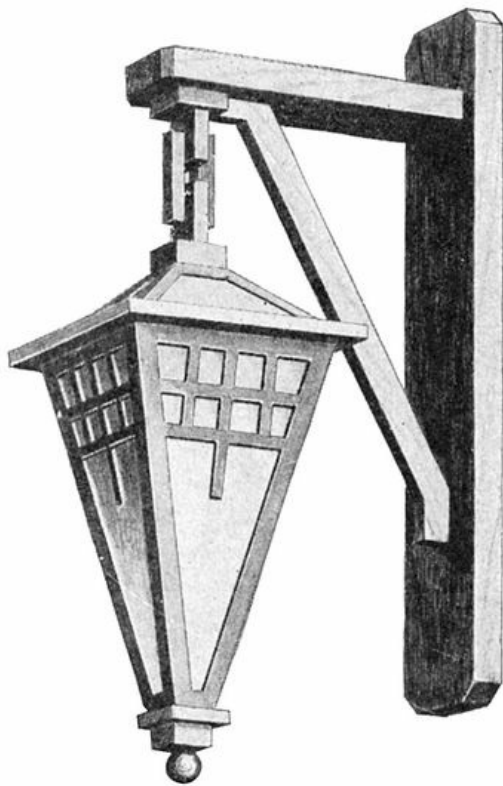
CHAPTER XI

ONE-LIGHT BRACKET

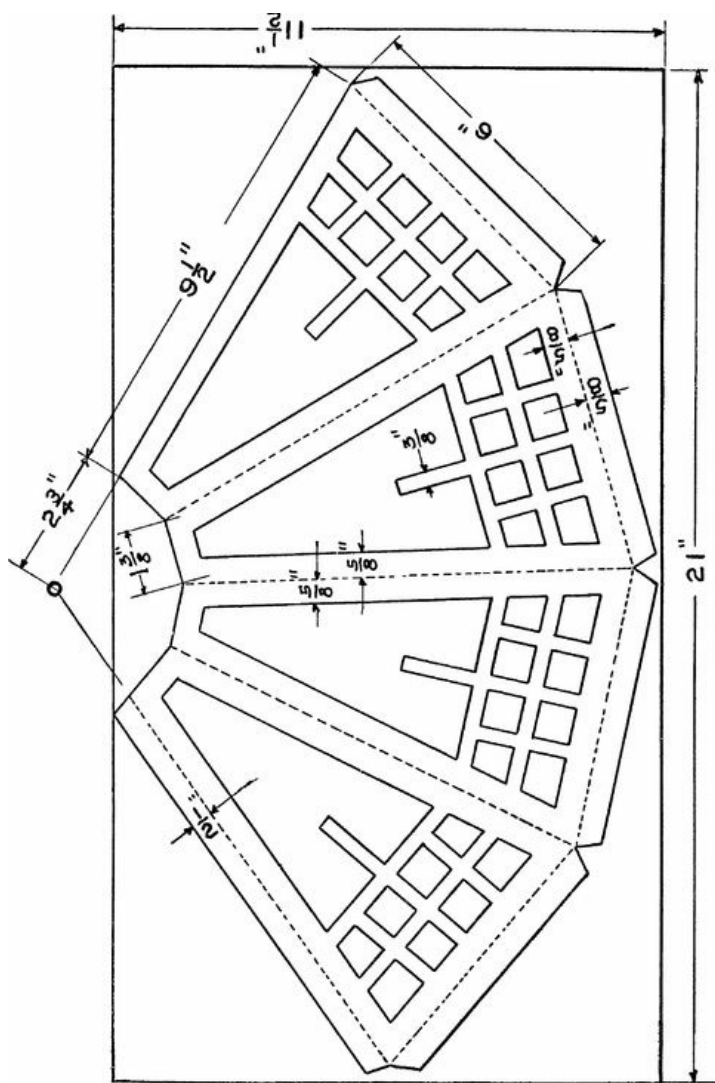
WHILE the method of constructing this bracket lamp is along the same lines as those previously described, its successful completion will largely depend on the care and accuracy with which the various pieces are laid out. There are quite a number of small pieces to be fitted and some rather sharp angles, all of which necessitate considerable care. When completed, the lamp is very attractive and will well repay the labor expended. Aside from the electric light and socket, the cost is practically nothing.

The first thing to do is to cut out the pattern for the lower portion of the shade on a piece of heavy paper, which should then be marked off four times on a large piece of cardboard so as to obtain the four sides complete in one piece. In the pattern drawings the dotted lines indicate those that are to be merely scored with the knife for bending, and the full lines those that are to be cut clear through. After all the cutting has been done, paste on the colored paper, which, if desired, may be of one color for the eight small openings and another for the lower triangular portion. The cardboard should now be bent into shape and the first and last sections connected by means of the extra strip provided for that purpose. The bending can be best done over the sharp edge of a table or board by holding the cardboard down tightly with a straightedge while the projecting portion is gradually bent along the entire length. Passe-partout tape should be applied to the connecting edge and also to the three remaining edges. Procure a piece of light board, 7 in. square, and cut a 4-in. square hole in the center. Now bend the extra strips at the top inward and glue them to the under side of the board. To hold this connection firmly while the glue is setting, push in a few thumb tacks from the inside through the cardboard into the wood. The lower end is closed with a couple of little blocks and ornamented with a wooden ball such as children play with on the end of a rubber band. This completes the lower portion of the shade, which should now be painted a dull black and set aside. In laying out the pattern for the upper portion of the shade, draw a circle of $4\frac{1}{2}$ -in. radius, and then space off four 6-in. chords, after which the remaining lines can be drawn in in a few minutes. Bend this into shape and bind the four corner edges with passe-partout tape. Bend the points at the top inward and fasten them to the under side of the small block. The extra strips along the lower edges should now be bent outward, so that they will lie flat on the upper side of the 7-in. board, to which they are to be later attached with thumb tacks. The wooden bracket and the small connecting blocks (supposed to represent a link of a wooden chain) are all so clearly shown in the drawings that the reader will have no difficulty in working them out. After the bracket is complete with the upper portion of the shade fastened in place, the cord should be run up through the center and along the top of the bracket arm. Screw the globe into the socket and adjust the lower portion of the shade, and our lamp is complete.

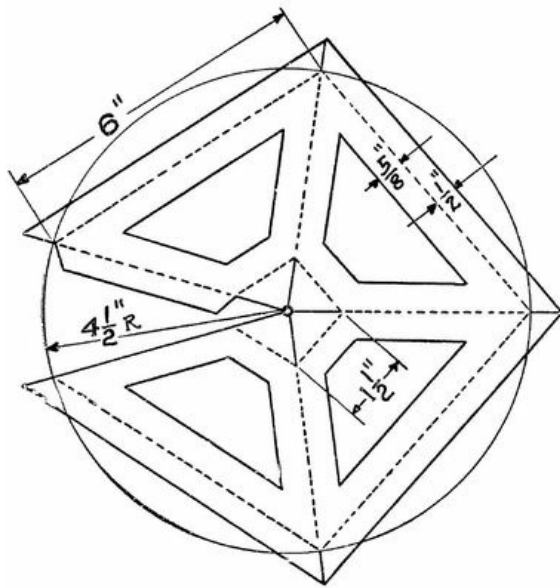




One-Light Bracket



Pattern for the Shade



Pattern for Top

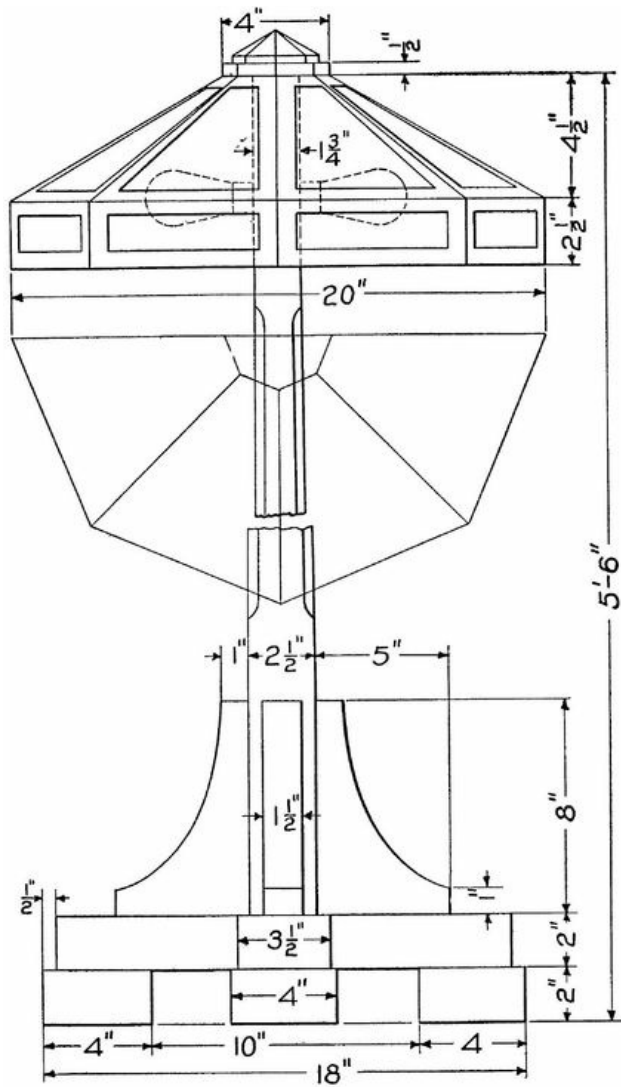


CHAPTER XII

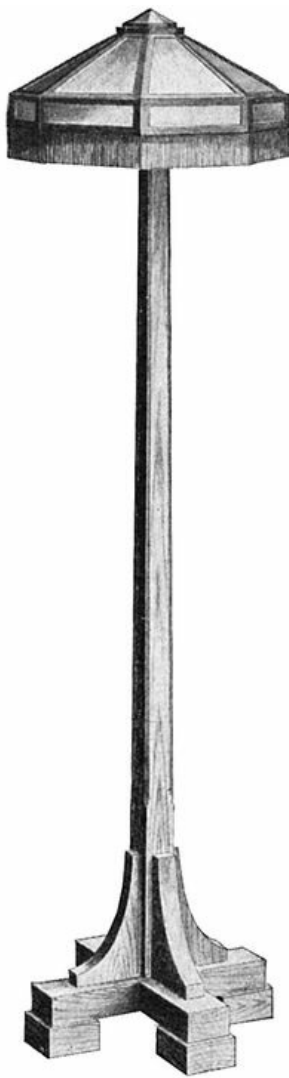
PIANO LAMP

THE piano lamp is by no means limited in its usefulness to the reading of music. Placed alongside of the morris chair it furnishes an excellent light for reading, and also may be used to advantage in connection with a card table or sewing stand, both of which are usually too small to conveniently hold a lamp.

The woodwork is a trifle more elaborate than in any of the lamps thus far described, but this need not deter the reader from undertaking its construction, as the carpentry involved is of the very simplest nature—in fact, not a single mortise or tenon is employed. Commence the construction with the two crosspieces for the base, which, after having been trimmed off squarely and to length, should be halved out to one-half their thickness where they cross one another, so that when fitted together the thickness of the connection will be but 2 in. The four blocks for the feet should now be trimmed up perfectly square and smooth on their ends, after which all the pieces thus far made should be put together. Use glue at all joints, supplementing it with a few long slender screws set in from underneath. The center post should now be taken up and planed to a uniform taper from a point about 10 in. from the lower end clear to the top, after which the corners are to be beveled off in the manner shown. The four angle brackets are now to be sawn out and trimmed up to a perfect right angle, after which the center post should be placed in position and the brackets attached by means of glue and screws. In the matter of staining, the other furnishings in the room should be considered.



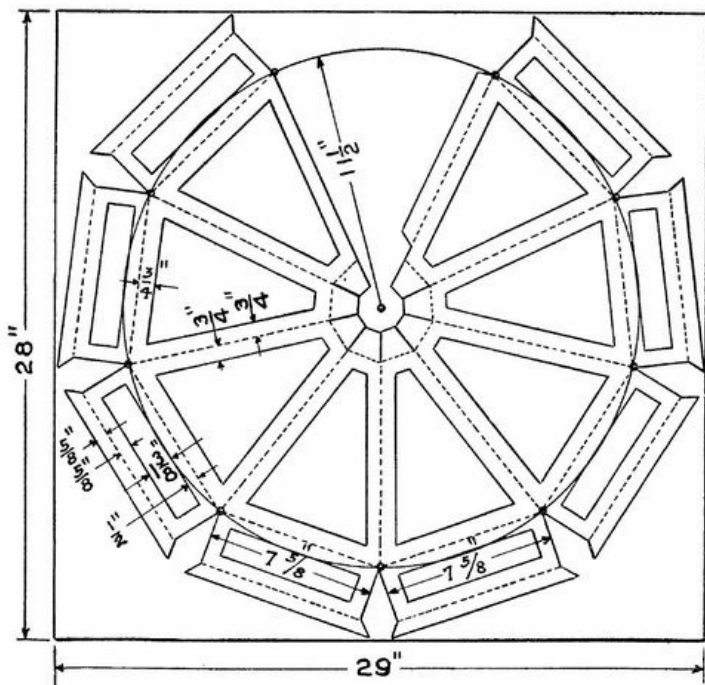
Details of Piano Lamp



Piano Lamp

The shade is of octagonal form and will necessitate a sheet of cardboard about 28 by 29 in. While possibly not the quickest, the most accurate way to lay out the pattern is to draw it directly on the cardboard. Draw a circle of $11\frac{1}{2}$ -in. radius, and space off eight chords, $7\frac{5}{8}$ in. long, around the circumference, and from each of the nine points (indicated by small circles on the drawing) draw radial lines to the center. On the outer side of each chord lay out the lines for the small side panels, and on the inner side and also along the radial lines mark off the $\frac{3}{4}$ -in. strips that form the borders of the triangular spaces that form the sloping

portion of the shade. Having drawn the complete pattern as shown, score with the knife along the dotted lines so that a good sharp bend may be made, and then cut the remaining lines clear through. The bending should be done over the sharp edge of a table or board. First bend the strips along the lower edges of the side panels to a right angle, and then bend the panels downward to almost a right angle. The frame should next be given a slight bend along each of the radial lines, after which the first and last sections may be connected by means of the extra strip, to which a good coat of glue is to be applied. The pointed ends shown at each outer corner of the side panels will now be found to lie in a horizontal position and to overlap. Set in a paper fastener at each of these points, and then apply passe-partout tape to the eight vertical and radial bends. A small octagonal block should now be prepared, and after bending in the eight tabs at the top of the shade, this block should be secured in place by means of glue and tacks set in from the inside. Give the entire framework a coat of dull black and when dry proceed with the colored paper lining. Before attaching the shade in position, the porcelain receptacles for the lights should be attached to the center post. Two or four lights, as desired, may be used. The cord should be amply long and connect with an outlet in the side wall, where the controlling switch may be placed. If this point is not convenient, a small switch may be fastened to the post well up toward the lights.



Pattern for Shade

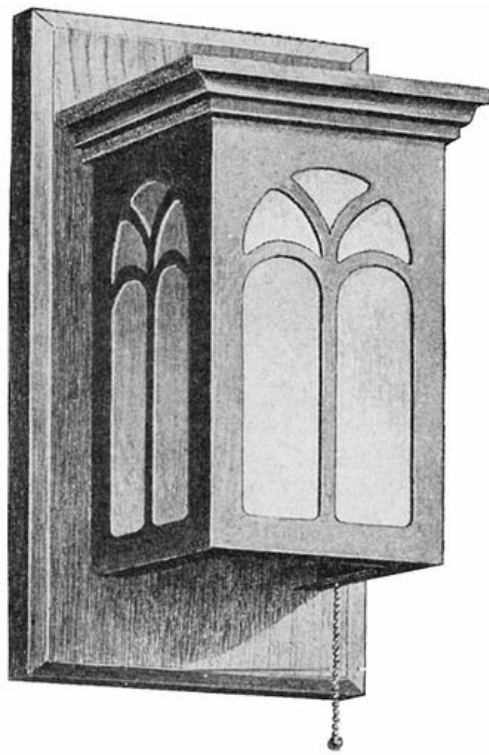
CHAPTER XIII

WALL LAMP

THIS wall lamp can be used to advantage in almost any place such as a hall, den or porch, where a rather subdued light is desired. A wooden mantel with one of these lamps on either side is a delightful combination.

The construction, which is very simple, should start with the preparation of the back board, which requires no further treatment than that of trimming up square and beveling on all edges. The top board should be about $1\frac{3}{8}$ in. thick, with a $\frac{3}{4}$ -in. molding running around the front and two sides. This leaves a portion of the board plain, which portion extends downward into the shade, and to which the shade is attached. Should the reader be supplied with the necessary tools, the entire top may, of course, be made in one piece. Secure the top of the back with glue and screws set in from behind, taking due care that the two pieces form an exact right angle. The pattern of one side should now be marked out on a piece of heavy flat paper. Cut this out with a sharp knife and then transfer it to the sheet of cardboard, on which it is to be marked off three times as shown.

All of the curves are portions of circles, the centers of which are indicated by small circles on the middle section. It will be noted that all corners are rounded out. Cut clear through along the full lines, and score with the knife along the dotted lines to a depth that will permit of a sharp bend. Bend into shape along the vertical lines, turning the strip at each end so that it will lie flat against the back board. The extra strips at the bottom should now be bent inward to a horizontal position and connected with paper fasteners at the overlapping corners. Place the shade in position and attach to the top and back board with glue and a few small tacks inside. Passe-partout all the bends, and then paint the entire frame a dull black. The woodwork should be stained to match the surrounding furnishings and rubbed to a dull finish with wax. Three pieces of colored paper should now be selected, and, after applying a little glue or mucilage to the inside of the frame, slipped inside. This completes our lamp with the exception of the socket, which, preferably, should be of the type operated with a small pull chain.



Wall Lamp

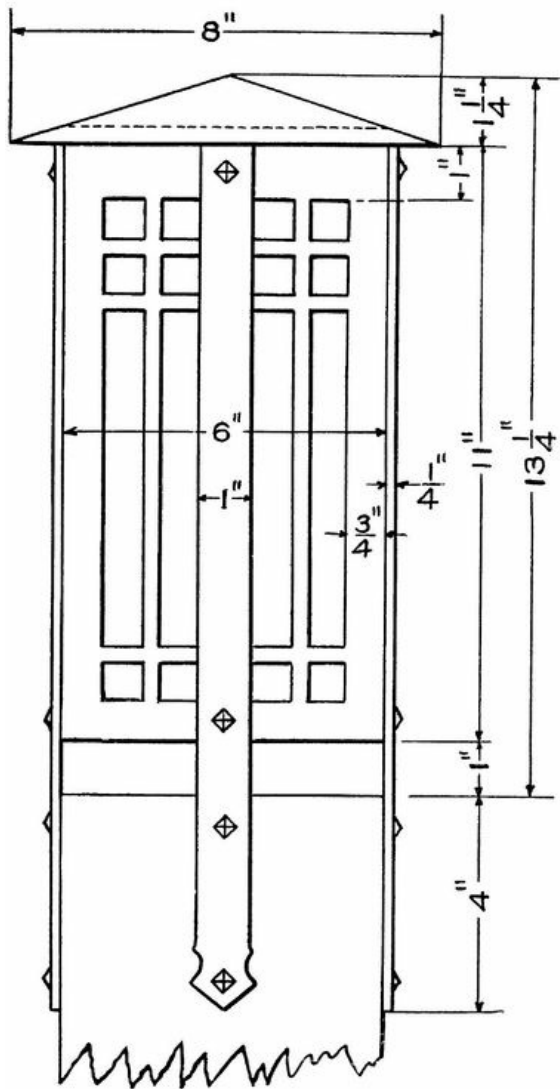


CHAPTER XIV

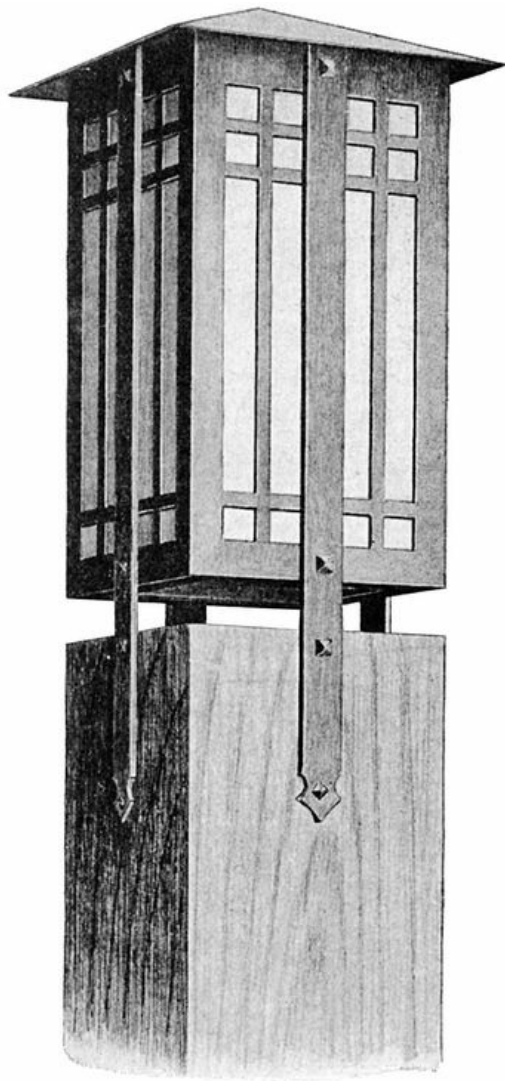
NEWEL POST LAMP

THE old-fashioned turned newel post is no longer used in the modern home with its arts-and-crafts atmosphere. The square post surmounted by an attractive lamp is much more appropriate. Our design is for the usual 6-in. post, but as the lines are all rectangular and quite simple, the reader will experience no difficulty in adapting the design to suit any particular post.

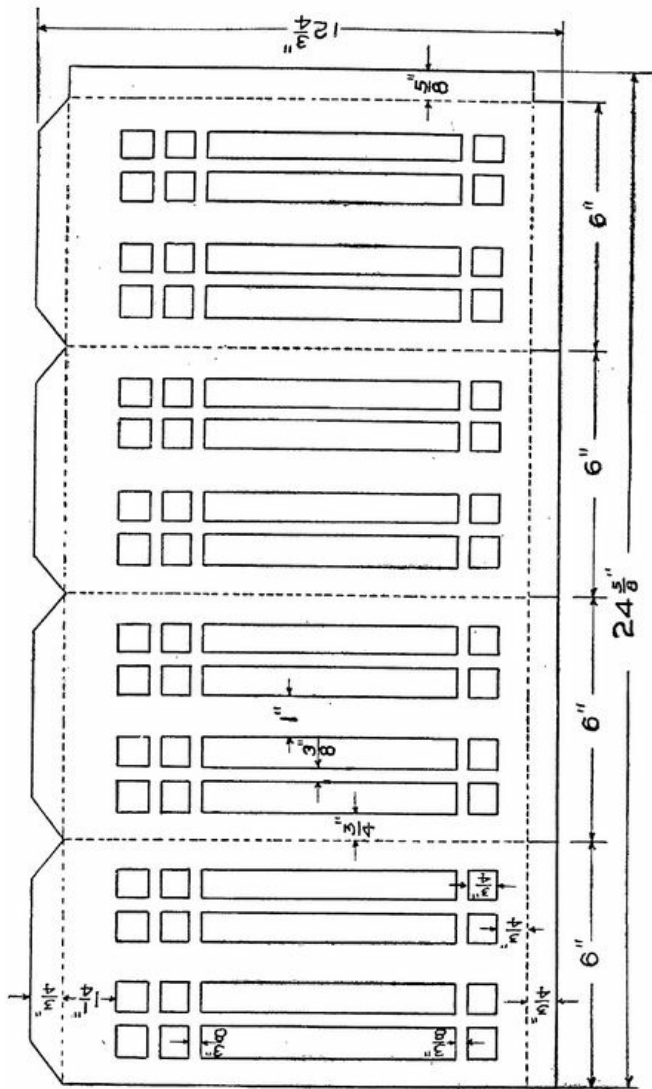
Having procured a sheet of good tough cardboard, carefully mark out the pattern shown in the working drawing, which makes provision for extra strips at the top and bottom of each section. There being quite a number of openings, considerable care must be exercised in cutting, in order that the hand may not slip and sever an intervening crossbar. See that all corners are square and sharply cut. Having cut the various openings, score along the dotted lines with the knife so that a good sharp bend may be made. Give the shade a preliminary bend and then flatten out again. Now prepare the four strips that hold the lamp to the post, and fasten them with glue to the outside of the cardboard and also with a few tacks set in from the inside. These strips should be preferably of hardwood.



Details of Lamp



Lamp on Post



Pattern for Shade

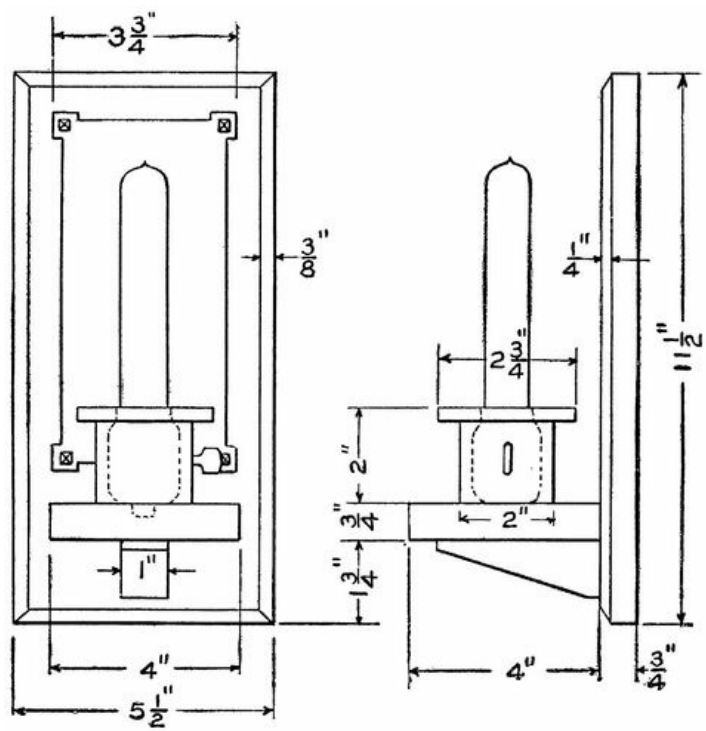
The colored paper is now to be attached, and the shade bent into form, and the first and last sections connected. Passe-partout tape should be applied to all four corner edges. Bend the strips along the bottom inward to a horizontal position and connect them at the overlapping corners with paper fasteners. This very materially stiffens the shade. The top is now to be marked out, which is accomplished by drawing a circle of 5 3/4-in. radius and spacing off four 8-in. chords around its circumference. Bend into shape, passe-partout the bends, and fit in

Pattern for Top

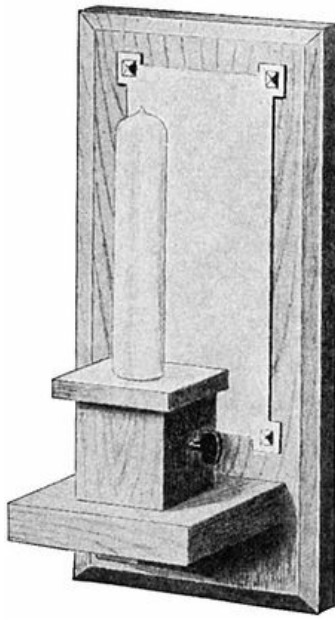
CHAPTER XV

ELECTRIC CANDLE SCONCE

THERE is a quaint attractiveness about the old candle sconce that is had in no other form of light. Electric candles of tubular form are now supplied in frosted and milk glass, rendering it possible to make a very attractive little fixture. One on either side of a toilet table presents a very attractive appearance both night and day.



Detail of Candle Sconce



Sconce

The back board should be prepared first and all four edges uniformly beveled. Next square up the shelf piece, taking particular care to have the edges perfectly square and the end wood smooth. After making the little corner bracket that is to be set underneath the shelf, the latter should be attached to the back board, using glue and a couple of screws set in from behind, after which the bracket may be placed. To completely hide the ordinary brass socket, a small 2-in. box of thin wood should be built around it, the box being then fastened on the top of the shelf board and the wires run out through the back board. The top of this box should now be closed with a $2\frac{3}{4}$ -in. square of $\frac{1}{4}$ -in. stuff with a hole in the center to allow the lamp to be screwed into the socket. Stain an appropriate color, and rub with wax to a dull satin finish. The reflector should be cut from a sheet of flat brass or copper and then worked up to a good polish and lacquered. If the regular lacquer is not at hand, a thin application of shellac varnish will answer quite well, although it is a rather difficult substance to apply uniformly.

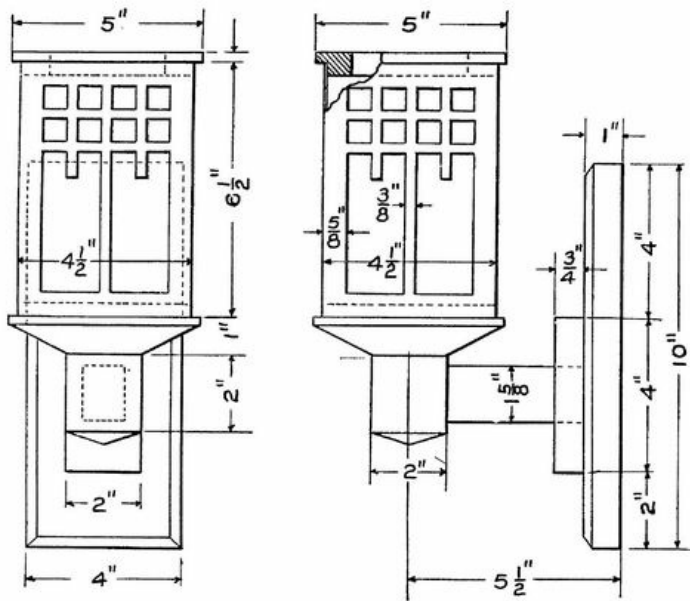


CHAPTER XVI

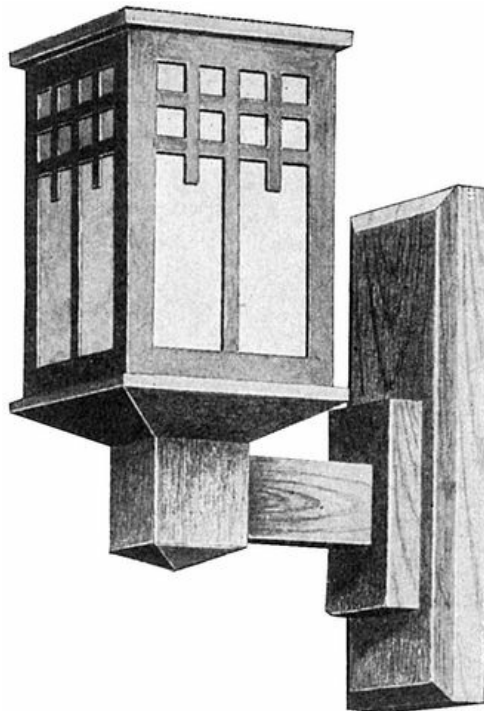
ONE-LIGHT BRACKET

FOR the hallway, for the porch on either side of the door, or for the sides of the arch leading to the den, this attractive little bracket lamp will be found appropriate.

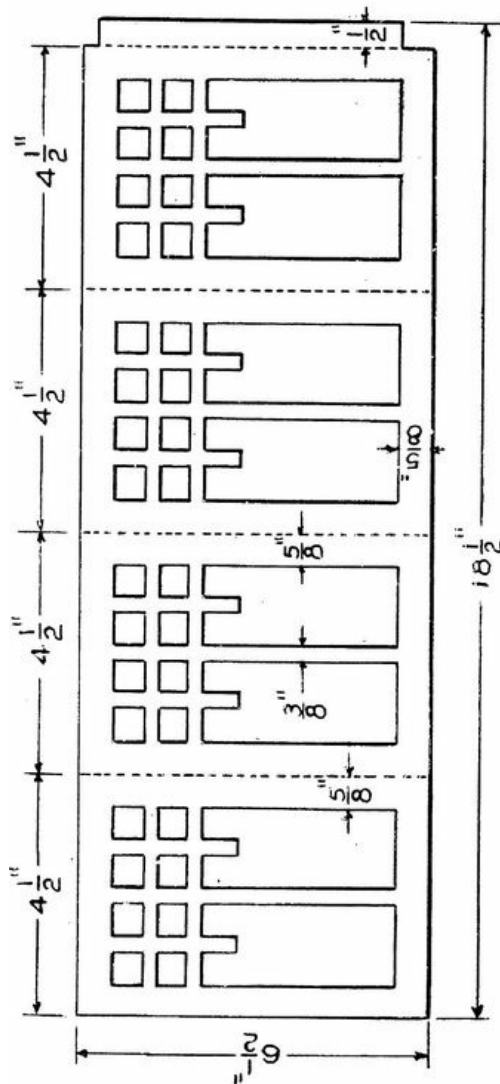
The construction should commence with the wall plate, which is beveled on its four edges. Attached to this is a $\frac{3}{4}$ -in. block, mortised to receive the horizontal arm, which should now be gotten out. Plane this up to size, trim off the outer end perfectly square and tenon the other to tightly fit the mortise already made in the vertical block. The next few steps will largely depend on the form of socket to be used. If the light is to be operated by means of a wall switch, a plain porcelain receptacle is all that is necessary. In this case the tapering base and the block underneath to which the arm is attached may all be made solid, but if the light is to be operated with an ordinary socket, or by one fitted with a pull chain, then the base will have to be hollowed out to receive it and provision made to allow the operating key or chain to remain on the outside. The socket having been provided for, the various pieces should all be securely fastened together. In assembling keep the try-square constantly at hand, so that everything will be perfectly square. On the top side of the baseboard, four small strips should be attached, so that when the shade is ready it can be fastened to them with small tacks or glue. The shade is a very simple matter to lay out and will require a piece of cardboard measuring $6\frac{1}{2}$ by $18\frac{1}{2}$ in. Work this out with a sharp-pointed knife, taking due care to make the corners of the various openings perfectly sharp and square. Score with the knife along the dotted lines deep enough to obtain a good sharp bend.



Details of Bracket Lamp



Bracket Lamp



Pattern for Shade

Select the colored paper for the lining, which, if desired, may be in two or more colors, and then paste it on to what will be the inside of the shade. The cardboard may now be bent into the square form and the first and last sections connected by means of the extra strip provided for that purpose. Passe-partout each of the four corner edges. Slip the shade over the little strips of wood already attached to the base, and fasten it to them with glue or a few

small tacks. The top, which should have an opening so that a new lamp may be put in, is now to be worked out. This may be in one piece, as shown in the sectional view, or made from a thin board provided with four strips on the under side to which the shade may be fastened. The woodwork should be given an appropriate mission stain and the frame of the shade painted a dull black.



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