

hanger, and countersink and drill three holes for the screws. Drill pilot holes into the arm end to prevent splitting.

48. Set the shade on the upper shade hanger and place the lower hanger over the nipple. Tighten nut A and its washer onto the threaded conduit. Install nut B and washer about halfway down the nipple. Thread the lamp socket cluster onto the nipple. Stop when the nipple reaches just inside the cluster. Back off nut B to lock the socket cluster in place.

STAINING AND FINISHING

Woodworker's Tip: *Though you may be tempted to cut short your sanding, preparation and application time, don't do it. These tasks are very important steps in obtaining a high-quality finish. Remember, it is the finish, just as much as the fit and smoothness of the parts that will have great bearing on how people judge your craftsmanship. To ensure an excellent result, follow the steps listed in this section and also the instructions the finish manufacturer puts on its products.*

FINISHING TIPS

- Test the stains and finishes you are planning to use on scraps of wood. On the back of the scrap, mark the stain/finish combination and the type of wood. Allow all samples to dry thoroughly before making your final finish selection. Save your samples for quick reference on future projects.
- All stains and finishes must be allowed to dry thoroughly between coats. Remember that drying times can vary due to humidity and other climatic conditions.
- If you have some leftover stain or finish, wipe the can rim so that stain or finish in the rim won't dry out and prevent the lid from forming a tight seal.
- Brushes used for water-based products, such as Minwax® Water-Based Wood Stains or Minwax® Polycrylic® Protective Finish, must be cleaned with soap and water; oil-based finishes must be cleaned with mineral spirits.

49. Sand all pieces with 120-grit paper, then move up to 220-grit to complete the pre-finish smoothing. Use an orbital sander to remove any marks or scratches, then lightly sand by hand using with-the-grain sanding strokes. Dust off the piece and wipe it carefully with a clean, lint-free cloth lightly dampened with mineral spirits.

Recommended Finish

50. Prior to final assembly of the lamp, apply the Minwax® Gel Stain you've chosen to the surfaces using a clean, lint-free cloth or natural-bristle brush. Allow the Gel Stain to set for about 3 minutes, then wipe off any excess. Repeat for the exterior surfaces. To achieve a deeper color, you may apply a second coat after 8 to 10 hours, repeating the application directions for the first coat. Allow the stain to dry for 24 hours before applying the finish.

Woodworker's Tip: *When wiping off stain, make certain that your last wipe with the cloth goes with the grain of the wood. This way, any stain you might miss during wipe-off will be visually minimized by the wood grain.*

51. Apply Minwax® Fast-Drying Polyurethane following the directions on the can. Use a good quality, natural-bristle brush. Allow the first coat to dry overnight.

52. The next day, sand all surfaces lightly with 220-grit or finer sandpaper using with-the-grain strokes. Dust off and wipe all surfaces with a cloth lightly dampened with mineral spirits. Apply a second coat of polyurethane and set the piece aside to cure overnight.

53. The following day, sand all surfaces lightly with 220-grit paper. Dust off and wipe the piece with a cloth lightly dampened with mineral spirits and apply the third and final coat of polyurethane.

Alternate Finish

54. Apply the Minwax® Wood Finish™ you've chosen to the surfaces using a natural-bristle brush and a clean, lint-free cloth following the directions on the can. The brush will help you get the stain into the many inside corners and other tight spots. Allow the Wood Finish™ to set for about 5 to 15 minutes, then wipe off any excess. To achieve a deeper color, you may apply a second coat after 4-6 hours, repeating the application directions for the first coat. Allow the stain to dry for 24 hours before applying the protective clear finish.

55. Apply Minwax® Fast-Drying Polyurethane following the directions on the can. Use a good quality, natural-bristle brush. Allow the first coat to dry overnight.

56. The next day, sand all surfaces lightly with 220-grit or finer sandpaper using with-the-grain strokes. Dust off and wipe all surfaces with a cloth lightly dampened with mineral spirits. Apply a second coat of polyurethane and set the piece aside to cure overnight.

57. The following day, sand all surfaces lightly with 220-grit paper. Dust off and wipe the piece with a cloth lightly dampened with mineral spirits and apply the third and final coat of polyurethane.

PRODUCT SAFETY

For your safety and the safety of those you work with, always read the safety warnings, which manufacturers print on their labels, and follow them to the letter.

WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

DANGER: Rags, steel wool, other waste soaked with oil-based stains and clear finishes, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with these products, and sanding residue in a sealed, water-filled metal container. Dispose of in accordance with local fire regulations.

When using oil-based wood finishing products:

CAUTIONS: CONTAINS ALIPHATIC HYDROCARBONS.

Contents are **COMBUSTIBLE**. Keep away from heat and open flame.

VAPOR HARMFUL. Use only with adequate ventilation. To avoid over-exposure, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air, or wear respiratory protection (NIOSH approved), or leave the area. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage.

FIRST AID: In case of eye contact, flush thoroughly with large amounts of water for 15 minutes and get medical attention. For skin contact, wash thoroughly with soap and water. In case of respiratory difficulty, provide fresh air and call physician. If swallowed, call Poison Control Center, hospital emergency room, or physician immediately.

DELAYED EFFECTS FROM LONG-TERM OVEREXPOSURE.

Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal.

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. CONFORMS TO ASTM D-4326. Contact a physician for more health information.

When using water-based wood finishing products:

CAUTIONS: Use Only With Adequate Ventilation. To avoid overexposure, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air, or wear respiratory protection (NIOSH approved), or leave the area. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage.

FIRST AID: In case of eye contact, flush thoroughly with large amounts of water. Get medical attention if irritation persists. If swallowed, get medical attention immediately.

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. CONFORMS TO ASTM D-4326. Contact a physician for more health information.

SOURCES

Grand Brass Lamp Parts

(212) 226-2567

www.grandbrass.com

One 10-ft. 18/2 SPT-1 cord with molded plug, #WIC10FTBL, \$1.50

One black rotary line switch for SPT-1 cord, #SW423BL, \$0.80

One 1/8 ips female black bushing, #BG201B, \$0.10

Two 10" x 1/8 ips steel pipe, #PIST10, \$0.75 ea.

One 9" x 1/8 ips steel pipe, #PIST09, \$0.75

Three straight coupling brass 1/8F thru, #NE449, \$0.20 ea.

Two 1/8m bottom x 1/8f side,

1/2 ball 90-degree armback, #AB335NP \$0.75 ea.

One 5" x 1/8 ips nipple steel, #NI5-0X1/8, \$0.60

Two 1/8 ips slip star lock washer, #WA1/8STAR, \$0.02 ea.

Three 1/8 hex nut, brass, #NU424, \$0.08 ea.

Two 3-1/2" plain (J) arm brass 1/8m ips, #ARJL, \$2.25 ea.

One small turned cluster body,

2-piece, #BOS2XB, \$2.50

Two MD wire nut, #WINUTG, \$0.10

Two cast-brass uno-threaded keyless socket with 1/8 ips bushing and setscrew, #SO9347CB, \$10 ea.

Processing fee for order under \$50: \$10.

Total cost: Lamp electrical parts, \$50 plus shipping.

Southern Front Stained Glass

(281) 890-5860

www.southernfront.com

Wissmach Glass, W0101, Dark Green and Opal Wispy

Five 10-1/2" x 16" panels, \$27

Fletcher-Terry steel glass cutter, \$4.50.

Woodworkers Supply

(800) 645-9292

www.woodworker.com

Felt discs, #933-671, \$2.99 strip of 60

1/4" straight bit, #03-140, \$13.99

1/4" router guide bushing, #938-048, \$7.99

FIG 1. LAMP DETAILS

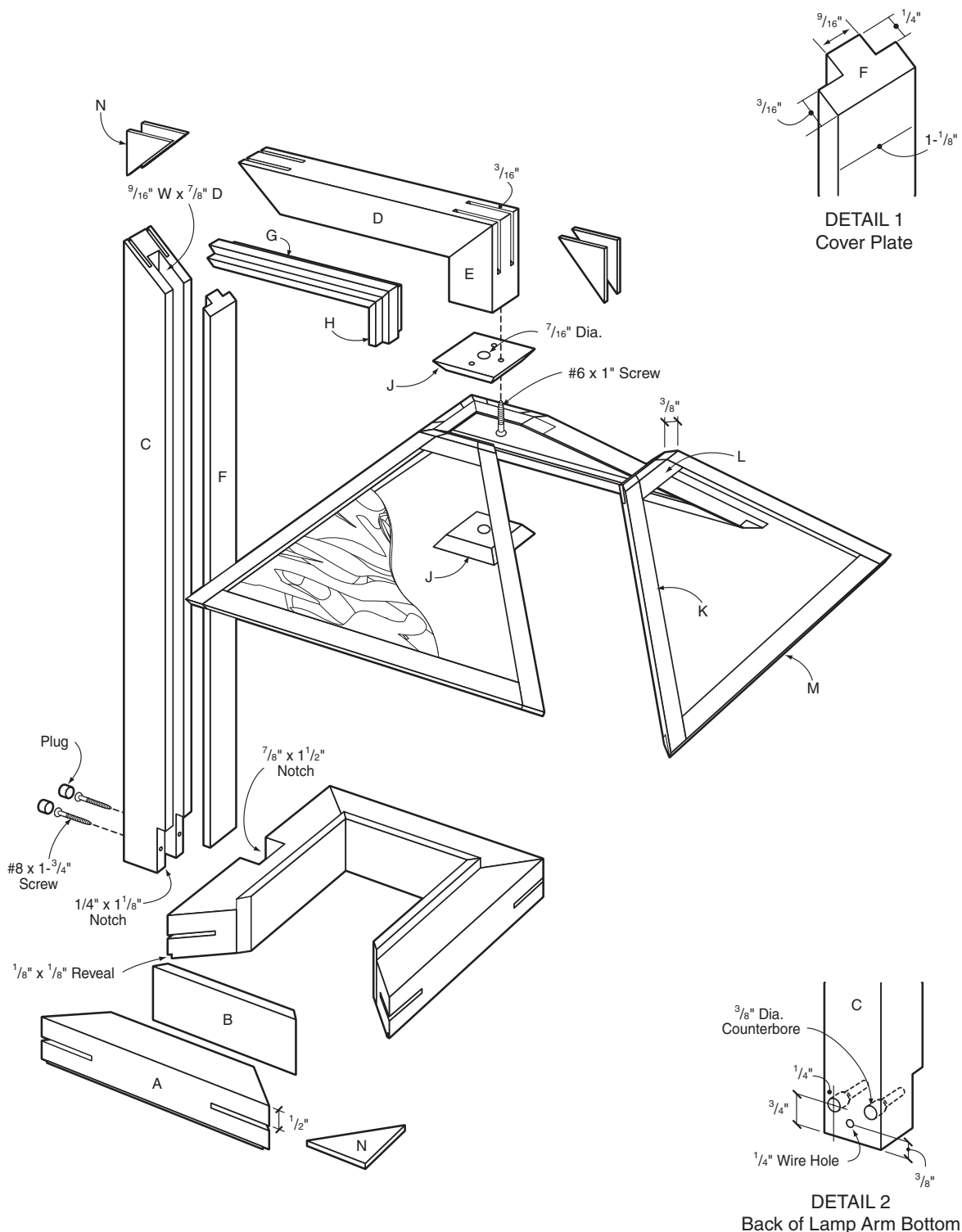


FIG 2. CUT THE ANGLED HALF-LAP JOINTS

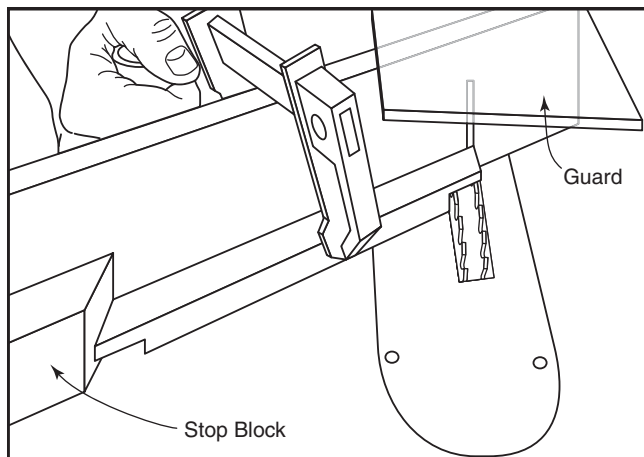


FIG 3. HALF-LAP JOINTS

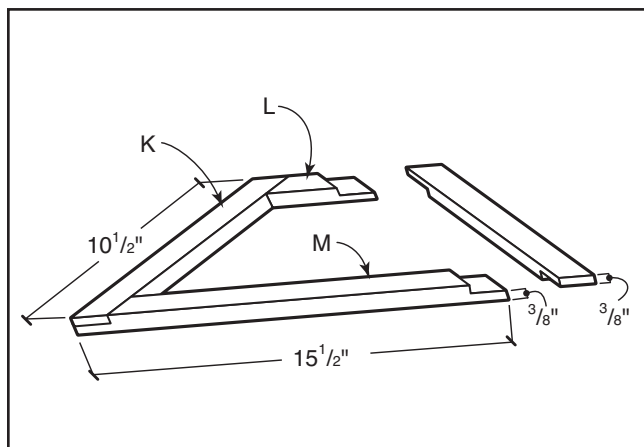


FIG 4. ASSEMBLE THE FRAME

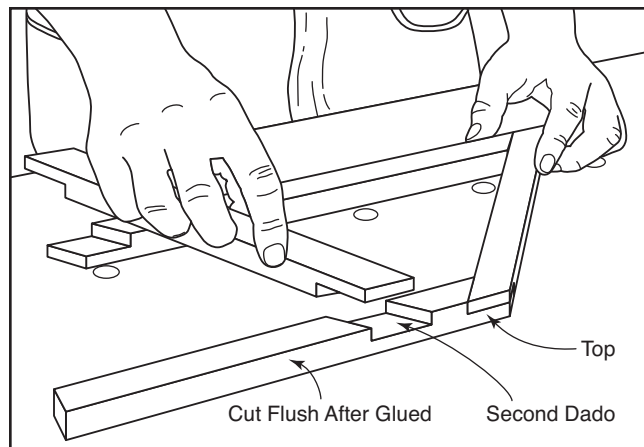


FIG 5. RABBET EACH FRAME

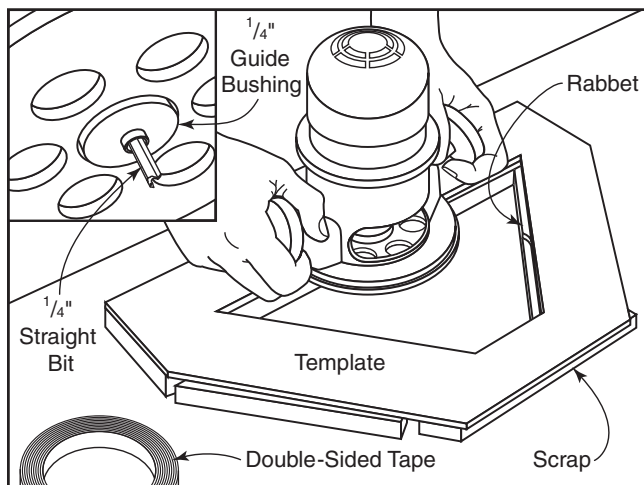


FIG 6. RIP THE COMPOUND ANGLES

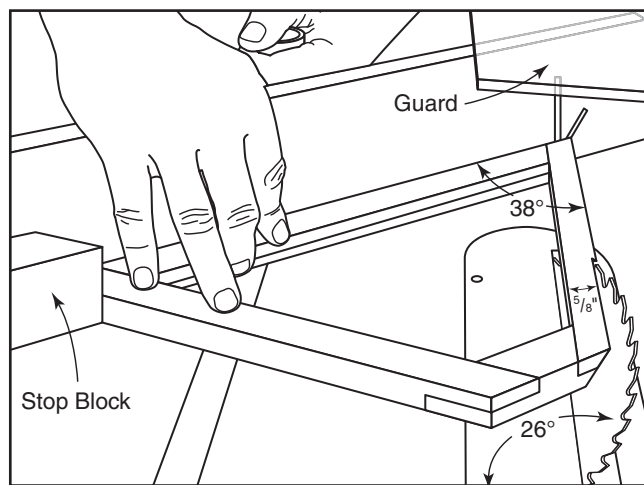


FIG 7A. BEVELED ENDS

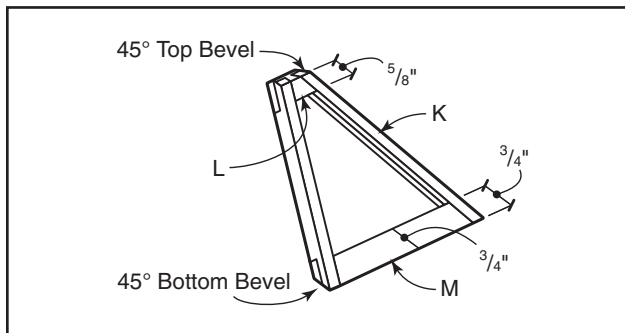


FIG 7B. INSIDE OF SHADE FRAME

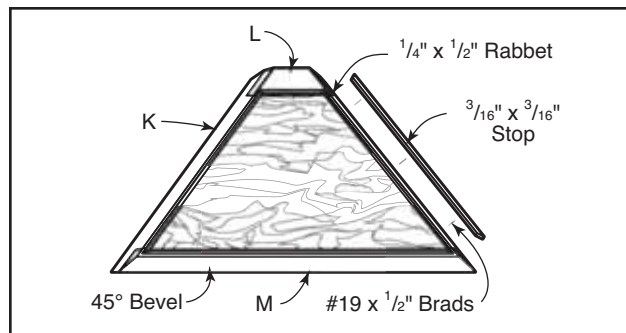


FIG 8. CUT THE SHADE HANGERS

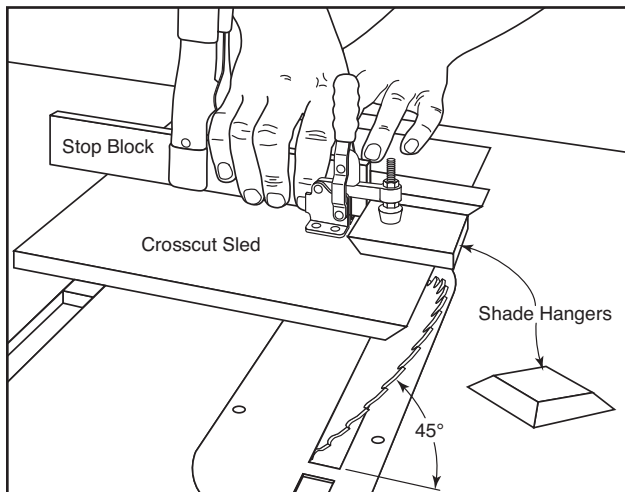


FIG 9. CROSSCUT SLED

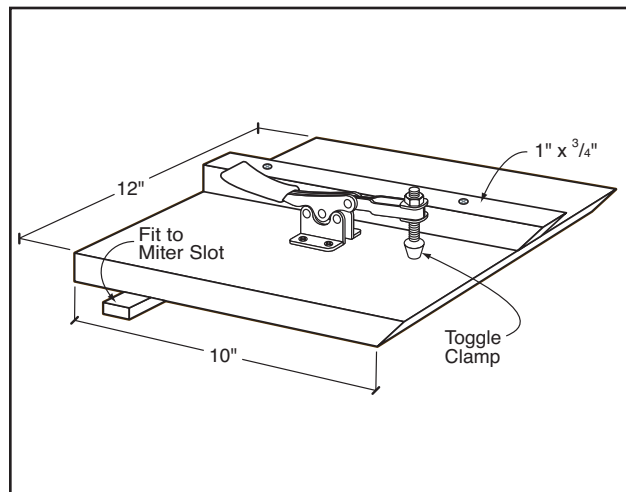


FIG 10. CUT SLOTS FOR SPLINES

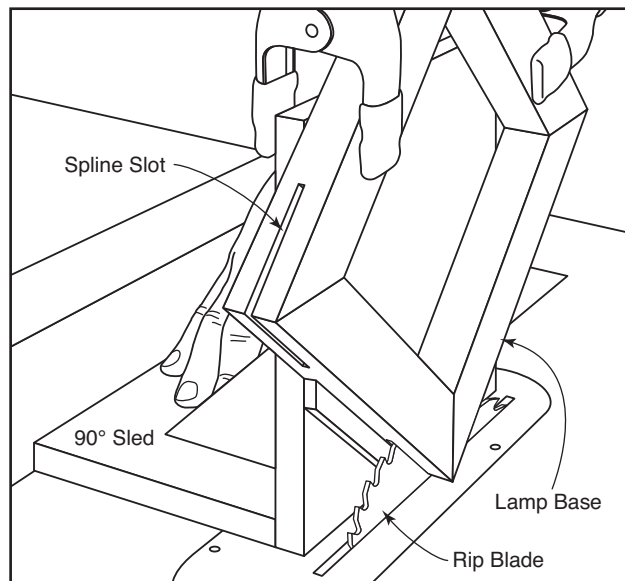


FIG 11. SPLINE SLOT SLED

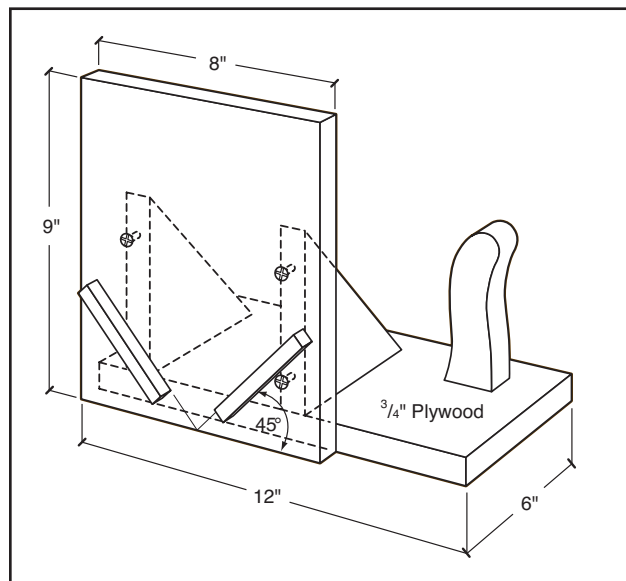


FIG 12. CONDUIT ASSEMBLY

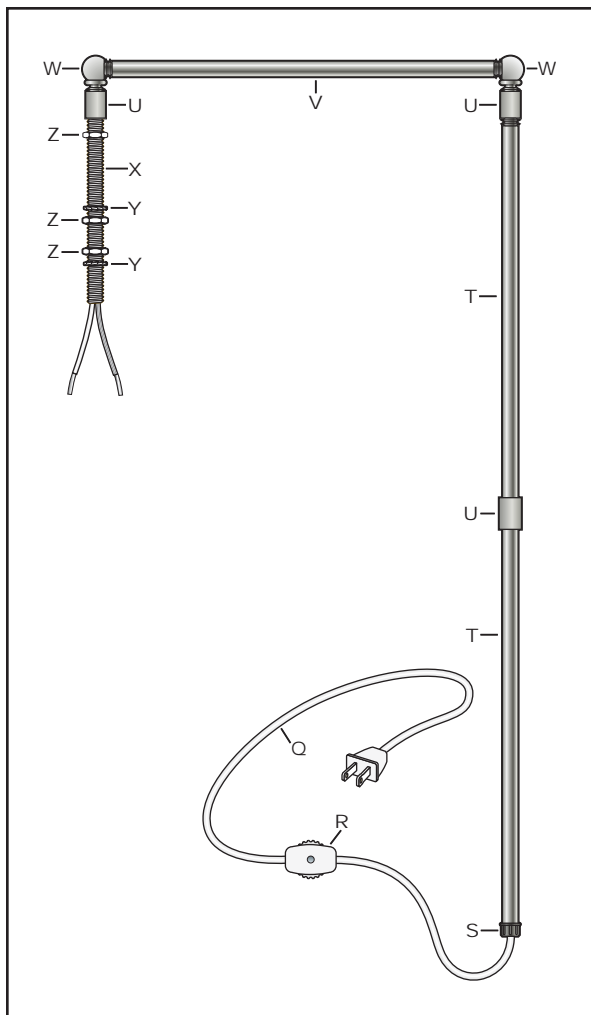


FIG 13. CLUSTER WIRING

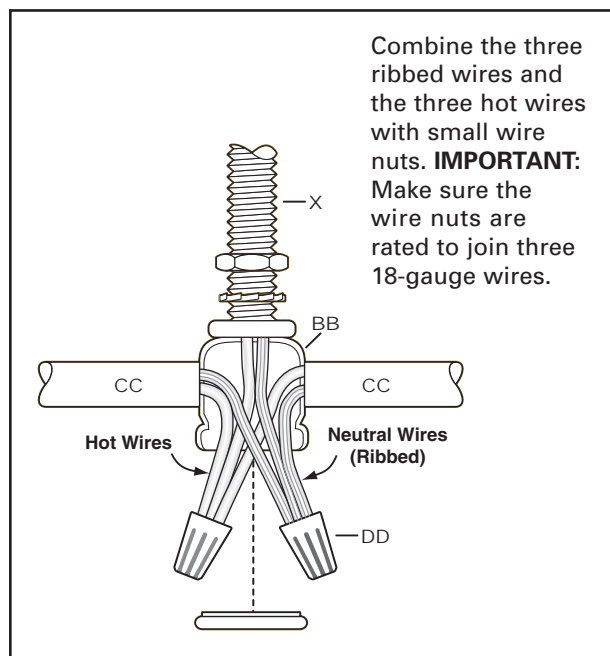


FIG 14. SOCKET ASSEMBLY

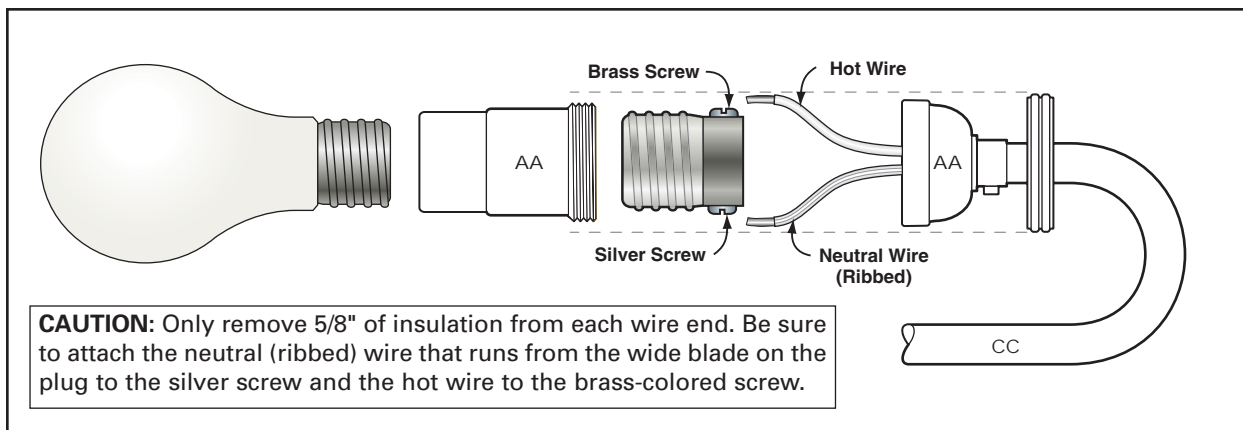


FIG 15. ROTARY SWITCH

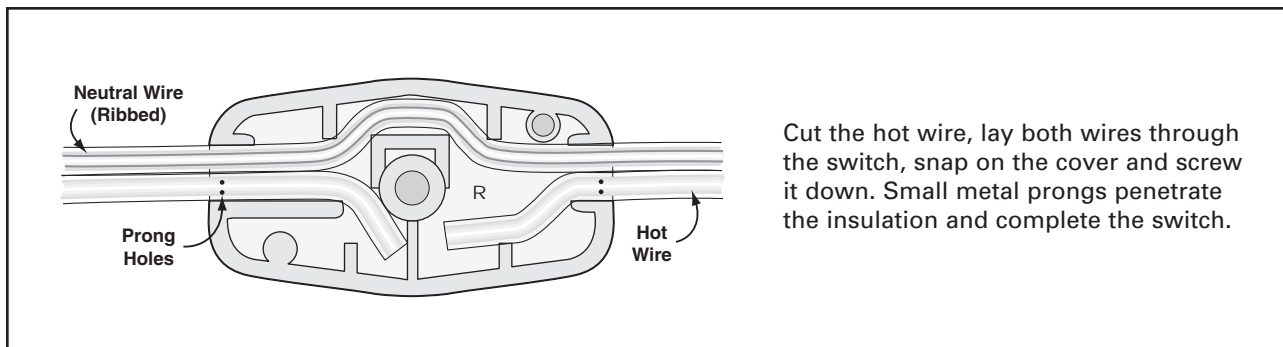


FIG 16. ATTACH THE SHADE

