# LVM14 COAL BREAKER

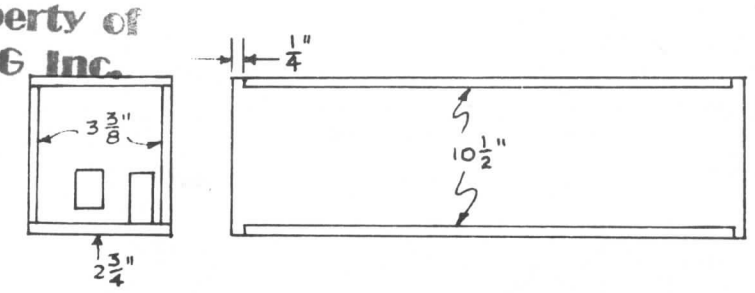
Coal has always been one of the railroad's heavy sources of revenue and still is to this day. It lies underground and must be obtained by mining. There are three methods of mining coal; uncovering coal from the surface or strip mining, digging a deep shaft to coal veins below or shaft mining, and following a vein downward or into the side of a hill from the surface which is a slope mine. LVM14 is a replica of an Anthracite or Bituminous coal breaker for the last two mentioned. This is the large building above ground where slate and other impurities are removed, the coal is graded into size and fed by gravity to waiting hopper cars on tracks below.

The model takes an area 10" x 12" and is all that is necessary to represent a coal mine on your railroad. However, we have provided LVM15, a super detail kit which depicts the minehead building (entrance), covered conveyor shaft and tower, mine cars, electric lokey, transformers, and many other details to bring added realism. A final kit is LVM16, the powerhouse, water tank and piping which will make your model the finest representation of the mining industry.

Before starting assembly, sort and identify the parts, and be sure to visualize each step. Most of the wood and card parts have been cut to size for you and may only require a bit of sanding or trimming. A good tool to use is a common fingernail emery board. Changes in humidity and temperature sometimes cause card and paper to shrink or swell, so if the parts do not always fit exactly, work from the center splitting the difference.

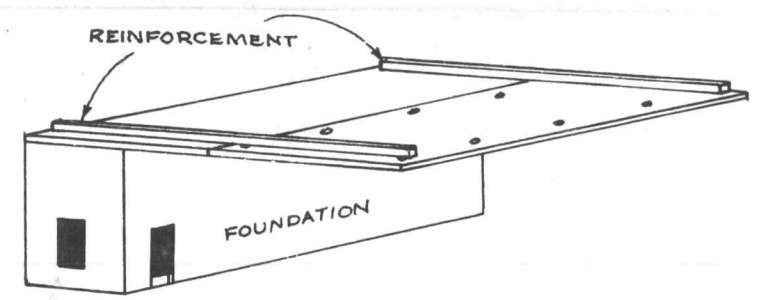
FLOOR - Glue the two pieces of 1/8" hardboard together to form one floor piece 9 1/4" x 10 15/16", keeping the two rows of holes toward the outside of the completed floor. Use a piece of wax paper beneath the parts to prevent accidentally gluing them to your work table. One-half inch in from each of the short sides (across the joints) glue the 3/16" square x 8 3/4" reenforcing strips.

CEMENT BLOCK FOUNDATION - First, cut out the two door and window openings as marked from the two 2 3/4" x 3 3/4" and one 3 3/4" x 11" card pieces that will form the foundation beneath the floor where there are no loading tracks. Next, glue 3/16" sq. reenforcing strips flush with the edges of the two 2 3/4" x 3 3/4" card end walls as shown. Then glue the 10 1/2" x 3/16" sq. strips to the edges of the longer card walls keeping them flush with the top and bottom edges and 1/4" in from both ends. Now glue both of

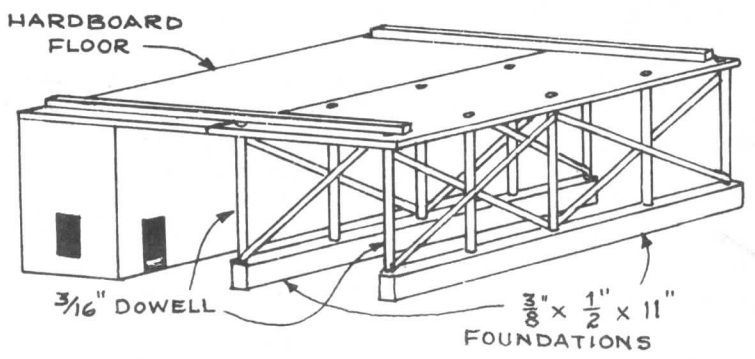



these long reenforced side walls to the reenforced end walls to form an elongated open box 11' x 2 7/8" x 3 3/4". Cut and glue cement block paper over the four walls of this foundation covering the door and window openings. Use thinned Elmer's glue, carefully brushing out any wrinkles. After the glue is dry, make an "X" cut from corner to corner of the window and door openings. Apply glue and fold these flaps inward covering the card edges. Do not worry about the reenforcing strip showing at the door openings because these will be covered by scrap corrugated pieces later.

FLOOR TO FOUNDATION - Glue the completed cement block foundation to the one side of the hardboard floor which doesn't contain any holes, keeping it flush with the outside edges. Caution: this is the opposite side from the reenforced side and the foundation door openings should be away from the floor. See sketch.

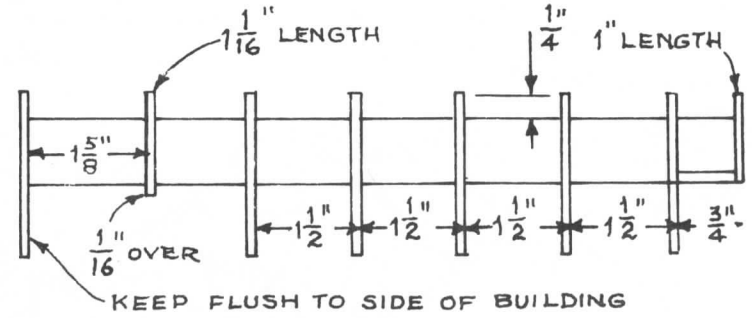



Assemble the rest of the building foundation using 3/8" x 1/2" x 11" predrilled stripwood pieces, applying glue to each hole and tapping 3/16" dowell supplied into each hole flush with opposite side. When these supports are dry, apply glue to holes in hardboard floor and carefully tap dowell and foundation into corresponding holes until ends are flush with top of the floor section. Using 1/16" x 5/32" x 1/4" stripwood, cut "X"




bracing (about 6 1/4" in length) and glue to sides of upright supports. You should now have an assembly looking like the sketch.

WALKWAY AND STAIRS - Using 1/16" x 3/4" x 10" random sheath supplied, cut and glue 1/16" x 3/32" x 1 3/4" supports to the unscribed side like this:

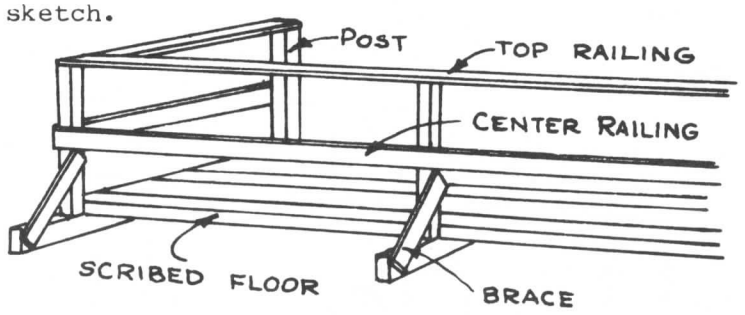



When assembled platform unit is dry, apply glue to the edges of the long supports and wherever else needed and glue beneath the hardboard floor keeping the platform edge 1/16" from the floor edge. This is to allow room for the corrugated building sides later. Also keep the left hand side flush to the building as stairs attach to right overhang. See large drawing for placement.

Glue 3/16" x 3/4" x 1" stair foundation block to the outside building foundation (3/8" x 1/2" x 11") 3 1/2" in from the front end. See large drawing.

Assemble the Evergreen Scale Model stairs using Testor's Plastic Cement. Lay one plastic riser flat with slots facing forward. Place treads in riser slots keeping treads flush all along one edge of the riser and apply the plastic cement. This will flow into slots and as glue sets try to keep all treads vertical as possible. When dry enough that they won't fall out, place other riser on top of the treads, working them into slots until all are positioned. Squeeze the risers together and turn the assembly over. Apply glue to the unglued riser, making sure all treads are aligned and in the slots. The ends of this stair assembly must be carefully trimmed to fit against the platform and the stair foundation at ground level. When you have a good fit, glue it in place at both ends allowing 1/16" space next to the building for corrugated sheathing. Epoxy or Crazy Glue are best to fasten styrene to wood.

POSTS AND RAILINGS - Using 1/16" stripwood, cut the railing posts to length. The eight posts along the platform are 5/8" in length, the four along the stair riser are 3/4" long, and there is one 9/16" in length next to the building at the right side of the platform. These are glued as shown in the sketch. When dry, cut top railings to fit from 1/32" x 1/16" stripwood supplied and glue in place atop the posts. Align and position posts at this time keeping all vertical and plumb. Now cut and attach center railings. When all is secure, cut eight 1/2" lengths from 1/32" x 1/16" stripwood for braces to the platform posts. See sketch.



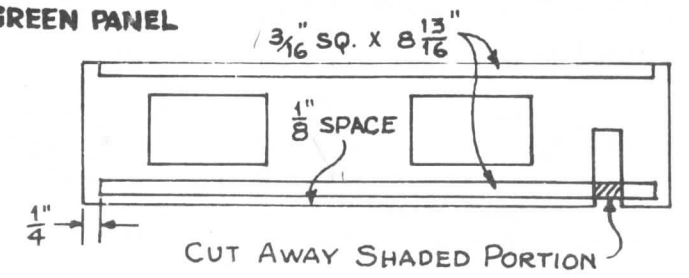

Don't forget to use Crazy Glue to fasten posts to the side of the stair risers.

BUILDING - Assemble all corrugated sheets according to colored numbers on them. You should have three of each; green, red, brown, orange, and blue. Lay the three pieces on a sheet of wax paper with the numbers of the same color reading from left to right and the bottom edges against a straight edge or ruler to keep them even. Now glue the edges that join. Just apply a bead of glue along the edges and fit them together as described above. Do this to all five sets. When they have set, carefully cut out the windows, door opening and roof lines. (Save the large scraps). If necessary, square up the openings with an emery board file.

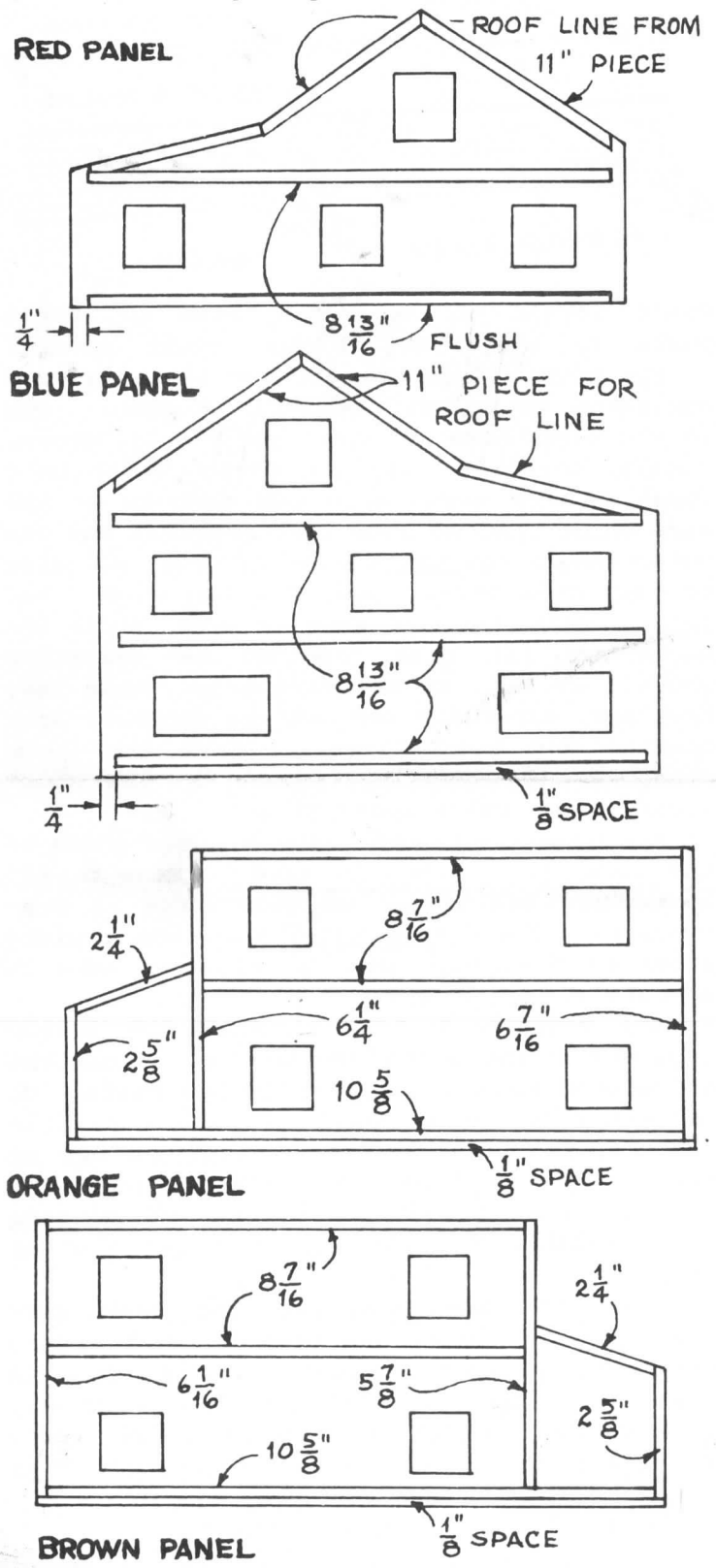
The brown panel must have a piece added to the left (No. 1) end to make it measure 11" in width. Use scrap and glue edges as previously. The orange panel also has a piece added to the right (No. 3) side to make it measure 11" in width.

Now measure 1 1/2" up from the bottom edge and scribe a horizontal line across the corrugated panels using an X-acto knife. Do not cut deep, just enough to make a visible mark that shows. Do this all the way up each panel so that you have horizontally scribed lines 1 1/2" intervals. These lines will resemble the edges of corrugated sheet rows.

Turn each panel over with the smooth surface upward. Using the precut 3/16" square stripwood pieces, proceed to glue them in place as shown in sketches for necessary reenforcing. Remember to leave a 1/8" space above the bottom edge of each panel. This



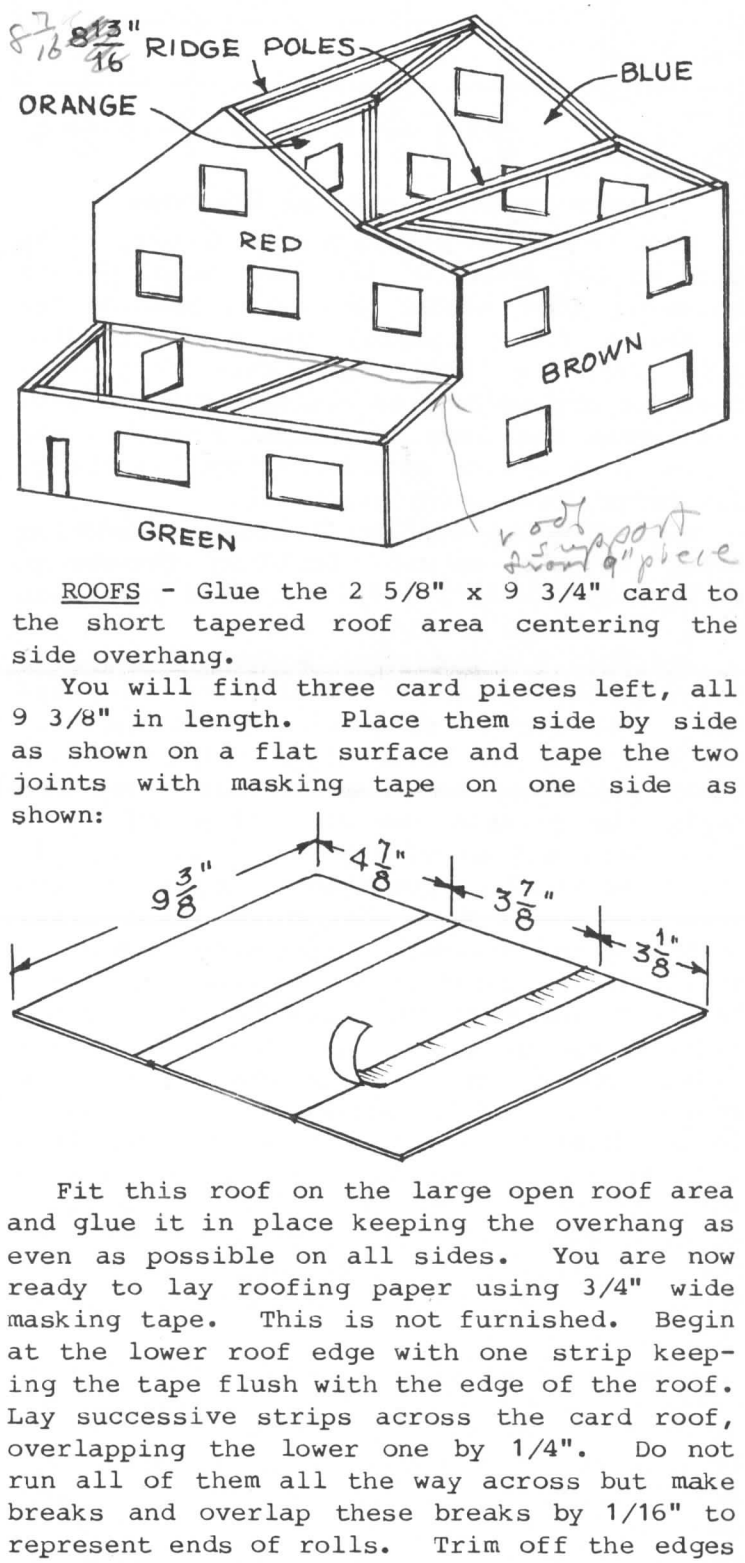
will allow the corrugated wood to cover the hardboard floor when the finished building is put in place. Also use the 11" strips for cutting the large roof line pieces. It is wise to lay all the pieces in their proper places before gluing.




After all five panels are reenforced as shown, glue the orange and the brown panels together with the blue panel, keeping the bottom edges flat on a smooth surface. Naturally the corrugated surface should face outward. Then join the green panel to the lower part of the orange and brown panels. Complete the building as shown keeping it even and square.

Trim the corrugated panel edges that overlap if they extend beyond the corners.

Now add two 8 13/16" long (3/16" sq.) ridge poles across the building at the roof peak and the other break in the roof angle as shown.



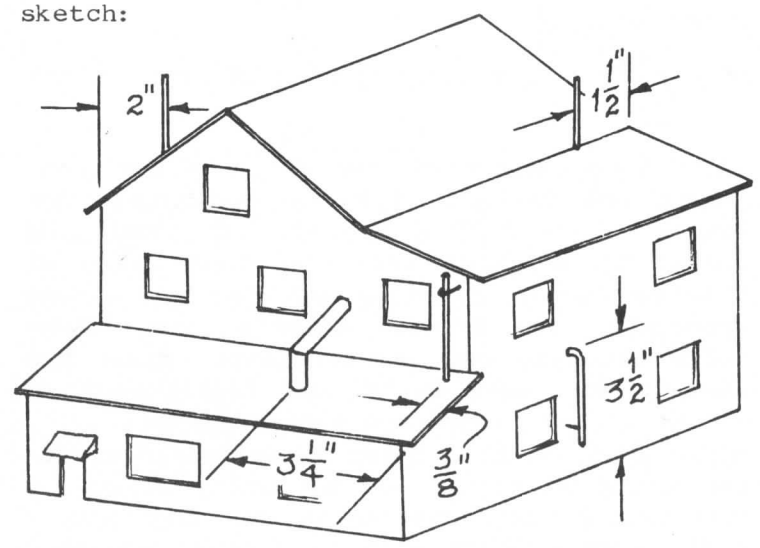

ROOFS - Glue the 2 5/8" x 9 3/4" card to the short tapered roof area centering the side overhang.

You will find three card pieces left, all 9 3/8" in length. Place them side by side as shown on a flat surface and tape the two joints with masking tape on one side as shown:

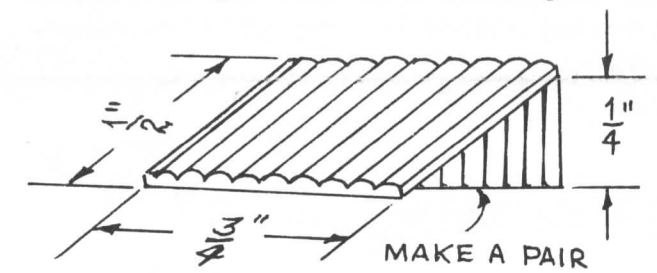



Fit this roof on the large open roof area and glue it in place keeping the overhang as even as possible on all sides. You are now ready to lay roofing paper using 3/4" wide masking tape. This is not furnished. Begin at the lower roof edge with one strip keeping the tape flush with the edge of the roof. Lay successive strips across the card roof, overlapping the lower one by 1/4". Do not run all of them all the way across but make breaks and overlap these breaks by 1/16" to represent ends of rolls. Trim off the edges with a scissor. Do this to both roofs. Remember to work from both lower edges on the large roof, using an overlapping strip at the peak.

DETAILS - Using the two pieces of 1/4" dowell supplied, glue the 45 degree cut ends together to form the heavy pipe shown in sketch:




Locate a point 3 1/4" from the roof edge, halfway up the roof, and also between the windows on the wall. Carefully cut holes to accept this pipe. When you have a good fit, glue it in place. Make a doorway canopy from scrap corrugated, glue together and glue above doorway to breaker building.




Cut 3" from the 1/16" dowell supplied and locate hole for the stack on the small sloping roof as shown. Glue in place. A straight pin is bent into a "V" to anchor the top of the pipe to the building side.

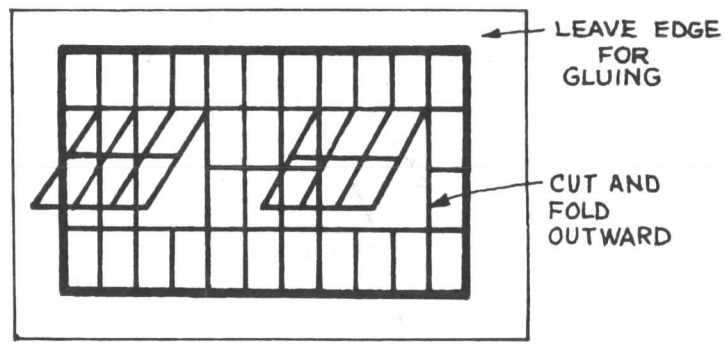
Cut two 1 1/2" pipes from leftover 1/16" dowell and glue in holes on large roof where shown. Holes are drilled carefully into 3/16" sq. reenforcing beneath cardboard roof. Locate hole for exhaust pipe on side of building along reenforcing stip. Using copper wire, bend to shape and glue in place. Straight pin supports lower part of pipe. This can be glued or soldered together.

PAINT - Paint entire coal breaker building, roofs, floor, support columns and bracing and stairs with flat black paint. Be careful not to get any on the cement block foundation. Paint the inside building surface also to prevent moisture from warping it. Paint both metal window castings black and when dry glue them into foundation openings. Cut doors from scrap corrugated, paint flat black and glue them into foundation door way openings.

Use a thinned flat black wash on the platform and railings. If any glue shows, simply coat those with flat black to cover them. After all the parts painted flat black are dry, paint concrete foundations that anchor support columns and the stair foundation Floquil Concrete color.

The corrugated siding on such a structure was coated with roofing pitch to seal it from rust and weather. To simulate the corrugated sheets, mix a bit of Floquil Concrete color (or some white) with the flat black to give you a lighter flat black color. Using a straight or square ended brush about 3/8" wide, start from the edges of the scribed lines on the corrugated sheath and stroke downwards to the next line. Do this across the building leaving some brush width spaces unpainted or original flat black color. This should resemble weathered corrugated sheets. Don't try to cover each stroke, just partially and it will look the best. You can mix a lighter color and repeat this process for highlighting after you have gone over the entire building with the first shade.

WINDOWS - After all paint is dry, cut out the windows on the sheet that is supplied leaving an edge for gluing them in place. You will want some windows open. This is done by cutting with a sharp razor or X-acto knife as shown:




Don't forget to glue clear acetate to inside of the cast windows in the cement block foundation.

Choose one of the signs on the large drawing sheet, glue it to a piece of card stock and mount it on the brown panel side of the building between the four windows. Old Reading Anthracite and Old Company's Lehigh were real signs; the others are fictitious.

Now you can place your completed building over the floor section. It should fit down over the 1/8" hardboard floor nicely. This was designed to allow the modeler to remove it in case he desires to make some sort of automatic hopper car loading device.

This should conclude your Athracite coal breaker. If you place the structure next to a mountain or hillside, it will appear that the coal enters the building from the unseen side. Some enterprising modelers will want to load their hopper cars automatically, giving real purpose to this unit. For those who desire a more complete and detailed unit, LVM15 and LVM16 kits will certainly satisfy their wishes. Send 75¢ to Lehigh Valley Models for a complete phtographically illustrated brochure of our complete set of mine kits and many other interesting items.

Instructions for painting signs:

Using a red felt tip pen,


Color the outer rim of diamond red; color the banner ("mining company") yellow.

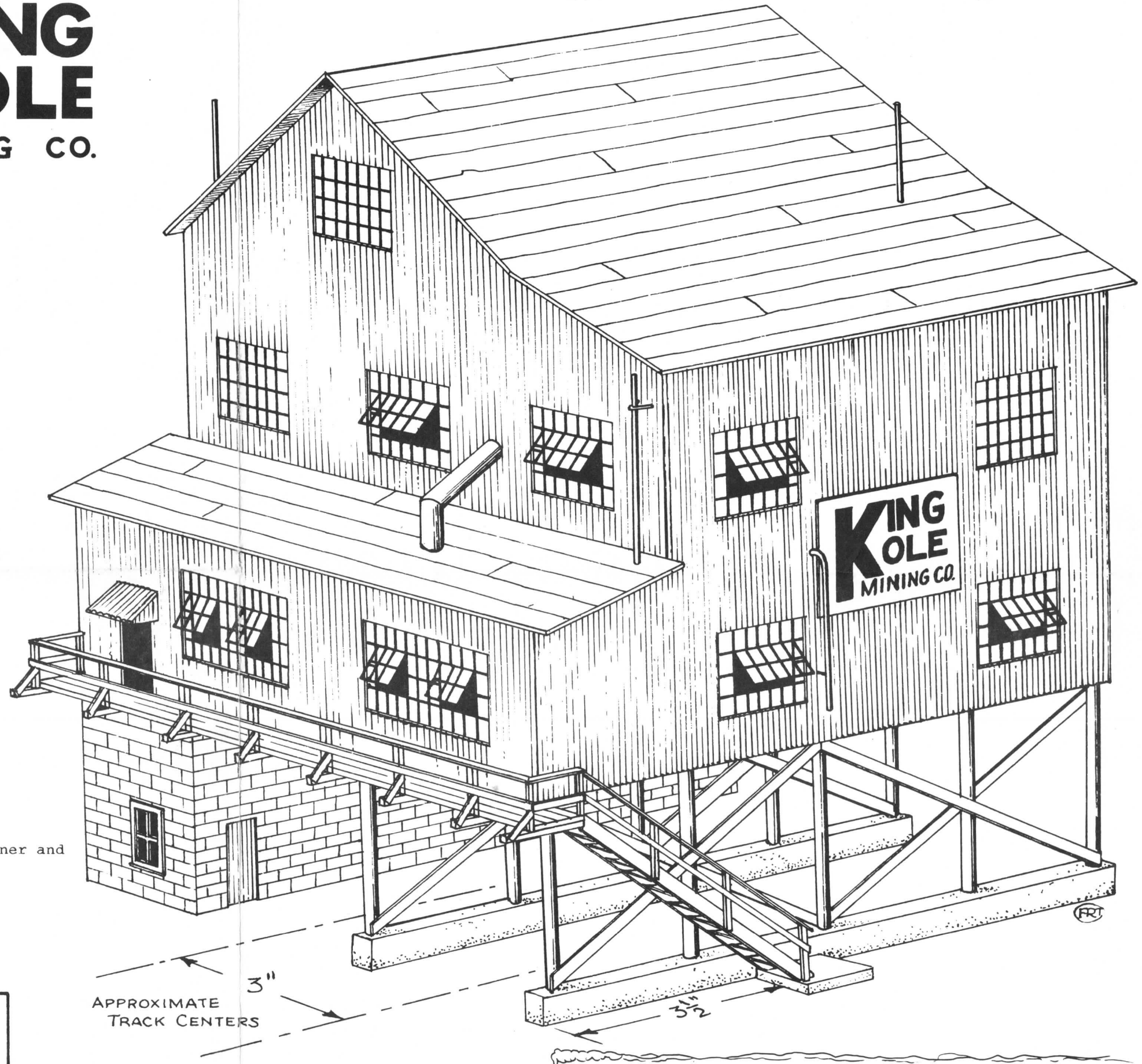

Color the inner circle red.


Using a red felt tip pen, color banner and outer ring leaving printing white.


Color the circle red.



# KING KOLE MINING CO.




Lehigh Valley Models

1225 N. Arch Street, Allentown, Pa. 18104

CORRECTION: Ridge poles are 8 7/16" in length as shown in revised drawing. Also, add roof support where shown cut from 9" piece to fit.