

Photos by the author

Lineside lumber and supply yard

This typical trackside industry — another point of switching interest for your way freight crews — is especially intriguing because its spur runs out onto a trestle

By Aaron G. Fryer

Part 1

LUMBER yards are among the most numerous of lineside industries, and here's an uncommonly interesting one. The prototype is located in Sellersville, Pa., on the Reading's Bethlehem branch. In many ways it is typical of the railside retail lumber establishments around the country. However, it seems especially fascinating because of its two-level aspect, the trestle siding and the large shed, which spans the trestle and a wide driveway.

Its physical characteristics lend themselves nicely to miniaturization. For example, the large shed and the adjacent office and shop building are built on a level below the railroad, and so can be built close to the prototype dimensions

without dominating your entire layout.

The prototype was at one time evidently a coal and lumber outfit, and this doubtless accounts for the trestle siding, which was used for unloading coal into the pockets below. The yard no longer handles coal, and the space beneath the trestle is used for stocking lumber, sashes and doors and other building materials.

The photo of the prototype gives an idea of how it fits into its surroundings. The main street of the town is partially shown at the left ascending a steep hill and swinging off to the east in order to bridge the Reading's right-of-way. As indicated on the plan, there is an entrance to the yard from this street, at the office corner of the shed. The driveway

runs beneath the shed and emerges into the yard on the north side, then rises steeply and curves sharply off to the west, crossing the siding at grade. It continues behind the upper level sheds, connecting to a back street and the Reading's freight station, which is also accessible from a side street. Thus, the yard is open to vehicles at both ends.

Only a very expansive layout could accommodate a model in the prototype dimensions. In the miniaturizing process, we have cut the width of the driveway on the south from 44 ft. to 27 ft. (this area provides handy storage space for the company's trucks), shortened the prototype's 114 ft. yard to 60 ft., but retained the approximate measurements of the

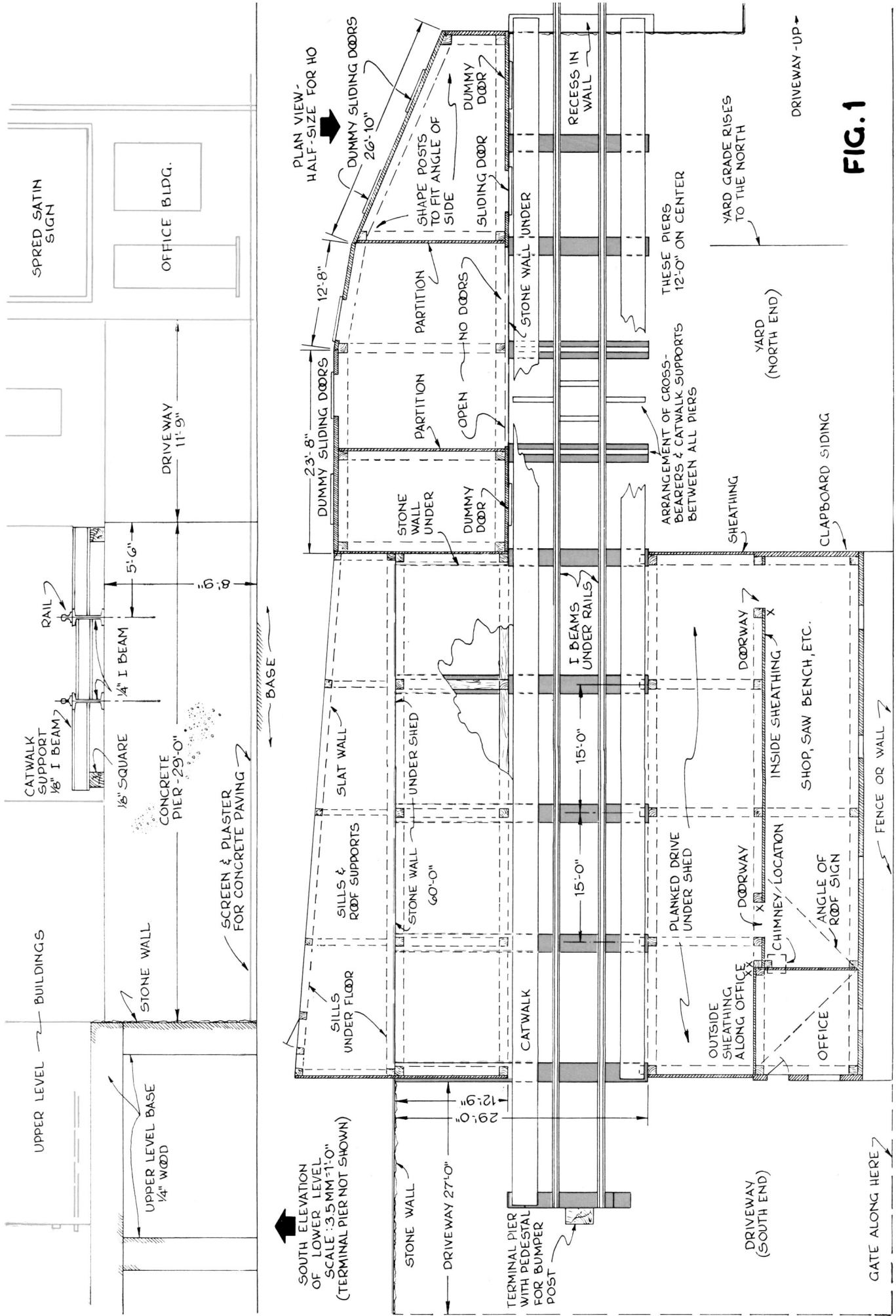
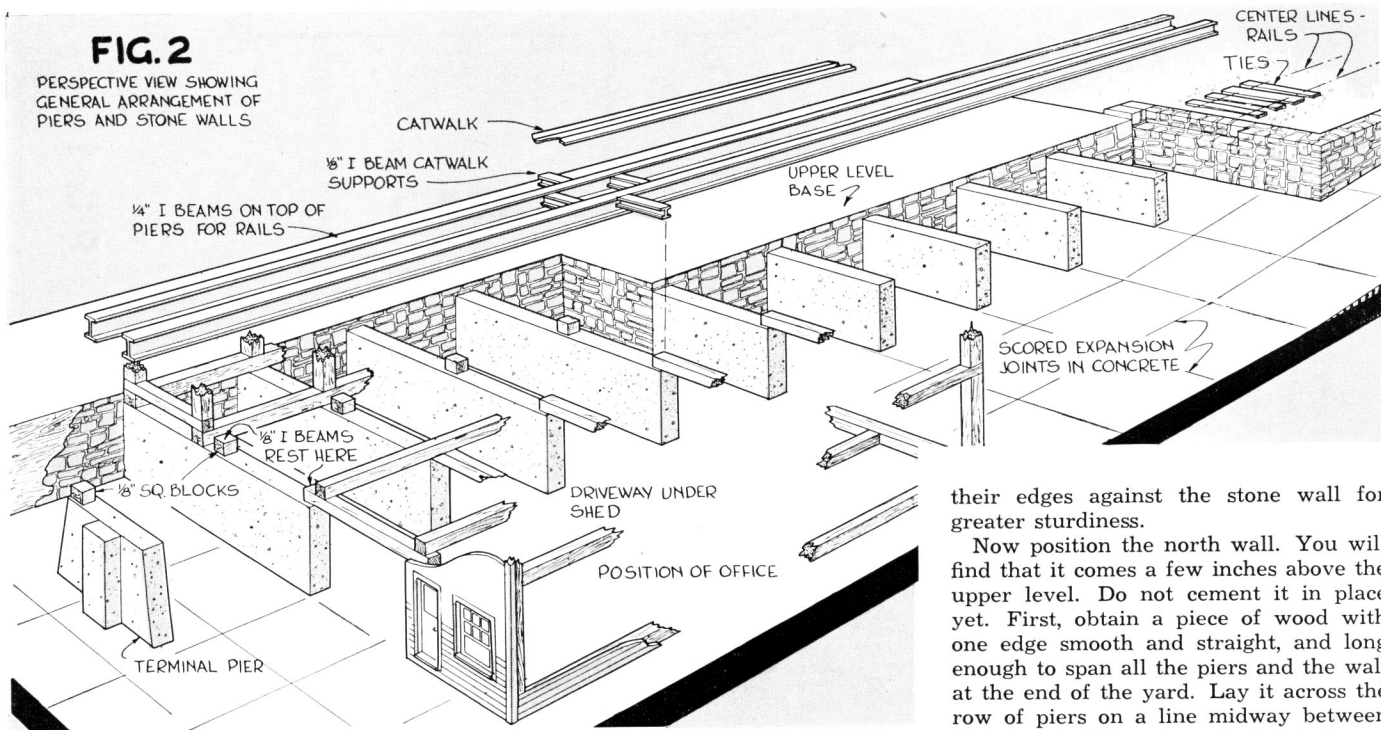


FIG. 1

FIG. 2

PERSPECTIVE VIEW SHOWING GENERAL ARRANGEMENT OF PIERS AND STONE WALLS



main shed. This gives a model that will fit nicely on an average pike, although further reductions might be necessary if it is to be used on a small layout.

All material sizes given refer to HO scale. The drawings, however, are in prototype dimensions for use in any scale. Begin with a piece of $\frac{3}{8}$ " or $\frac{1}{2}$ " thick plywood about 12" wide and 24" long as the baseboard for the entire model. The model will not occupy this large an area, but the extra width and length make it easy to mount the finished model on the grid work of the layout. If you know exactly what size baseboard you will need to fit your layout, cut it to the required dimensions now.

Next, lay out the basic plan of the entire model on the baseboard, positioning it to permit easy installation on your pike. Locate the line of the stone retaining wall for the upper level, the positions of the piers, the driveway beneath the shed, the office and shop and the sheds on the upper level, taking the dimensions from the drawings.

Erect the stone retaining wall and upper level with $\frac{3}{8}$ " or $\frac{1}{2}$ " thick plywood. Do not put in the wall running parallel to the piers at the north end of the yard. That will come later when you install the piers for the trestle.

With the retaining wall securely in place, put on the stonework, but do not apply it on that portion of the wall beneath the large shed, since it will not be seen there anyway. I used a gray stone building paper for this, pasting it on with liquid scrapbook paste. Then I mixed a very weak wash of model railroad paint thinner, with a little black and a little boxcar red, and stained the paper to eliminate the new look. By making additional applications of this wash here and there, the color variations of real stonework can be suggested. Of course, you still don't obtain any of the textured ef-

fect by this method, but however you may choose to make the stonework, this is the time to do it.

Cut pieces of wood for the concrete piers which support the trestle. As the plan indicates, these are 24" thick, and in HO the nearest we can come to that dimension in ready-cut wood is $\frac{1}{4}$ " thick. Plywood will not do because the various layers of wood would show on the exposed ends of the piers. If the wood is finished smooth, roughen it a bit with coarse sandpaper, to suggest a concrete texture. You may want to make the piers of stone, like the wall, but I like the idea of concrete to introduce more variety.

The terminal pier beyond the main shed is tapered, from 14 ft. at the base to 10 ft. at the top. An additional pedestal is required on the back of this pier for the bumper block of the siding.

Now, cut the pieces for the stone wall at the end of the yard where the trestle comes off the upper level. It is recessed to receive the beams of the trestle and the supporting I beams of the walkway. Make it from two pieces of $\frac{1}{4}$ " thick wood, 10'-6" high. This height, plus the thickness of fiber tie strip should bring you to the height of the base of the rails coming off the trestle. If you are going to use ties other than conventional tie strip to support the rails from the trestle to the main, then the height of the wall may have to be altered accordingly.

In the pieces that will serve for the face of the wall, cut the recess 17 ft. long and deep enough to line up with the tops of the piers. The second piece is then glued as is to the back of the first piece and the recess is made.

After checking all the piers to make sure they are of the same height, glue them into their proper positions and make certain they stand perpendicular to the baseboard. It's a good idea to cement

their edges against the stone wall for greater sturdiness.

Now position the north wall. You will find that it comes a few inches above the upper level. Do not cement it in place yet. First, obtain a piece of wood with one edge smooth and straight, and long enough to span all the piers and the wall at the end of the yard. Lay it across the row of piers on a line midway between the eventual location of the I beams which will support the rails of the siding. Check to see that it seats true on all supports, then cement the wall at the point where the trestle comes off the upper level.

Run a return of this wall for about 12 or 14 ft. beside the driveway from the yard. Now, put in a small piece of baseboard here, supported by wood blocks.

Later on, when you are doing the scenic work around the model, the slight difference in grades in this area of the upper level can be adjusted with plaster, or plastic wood, then covered with grass and earth mix. Finally, apply the stonework as on the other wall.

Now, paint the piers to simulate concrete. Try this mixture: start off with white, then carefully add a little gray. Now add a very small amount of yellow and a bit of violet. The addition of these two colors in the right proportions serves to tone up the dead appearance of the grayish white and give the mixture a realistic concrete complexion. But they must be added cautiously, small amounts at a time. Brush the mixture on a scrap piece to test the color. You may flub it on the first try, but don't be disappointed, it's not too hard to hit the right color.

After the paint has dried on the piers, take some pencil filings on an artist's paper stomp or a cotton swab and dab these on to dirty the surfaces of the piers.

Next, pave the driveway area on the south side of the shed, and the yard, using plaster applied to screening. The yard of the prototype rises, as shown in the photo, and it seems like an interesting feature, so why not retain the idea in the model? It also has a practical purpose, in that the grade of the driveway beyond will thus be reduced a little.

Start the rise about midway in the yard (see plan). Nail or cement three strips across the yard, making each a little higher than the one before. It will also

be necessary to put them in on either side of the piers. Then put one in the driveway (the remainder of the driveway, of course, will be finished out on the layout itself). How steep you make it will depend on your conditions. On my model, it rose $\frac{1}{2}$ " in 4".

Tack on the screening. It will be easier to cut a small piece for the space between each pier, then one piece for the yard area, rather than trying to fit a single piece around all the piers. Make a plaster mix and apply it to the screening as smoothly as possible.

When it has partly set, scribe lines to represent the paving sections. With a penknife, lightly scribe some irregular lines here and there to represent cracks in the surface. The driveway area at the south side is done similarly. Bring the screening right up to the building line at the office. Do not surface the drive area beneath the main shed, this will be planked with timber later.

When the plaster is dry, use the same paint you mixed for the concrete piers, dilute it to a weak wash with the appropriate thinner and apply it to the plaster. Later you may decorate it with oil drippings, using a weak black stain plus some dabs of pure black here and there to represent fresh drippings.

This is the best time to cover the surface between the piers under the shed. This is open ground, so smear on some glue, and apply an earth mixture to a line even with the front edges of the piers. It isn't really necessary to apply this all the way back to the wall, since most of these spaces will be hidden from view. About 16 or 17 ft. back will be adequate.

Trestle siding

Now we come to one of the major operations of the project — setting the long I

beams, bearing the rails of the siding, on the piers. The prototype has beams 24" in depth. Let's settle for Northeastern's $\frac{1}{4}$ " I beam, which scales to about 21". This material in its stock length is inclined to be willowy, so rather than trying to set a single piece from one end of the trestle to the other, cut it into smaller sections. I made mine in two pieces with the break midway on the pier at the north end of the main shed. Cut the I beam to the required lengths after taking the exact dimensions from your model. Paint them with boxcar red to which a little black has been added.

Now cut lengths of running rail to mount on the top of the beams. Those for the north end should be cut a little longer than the beams, to run off beyond the trestle and join the rails from the main line.

At the south end, there is a bumper where the rails should be bent up and inward to "bolt" into the bumper block. Because we are going to have to gauge these beams when placing them, it is easier to handle this situation at the bumper by another method. Cut the rails about 5'-6" shorter than the beams. Later, when you put the bumper on, you can install the bent sections as separate pieces.

Cement the lengths of rail to the tops of the beams, centering them carefully. For work like this, an adhesive like Pliobond seems to be best. It sets slowly, allowing you plenty of time to align the work properly. Also, any excess can be rubbed away fairly easily. Make sure the rail is absolutely straight the entire length on the flange of the I beam. Once the rail is in proper position, carefully put on a few small clamps to hold the work and let it dry for several hours without disturbing it.

While these are setting, locate the position of the beams on the piers. The drawings give approximate position, but here is the way to establish them on your model: The center line for the beam toward the driveway side (east side) is located first. It should be approximately 5'-6" in from the driveway end of the piers; mark this center line on all the piers.

Now mark a line on each pier $\frac{1}{16}$ " (half the width of the flange) nearer the front face, or driveway end of the pier. This will be the alignment for the outer edge of the flange resting on the piers. When the beams with the rails attached are ready (and be sure they are, because if the rails come loose later when the shed is up, you will be in a peck of trouble) cement them into position along the line just located.

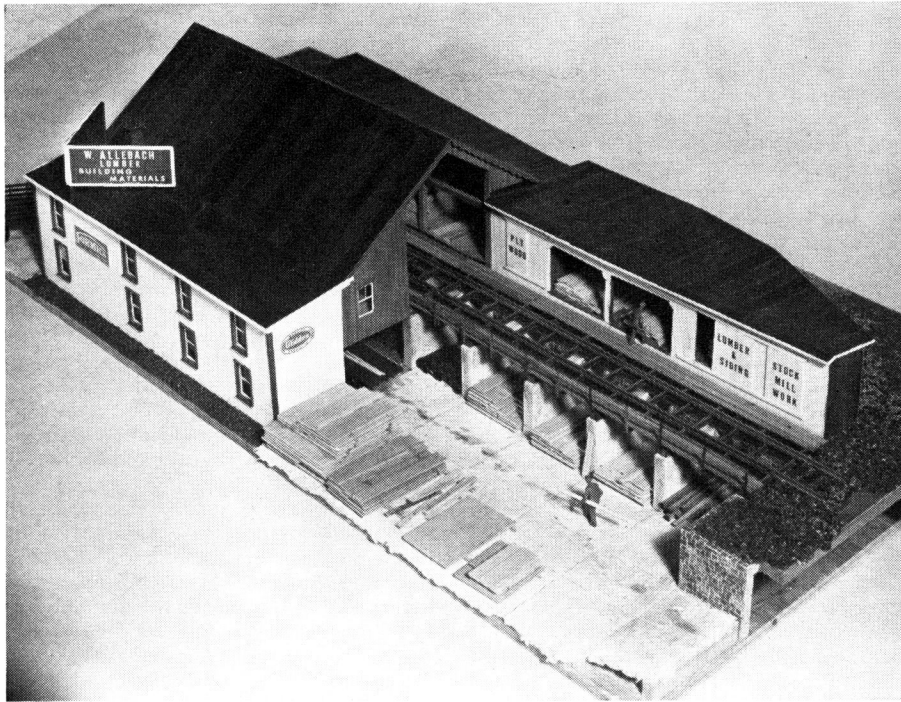
For this work, again, Pliobond will work well, giving ample time to get the beam on the piers exactly correct. You may find that the I beam still has a tendency to curve a bit, but as the adhesive becomes tacky you will be able to ease the beam to the line and have it stay put. To assure a good bond, place weights on the beam over each pier.

Obviously, you can't balance the weights on the railhead, so lay wood strips across the pier heads beside the beam to support the weights, but make certain the weight is still concentrated on the beam.

Do not work on the model while this is setting. Instead, move on to some other items that will be needed shortly. For instance, between the piers under the shed, things like stock doors and window sash, roofing paper, shingles and kegs of nails may be stocked. You do not need to fill these areas all the way to the rear because the stuff couldn't be seen anyway

Prototype yard is located on a Reading branch at Sellersville, Pa. Note scalloped trim on the eaves, weathered siding and the abundance of weeds.





Bilevel model with its trestle siding offers good opportunities both for detailing and operation.

once the shed is in place. The bays at either end should be stocked several feet in, but the other two need only be stocked at the edge next to the drive to give the lumber yard an "in-business" appearance.

Make up a few stands of stock doors by cutting pieces of $\frac{1}{32}$ " sheetwood to the size of standard doors, cement them together so that when upright they will look like doors standing face-to-face, then panel the one on the outside with card stock overlays. Stand them on strips against the pier, with a touch of quick-setting cement to secure them. Make a few window sashes and install these in the same way.

Rolls of roofing paper can be readily made from the pressed paper sticks of lollipop. The small fry can help here by consuming a few pops and turning the empty sticks over to you. Cut them into scale 3 ft. lengths, poke a hole in the center of the ends with a scribe to suggest the center of the roll, then paint black. You will need enough to make only one row, four or five layers high, in the fore part of one bay.

Bundles of shingles may be made from small blocks of wood, notched in the manner of shingles, then closely scribed on those vertical faces that will show. Paint the tops green, gray or red, and the sides dull black.

To go on with the trestle, we now place the beams on the opposite side. The rails are already cemented to the beams, so the easiest method to locate them accurately is by means of a good track gauge, or two, if you have two. Set the I beam on the piers, gauge at each end with the track gauge and mark the outer edge of the bottom flange on the pier top. Slide the track gauge along, thus automatically aligning the beam on the top of each pier, and mark the outside edge of the flange.

Remove the beam, apply cement at the proper points on the pier tops and let it partially dry. Then, put on the beam, lining it up with the pencil marks. Use the track gauge, or gauges, again for a double check. When everything is O.K., put on the weights and allow it to dry thoroughly.

When all the running beams are securely in place, put in the cross-bearers between the beams as shown. These are cut from Northeastern's $\frac{1}{8}$ " I beam. Paint first, then cut them to fit snugly, but not so tight as to force the running beams to bow out at the top. Use a track gauge to check this as you go. Do the glue work as neatly as possible so the "steel" work will look clean when it's finished. I recommend Pliobond because the excess can be picked off.

After all the crosspieces are installed, bond the rail joints between the sections of the running beams for electrical purposes by soldering a small piece of thin solid wire across the joint in the web of the rail. Make it as obscure as possible.

Next, place the supports for the walkways that go on either side of the track. They are also made of the $\frac{1}{8}$ " I beam. The drawings indicate their locations. Note that they are placed so their top flange is flush with the top of the running beam. Notch them a bit to fit neatly into the running beam. The walkway supports at the piers rest on 12" sq. blocks of timber, pre-painted with a weak black stain and cemented to the tops of the piers before placing the supporting beams. However, the supporting beams on the piers under the main shed on the east side of the trestle cannot be placed until the horizontal timbers spanning the driveway are in position, because these timbers are their supports on the ends (see framing diagram). These beams, therefore, will be placed later.

All of the walkway beams located between the piers are put in now. They are supported in cantilever fashion, so glue them to the running beam, then cement a bracket from their underside near the outer extremity back to the bottom flange of the running beam. This bracket may be a piece of thin stripwood with a width equal to the flange width of the walkway beam, or an angle piece of similar size, if you prefer.

At this time do a little decorating on the sides of the piers. Where the steel beams bear on the piers there should be some rust stains on the pier faces. Use transparent water color (a cheap set from the dime store is fine) to make up a wash of brown and a little orange. A similar mixture can be made with model railroad paints and thinner, but be sure it is quite weak.

Pick up a little of the rust mixture on a small brush and apply in streaks on the faces of the piers beneath the beams. Keep the brush rather dry so that the streaks are not too well defined or too heavy in color saturation. A small cotton swab may also be used to rub and blend the streakings while still moist; if they dry too quickly, moisten the swab to blend them.

Now plank the driveway under the shed. Northeastern scribed sheathing, $\frac{1}{32}$ " thick with $\frac{1}{8}$ " spacing, looks fine for this. Put it on with the scribing running across the drive and cement directly to the baseboard. Here and there, put in individual planks cut from the sheathing, shimming them with file card on the under side to raise them a little above the other planks. You might put in two or three boards together like this, to give you the uneven surface so often seen in prototype installations of this kind after several years of wear.

After all the planking is down, mix an extremely weak wash to imitate the color of weathered and unpainted wood. Use model railroad paint thinner with a little black and a bit of boxcar red mixed into it. Actually, it will be mostly thinner and very little color, and should be so dilute as to produce a transparent grayish tone to the wood. In fact, the color of the wood should still be somewhat apparent through the wash. Make up a small bottle of this wash, because you will be using it often throughout the construction of the sheds. When you've got the right color, coat the planking with it.

The planking visible at the ends of the drive should show some signs of wear. Rub the narrow end of a small emery board across the planks in two parallel tracks, to represent paths worn by truck wheels. Scuff up the edges of the higher planks in these tracks. With a square needle file, gouge out places here and there in the tracks to indicate severe wear on the edges of the planks from trucks passing over them.

Now install any stock you wish to place in the bays beneath the large shed, if you have not already done so, because we are ready to go on with the framing and there will be no further chance to do this work.

(Continued next month.)

Lineside lumber yard

Building the main storage shed and office

By Aaron G. Fryer

Part 2

THE framing of the main shed and the office and shop adjacent to it, is of 12" sq. timbers, except for the roof supports of the main shed, some brackets and the ridgepole. In HO, $\frac{1}{8}$ " sq. stripwood will serve for the 12" sq. framing members.

Figs. 4 and 5 show the location of the various timbers. The best procedure is to compare the dimensions of the drawings with your own model before cutting

any given piece. The process is essentially one of taking a measurement from the model, then cut-and-try.

Timbers which fit between others running at right angles should be cut for a good fit, but must not fit so tightly as to cause a severe misalignment in the framework. However, you will probably find your framing developing slight kinks here and there. If so, don't be distressed, for it will make your model look all the

more characteristic of the real structures of this kind.

All the framing pieces should be pre-painted with the same wash used on the planking of the driveway before cementing them in place. Use a relatively fast-setting cement to speed up the job.

Begin the framing by laying base blocks for the three outside walls of the office and shop. You have already drawn the lines locating these walls on the baseboard. But these base blocks, or sills, should be set back by the thickness of the clapboard siding, which is $\frac{1}{16}$ ". On the north and south walls, the siding will seat on the baseboard between the paving and the sills.

Go on now to the wall along the driveway under the shed. As the drawing indicates, this wall is sheathed on the outside along the office portion for cold weather protection, while the shop section is sheathed on the inside only, leaving the sills and uprights exposed to view in the driveway.

Therefore, the sill and two vertical timbers on the office wall will be set in $\frac{1}{32}$ " from the edge of the driveway planking to allow for the sheathing. The sill along the shop rests right against the planking; also, it is continued across the doorway openings to double as the shop floor at these openings. Actually, no flooring will be put in the shop, since it wouldn't show anyway.

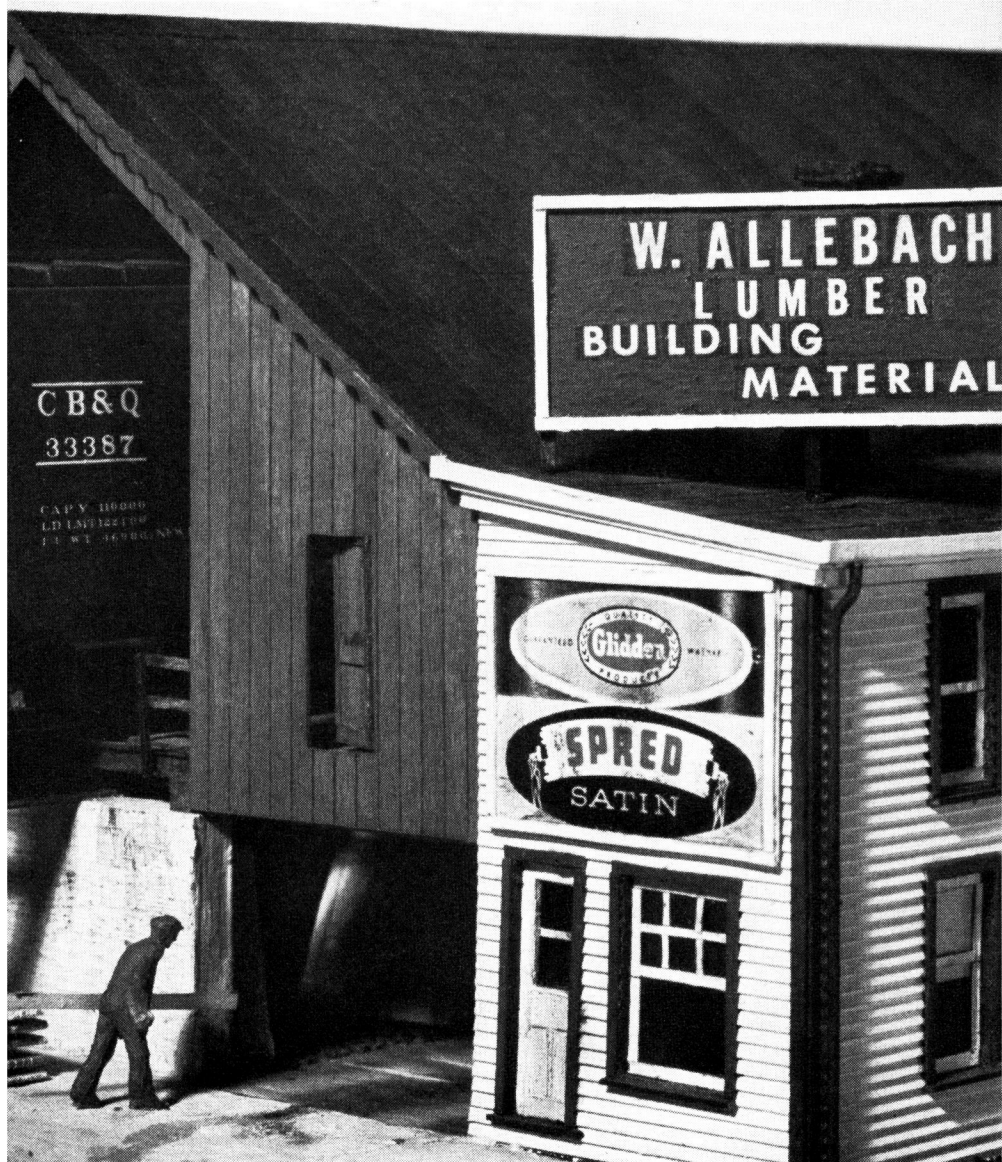
If you want to illuminate the shop and office, this is the time to cut the required holes in the base.

Cut the vertical timbers for this wall opposite the piers. When mounted upon the sill, they come to the exact height of the piers. Exercise care in this aspect of the framing — cut one vertical, hold it in place on the sill opposite a pier, then lay a piece of $\frac{1}{8}$ " sq. stripwood across the pier to the stud post and check to be sure it's level. Cut all the posts in a mitre-box except the four marked "X" in Fig. 5. These are cut $\frac{1}{8}$ " longer so their tops will be equal to the top faces of the cross timbers which will go in over the driveway. These "X" posts are merely to support the sheathing, and are not a basic part of the supporting framework.

Cement all the posts in place on the sill and make sure they stand perpendicular. Cut the five cross timbers which bridge the drive from the piers to the wall. Since these members are also going to support the ends of the walkway beams, they must be cut a little longer than would otherwise be necessary (see Fig. 4). Also, carefully note on the plan how those cross-bearers on the piers at either end of the shed are positioned. At the south end, the outer face of the cross-bearer is flush with the outside face of the corner post of the office. The cross timber at the opposite end should be notched out $\frac{1}{32}$ " on its wall extremity to receive the clapboard siding which is flush with the sheathing of the shed on this end of the building.

Once the crosspieces are in place, put on the remaining walkway supports at the piers on this side of the track. This will finish the work of installing the walkway supports. The boards of the walk may be put on now, although the

Photos by the author



portion in the yard could be applied later, after the upper level shed is finished. The walkway is about 30" to 36" wide and made up of three planks. Use $\frac{1}{32}$ " thick sheetwood scribed to represent the individual planks, or use individual pieces of stripwood of the same thickness. All joints are made on supporting beams.

Now return to the wall on the driveway side of the shop and finish this. Header timbers are installed at the top, cut to fit between the verticals. They will provide bracing now, but their main purpose is to lend support to the "X" posts as well as to provide a surface against which to cement the sheathing along the top. Use Northeastern's $\frac{1}{32}$ " thick sheathing with $\frac{1}{16}$ " spaced scribing. Hand-scribed Strathmore may be substituted. Paint the sheathing first with the gray wash, and install it. The piece of the outside of the office is notched to fit around the cross timber on the end pier.

To add a touch of realism, cut out some trademarks or small advertisements from magazines and paste them here and there on the exterior of the office wall.

Put in the two longitudinal timbers which run the length of the shed on the crossbeams (see drawings). Those may be in one piece so long as you are successful in having them seat properly on all the cross timbers. Erect the verticals on these members over each crosspiece. These verticals in both rows (over the piers and above the shop wall) measure about 8'-10" in height, but those in the row over the shop should be tapered off on the top to receive the sloping roof of the shop.

With the verticals thoroughly set, put in the floor over the drive. Make it from $\frac{1}{32}$ " thick scribed sheathing. As Fig. 4 shows, it is cemented onto the longitudinal members. Allow room for the shop side to cement the second story shop floor to the same sill. The floor is notched to fit neatly around the posts. This will be a little easier if it is made in two pieces with the joint at the middle pier. Paint the decking with the gray wash. Now, cement on the timbers which run crosswise between the posts. Be careful and try to keep the verticals in line. Cut the brackets from $\frac{3}{32}$ " sq. stripwood and cement in place. About now you will observe the framework becoming quite rigid.

Lumber stacks

This is the best time to put in the lumber piles on this side of the main shed, so let me introduce you to the art of making reasonably good-looking lumber stacks. Go through your box of sheetwood scraps and pick out all the $\frac{1}{32}$ " thick pieces, scribed or unscribed. This $\frac{1}{32}$ " material scales out a little thick for individual boards, but it looks quite realistic, and that's what really counts. Boards run generally in lengths of 10, 12, 14 and 16 ft., so any scraps at least a scale 10 ft. long will be useful.

To start a pile, take a piece of unscribed sheetwood of the width you want to make the stack (in this case, it must fit between the posts of the shed), and perhaps a scale 12 to 16 ft. long. Nick the edge that goes to the front of the pile with a modeling

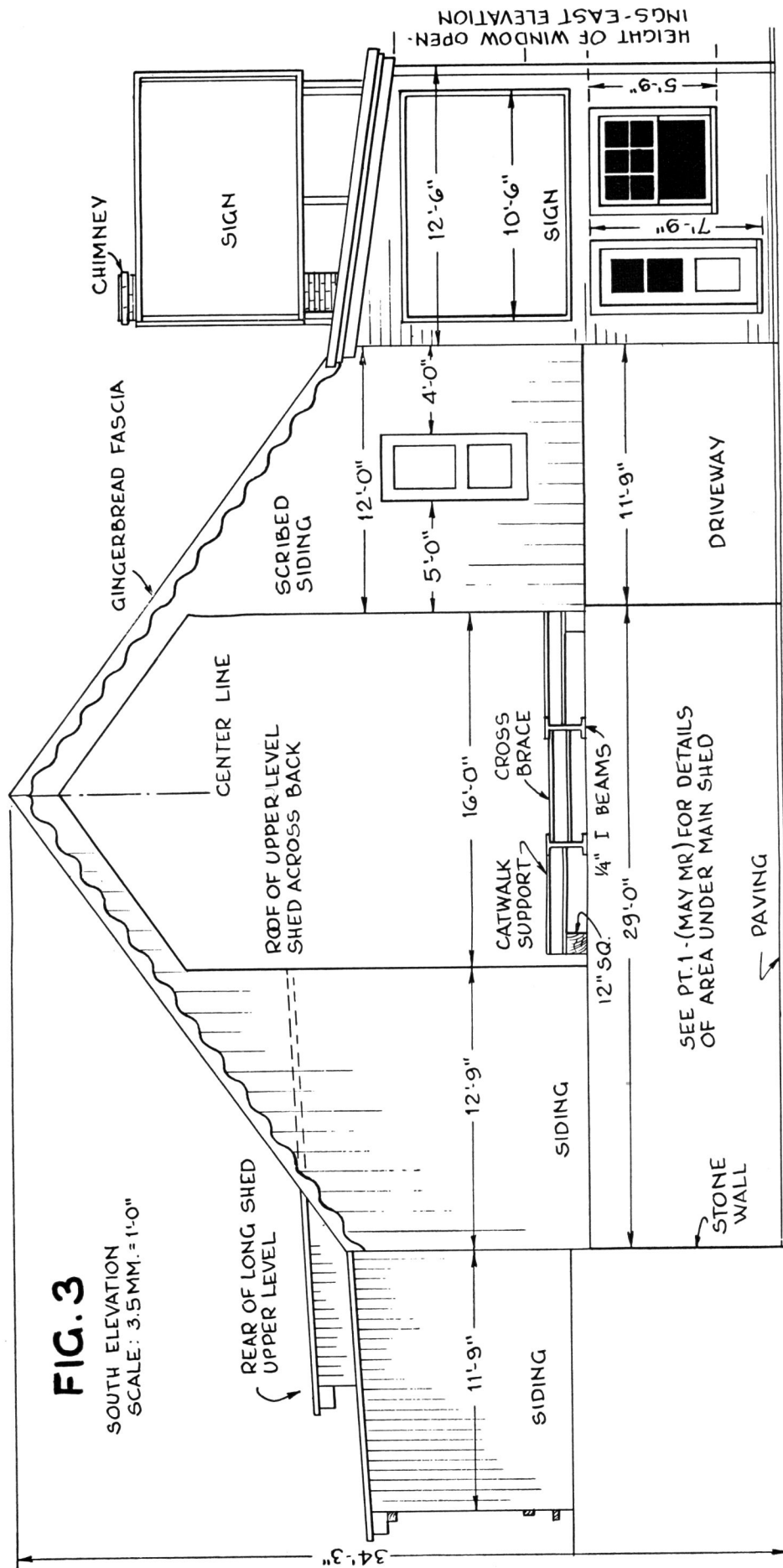
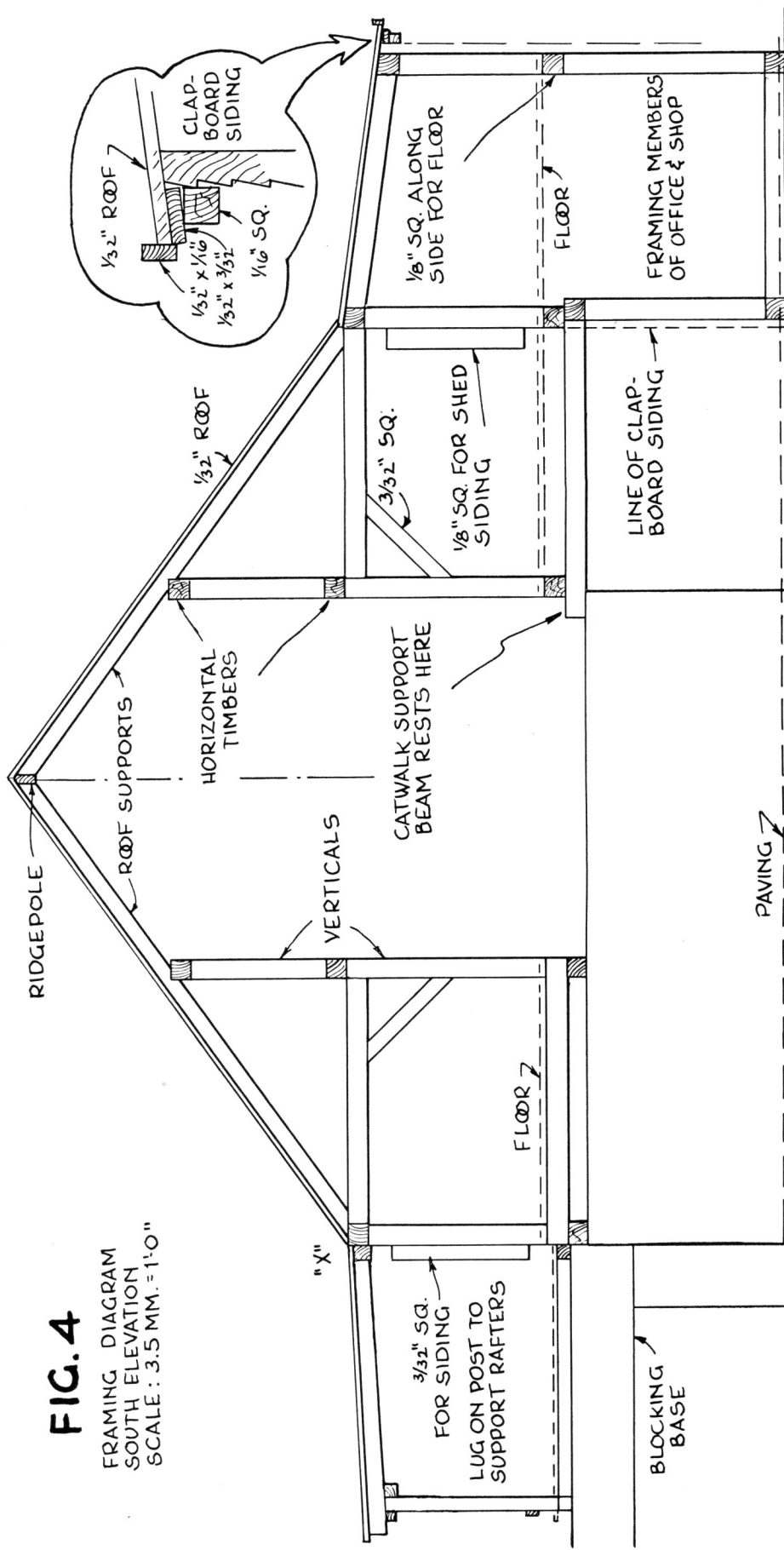


FIG. 3

SOUTH ELEVATION
SCALE: 3.5 MM. = 1'-0"

FIG. 4

FRAMING DIAGRAM
SOUTH ELEVATION
SCALE : 3.5 MM. = 1'-0"



knife to represent the individual boards. Board widths may be anything from 8" to 16", and sometimes boards of all one width are put in one pile, while at other times, random widths are stacked in a single pile. It's not necessary to measure off the nicks, merely judge them by eye.

With a square needle file, cut back the edge a little between some of the nicks. This suggests the irregular projections of the various planks at the front of the pile.

Make another piece the same way, but file back the front edge at different places. Put a few dabs of cement on its underside and cement to the first piece. You may keep their front edges even, or set one in or out a bit to further the irregular effect on the front of the pile. Keep adding layers like this until you reach the desired height. The top piece, or pieces, should be scribed to correspond with the nicks on the front edge.

The top of a lumber pile is not always of the same height all the way across. Often boards are stacked a little higher on one side of the pile than on the other, so make some of yours the same way. And sometimes one or two pieces are left lying across the top at an angle, and perhaps overhanging the front of the pile a little. After the stack is finished to your satisfaction, cement it in place on the shed floor. Do not paint it.

Scribed sheathing is fine for creating stacks of boards of identical width. The procedure is the same except that you nick the front edge at the scribe marks. You doubtless have the idea now, so proceed to make stacks for the side of the shed you are working on.

Take time to try for as much realism as possible. Make the stacks of varying heights; in one bay put two narrow piles instead of one wide pile, representing different kinds of wood, of perhaps different lengths. The broad stacks do not necessarily have to fill the bay. After all the piles are placed, put some single boards alongside them in a random manner and fasten them with a drop of cement. Often, too, you will see some planks standing on end leaning against the horizontal timbers of the shed at the rear or sides. You might like to add a few of these later on before putting on the roof supporting pieces.

Continue with the framework on this side of the shed by installing the overhead horizontal pieces running the length of the shed. On the pier end of the bents, this member rests upon the posts. One piece may be used if it can be made to seat properly on all the posts, notched a little at the center lines of the posts to represent individual timbers; if not, use separate pieces, butt-joining them at the centers of the posts. Sand off their upper surfaces at a slight angle to take the pitch of the shop roof.

Install the uppermost row of posts (take dimension from drawing) and follow it with the horizontal members cut to fit between them. Do not put on the roof supports yet.

The framework on the other side of the track is erected similarly, although it does have a few modifications. You will note that on this side, the decking is cemented to the cross-bearers rather than

to the plates as on the opposite side. The flooring is, of course, laid with the scribing running parallel to the cross-bearers.

This may later allow it to sag or bow, if the wood swells, so to prevent this, cement a strip of $\frac{1}{16}$ " x $\frac{1}{8}$ " stripwood edge-wise on the plates between the cross-bearers and cement the flooring to these, as well as to the crosspieces. After the floor is on, make some more lumber stacks and place them, then finish the framing with the exception of the roof supports, which will be added later.

Office and shop

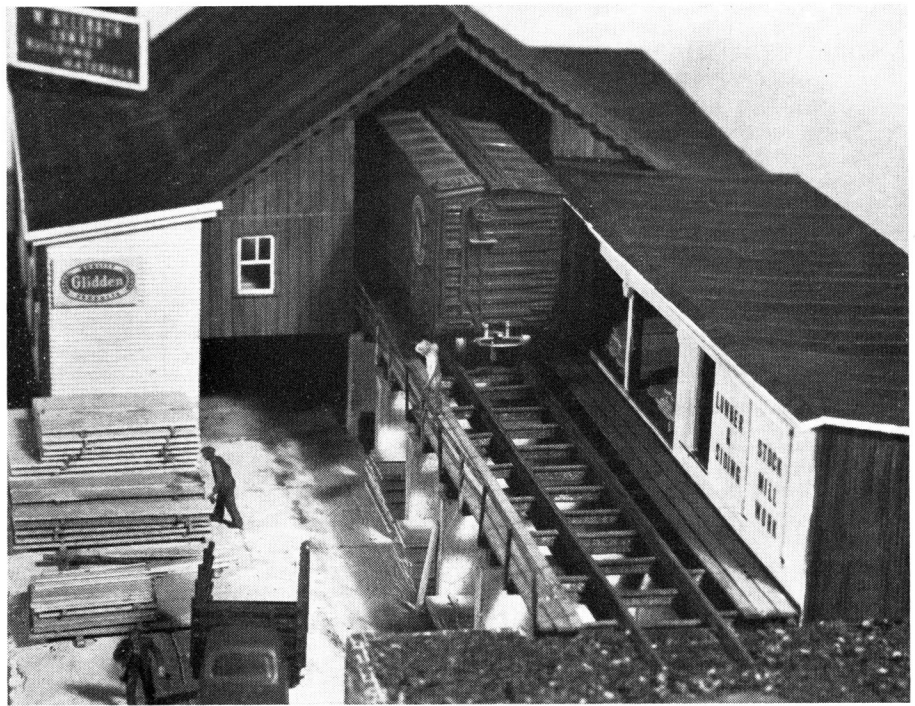
Now, complete the office and shop portion. The base sills are in place, so the next thing to do is erect the framing to which the clapboard siding will be cemented. The drawings show how and where the various members are put in. Set the posts, then put the horizontal members on these posts, making certain everything is square. Note that the horizontal timber on the top of the east elevation must be beveled slightly for the roof.

Cut out the three sides of the building from $\frac{1}{16}$ " thick Northeastern clapboard siding with $\frac{1}{16}$ " lap spacing. Check the drawings and your model for dimensions.

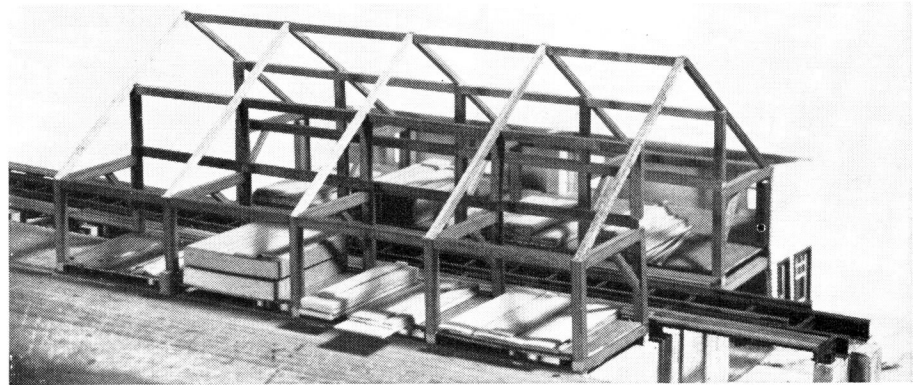
Although the shed portion is a faded and weathered gray, the office and shop should be painted attractively, since it's located right on a public street where its appearance is important for business purposes. White is suggested for the siding, the sashes and the door, while all the trim should be a contrasting color, perhaps red, green or blue.

Refer to Fig. 1 (May MR) and Fig. 3 for the locations and dimensions of the office door and windows. Cut these out and then paint the walls, but do not cement them in place yet. Make the door and the double-hung sashes by the usual methods (Fig. 6), painting as you go.

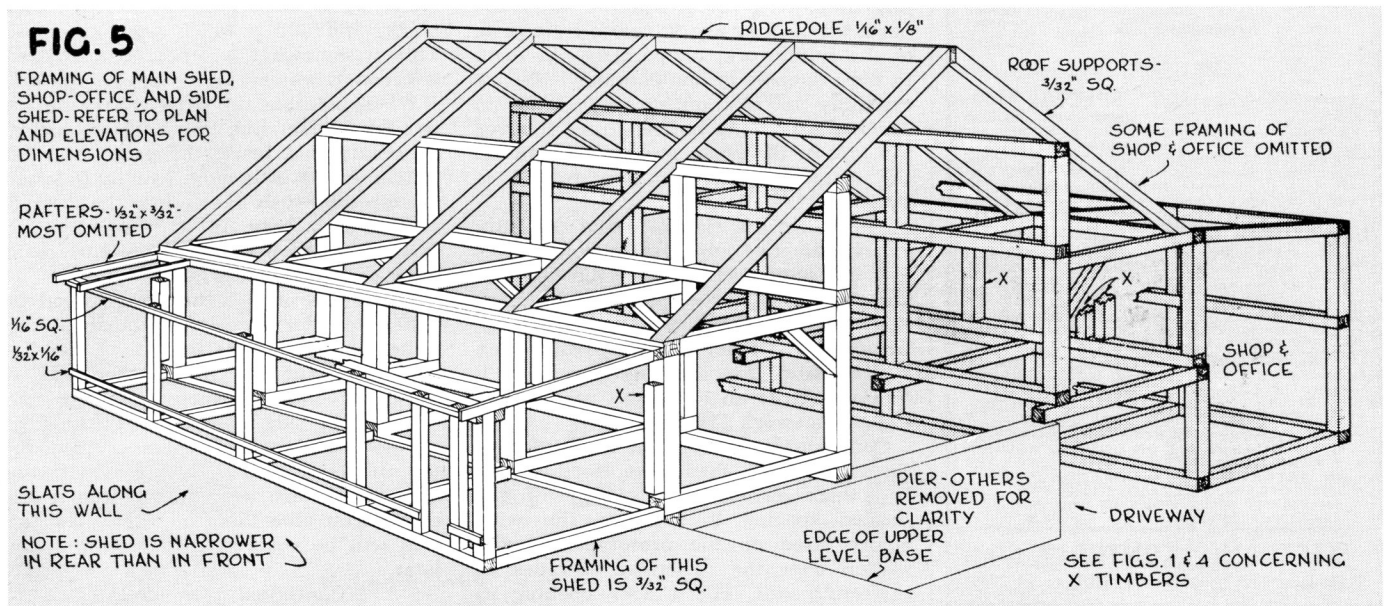
Cement floor supports to the inside of the long wall, taking their locations from Fig. 4. Now cement the walls on the framing, then install the upper floor, which is actually a continuation of the



North side view shows a busy and well-stocked yard. Trim office contrasts sharply with main shed.



Framework of the main shed, with lumber stacks in place. Backs of stacks need not be detailed.



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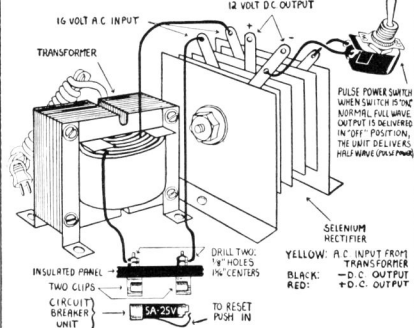
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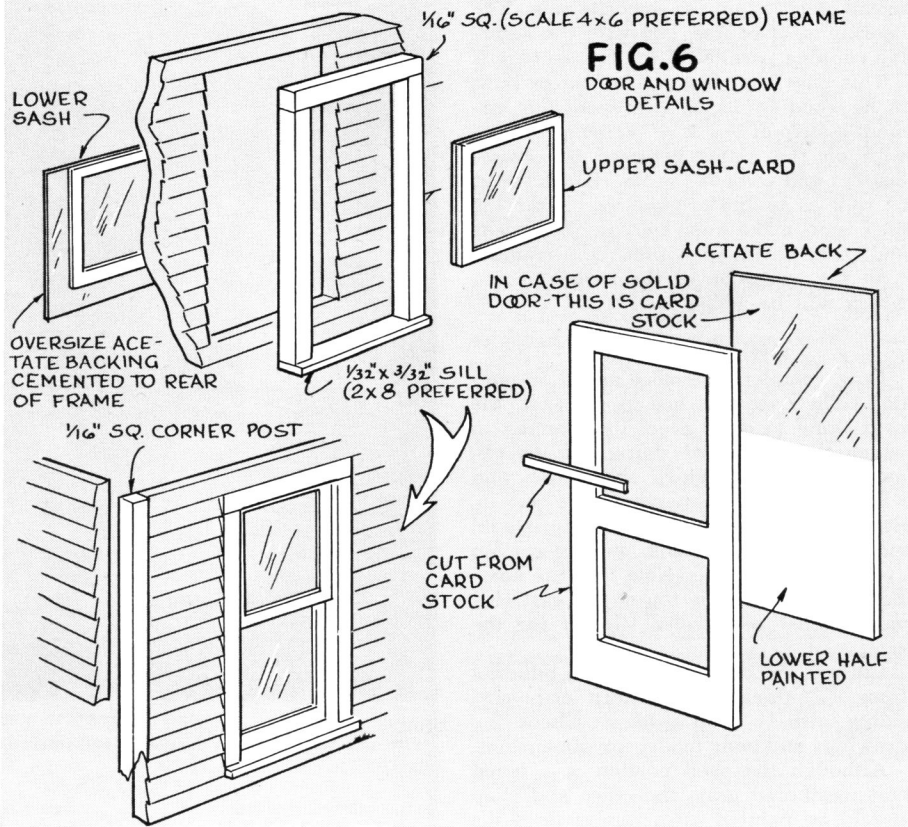
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shed floor. There is no wall between the shop and the shed on this level.

Cut the roof from 1/32" sheetwood or Strathmore, and cement in position after first checking the amount of overhang (see drawings). With this roof in place, we may return to finishing out the big shed.

Cut a pair of roof supports for the south end as a start, from 3/32" sq. stripwood and a ridgepole from 1/16" x 1/8" stripwood cut to the length of the framework. Chamfer the top two corners of the ridgepole to accommodate the roof later. Fitting the supports will be largely a matter of cut and try, because your framework will probably be a bit out of line in places. Notch out the two supports where they are to bear on the posts of the framework, temporarily pin them to the ridgepole at one end and hold this assembly in position on the frame to check the fit. The notches must fit over the tops of the posts, and the bottoms of the supports must rest on the frame squarely.

Disconnect the ridgepole and carefully cement the two supports in place. Follow the same technique at the opposite end, but cement the ridgepole in place also, after the two roof supports are up. Install all the other roof supports. When all this work has thoroughly set, you'll find you have an amazingly strong and rigid framework.

Continue by putting on the siding at the ends of the shed. Use Northeastern 1/32" thick scribed sheathing with 1/4" scribed spacing to simulate the wide boards used on the prototype. In the section over the driveway entrance at the south side, cut a door opening as

shown on the elevation drawing. After it is in place, make a paneled door with no glass lights, and cement into place in a partly opened position to add a little life. This door is apparently used for passing boards down from the shed. The corresponding section at the opposite end has a window (see prototype photo, May MR) which adds interest to this end, although any practical purpose for it is obscure.

Paint the sheathing on both sides before installing. The prototype shed had evidently been painted gray a long time ago, and has since weathered down pretty well. It gives an interesting character to the old shed, and contrasts sharply with the trim white clapboards of the shop. Make up a dark gray with white and black, and add a touch of boxcar red. Thin it somewhat, but not so much that it becomes watery.

When painting the exterior, try for an irregular effect like that of faded paint. To obtain this, brush the paint out well but apply it a little more heavily in spots. Or, dip the brush lightly into the thinner after first picking up some paint on it, then work the brush over the surface to produce an uneven density.

Cut pieces of 1/32" thick sheetwood or Strathmore for the roof of the shed, and cement in place. The roof overhangs the ends by about 6". On the shop side, it fits down onto the shop roof, while on the opposite side it is even with the edge of the framework. Remember to paint the underside of the roof pieces with the same gray wash used on the framework before you glue them in place. The top side will be covered with roofing paper later.

(Continued next month.)



Photos by the author

Lineside lumber yard

— Building the second storage shed

By Aaron G. Fryer

Part 3 — Conclusion

THE low shed adjoining the main shed on the upper level is next to be constructed. The elevation drawing (June MR) shows the details of the framing, and the procedure is basically the same as that used for the large shed.

Set the edge sills and the cross sills on the baseboard, erect the posts, and follow up by laying the floor. Note that in this shed, the framing timbers are of $\frac{3}{32}$ " sq. stripwood. Note also that the flooring overhangs the sill on the long side of the shed, and because it shows to this extent, use scribed sheathing to represent the floor boards. Nick the edge at the scribe marks to further the appearance of individual boards.

The long side of this shed is made up of slats which run from the floor to a line even with the top of the posts. Their horizontal supports are cemented to the exterior faces of the posts as shown on the drawing. In HO, the slats are cut from $\frac{1}{32}$ " x $\frac{1}{16}$ " stripwood and painted with

the weathered gray wash before installation. Use the same painting technique you used on the large shed, so all the slats do not look alike. Here and there slip in one or two unpainted ones to suggest recent replacements. The gate is also of slats battened "Z" fashion. Cement a tiny sliver of stripwood on it to simulate the latch, and attach the gate to the post, using little pieces of file card for hinges.

My method of putting the roof supports on this shed is not very prototypical, but it serves the purpose and isn't seen anyway. The idea is not to show the roof supports on the long side because you are going to dub in the rafters at the eaves to suggest the open eave construction of the prototype where, of course, the rafters carry the roof all the way across.

Cement small pieces of $\frac{3}{32}$ " sq. stripwood to the inner faces of the shed posts, flush with the top. (See framing diagram, June MR). Then, cement a long piece of $\frac{3}{32}$ " sq. stripwood onto the frame of the

main shed, indicated by "X" on the framing diagram, first filing off the top to receive the roof. The roof supports of $\frac{3}{32}$ " sq. pieces are glued onto the lugs and the "X" member.

Cut out a piece of scribed sheathing (scale 6" wide boards) for the south end of the shed, paint it and cement into position. You may also close up the narrow end of the shed now, by first placing a post, or a lug, between the sill and header against the main shed corner; then apply sheathing.

The roof is made from $\frac{1}{32}$ " thick material, painted on the underside before it is cemented in place. On the south end it should align with the edge of the main shed roof, while at the narrow end of the shed, it should be even with the framing, not the edge of the sheathing. The reason for this will be apparent later.

With the roof in place, dummy rafters may be installed on the long side of the shed. They are $\frac{1}{32}$ " x $\frac{3}{32}$ " stripwood, and

need be only about a scale 3 ft. long to give the desired effect. Paint first with the weathered gray wash, then cement them in between the roof and the horizontal members (see drawing). Spacing may be approximately 24".

Now, begin the work of covering the roofs with roofing paper. Any thin paper can be made to do by painting it a flat gray-black, or warm black, after it's cemented in place. Cut the strips a scale 3 ft. wide and apply with a slight overlap of the previously laid stretch. Start with the shed just completed, running the strips across its narrow dimension, then switch to the shop and office building, where the strips run the long way. Here, start the first stretch at the eaves, working up to the roof of the large shed.

The strips on the large shed run crosswise. Lap the coverings of the adjacent roofs a little along the meeting line. Finally put on the ridge strip along the length of the peak of the roof, lapping each side about 12". In putting on the roofing paper, piece in some short stretches here and there to simulate the end of one roll and the start of a new one.

Upper level shed

You are now ready to start the final phase of construction, the shed on the upper level along the siding, behind the large shed. Use the same 12" sq. stripwood for the framing pieces. The drawing indicates the location of the various members.

Note from the photos and drawings that two bays of the shed are open on the front, but closed on the rear with sliding doors for access. Side walls of sheathing isolate these bays from the remainder of the structure.

Begin by laying the sill pieces on the perimeter of the building. Along the stone retaining wall the sill pieces are set back enough to allow for the 1/4" thick sheathing, which will be placed more or less flush with the face of the wall. Install the cross sills at the partitions of the open bay. These cross sills serve merely to secure the partitions along the bottom.

The roof of this building is sloped toward the rear, so the posts at the rear will be shorter than those of the front elevation. Further, because the building narrows at the north end, the two rear posts on the oblique portions of the rear wall will also be of different heights.

The angle of the roof slope is indicated on the south elevation and Fig. 7. On the elevation drawing, the rear portion of this shed is shown extending beyond the roof of the large shed, and a dotted line carries the line of the slope out to the front wall. The front wall is exactly aligned with the track opening through the main shed. Thus, it will be found that the top of the front wall (not including the roof) will be about 12'-6" above the upper level. Cut the front posts to make this height when placed upon the sill, with the exception of the post midway between the open bays, which will be put in later.

The three rearmost posts will be about 10'-3" long, so that when placed upon the sills they will be approximately 11'-3" high. This dimension is not too critical — in fact, if there is a slight variation in the height of the various posts, it will serve to introduce realistic undulations in the roof, making the model look all the more authentic.

The heights for the remaining two ver-

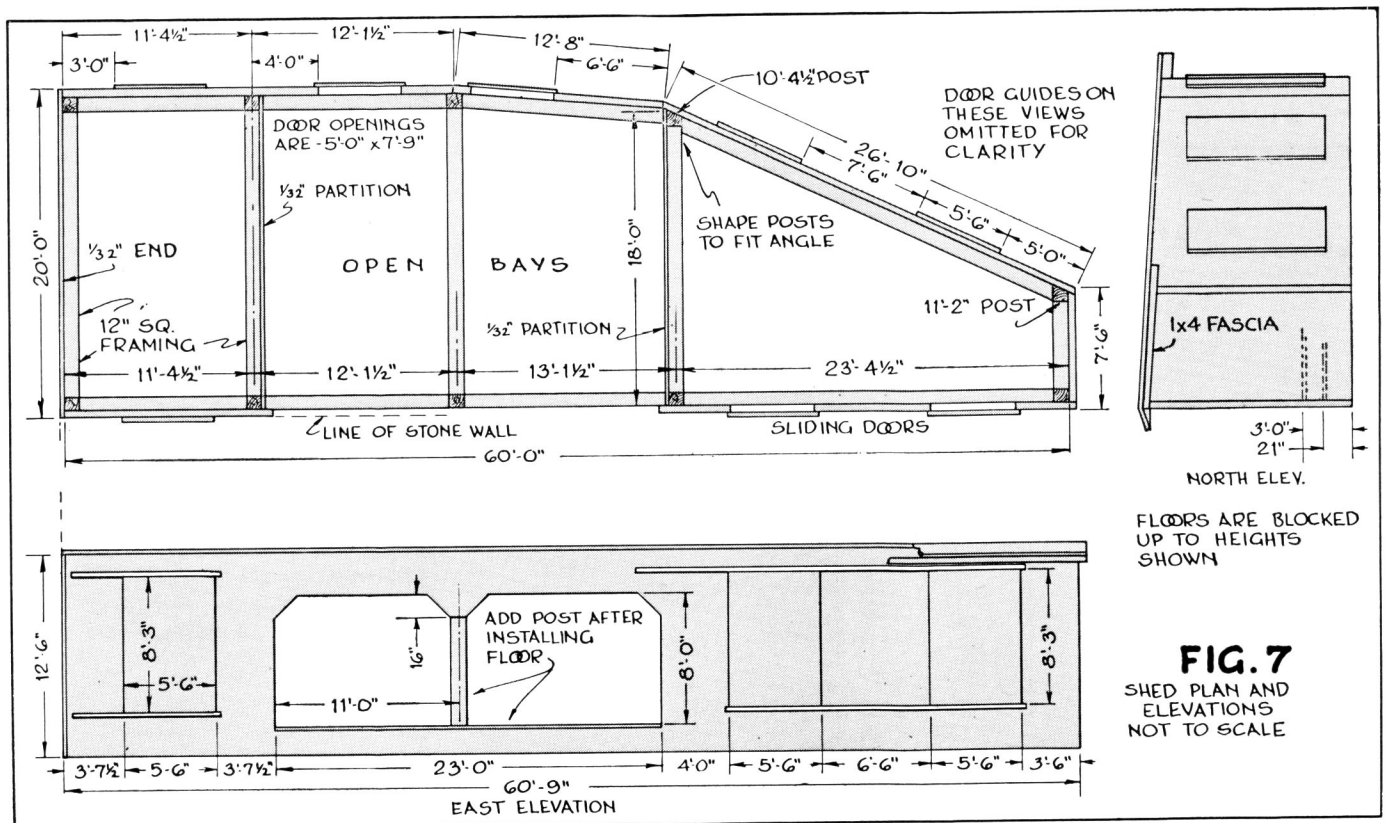
ticals on the oblique sides are shown in Fig. 8, or can be fitted by the cut-and-try method. Here again, you need not be overly exact. On my model I deliberately cut the rear post for the narrow end of the shed a few inches shorter than it should have been to carry the roof slope correctly. This produced a gentle dip toward that corner when the roof was applied, lending authentic atmosphere to the model. All posts have a slight angle on the top to accommodate the roof slope, and those supporting oblique sides must be filed away to receive the side sheathing properly (see plan).

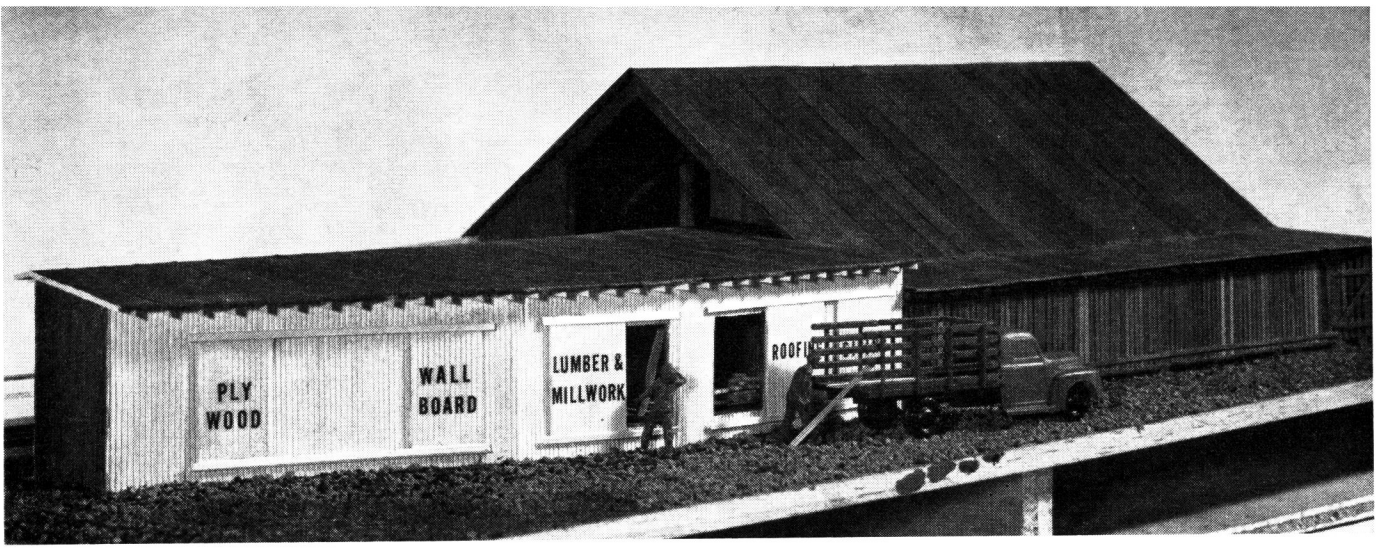
Next, put in all the roof supports running across the shed between the posts, with the exception of the one in the middle of the open bay. Cement in the partitions of the open bay, using 1/32" thick scribed sheathing prepainted as weathered wood.

Glue in some floor supports here (Fig. 8), shimming as required to bring the decking about 21" above the upper level base. But before cementing the floor into position put in the 1/16" thick scribed sheathing along the base below the opening (paint first), because the floor comes out flush with the face of the sheathing.

At the rear the floor is brought to the inside line of the walls. Nick the front edge of the floor corresponding to the scribe marks to suggest individual boards, then paint with the gray wash. Finally, put in the center post on the front, setting it back from the edge by the thickness of the sheathing material.

Now make a couple more lumber piles to be placed in the open bays, since this is the logical time to put them in. These are going to show, so take pains in making these stacks as realistic as possible. After





The upper level shed can be left unpainted, or, like the prototype, painted a neat white and used for advertising the lumber company's products.

cementing them in place put odds and ends of boards around inside (secure with a drop of cement), some lying by the piles, perhaps one or two standing against the wall. Put in the roof support running across the middle of the open bay, and then the lengthwise headers at front and rear between the posts. These should be filed on the top to a slight angle for the roof.

Next, put on the sides. Start by placing the narrow end of the shed, using $\frac{1}{16}$ " thick scribed sheathing. On the prototype this wall was unpainted and weathered. This adds variety and interest, so I did it that way on my model.

Finish the other end by piecing in a segment of scribed sheathing to close up that portion of the building extending above the roof of the main shed and the adjacent upper level shed. Cement the piece against the timbers and the edge of the main shed roof. It, too, is painted with the familiar gray wash.

With the ends closed up, the front and rear walls may be applied, made as

already mentioned from $\frac{1}{16}$ " thick scribed sheathing. It is not necessary to make all the loading doors workable. Two or three operative are enough to give a busy atmosphere. Of course, if you want them all movable, you may make them this way, but it means cutting more openings in the walls, installing a floor throughout and filling out the interior with simulated stock, (plywood, plasterboard, wallboard, and similar items) to provide a realistic appearance when the doors are opened.

The floor in those parts of the shed other than the open bays should be figured to be about 3 ft. above the base. The doors are approximately 8'-3" high and cover openings (for the moving doors) 5 ft. wide. The doors are $\frac{1}{32}$ " thick scribed sheathing. The tracks in which they slide are $\frac{1}{32}$ " sq. stripwood with a narrow piece of card stock cemented to the outer edge as a retainer. If you have dummy doors, no openings need be cut into the walls; the doors are simply glued to the sheathing.

Piece in scribed sheathing across the top of the open bays on the front of the shed so that the height of these openings will be about 8 ft. from the floor. Cut small triangular pieces to fit into the upper corners of the opening and over the face of the center support at the top of the bays.

By painting the front and rear of this building white, you may later apply advertising to the doors as on the prototype building.

The $\frac{1}{32}$ " thick sheetwood roof goes on next. It overhangs the rear about 18" and the ends by approximately 6" or 7", but when cutting the pieces make them to fit even with the front. There is an overhang on the front—about 15"—made from individual pieces. Make it of two or three pieces of stripwood of a scale 15" width, sanding off one edge at an angle to fit against the edge of the roof proper, and so give the downward pitch as in the prototype. When you cement them into place, allow the adhesive to become tacky before applying the piece. This will tend

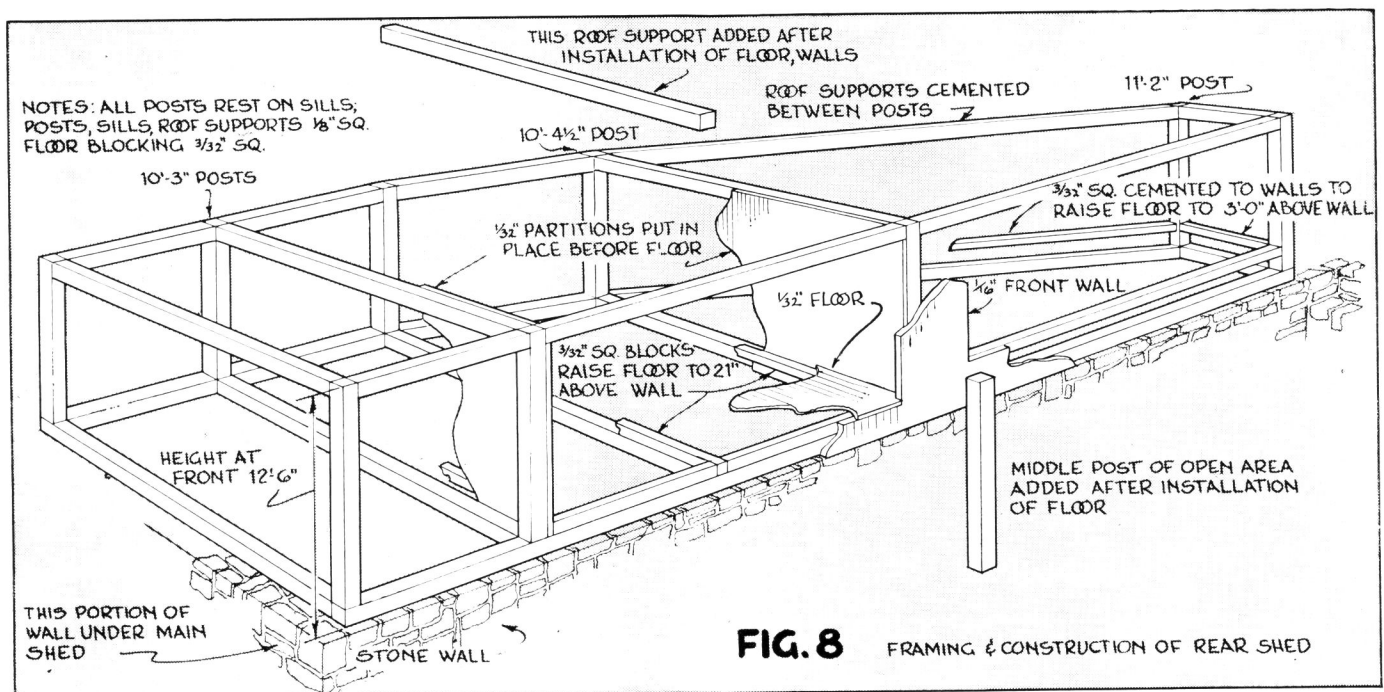


FIG. 8 FRAMING & CONSTRUCTION OF REAR SHED

to make it self-supporting at the required angle as the cement sets. If trouble is encountered, just put in a few small brackets for support until the cement sets firmly, then remove them.

On the edge of the front eave, as well as the eave on the narrow end of the shed, hang a fascia board made from a piece of $\frac{1}{32}$ " x $\frac{1}{16}$ " stripwood sanded down to $\frac{3}{64}$ " and painted white. On the rear, dub in the roof rafters extending through the siding by cementing pieces of 2" x 8", made of stripwood or card, under the eaves on 24" centers. Paint them white before putting on.

Paste on strips of roofing paper across the narrow dimension of the shed, folding them down over the rear edge, and also on the short edge on the end at the main shed. Where the sides and roofs of the long shed and the large shed join, provide flashing made from the roofing paper cut into suitable widths and lengths to make a neat job.

Final details

Put the fascia boards on the ends of the roof of the large shed. On the prototype, these had a bit of gingerbread cut into the bottom edge. This may be effectively suggested on the model by cutting in a series of short S curves along the length of the board with a round needle file. First cut in the concave curves at regular intervals, as suggested on the south elevation, then round off the flat areas in between them. Paint the same color as the siding and cement to the edge of the roof.

With these in place, the cornice of the office and shop building may be put on, since the returns of the cornice are boxed around, or into, these fascias. The drawings show a method for making a very effective looking cornice. Note the top piece comes a couple of inches above the deck of the roof. Put on the corner trims next, painting them first.

Make a downspout from .045" dia. brass rod, paint it to match the trim and install at one or both ends of the building, to fit up under the cornice.

I made the chimney by cementing aluminum foil onto a softwood base and scribing it to a brick pattern. I made the four sides separately, cut to match the roof slope, and glued them together after scribing. The capping course is a piece also covered with foil and scribed. Paint the entire chimney caboose red and smudge it with soft pencil dust, or else apply a little black to the red before it dries completely. Of course, the top should be quite thoroughly blackened. Don't forget to flash the base with roofing paper after installing the chimney on the roof.

Make the two signs for the rooftop from $\frac{1}{32}$ " thick material, approximately 7'-6" high x 16'-0" long. Paint, then apply prepainted wood framing strips and put on the decals. I used Champion $\frac{3}{16}$ " high condensed Gothic alphabet for the company name and $\frac{5}{32}$ " high condensed Gothic for the word "Lumber." "Building Materials" is No. L-42, $\frac{1}{8}$ " high alphabet, also by Champion.

After the signs are finished, attach legs



African violets?

"As far back as I can remember," Aaron Fryer says, "trains and trolleys have been a never-ending fascination for me. I started in model railroading with a Lionel set when I was nine — and I still have it.

"In 1948, I started in scale model railroading with an HO car kit or two. After building some 20 or 30 kits and two locomotive kits, I went into scratch-building cars and structures and have derived great personal satisfaction from this aspect of the hobby.

"I have no layout myself, but I am building a very simple 5 x 8 ft. layout for my son, Paul, who even at the age of seven is a rabid railfan and model railroad enthusiast. Wife Grace tolerates our hobby quite well, even packs lunches for us and goes along on our safaris for model railroad material, and train and traction photos, some of which find their way into your companion publication, *Trains*. Besides model railroading and railroad photography, I also paint in oils and water color, and grow African violets.

"I am 46, and earn our bread and butter and tax money as a commercial photographer in one of the country's largest photo finishing plants."

made from thin stripwood and mount on the roof in a V formation, as in the drawings. The front leg, which is the longest, acts as a common support for both signboards.

Look through magazines for advertisements that would be suitable for signs in your scale. In addition to lumber, the products advertised might be paint, building boards, cement, and similar items. Cut them out, mount on card stock, apply framing strips and install on the building.

Apply the advertising decals to the doors on the front and back of the long shed on the upper level. In HO, Champ's black condensed Gothic, $\frac{5}{32}$ " high, are quite suitable.

Build the bumper (Fig. 9) and attach

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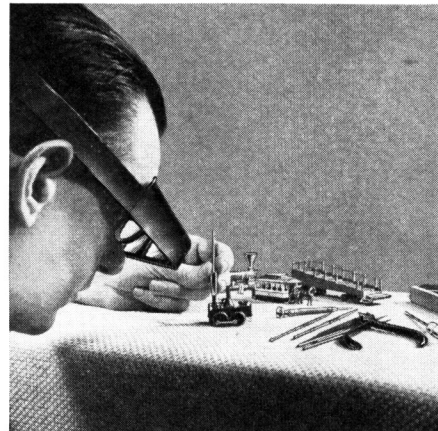
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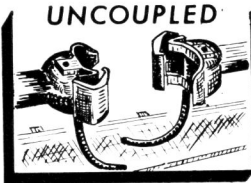
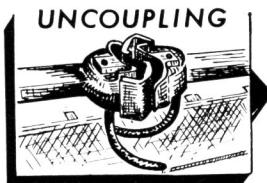
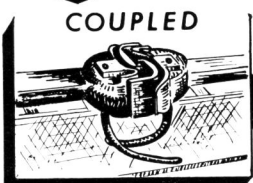


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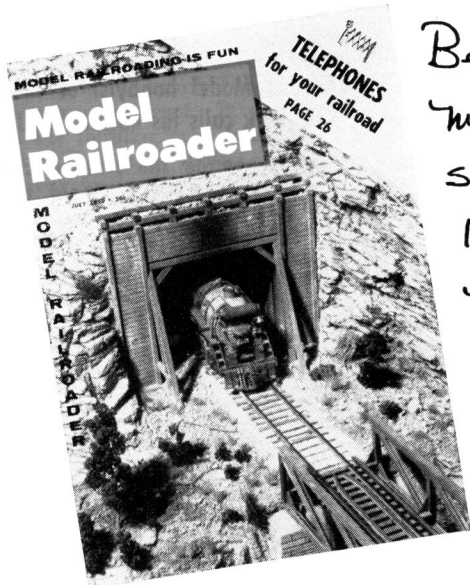
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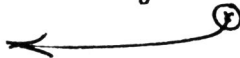
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it to the terminal pier. Now put on the ends of the rails which bolt into the bumper block. Try for a neat fit where they meet the running rails, to cover up the fact that the rails are not one continuous piece directly to the bumper as they would be in prototype.

The outer catwalk of the trestle in the yard, and the one going from the large shed to the terminal pier are protected with railings. The prototype uses an iron railing, but wood railings are often used on these trestles, so you have a choice. Duplicating the railing in metal would be a challenging exercise in soldering. Wood is easier and looks just as interesting—in fact, it can be made quite picturesque by introducing some zigzags to make it look rickety.

For the wood railing, use 1/32" sq. stripwood for the posts, which are cemented to the ends of the support beams, and cut the rails from 1/32" x 1/16" stripwood. Paint as badly weathered wood, and try to vary the tone from piece to piece for realism. You might also put a railing at the end of the walkway on the east side of the trestle, and the south end of the large shed.

The model is now ready for installation on the layout. Before doing this, though, you may put the ties under the rails coming off the trestle. After you've placed it on your pike, make some more lumber stacks to fill out the main yard. The stacks along the edge of the yard in the model photos were made low to show the details beyond, for photographing. Actually, these stacks should be built up fairly high. Place stacks beneath the trestle, and some piles may also go on the upper level as in the prototype photo (May MR).

The outdoor stacks should have stripplings between the layers (thin stripwood sanded down considerably). Building materials like cinder blocks and drainage tiles may also be stocked in the pockets under the trestle. Make the place look as though it's really in business!

The final touch will be putting up a wall or fence along the shop building side and landscaping to blend the model into its surroundings on your layout. Don't forget the close clearance warning sign on the narrow end of the upper level shed.

