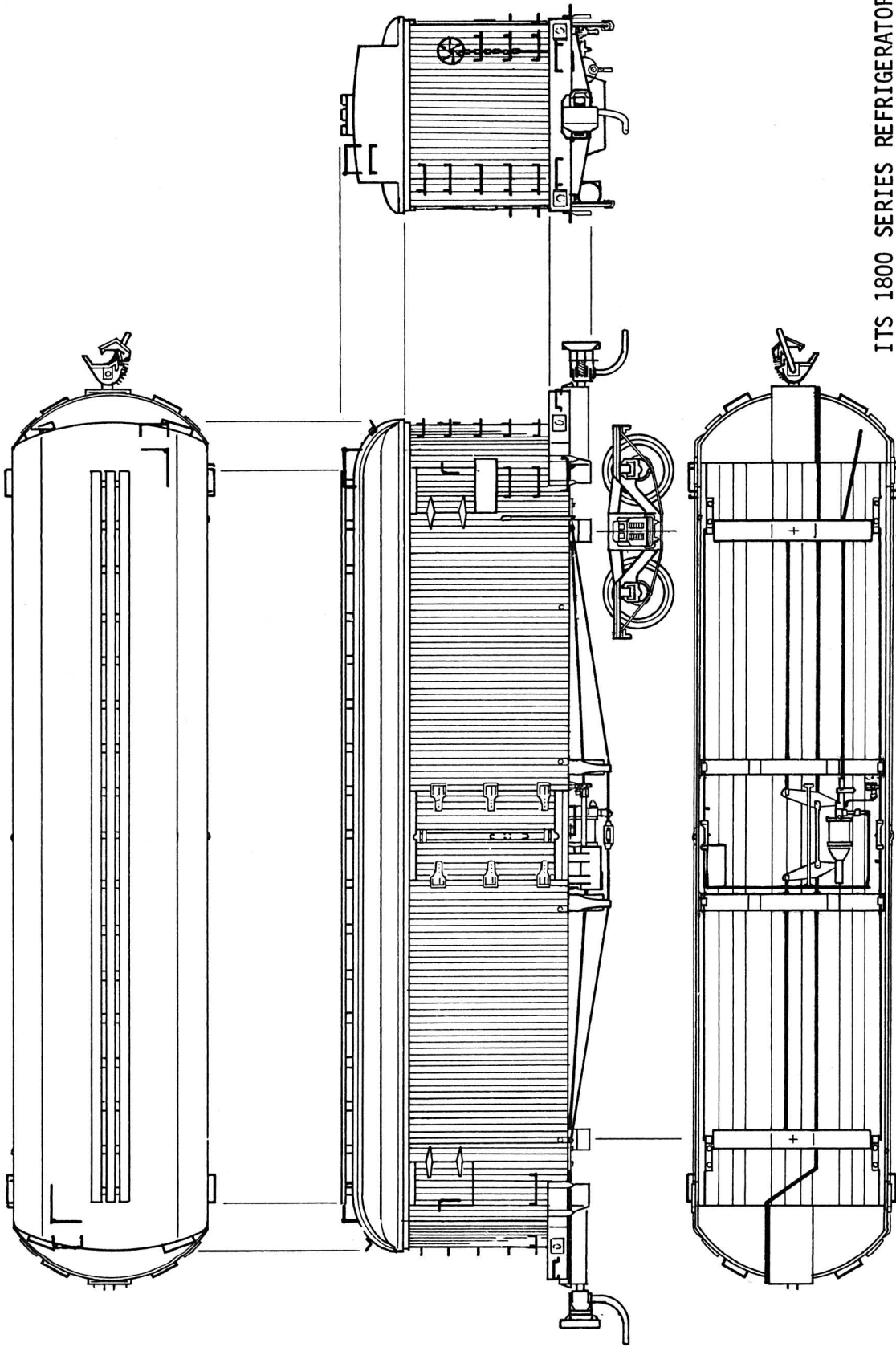
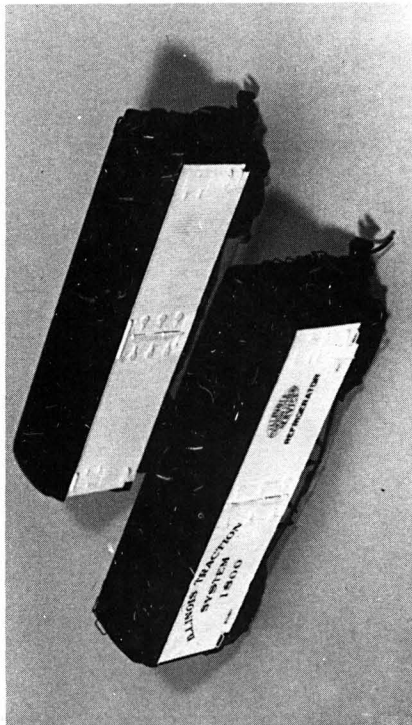


NOTE: This is a drawing of a model. It is NOT a prototype drawing.

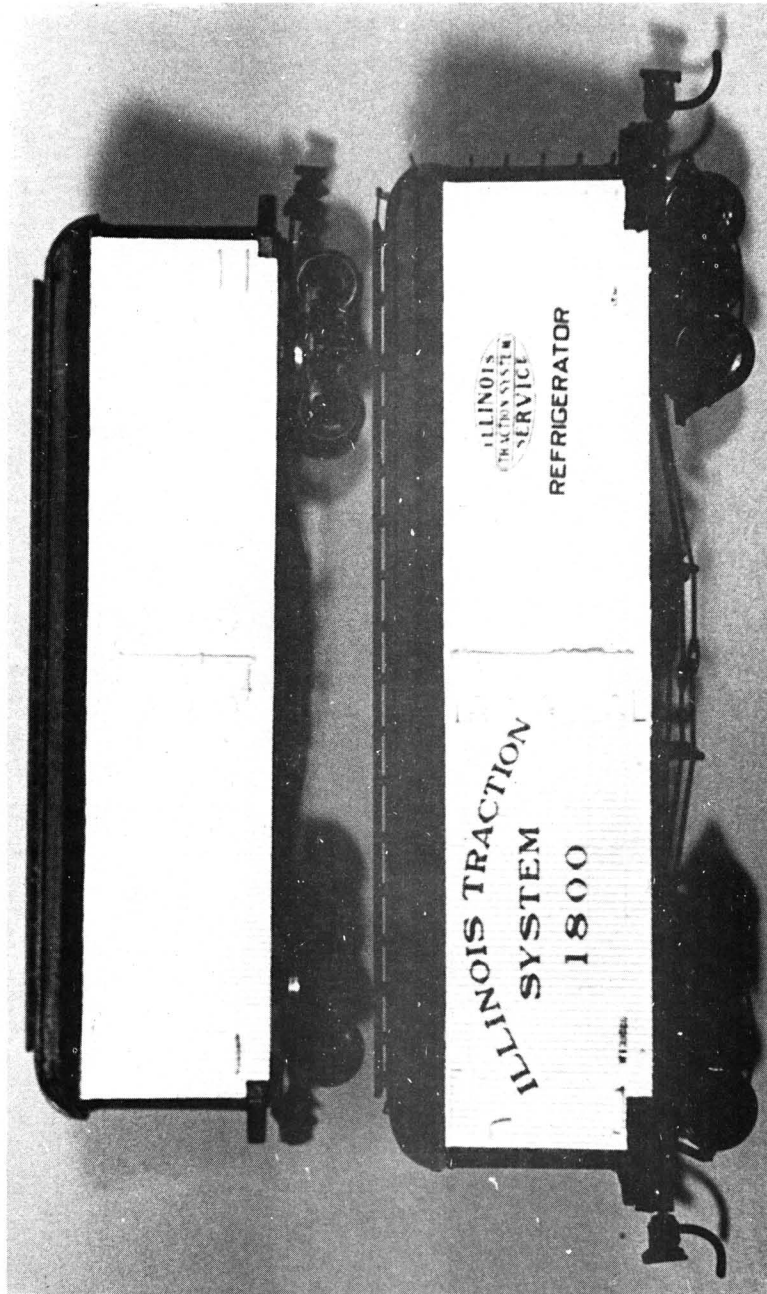
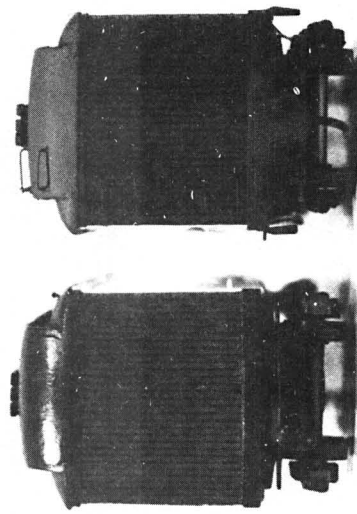
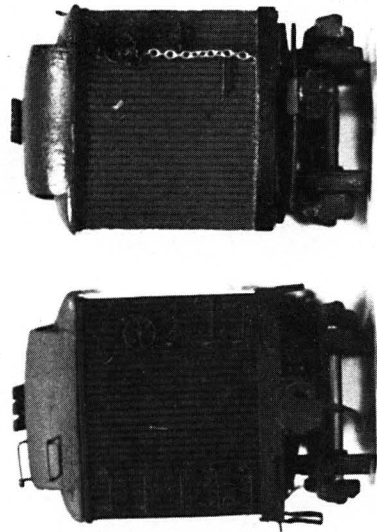


ITS 1800 SERIES REFRIGERATOR CAR  
DRAWN BY LARRY MILLER III

Full size for H0 Scale



NOT CONNECTED WITH THE ILLINOIS TERMINAL RAILROAD COMPANY



These photos of both the modified IT Refrigerator Car and the original La Belle version show that the sides are not very different ( the original is the same size, the camera angle makes it look a little smaller ). The grab iron arrangement on the ends is the biggest change. Fred Soady built the original version. Also note that the underbody details are different on my model than in the instructions. I used the castings included in the kit and decided that the Cal-Scale details were better afterwards.

PHOTOS BY LARRY MILLER III



ITS refrigerator car #1800 pictured at the Decatur Shops in 1927.

W. C. Jansen Collection

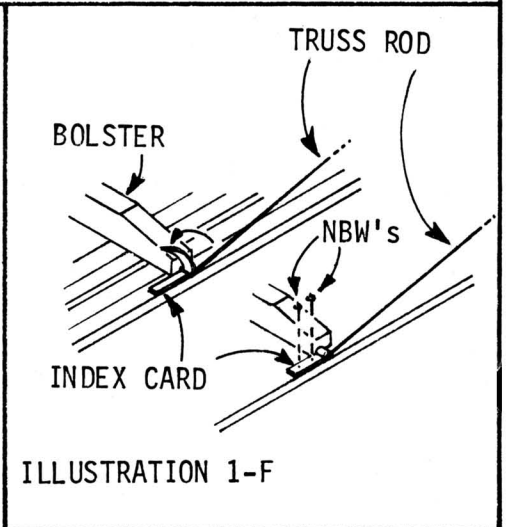
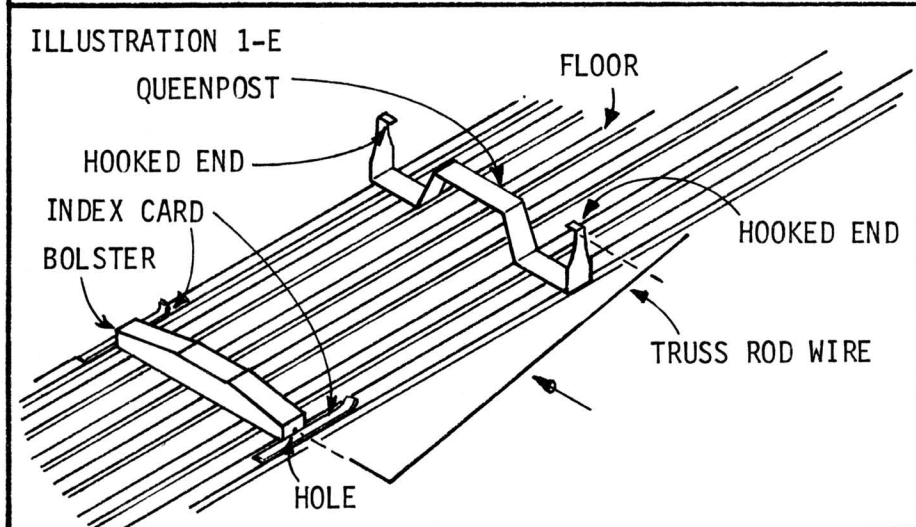
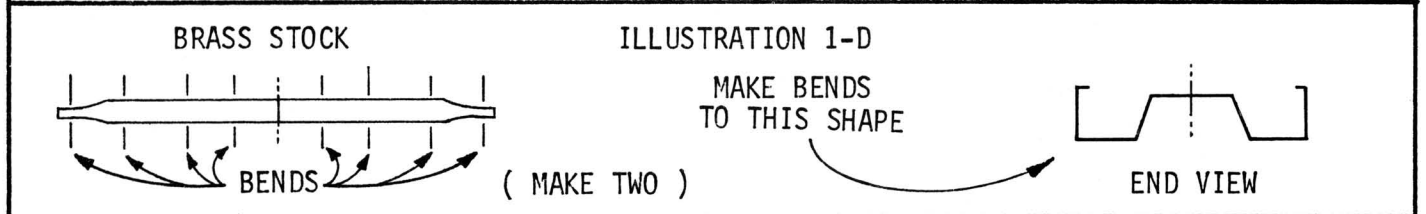
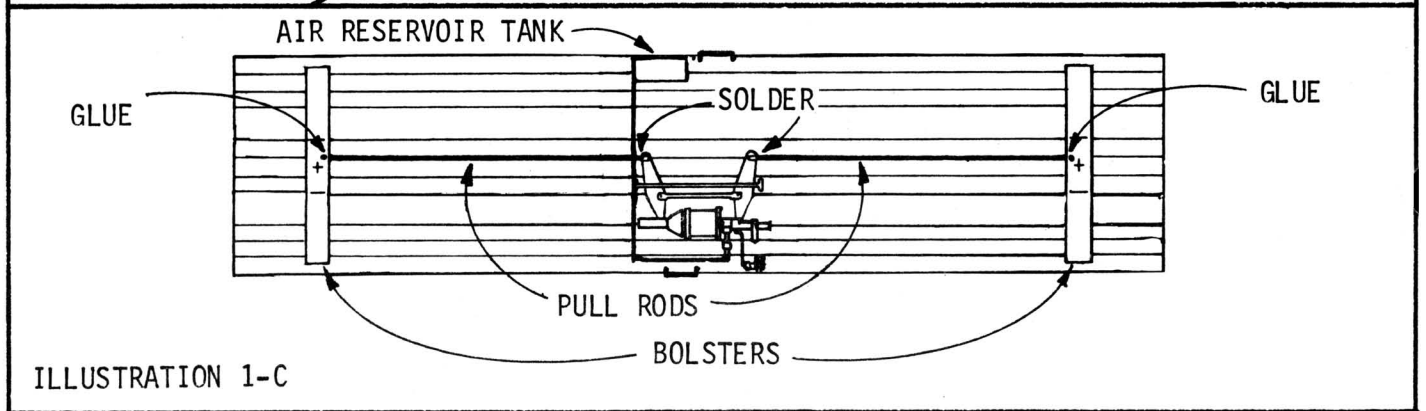
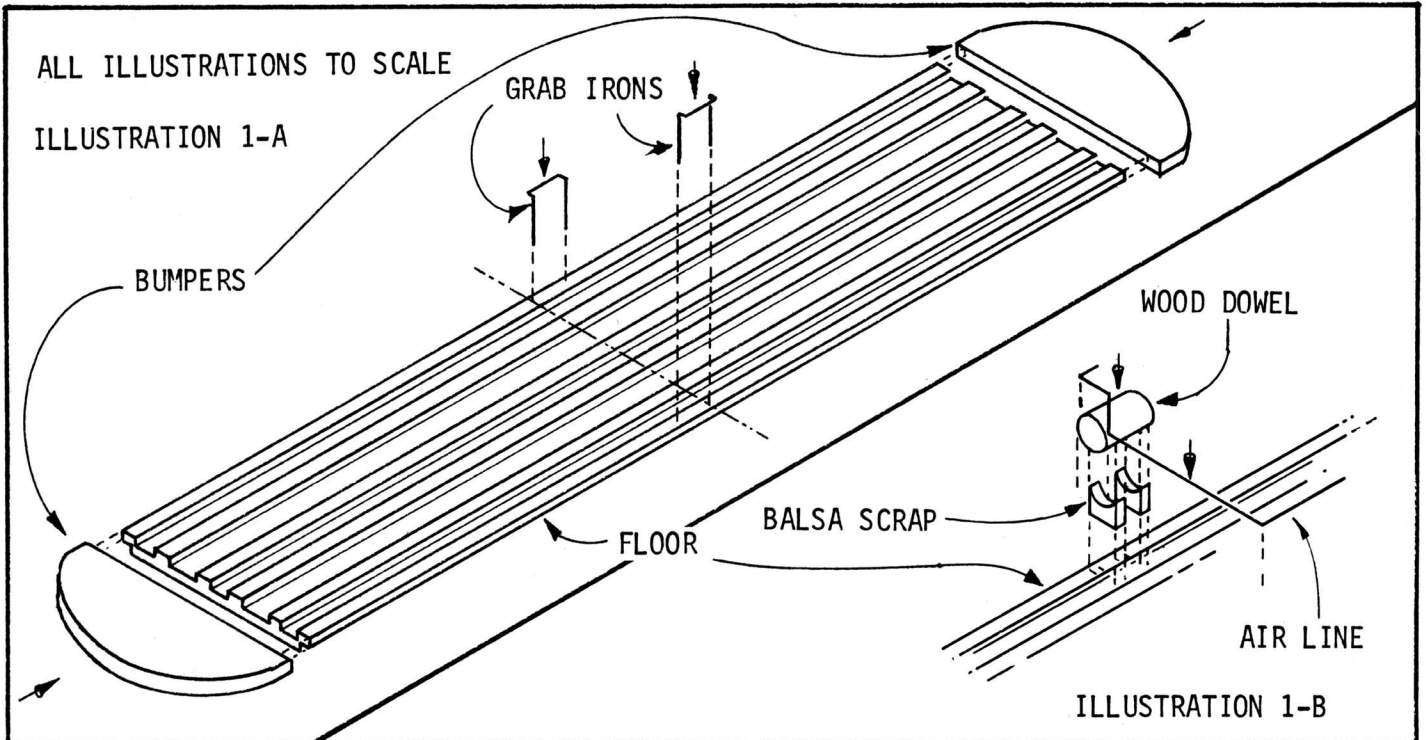
One of the longest running IT models still in production is La Belle's # H0-63 "FLEXA-SERIES" Illinois Traction Box Trailer kit. Though the kit has undergone innumerable modifications over the years, it is still the basic wood model which can be built as the box or refrigerator versions of the IT freight trailers of the twenties. Earlier versions were ( to my understanding ) supplied with decals, but the release I purchased came without and that led to the need for accurate lettering. The prototype photo reproduced with this article was used in making the decals which are available from me. Send \$1.50 for one decal sheet ( 2 sets ) postpaid to; LARRY MILLER III, 417 Wagner Pl., Washington, Illinois 61571.

After I accomplished the task of making decals, I began to construct the model using the same photo and information from A. Gill Siepert and Fred Soady, Jr. to build a more accurate model of the prototype than La Belle's kit produced. The result was a model of scratchbuilt looks with enough details to satisfy the nit-pickers, yet easy to build. The accuracy of details is rather lax as the photo was my greatest reference, and any information on this version or the box trailer which anyone can supply me with to correct it further would be appreciated.

Please read through these instructions and trial fit any parts before attaching them to make sure they are right. I will refer to the parts and numbers used by La Belle in their instruction sheet wherever possible. If any of the detail parts in your kit do not match the part I describe, don't be alarmed. Remember that each release of this kit was slightly different and my version will probably differ. Refer to my drawings and illustrations where noted.

#### ASSEMBLY

STEP 1 - Begin with the floor and underbody. With the floor (6) bottom-side up, glue the bumpers (37) to each end. Drill holes and install two Detail Associates grab irons (#SY 2202) into place ( see illustration 1-A ). Trim 1/16" off each end of the bolsters (7) and glue them into place. Determine the location of the master brake cylinder from the Cal-Scale (BC-220) parts pack. Drill the necessary hole and glue into place. Do the same for the reducing valve, bending the connecting hose with the needlenose pliers to proper position. The air reservoir tank is made of wood dowel and balsa wood ( see illustration 1-B ) and attaches to the floor. Make up an air line to go from the brake cylinder to the air reservoir tank from the wire supplied in the kit. Using the 24 gauge copper wire, make the pull rods from the levers of the brake cylinder to the bolsters. Solder the ends of the pull rods to the levers and glue the other ends to the bottom of the bolsters ( see illustration 1-C ).





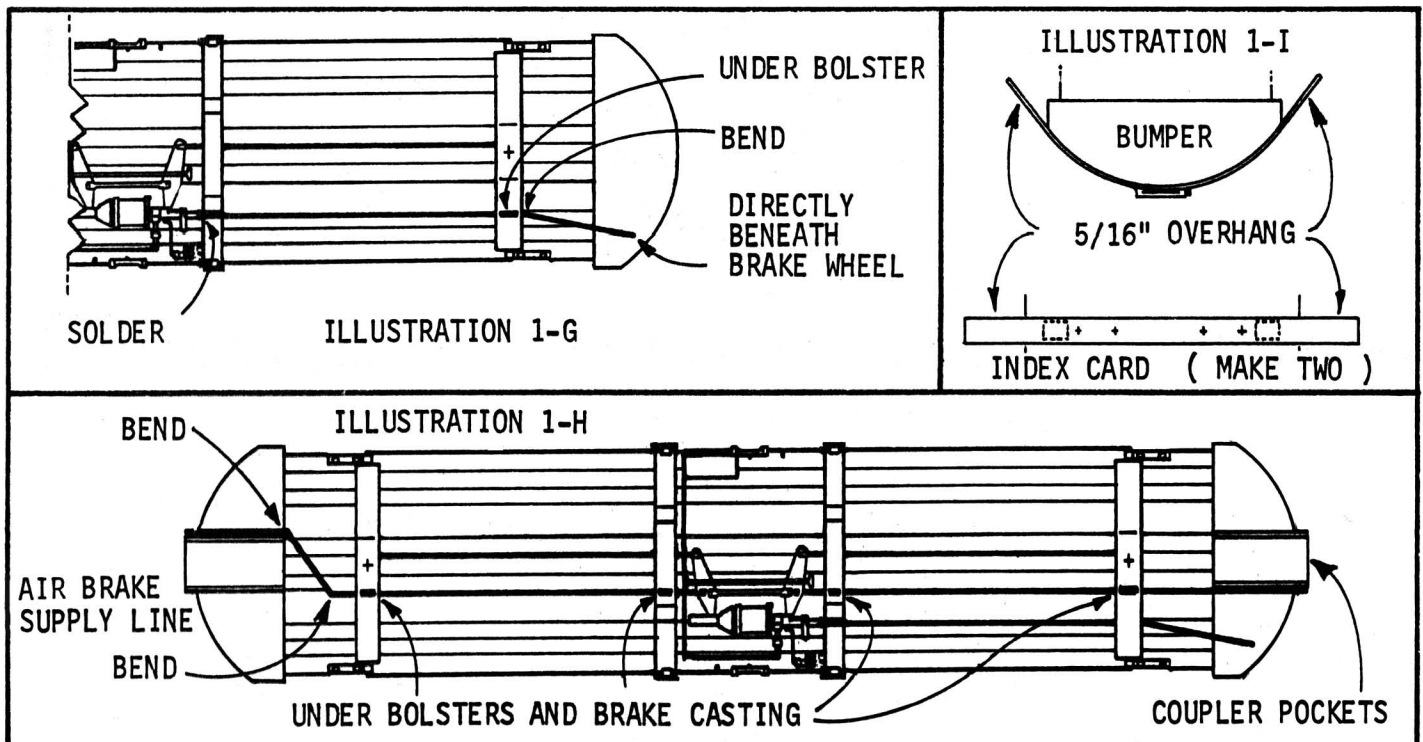
STEP 2 - Make up two queenposts from the .010 thick brass sheet stock ( see illustration 1-D ). Glue them into place.

STEP 3 - Make one truss rod floor mount from 1mm. wide strip of index card. Glue index strip to floor just past the bolster. Drill a hole in the center of the bolster end, just above the index strip. Bend a 90° angle 1/4" from the end of a 2 1/4" piece of truss rod wire (9) supplied in kit. Insert the short end of the wire into the hole. Be sure the 90° bend clears the edge of the floor. Attach the wire to the queenpost nearest the bolster at the hooked end ( see illustration 1-E ). Wrap the index strip around the truss rod wire at the end of the bolster and trim off excess with an X-acto knife. Drill holes for the two NBW castings (FC 6205 - Detail associates). Glue into place. ( see illustration 1-F ). Repeat step 3 for the remaining truss rods and floor mounts.

STEP 4 - Bend the truss rod wire at the queenposts so that the two wires of one side almost touch each other and are parallel to the floor between the queenposts. Center the turnbuckles (40) between the queenposts and solder ( if the turnbuckles are stamped brass ) or glue into place. Repeat for other side.

STEP 5 - Determine the end of the car with the brake wheel. Cut a 2 5/16" length of 24 gauge copper wire. Solder one end to the master brake cylinder and glue it to the bolster where it runs underneath. Bend the wire just past the bolster slightly until the end is directly beneath the brake wheel location ( see illustration 1-G ). Glue the Kay-Dee coupler pockets into place ( make sure that there is no overhang onto the floor section. It should be on the bumper section ONLY. ). Cut a 6" piece of 24 gauge wire for the air brake supply line. Two bends will be needed to cross over just past the bolster to the correct side of the coupler pocket on the non-brake wheel end ( see illustration 1-H ).

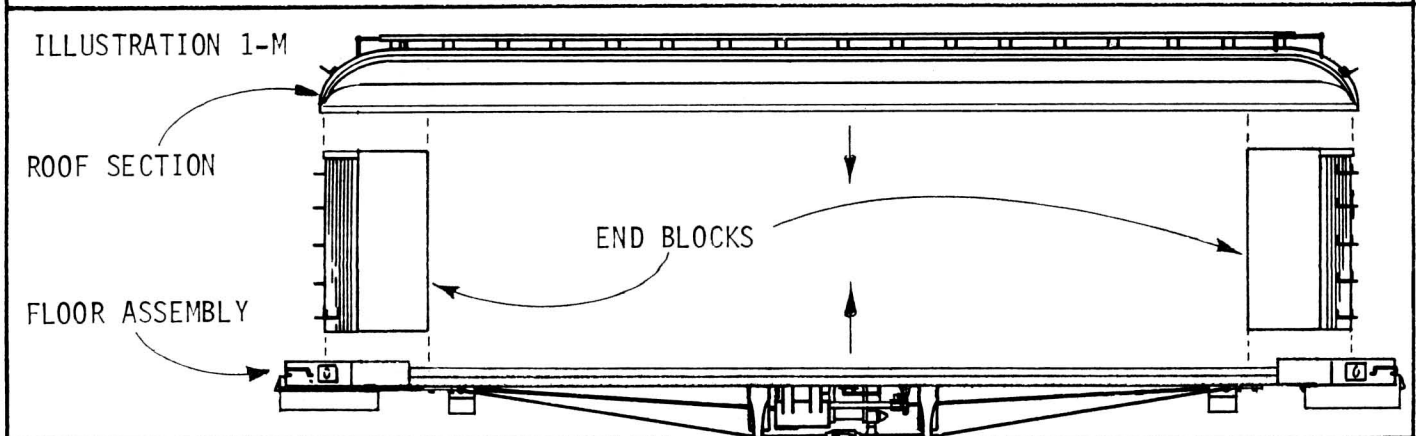
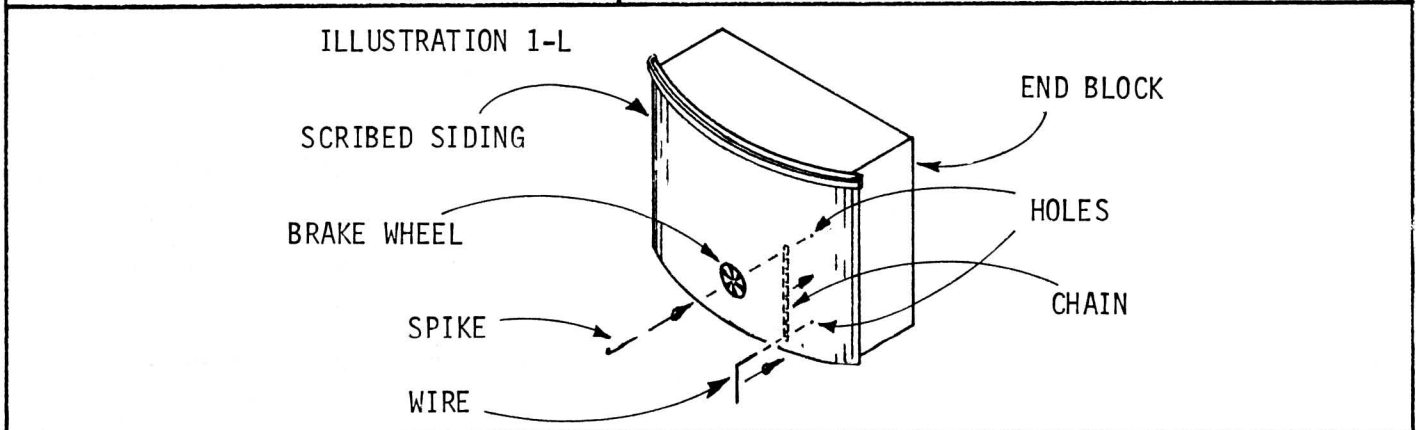
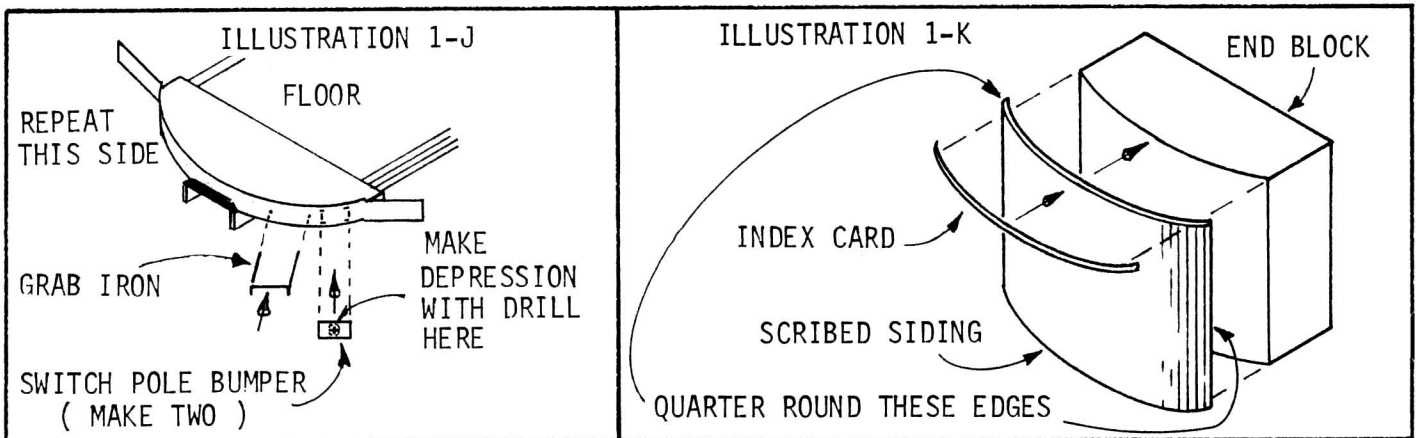
STEP 6 - Cut a 2 1/16" by 1/8" strip of index card. Turn the floor assembly bottom-side down. Leaving a 5/16" overhang on each side, glue the index strip to the round edge of the bumper ends and flush to the bottom side of the bumpers ( see illustration 1-I ). Determine the location of the two ( Detail Associates #SY 2202 ) grab irons. Drill holes and glue into place. Cut two 3/32" by 5/32" pieces of index card and using a #54 twist drill make a depression in the center not deep enough to break through the index card. Glue into place ( see illustration 1-J ). Repeat for opposite end.



STEP 7 - Paint the entire floor section assembly engine black ( Floquil #RR 10 ) from all angles so that all of the underbody details are painted consistently.

STEP 8 - Cut to size and cement in place the scribed siding (12) from the pieces 1 1/8" by 1 3/4" ( supplied with the kit ) to the end block (11), making sure that the top and bottom edges are flush to the end block. Leave a 1/16" overhang on each side and lightly sand the outer edges quarter-round with fine grain sandpaper. Using the metric side of your steel rule, cut a 1mm. wide strip of index card and glue flush to the top edge of the scribed siding and around the quarter-round sides. Trim the excess off at the edge of the scribed siding ( see illustration 1-K ). Repeat for opposite end.

STEP 9 - Locate the position of the brake wheel (45) and drill the hole at its center location into one end block. Cut a 7/16" length of chain (46), Using a rail spike supplied in kit, attach the brake wheel and the chain to the end block. Cut a 5/16" length of 24 gauge wire, bending a 90° angle in it 1/8" from one end. Drill a hole into the end block and attach the bottom end of the chain to the end block with the wire ( see illustration 1-L ). Make sure the wire end is flush to the bottom edge of the end block.



STEP 10 - Locate and drill holes for the grab irons on each end block ( NOTE: the end with the brake wheel has three grab irons beneath the brake wheel as noted in the scale plans. However, the opposite end has only one grab iron on the right side and the same five on the left. ). Install Northeastern scale Model grab irons (#852).

STEP 11 - The end blocks may now be painted either to match the floor section or the roof as noted in the paint and decal diagram. The choice is yours as the refrigerator car came in whatever paint there was available at the time.

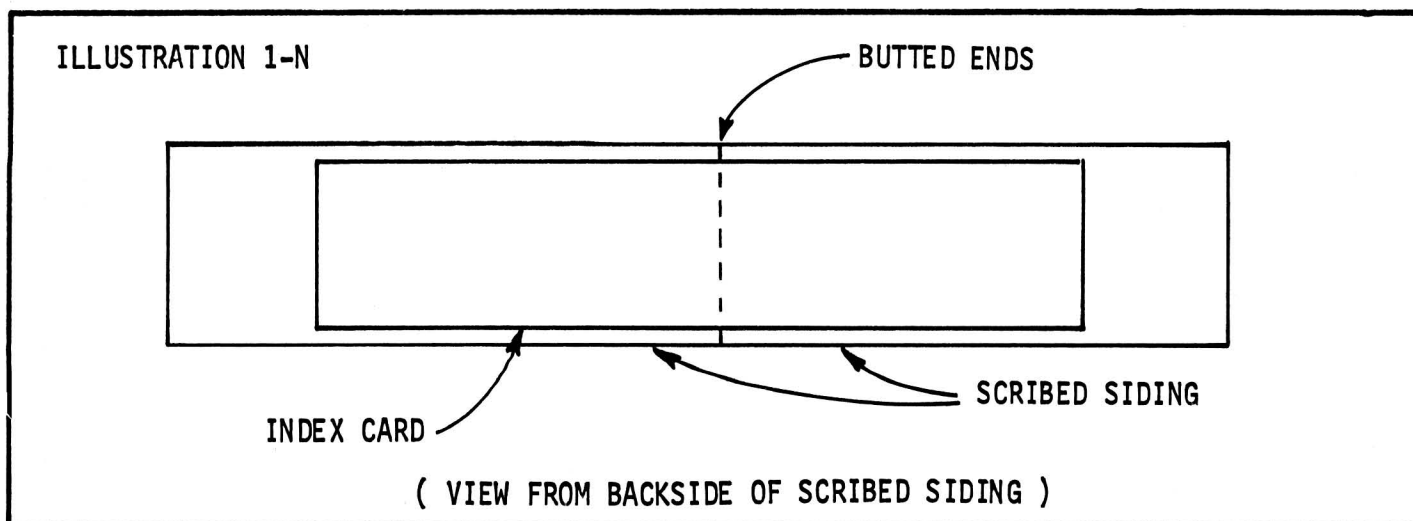
STEP 12 - Sand down the edges of the roof to the contour indicated in the scale drawing with coarse grain sandpaper or a Dremel tool fitted with a sandpaper disk. Finish the shape with fine grain sandpaper or the a file. Make up four overhang peices (21) from 1/16" by 1/2" stripwood and cement into place. Any depressions, glue edges, and/or overzealous filing can be filled with Green Squadron body putty. Let dry overnight and resand to shape.

STEP 13 - Take a facial tissue and separate the two plies ( or layers ) making up the sheet. Brush Elmer's white glue on thinly to one end edge of the roof and apply the tissue to the wet glue. Use a stiff dry brush to press the tissue against the roof section to flatten it against the contours. Apply the glue an inch or so at a time and attach the tissue accross the entire length of the roof. The two lower sections should be done first, with the very top section's tissue ends covering the lower section's tissue edges. The entire top surface of the roof and the side and end edges should be covered with the tissue to represent tarpaper. Trim any excess with the X-acto knife. Note that the recessed sides of the roof are not covered. Make up the roof walk (31 - stripwood with brown colored end) and roof walk supports (32 - stripwood with red colored end) as per Detail W of the kit instructions. Cement in place. Locate and drill holes for two Northeastern Scale Models grab irons (#852) on the contoured ends of the roof, and two Detail Associates corner grab irons (# FC 6205) and glue them in place ( the corner support of the corner grab irons may be soldered after it is attached to the roof for a firmer grab iron ).

STEP 14 - Paint the completed roof section with boxcar red ( Floquil #RR 74 )and allow to dry overnight.

STEP 15 - Glue the two end sections between the floor and roof sections ( see illustration 1-M ). Use rubber bands to hold the pieces together while the glue sets.

STEP 16 - Take two 1 1/16" by 2 7/8" pieces of scribed siding (16) and glue them together by butting the ends flush top and bottom. Using an X-acto knife and steel rule, cut a 7/8" by 4 " piece of index card, Center it perfectly behind the scribed siding and glue to brace them together ( see illustration 1-N ). Trim 3/8" off each end of the scribed



siding. Cut 1/8" by 3/32" notches from the two bottom corners and 9/16" by 3/32" notches above and below the door sections ( center ). Make four horizontal cuts with an X-acto knife to indicate the the ice doors ( see illustration 1-0 ). Fill the two notches made above and below the door section with scrap strips of scribed siding mounted horizontally. Cut a 1mm. wide strip of index card ( at least 5 1/4" long ) and glue flush to the top edge of the scribed siding. Trim flush at the ends. Cut and attach two 1mm. by 5/16" strips of index card ( one above each ice door ) to the scribed siding. Cut and attach four 1mm. by 3/16" ice door hinges ( two each door ). Make two ice door latches from 24 gauge wire ( 3/16" with a 90° bend 1/8" from one end ) and attach in proper location ( see illustration 1-P ). Locate and attach reefer door hinges (33) and the reefer doorlatch (36). The latch may need some filing, but be carefull as these are very fragile. Cut a 1/2" length of 24 gauge wire and flatten 1/16" of one end by squeezing it in needlenose pliers or a vise. Glue in place vertically, flush to bottom, and 7/16" from the right hand side of the scribed siding's edge. Cut a 3/8" by 5/32" piece of index card and glue in place beneath the right hand side ice hatch door ( see illustration 1-Q ). Repeat step 16 for the other car side.

STEP 17 - Paint the completed sides reefer white ( Floquil #RR 11 ). The IT refrigerator decals may be applied to the car sides at this time or left until the model is completed. Let dry overnight.

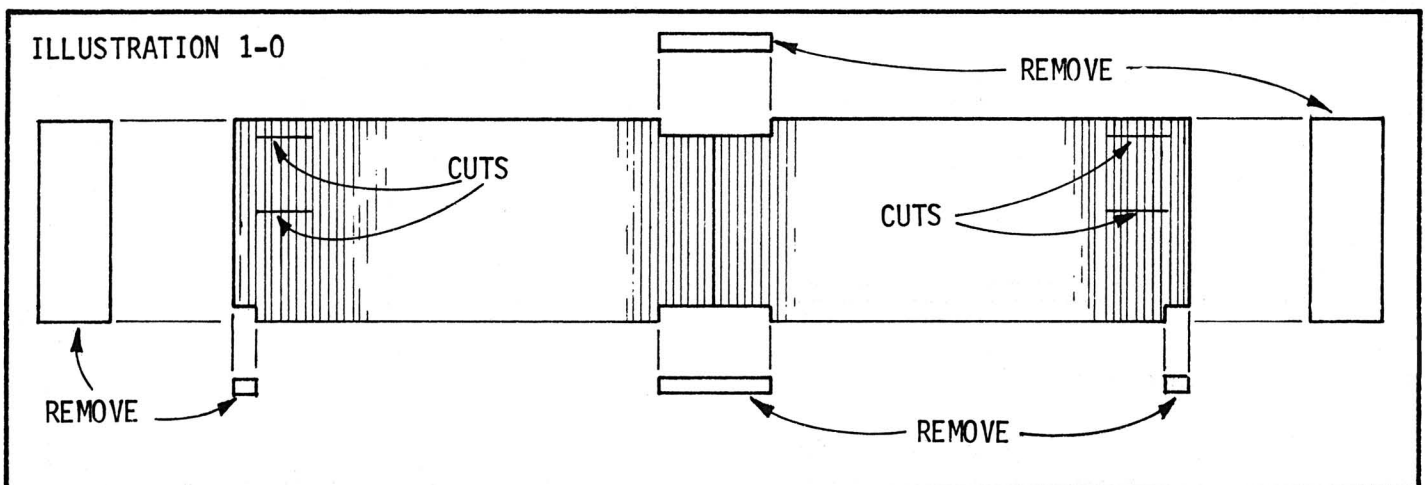
STEP 18 - Glue sides into place. Some filing of the ends might be needed for proper fit but a tight fit is better than any gaps. Locate and drill four holes for NBW castings ( Detail Associates #FC 6205 )each side. A larger drill (#58) may be used to make a depression for each hole for the NBWs to recess into. Glue the NBWs into place. Locate and drill holes for the three Northeastern Scale Models grab irons (#852) per each side. Note: omit the lowest grab iron on the right hand side of each end at this point. Glue the grab irons into place. Paint the grab irons and NBW casting reefer white.

STEP 19 - Glue the four loose ends of the index strips left loose in step 6 - illustration 1-I to the sides. Cut four 1mm. by 9/16" strips of index card and shape with needlenose pliers into stirrup steps and glue two to each side. Locate and drill holes for one Northeastern Scale Models grab iron (#852) each side as omitted in step 18. Paint the stirrup steps and grab irons engine black. Glue the grab irons into place after dry.

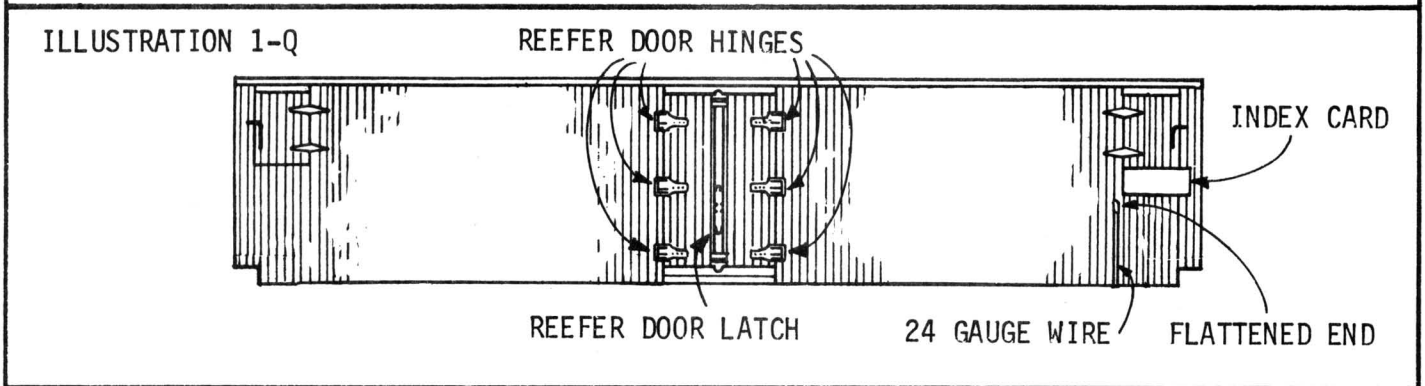
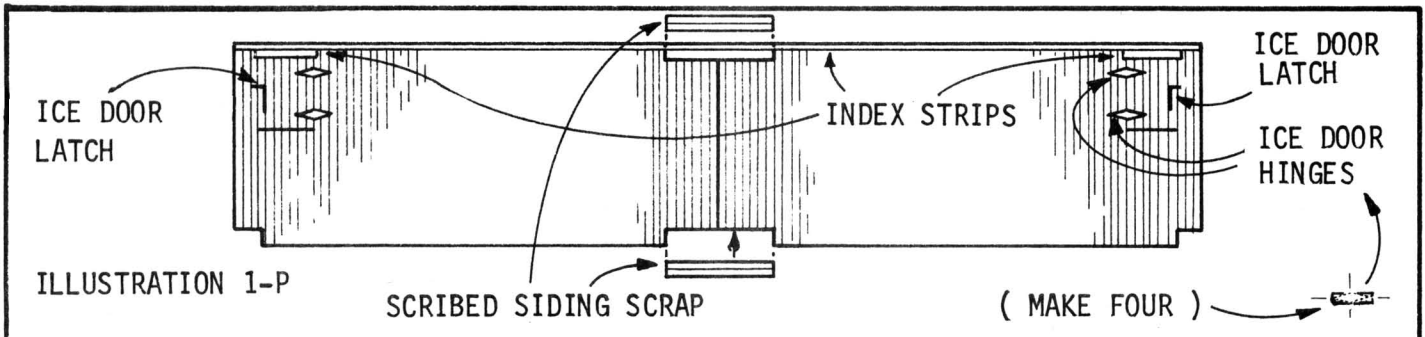
STEP 20 - Apply the decals now if you didn't in step 17. After they are dry, spray the entire model with Testor's Dullcoat. When dry, attach the trucks and couplers ( as detailed in the following article ) and your model is complete. Certainly this is a most eyecatching and prototypical IT model at home on anyone's layout or shelf. A heavily weathered car could be placed on a weedgrown siding of even the most modern layout.

Remember, if you have any questions or problems concerning this model article, just write to me and I'll see if I can help you out.

Larry Miller III







## PAINT AND DECAL GUIDE



REEFER WHITE



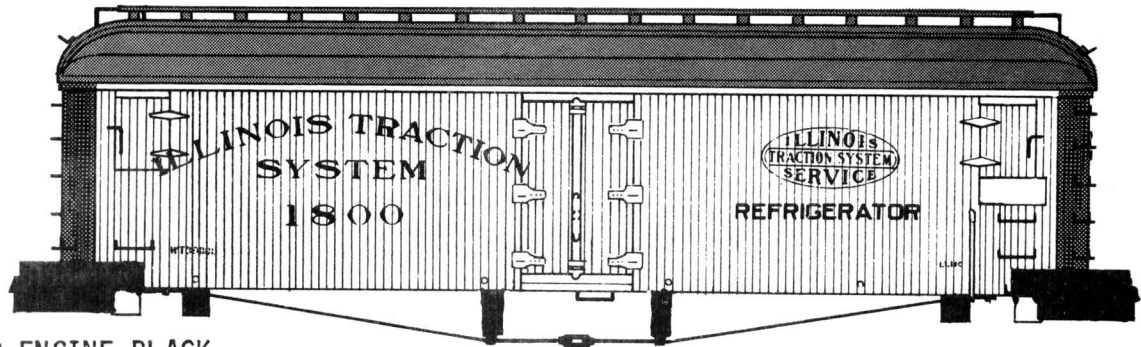
ENGINE BLACK



BOXCAR RED



BOXCAR RED OR ENGINE BLACK



## MATERIALS LIST

- 1 - La Belle IT Box Trailer kit # H0 - 63
- 1 - IT Refrigerator Car Decal set
- 1 - Cal - Scale Air Brake set # BC - 220
- 1 - Strathmore 2 ply Index Card ( 8 1/2" by 11" minimum ) available at most art supply stores
- 1 - Detail Associates Grab Irons # SY 2202
- 1 - Detail Associates Corner Grab Irons and NBW ( nut, bolt, and washer ) Castings # FC 6205
- 1 - K & S .010" thick Brass Stock #251
- 1 - Northeastern Scale Models Grab Irons #8852
- 1 - 3' spool 24 Gauge Copper Wire ( Brass may be substituted ) available at local hardware stores
- 1 - 2 ply Sheet of Facial Tissue ( Puffs, Kleenex, Scotties, etc. )
- 1 - 5/32" Diameter Wood dowel
- 1 - 1/16" by 11/8" Piece Balsa scrap ( 1/2" long )
- 1 - Set of trucks and couplers as indicated in following article.

## TOOLS

- X-acto knife with #11 blade
- Needlenose pliers and Wire cutters
- Solder and Soldering gun
- Sandpaper ( Fine and Coarse grain )
- Steel Straight-edge Rule with 32nds of an inch and millimeters
- Rubber Bands ( various sizes )
- Twist Drills ( #58, 68 ( for 24 gauge wire ), 71 ( for NBW castings ), and 77 ( for grab irons )
- X-acto Jewelers Files ( assorted )
- Solva-set ( for setting decals )
- Green Squadron Body Putty

## GLUES and ADHESIVES

- WOOD TO WOOD - Elmer's All Purpose white, Ambroid Wood, Dexter's Craft, or similar glue
- WOOD TO PAPER - Same as Above
- METAL TO WOOD OR PAPER - Walther's G00 or a Cyanoacrylate glue
- METAL TO METAL - Solder or a Cyanoacrylate glue

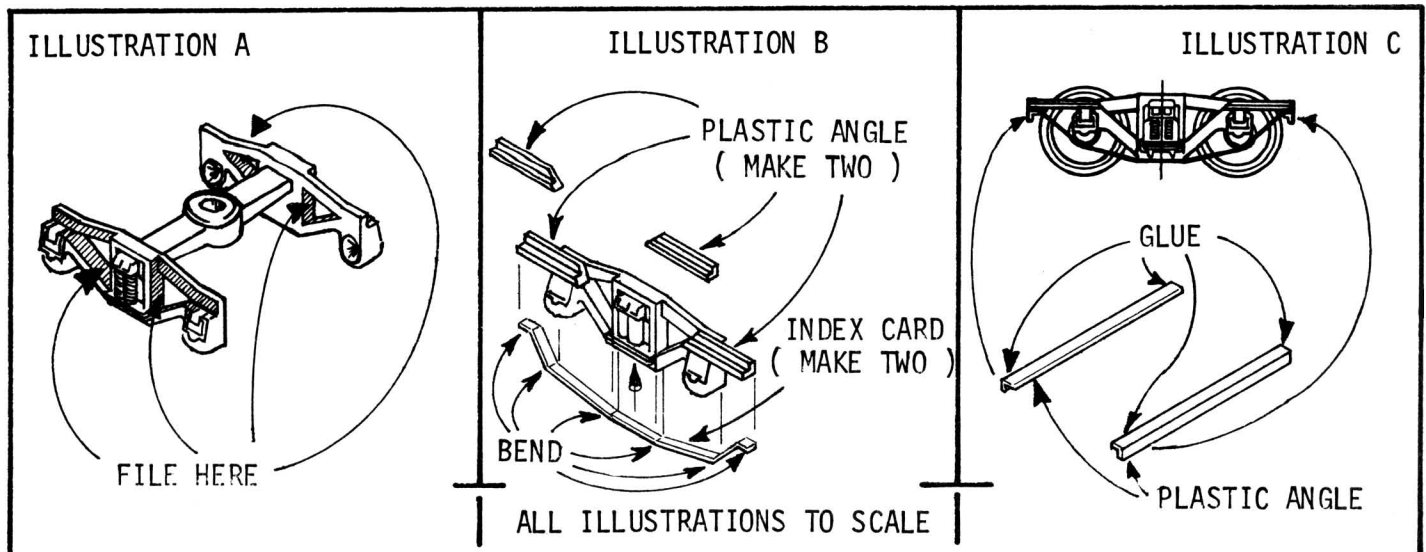
**IT in MINIATURE****ITS TRUCKS and COUPLERS**

The IT trucks I made for the IT refrigerator model drew some of the strongest attention wherever it was displayed. Since the couplers and trucks can be used on other IT equipment models of this same era, I've decided to describe them in this separate article for ease of reference.

The trucks I have used are the Delrin plastic versions from Roundhouse Products ( #2923 ) but other trucks of your choice may be substituted. ( For instance, if you have a brass version of the Bettendorf style trucks with sprung side frames you might also want to use brass stock for the modifications. )

The basic modifications are simple. To begin with, remove the wheel sets from one truck. Use a triangular jewelers file to cut sharp corners into the rounded corners of the open areas of the side frame. Next, cut or file out 1/32" of the depth ( about half ) of the side frame from above the journal boxes to the center section ( see illustration A ). Replace the wheelsets.

Cut four 3/8" lengths of 3/32" plastic angle stock. File a 45° angle off one end of each piece. Glue each above a journal box. Cut two 1mm. by 1 5/8" lengths of index card stock and glue to side frame under center section and journals ( see illustration B ).

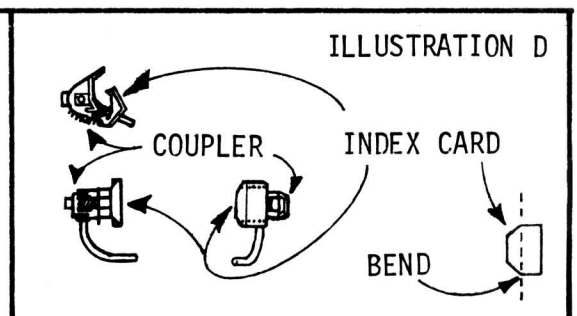


Cut two 1" lengths of 3/32" plastic angle. Glue the end of the index card strips between the angle pieces just cut and those already glued to the truck side frames ( see illustration C ). Paint the now-completed truck engine black ( Floquil #RR 10 ). Repeat all of the steps for the other truck.

The couplers are Kadee #5. Cut a 5/32" by 1/4" piece of index card. Trim the two left hand corners off with an X-acto knife and bend at the dashed line ( see illustration D ). Attach as indicated to the coupler. Make sure that when the coupler is installed that the index card does not interfere with its operation. If it does, some extra trimming with the X-acto knife may be needed. Paint the finished coupler and coupler pocket engine black.

**MATERIALS LIST**

- 1 - Set Roundhouse Bettendorf Trucks #2923
- 1 - Set Kadee Couplers #5
- 1 - Strathmore Index Card Stock ( 3" by 5" min.)
- 1 - Bottle Floquil Engine Black #RR 10
- 1 - 10" Piece of Plastruc 3/32" Plastic Angle Stock









The decal sheet from 1979...

