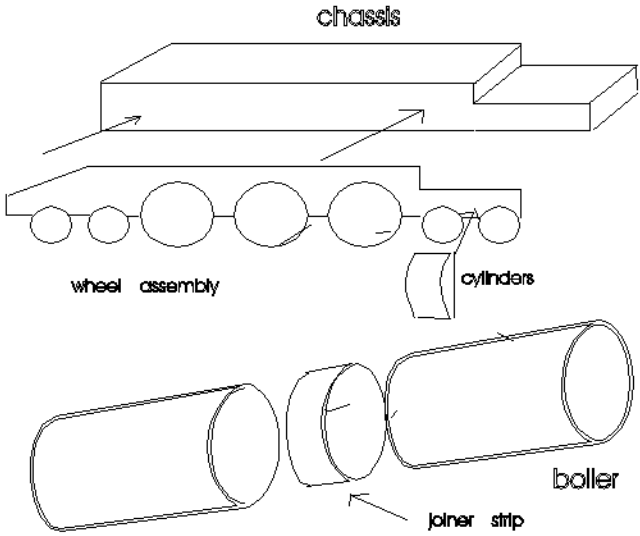
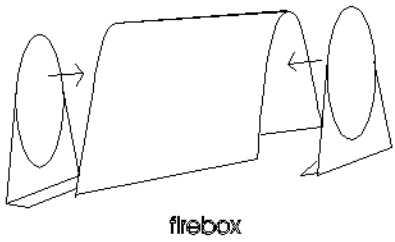
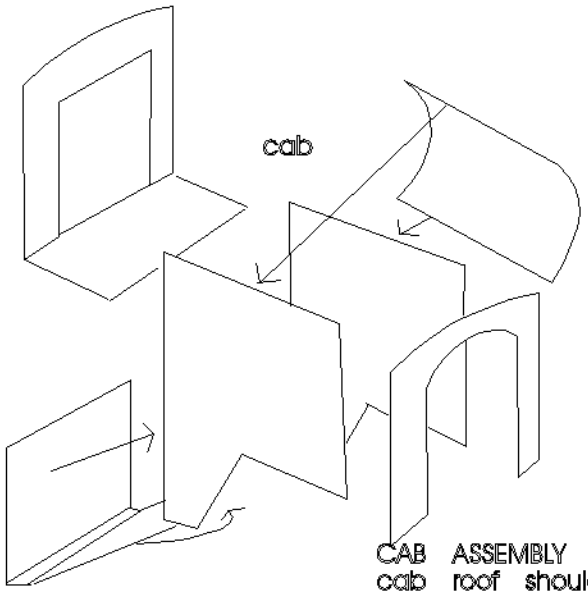
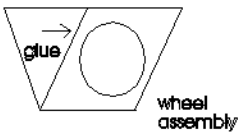
museum miniatures

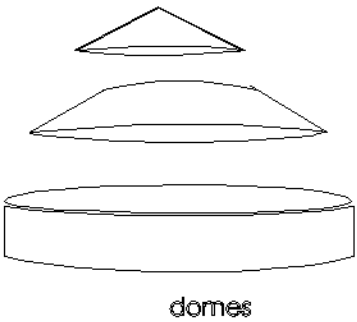
HUDSON CLASS 4-6-4

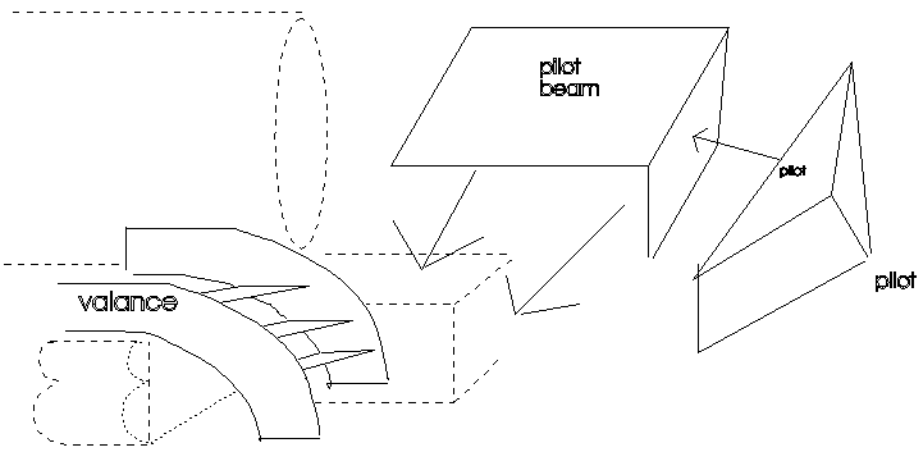






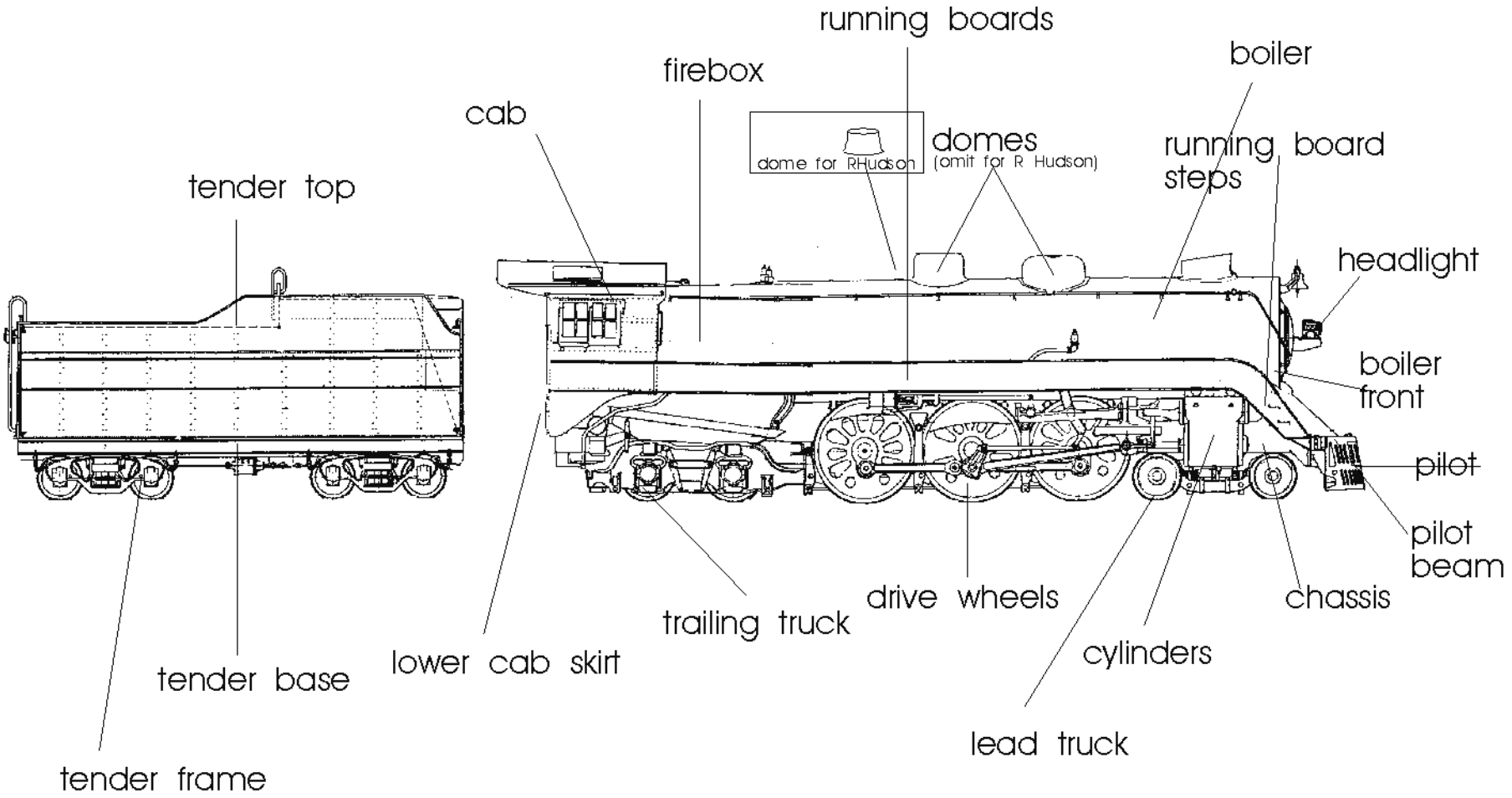






valance & front end assembly

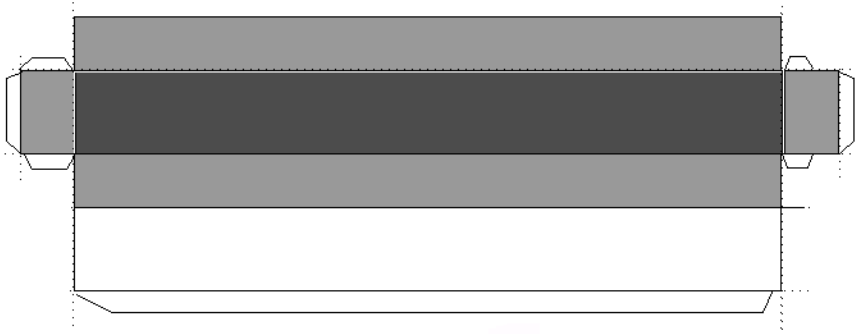
DIAGRAM SHOWING RELATIVE POSITIONS OF PARTS

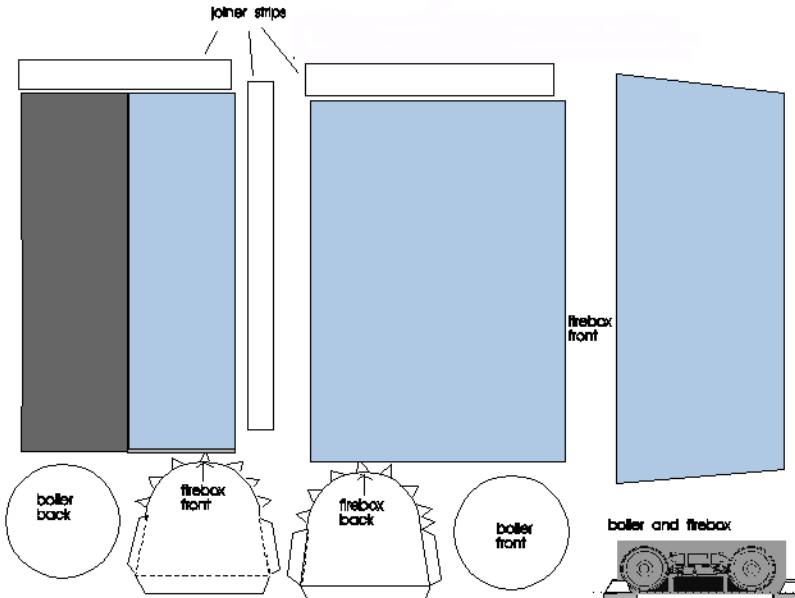


HUDSON 4-6-4

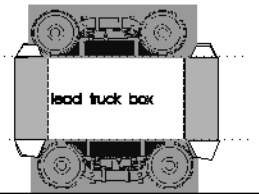
2860

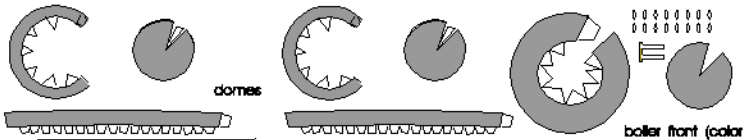
4-6-4 ROYAL HUDSON

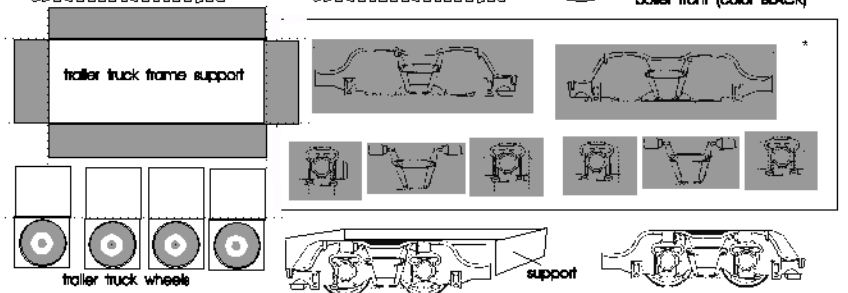


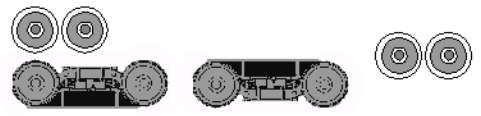


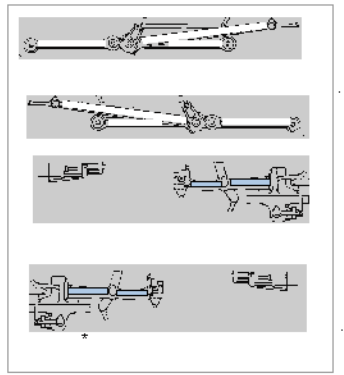
boiler and firebox



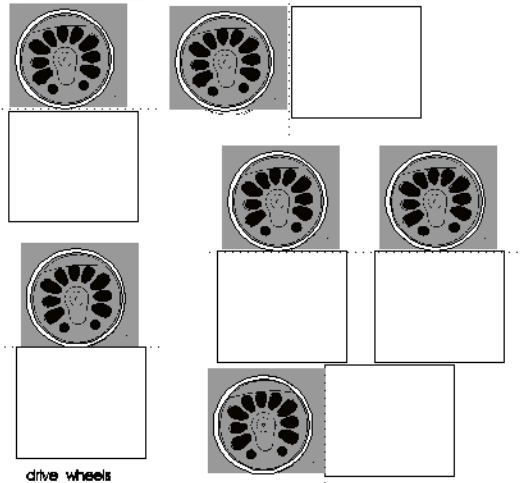


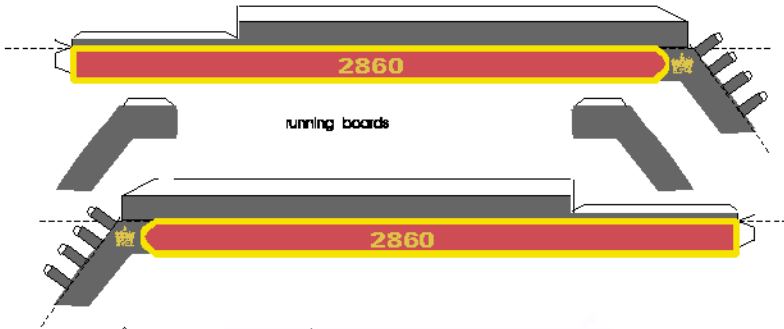




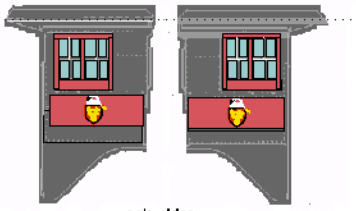


parts marked * are duplicated on the silver sheet

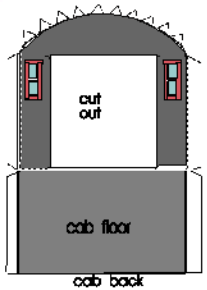




cab front

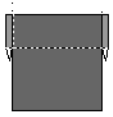


cab sides



cab back

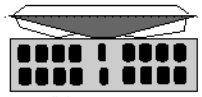
lower cab skirt
color LIGHT GREY



pilot beam

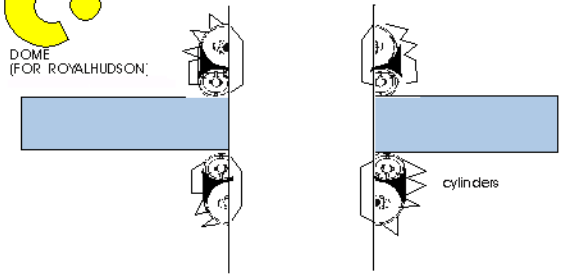
headlight bracket
color BLACK or GOLD

headlight

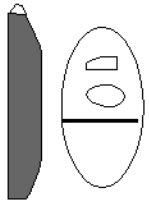


pilot
color LIGHT GREY

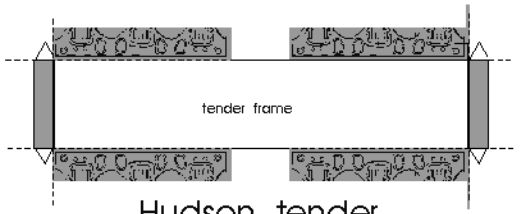
DOME
(FOR ROYALHUDSON)



cylinders



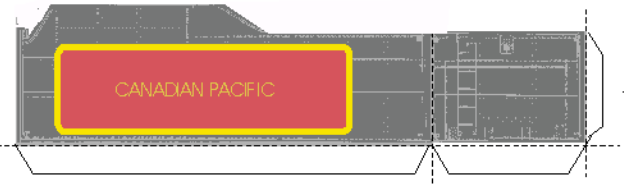
smoke stack

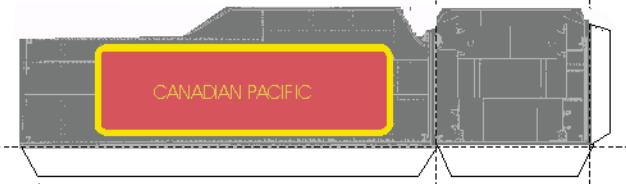


bend top to this shape

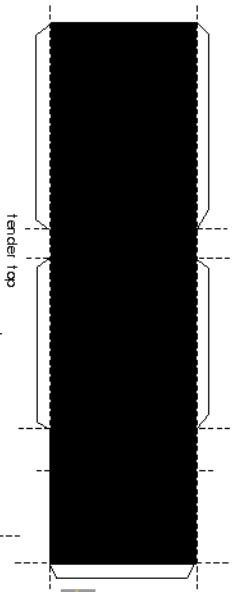
HUDSON sheet 4

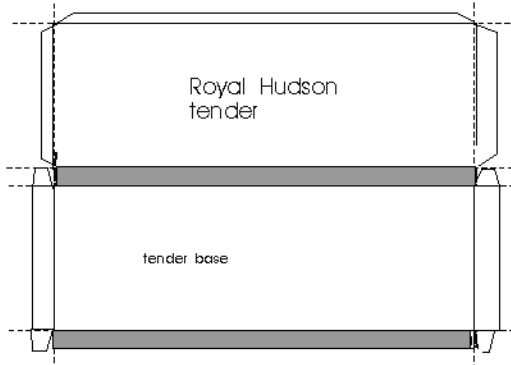
Hudson tender

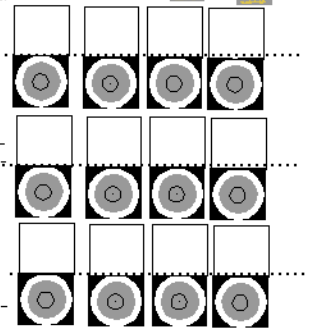


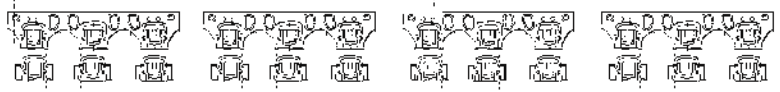


tender top









STEAM LOCOMOTIVE CONSTRUCTION

General Instructions

Tools Sharp hobby knife
Steel ruler or straight edge
Glue (Alleen's 'tacky' glue reccomended)
Pastel crayons for coloring edges
Cutting mat

Recommended order of procedure.

Locomotive frame (chassis), Drive wheels, Rods and valve gear, Cylinders, Lead and trailing trucks.

Boiler saddle, Boiler, Firebox, Cab, Boiler front, Chimney, Domes and pressure valves, Water tanks and super heaters, Running boards and/or valances

Tender frame (chassis), trucks (bogies), Sides, Lining
Misc. parts such as Pilot, Steps, Headlight, Buffers or couplers,
Water and steam pipes, Hand rails.

FRAME.
Form into a shallow box. It is important that you avoid twisting so assemble on a flat surface.
Tip: Cut a piece of strong card (such as mat board available at picture framing suppliers, or foam board) to size and fit inside the frame.
If the frame has 'steps' these should be glued down last.

RODS AND VALVE GEAR.
Before cutting out glue to scrap card for extra strength
Tip: Old playing card stock is ideal.
When assembling the rods separate them slightly with a small piece of scrap card glued between the various components.
Set these assemblies aside temporarily

CYLINDERS:
Basically these are rounded boxes. Set aside temporarily

DRIVE WHEELS
Make double or triple thickness. These can now be glued to the frame on the appropriate positions. Before the glue dries check to make sure the frame stands straight by standing it on a flat surface and adjusting the height of the wheels accordingly.
Tip: Temporarily attach the wheels using a tiny dab of glue and position the rods and cylinders at the same time, The cylinder heads should butt up against the pistons. Adjust the positioning of the wheels accordingly before gluing permanently.
Tip: Brake shoes can be added between the wheels after the wheels are glued in place
LEAD TRUCK (BOGIE)
In some models this is a shallow box with the frame and wheels attached to the sides. In others it is an open framework. In either case stick to the front of the chassis before adding the wheels so that they can be adjusted to line up correctly with the drive wheel.

TRAILING TRUCK
Assemble and attach like the lead truck

Set this completed assembly asside.

BOILER.
There are two types of boilers., the single length and the sectional. For the former curve into a tube and glue then fit the bulkheads in, one at each end.
Tip: Strengthen the bulkheads by gluing to an old playing card before cutting out.
The sectional boiler is made in a similar way except that the bulkheads are set in slightly to allow room for the end joiner strips to be curved and inserted for half their width. Thus one section will slide over the protruding part of the joiner strip making a tight join.
If a section is tapered the join should be on the top when attaching it to the next section.
Tip: Color the edges of the sections before joining them.

BOILER DOOR
This is simply one or two disks glued to the front of the boiler To ensure proper alignment of the door hinges it is best to attach the door after the chimney and domes are attached.

SMOKE STACK (chimney)
Simply a narrow tube surmounted by disk(s) and, in some instances, with a bottom plate. This should be slightly curved to conform with the curve of the boiler.

DOMES
Basically a tube surmounted by a truncated cone and topped by a disk. If there is a base plate it should be slightly curved downwards to conform with the curve of the boiler.
Attach to the boiler top using the main locomotive diagram as a guide for positioning. *It is important that the domes, steam valves, and smoke stack are lined up with each other.* Now attach the boiler door making sure that the door hinge is lined up vertically on the right hand side.

BOILER CRADLE
I most cases this is an open ended box. Do not attach to the frame yet.

FIREBOX
Assemble and fit over the end of the boiler or in some locos, butt it against the back end.
Tip: To ensure that the boiler is parallel to the frame it is best to Place the saddle in position (without gluing) then rest the boiler/firebox on it and adjust things so that the boiler runs parallel with the top surface of the frame. Once aligned you can glue the saddle and firebox to the frame and then the boiler can be glued to the saddle.
British locomotives. If the loco has wheel splashers these should be glued in position on the frame before attaching the boiler/firebox assembly.

CAB
An open ended box (or three sided) glued to the back of the firebox or the front may fit over the back end of the firebox. Glue to the firebox and check that it sits squarely on the frame before adding the roof.
Tip: Color the inside of the cab and cab roof before assembly. Cut out windows and apply window frames if applicable before assembly.

FRONT END
You can now finish off any detail on the front end of the frame and boiler such as pilot beam, pilot, headlight etc.

FOOTPLATE AND/OR VALANCES.
First cut- out and fold the pieces. Note the front ladder, which bends down and is glued to the front edges of the pilot beam at the front of the frame. When the ends of these ladders are firmly glued in place you can extend the footplates along the sides of the boiler sides and lightly mark a horizontal line as a guide for gluing. Use the same procedure for the footplates with tabs marking the places where slots should be cut in the boiler sides. To cut these slots run the point of your knife two or three times over the lines increasing the pressure slightly each time, being careful not to dent the boiler.

STEAM AND WATER TANKS
Simple tube shapes capped with a disk on each end. Check the main diagrams for correct locations.
Tip: When gluing to the locomotive make sure the join seam is to the back or at the bottom so it cannot be seen. Color the edges of the end caps before gluing in place.

STEAM AND WATER PIPES
Round section shoe laces of different diameters and braided fishing line make very effective pipes and they are easy to cut to length and glue. Refer to the main diagrams,
Tip: Find good photos of the prototype as a guide foe super-detailing.

HAND RAILS
These can be made from thin wire. Bend the ends at right angles (about ¼ inch) then prick holes in the boiler where they will be inserted and glued. Holding the wire against the boiler in the correct position and pricking at the correct spots easily does this.

SMALL DETAIL
Items such as cab steps, couplers, buffers (British), hoses etc should be added last.

TENDER
Build the frame and wheel assembly first. Next make the tender sides into an open box and fit interior. Notice that on some models the interior lining fold upwards rather than downward.
Attach the sides to the frame. Attach any detail.