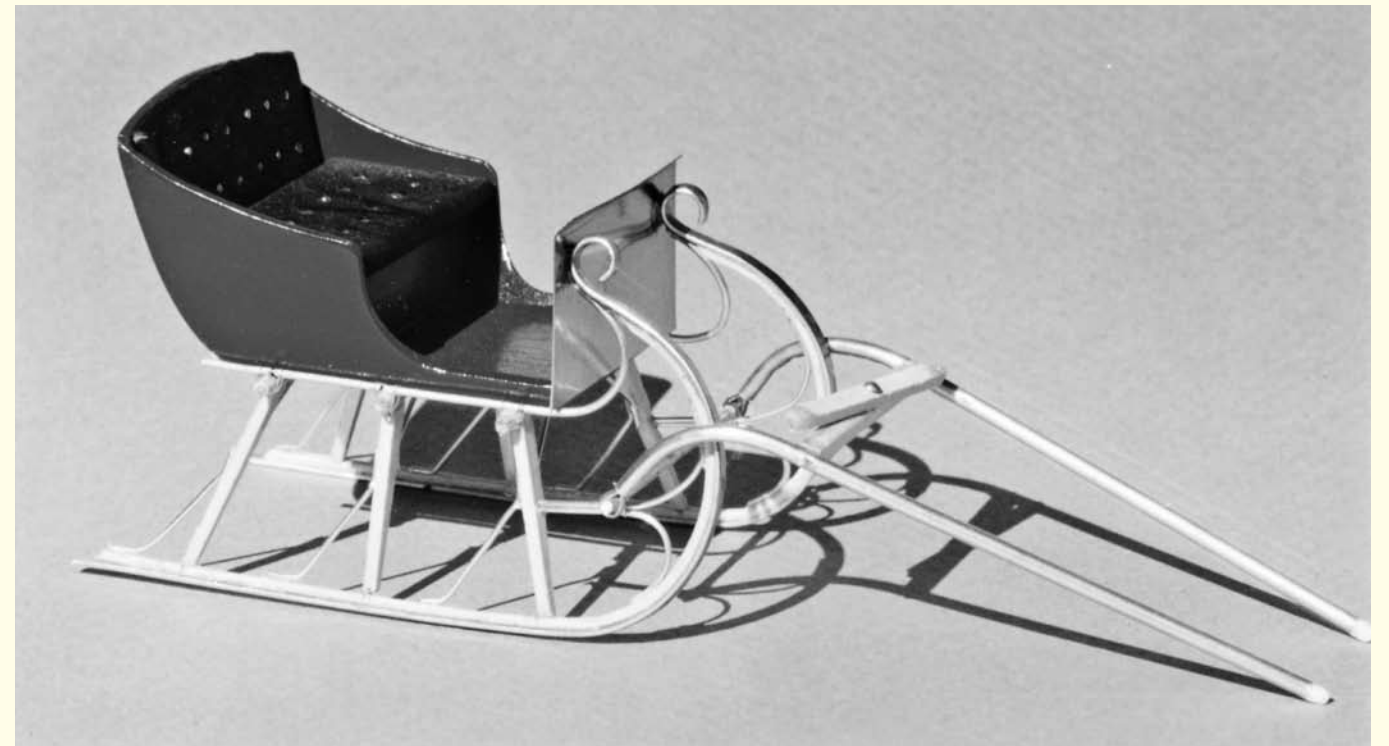
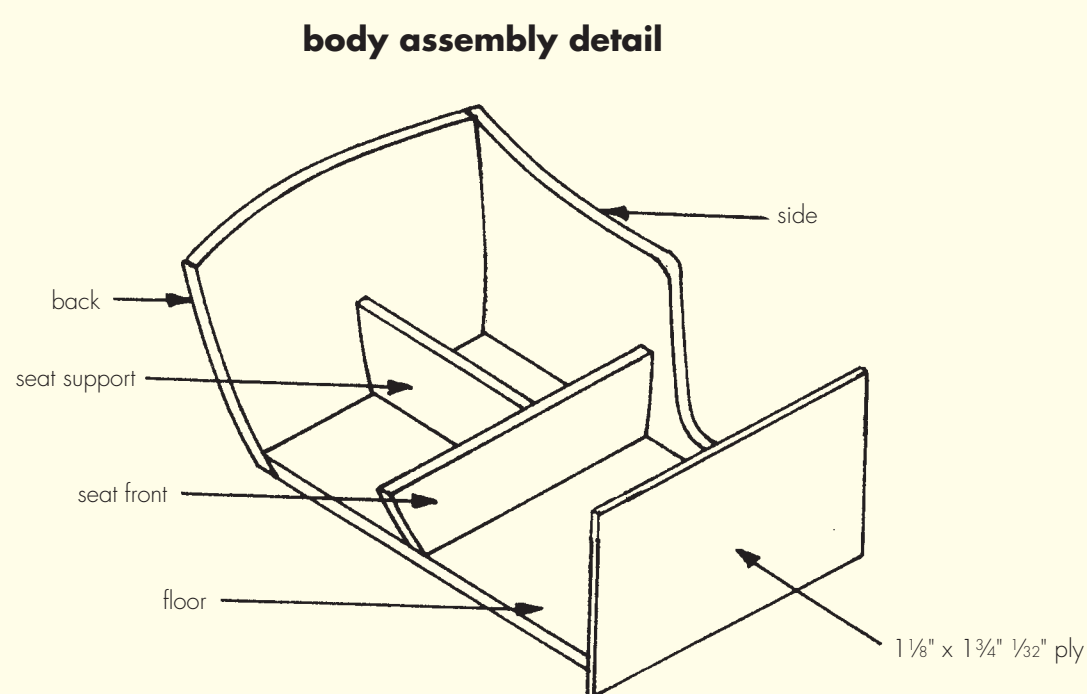
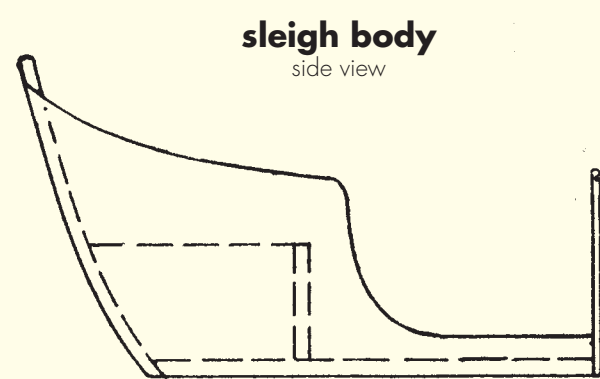


1:20.3 sleigh

by Ted Stinson | Wiscasset, Maine



If you are modeling a railroad in a period prior to 1920, you will need a supply of horse-drawn vehicles. This sleigh is the third one offered in this series. While a sleigh would not be seen in warmer climates, they were the most common form of transport in the winter in the cold north. Before the advent of paved roads and auto travel, snow was not plowed, but packed down by large drums drawn by large teams of oxen or horses. It was on this surface that a sleigh replaced the carriage and became the primary means of travel.

The original model was built entirely with CA glue. It is now 15 years old and is still quite sturdy. The model calls for the use of $1/16"$ -diameter reed. This can be found at most craft stores—even Wal-mart. It is likely to be rather brittle at first. Soak it in boiling water for a few minutes, then pat it dry. You should now find the reed can be easily bent.

Construction

Begin construction by cutting out the "print wood" parts. The print-wood pattern can be copied and glued to a piece of firm balsa of the appropriate thickness. Balsa will be the easiest material to cut.

Runner assembly

Begin by assembling the legs according to the drawing. With this done, make up two runners. Mark the location of the legs on the runners as indicated by the small arrows. Assemble the legs and runners according to the detail. Make sure to fit and glue the $.03"$ -diameter-wire diagonal braces at the back of each set of legs (see the side view). Complete the runner assembly by fitting and gluing the $1/32"$ cotter pins in the $1/32"$ holes in the front set of legs. Cut off the excess material with wire snips. Fit a $1/16"$ -diameter rod in the cotter pins. Leave about $1/8"$ extending beyond the pins. Cut, fit, and glue the rod in place.

Body assembly

After cutting the parts of the body from $1/16"$ balsa, glue the seat front to the seat support. When dry, glue this assembly to the seat floor. Now glue the seat back to the floor and seat support. Finally, glue the sides in place. Refer to the detail for further information. When everything has dried, sand the edges smooth and round. Glue the $1/32"$ -ply front piece in place. Give this assembly two coats of spray lacquer. When dry, paint the body red.

Details

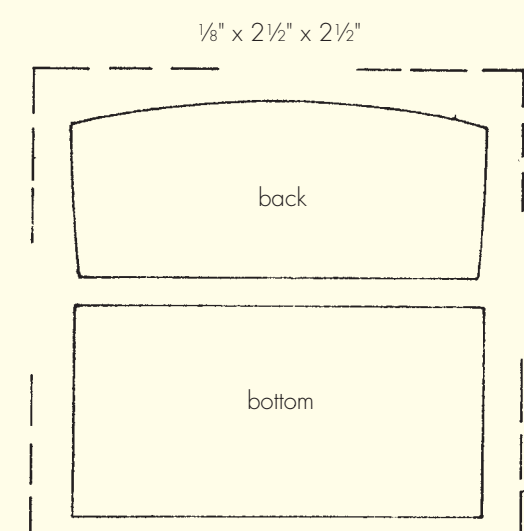
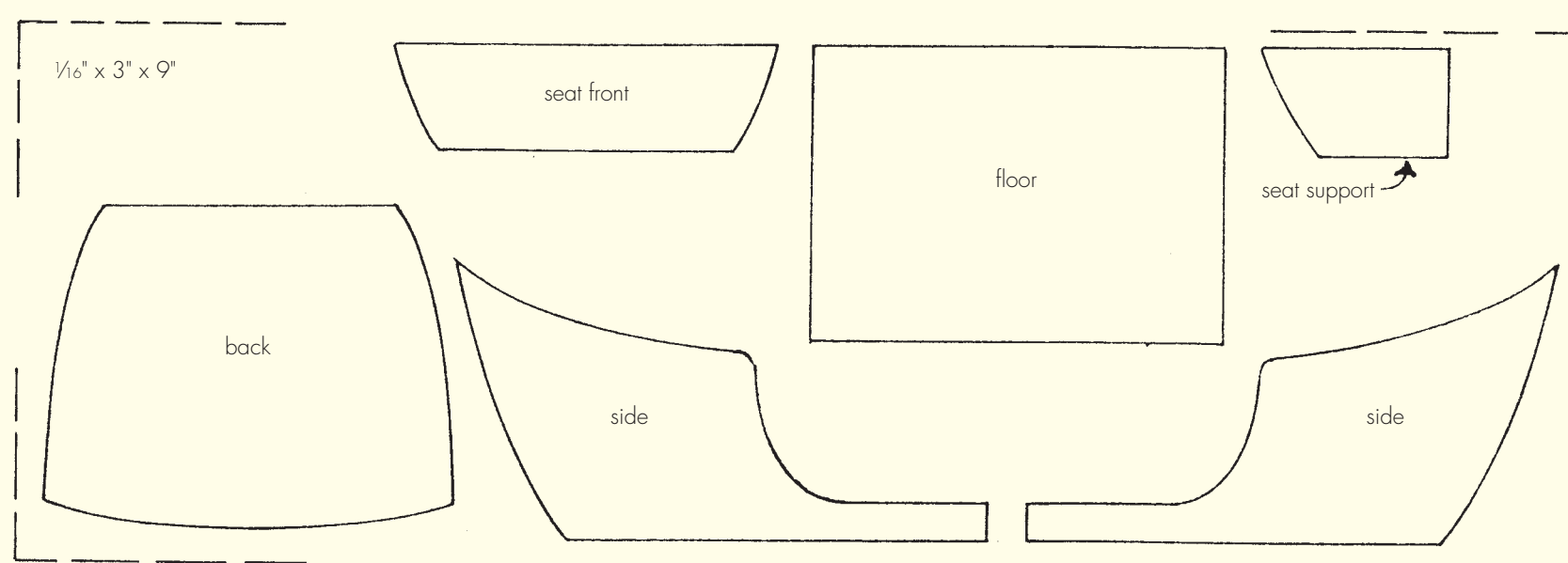
Make the shafts according to the drawing. Paint these red or black, according to your taste. Fit these in place on the ends of the $1/16"$ -diameter rod. Now make the seat cushions. Run pins through the $1/8"$ balsa to represent the upholstery buttons. Cut any excess at the back with wire snips. Paint the finished cushions, first with clear lacquer, then with satin-finish black. When dry, glue these in place. Now glue the finished body to the runners along the bottom, where the glue will be least visible. Now you're finished, except for a horse.

A Morgan horse was often used to pull a sleigh. One possibility is a Breyer "Paddock Pal" Morgan, available from toy stores, tack shops, or online.

This sheet is a supplement to the February 2006 issue of *Garden Railways* magazine. While supplies last, extra copies of these drawings can be had by sending \$1.50 per set (\$2.00 foreign) to: Sidestreet Bannerworks, PO Box 460222, Denver CO 80246 USA. A complete list of available plans can be found at www.sidestreet.info, or send a stamped, self-addressed envelope to the above address.

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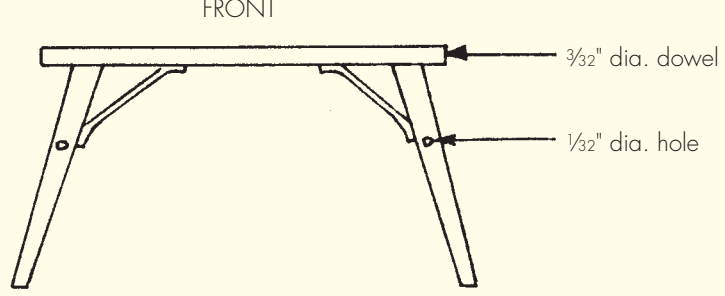


Composite
View

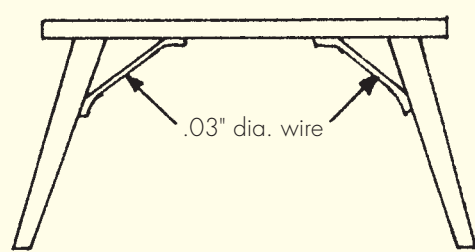
Are you working in a different scale?

If you are working in 1:32 scale, reduce these drawings to 63%.
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 If you are working in 1:13.7 (7/16") scale, enlarge these drawings to 148%.

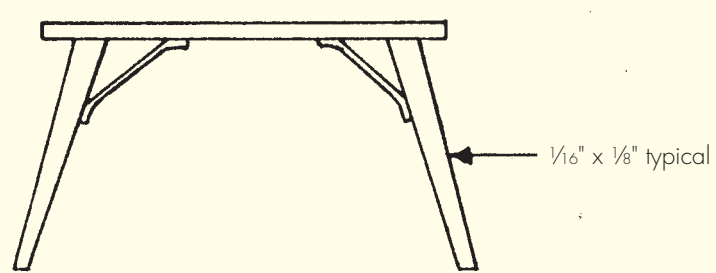
runner legs



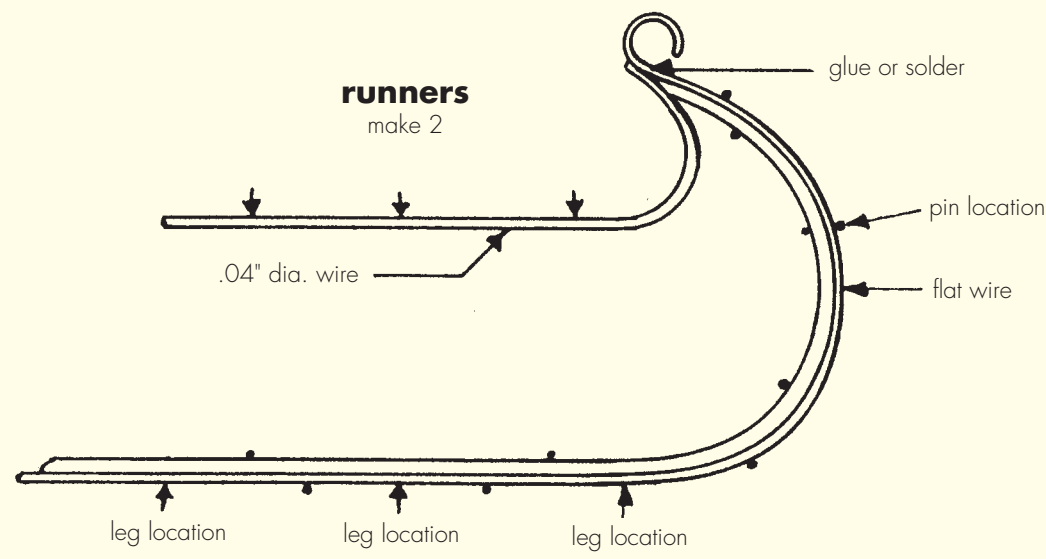
MIDDLE



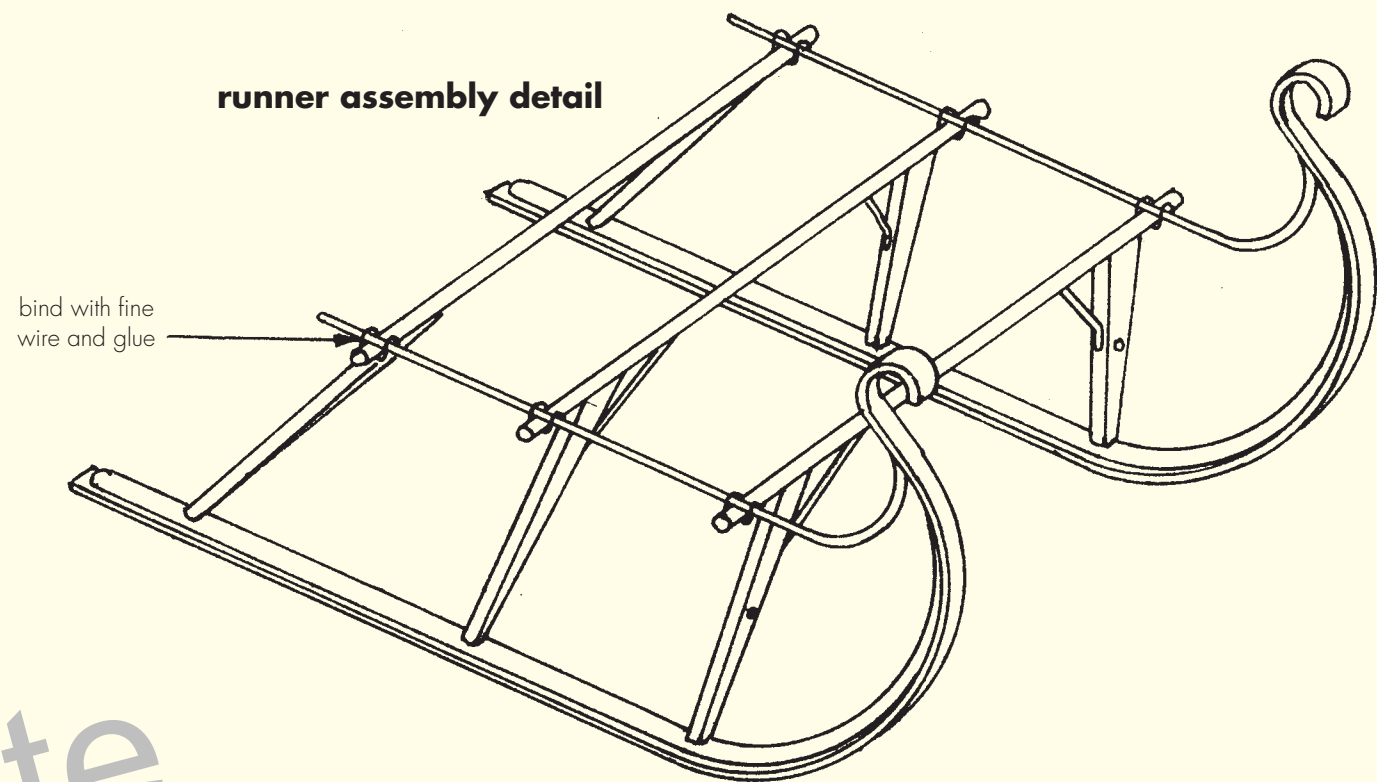
REAR



runners
make 2



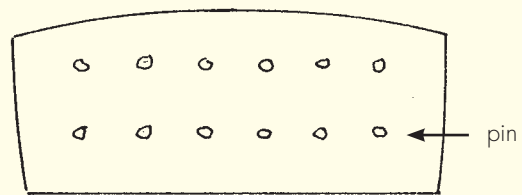
runner assembly detail



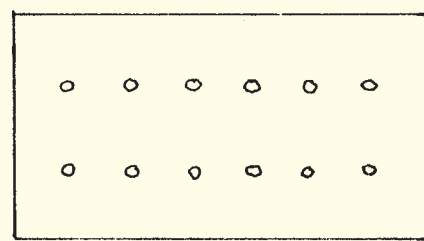
Composite View

upholstered seat

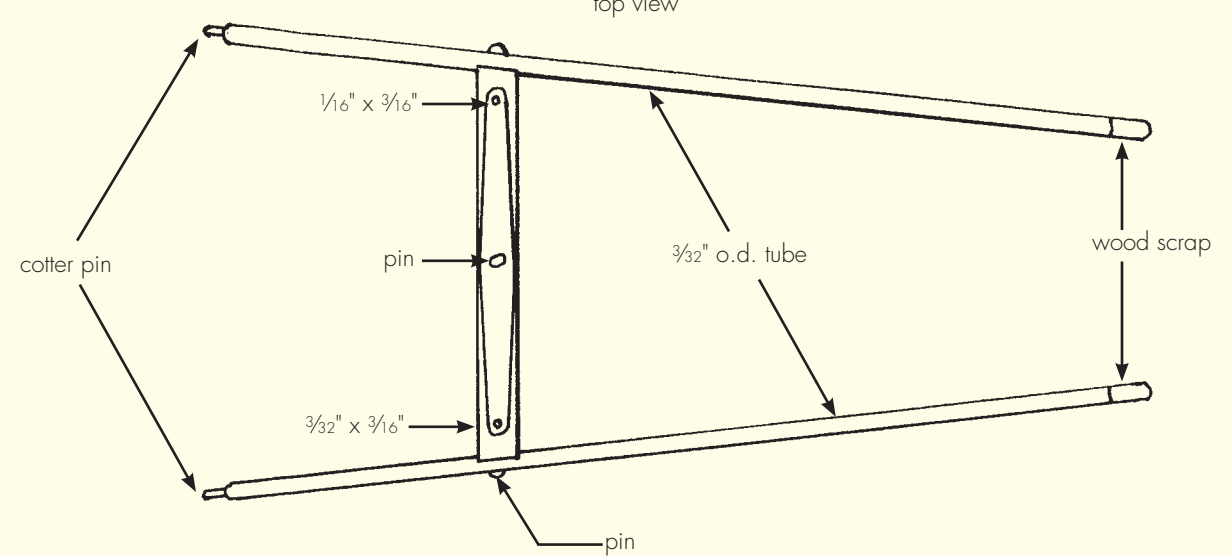
BACK



BOTTOM

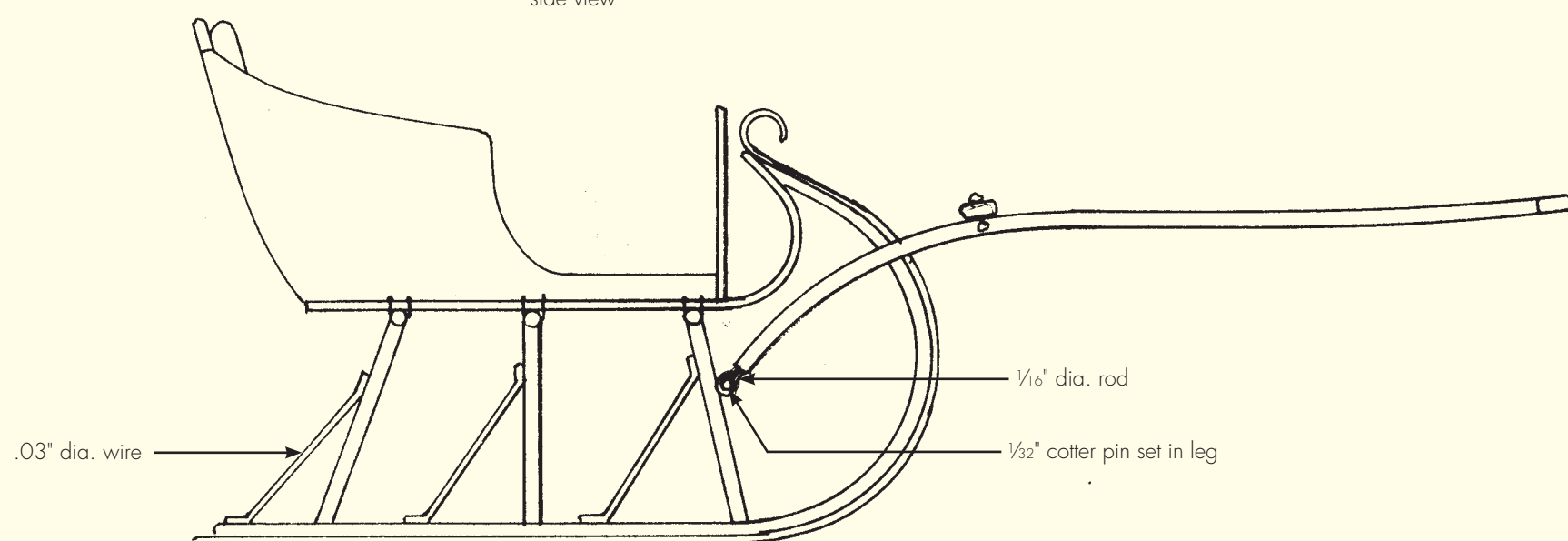


SHAFTS
top view

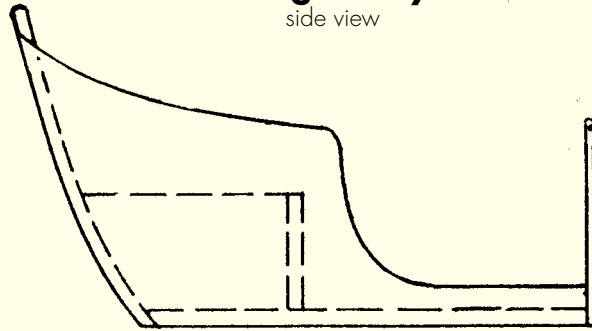


sleigh

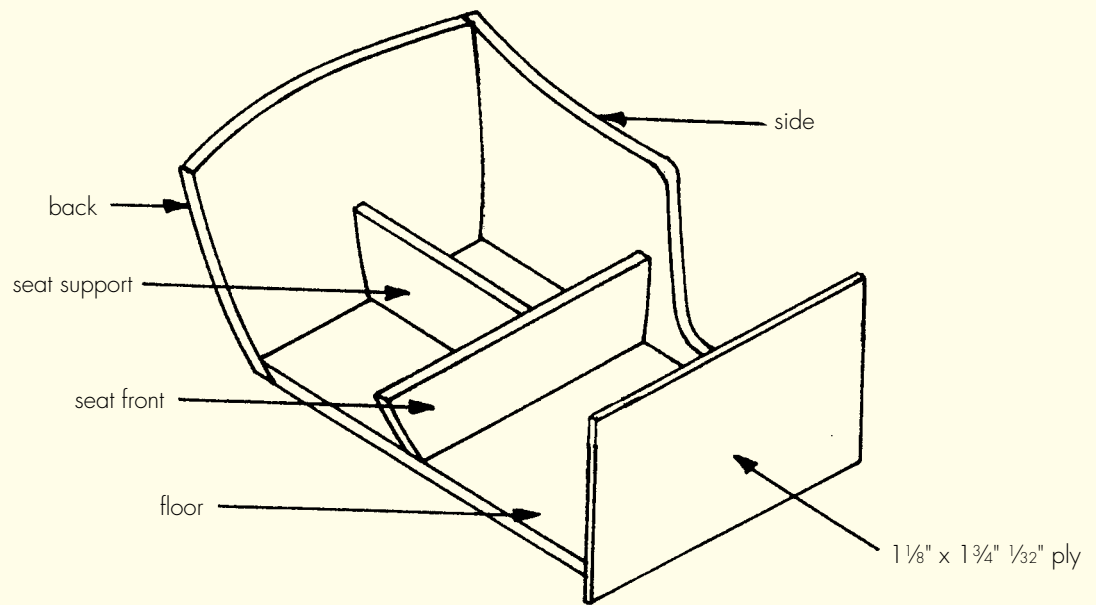
side view



sleigh body side view

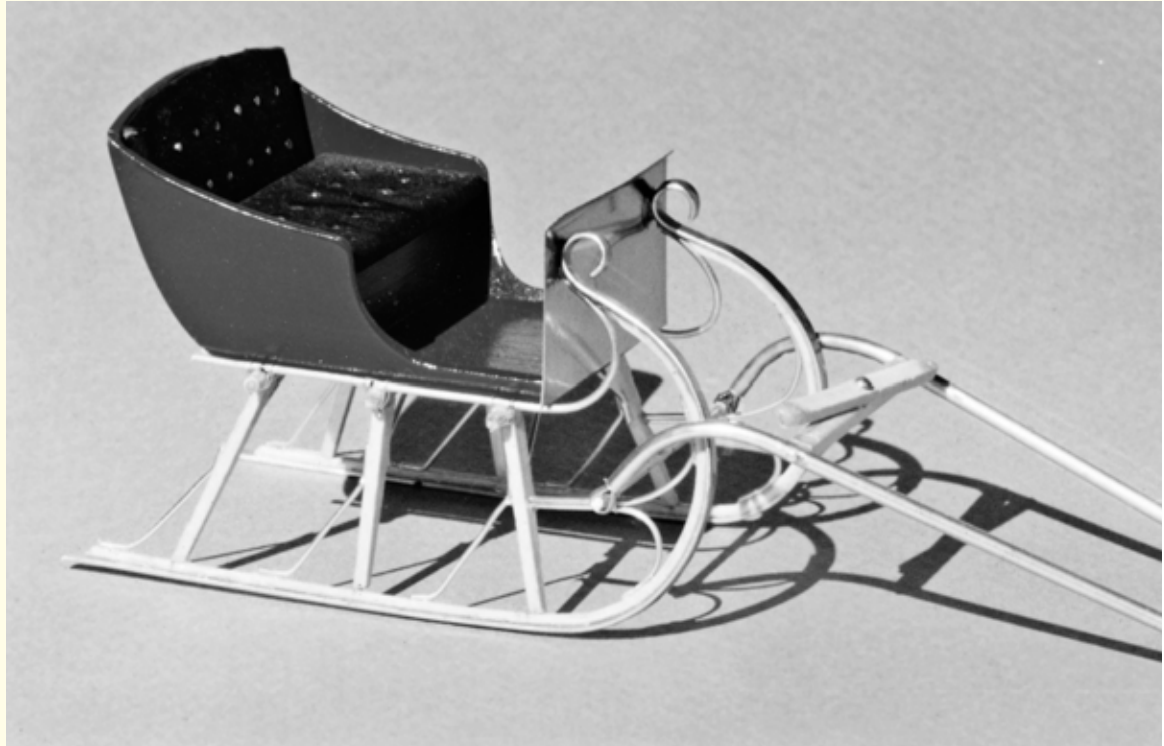


body assembly detail



1:20.3 sleigh

by Ted Stinson | Wiscasset, Maine



If you are modeling a railroad in a period prior to 1920, you will need a supply of horse-drawn vehicles. This one offered in this series. While a sleigh would not be seen in warmer climates, they were the most common in the winter in the cold north. Before the advent of paved roads and auto travel, snow was not plowed, but packed large drums drawn by large teams of oxen or horses. It was on this surface that a sleigh replaced the carriage as a primary means of travel.

The original model was built entirely with CA glue. It is now 15 years old and is still quite sturdy. The model is made of $\frac{1}{16}$ "-diameter reed. This can be found at most craft stores—even Wal-mart. It is likely to be rather brittle at first. Soak it in water for a few minutes, then pat it dry. You should now find the reed can be easily bent.

Construction

Begin construction by cutting out the “print wood” parts. The print-wood pattern can be copied and glued to a piece of balsa of the appropriate thickness. Balsa will be the easiest material to cut.

Runner assembly

Begin by assembling the legs according to the drawing. With this done, make up two runners. Mark the locations on the runners as indicated by the small arrows. Assemble the legs and runners according to the detail. Make sure to install the $.03$ "-diameter-wire diagonal braces at the back of each set of legs (see the side view). Complete the runner assembly by gluing the $\frac{1}{32}$ " cotter pins in the $\frac{1}{32}$ " holes in the front set of legs. Cut off the excess material with wire snips. Insert a thin rod in the cotter pins. Leave about $\frac{1}{8}$ " extending beyond the pins. Cut, fit, and glue the rod in place.

Body assembly

After cutting the parts of the body from $\frac{1}{16}$ " balsa, glue the seat front to the seat support. When dry, glue the seat floor. Now glue the seat back to the floor and seat support. Finally, glue the sides in place. Refer to the detail for the seat back. When everything has dried, sand the edges smooth and round. Glue the $\frac{1}{32}$ "-ply front piece in place. Finish with two coats of spray lacquer. When dry, paint the body red.

Details

x $1\frac{3}{4}$ " $\frac{1}{32}$ " ply

Plan set #75



horse-drawn vehicles. This sleigh is the third
 they were the most common form of transport
 now was not plowed, but packed down by
 sleigh replaced the carriage and became the pri-

s still quite sturdy. The model calls for the use
 likely to be rather brittle at first. Soak it in boil-
 asily bent.

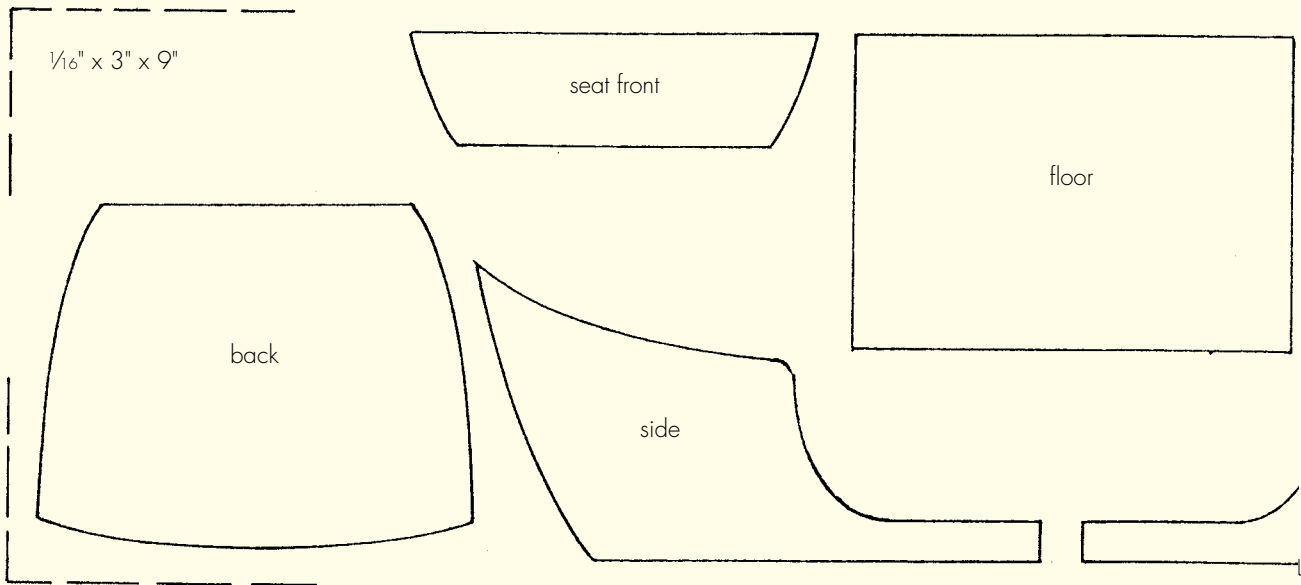
ern can be copied and glued to a piece of firm

two runners. Mark the location of the legs on
 ling to the detail. Make sure to fit and glue the
). Complete the runner assembly by fitting and
 ps material with wire snips. Fit a 1/16"-diameter
 the rod in place.

t support. When dry, glue this assembly to the
 es in place. Refer to the detail for further infor-
 32"-ply front piece in place. Give this assembly

floor

$1\frac{1}{8}'' \times 1\frac{3}{4}'' \frac{1}{32}''$ ply



rod in the cotter pins. Leave about 1/8" extending beyond the pins. Cut, fit, and glue the rod in place.

x 1 3/4" 1/32" ply

Body assembly

After cutting the parts of the body from 1/16" balsa, glue the seat front to the seat support. When dry, glue the seat floor. Now glue the seat back to the floor and seat support. Finally, glue the sides in place. Refer to the details. When everything has dried, sand the edges smooth and round. Glue the 1/32"-ply front piece in place. two coats of spray lacquer. When dry, paint the body red.

Details

Make the shafts according to the drawing. Paint these red or black, according to your taste. Fit these in place 1/16"-diameter rod. Now make the seat cushions. Run pins through the 1/8" balsa to represent the upholstery buttons at the back with wire snips. Paint the finished cushions, first with clear lacquer, then with satin-finish black. Weave the seat in place. Now glue the finished body to the runners along the bottom, where the glue will be least visible. Note: Not suitable except for a horse.

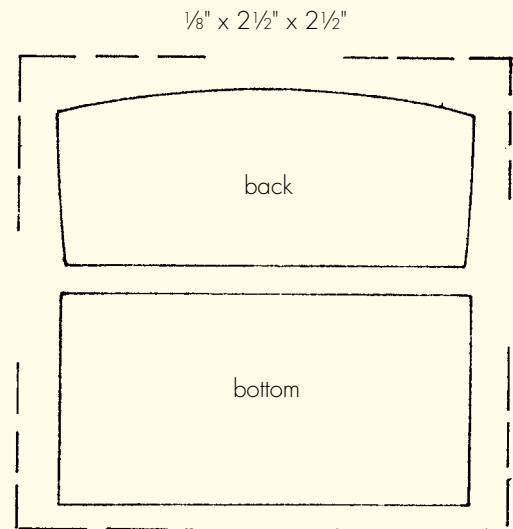
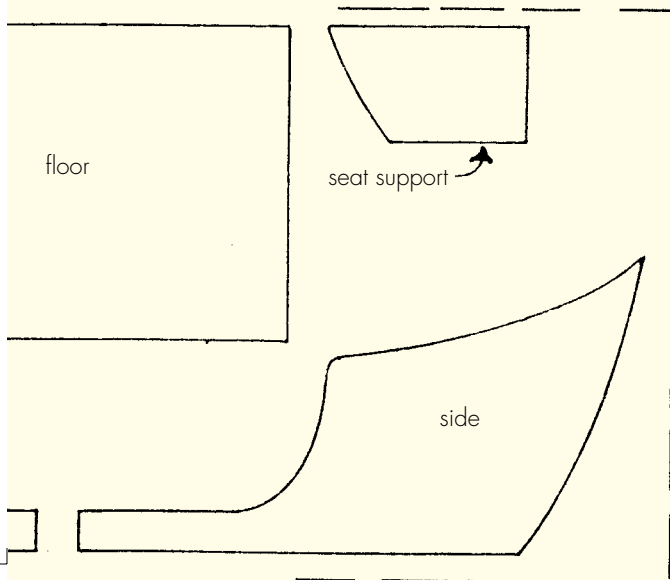
A Morgan horse was often used to pull a sleigh. One possibility is a Breyer "Paddock Pal" Morgan, available at tack shops, or online.

* * *

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the rod in place.

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-es in place. Refer to the detail for further infor-
32"-ply front piece in place. Give this assembly

your taste. Fit these in place on the ends of the
represent the upholstery buttons. Cut any excess
n with satin-finish black. When dry, glue these
glue will be least visible. Now you're finished,

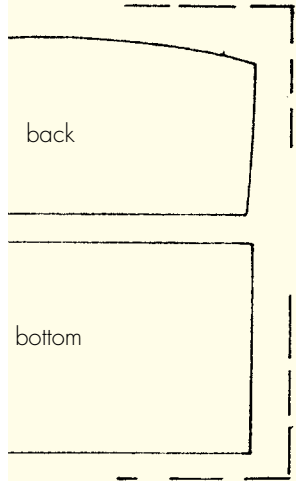
ddock Pal" Morgan, available from toy stores,

zine. While supplies last, extra copies of these
works, PO Box 460222, Denver CO 80246 USA.
stamped, self-addressed envelope to the above

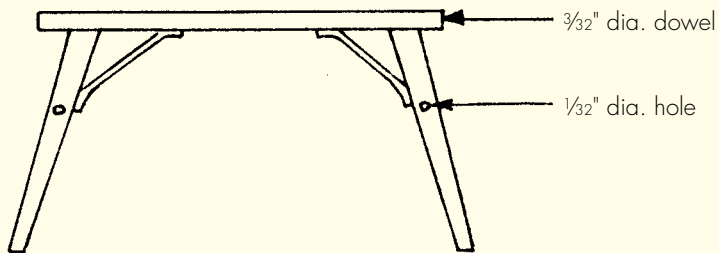
\$25 + \$6 s&h. Order from Northeast Narrow

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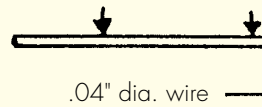
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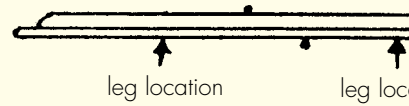
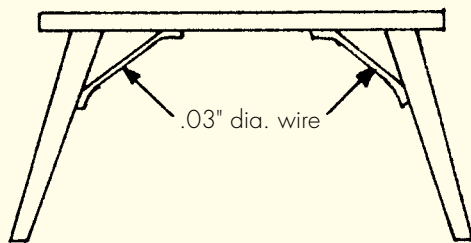
runner legs FRONT



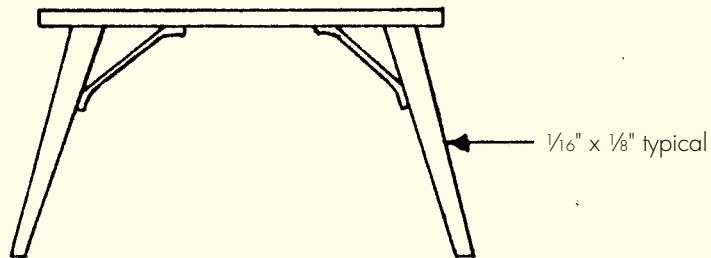
runner
make



MIDDLE



REAR

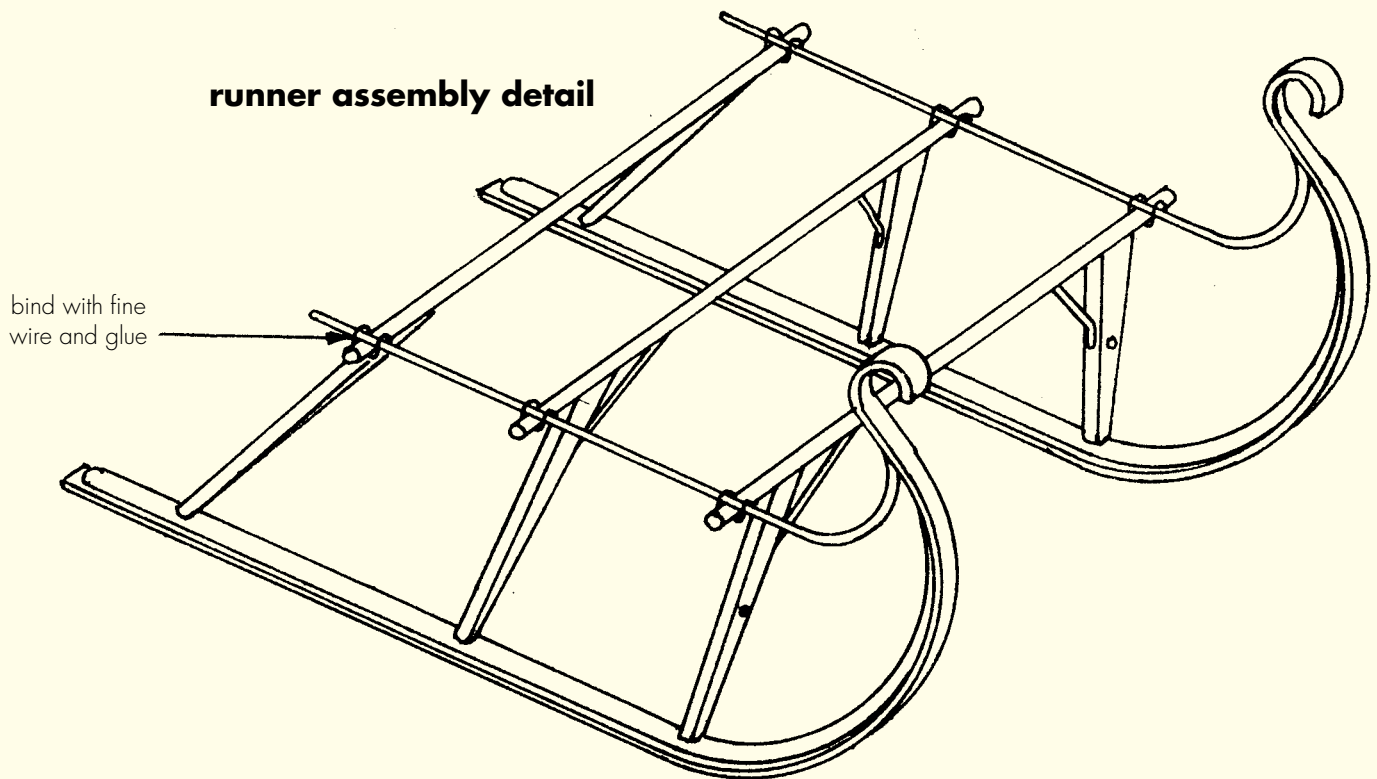
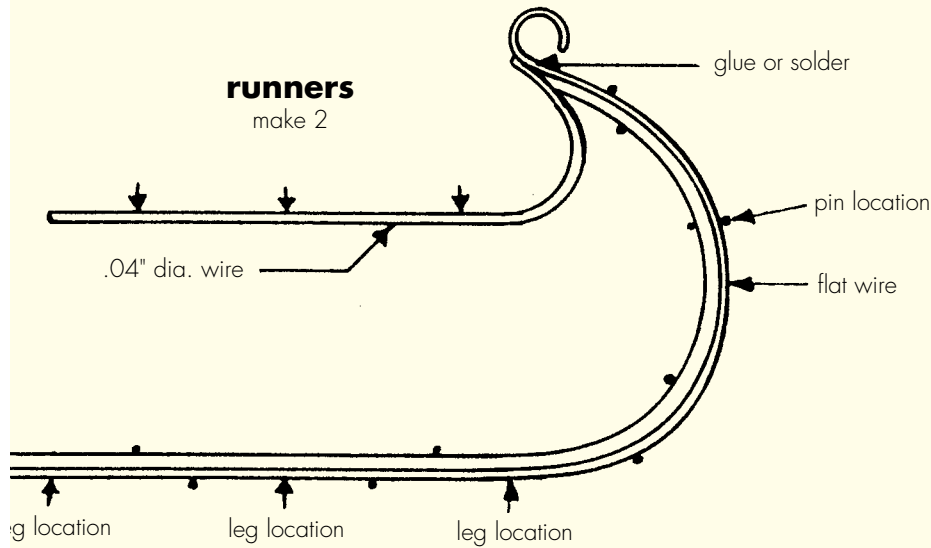


bind with fine
wire and glue



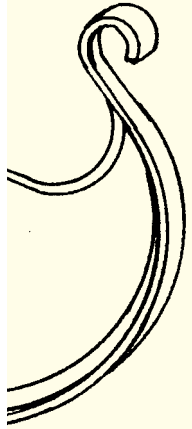
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If you are working in 1:22.5 scale, reduce these drawings to
If you are working in 16mm scale, enlarge these drawings
If you are working in 1:13.7 (7/8") scale, enlarge these drawings

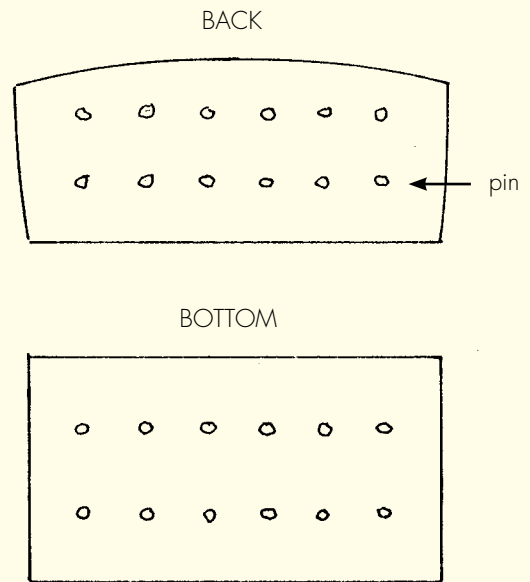


ifferent scale?

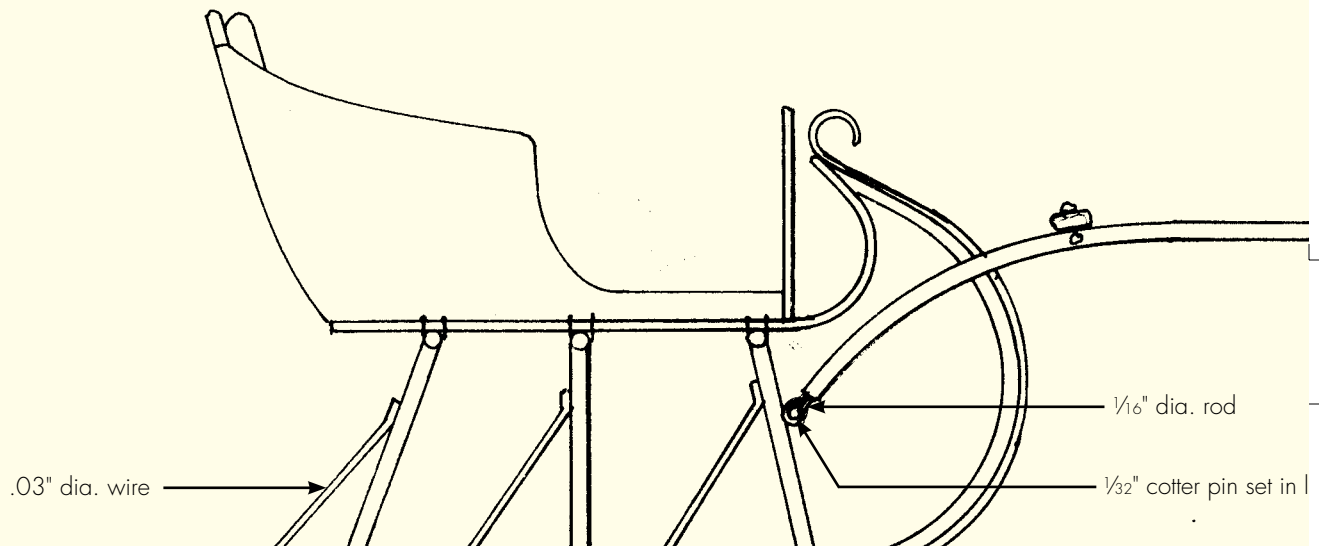
- 3, reduce these drawings to 63 %.
- 3, reduce these drawings to 70 %.
- 3, reduce these drawings to 88 %.
- ale, reduce these drawings to 90%.
- ale, enlarge these drawings to 107%.
- s") scale, enlarge these drawings to 148 %.

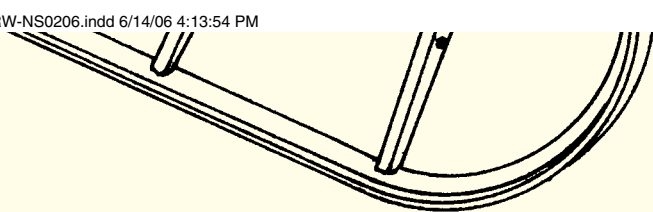


upholstered seat



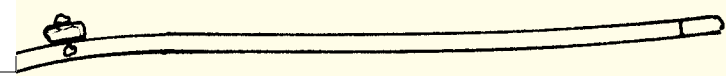
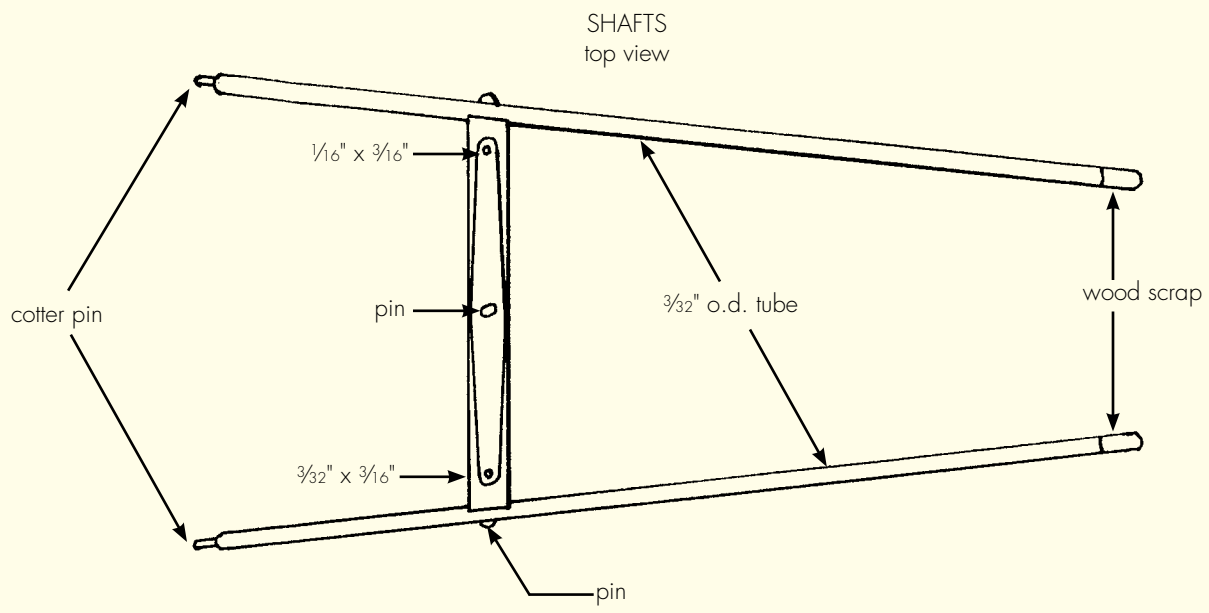
sleigh side view





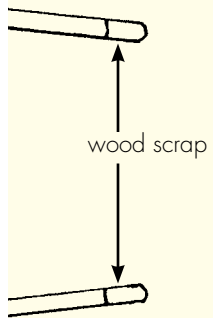
pin

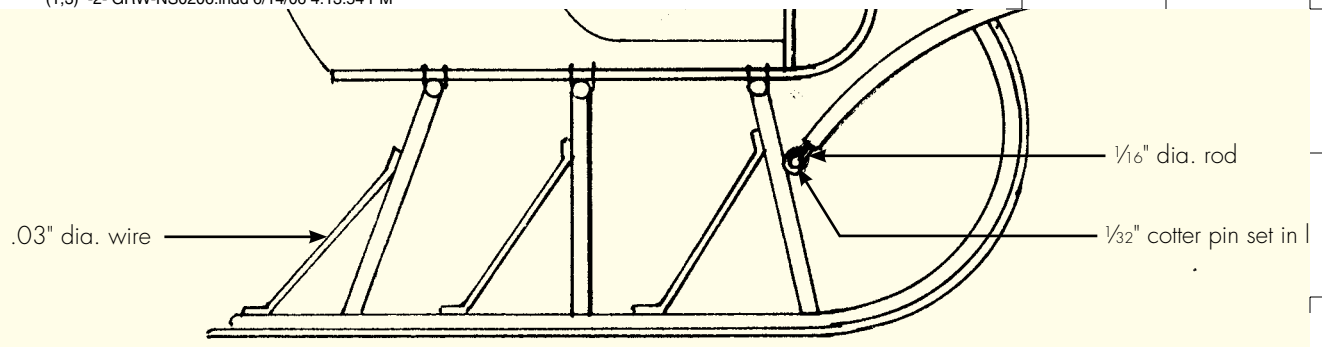
pin



$\frac{1}{16}''$ dia. rod

$\frac{1}{32}''$ cotter pin set in leg





— 1/16" dia. rod
— 1/32" cotter pin set in leg

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