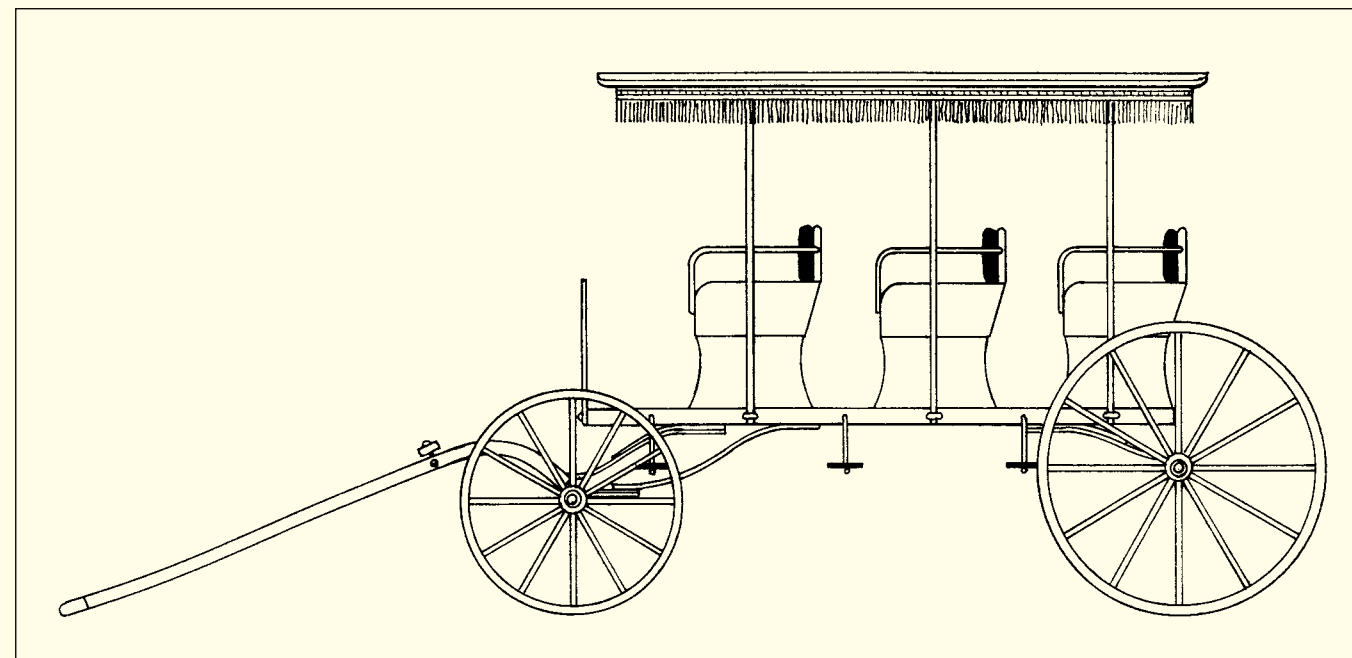
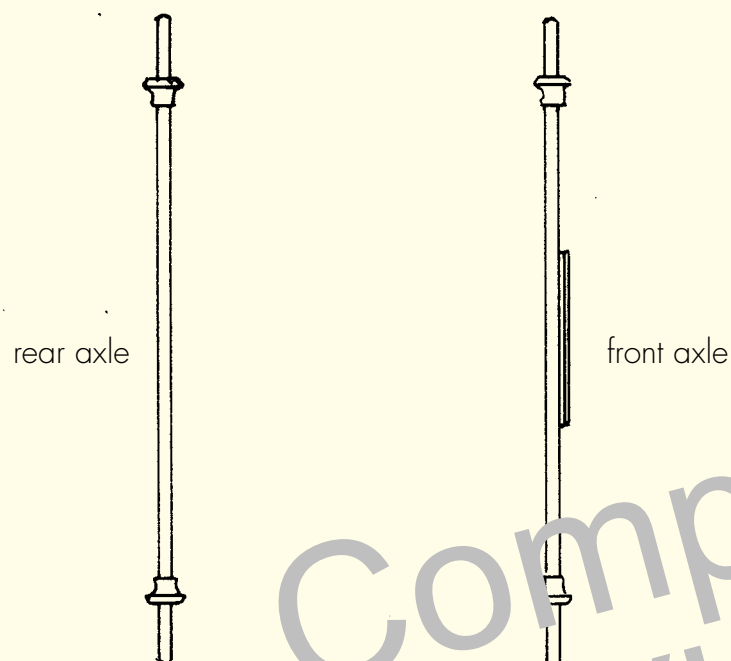
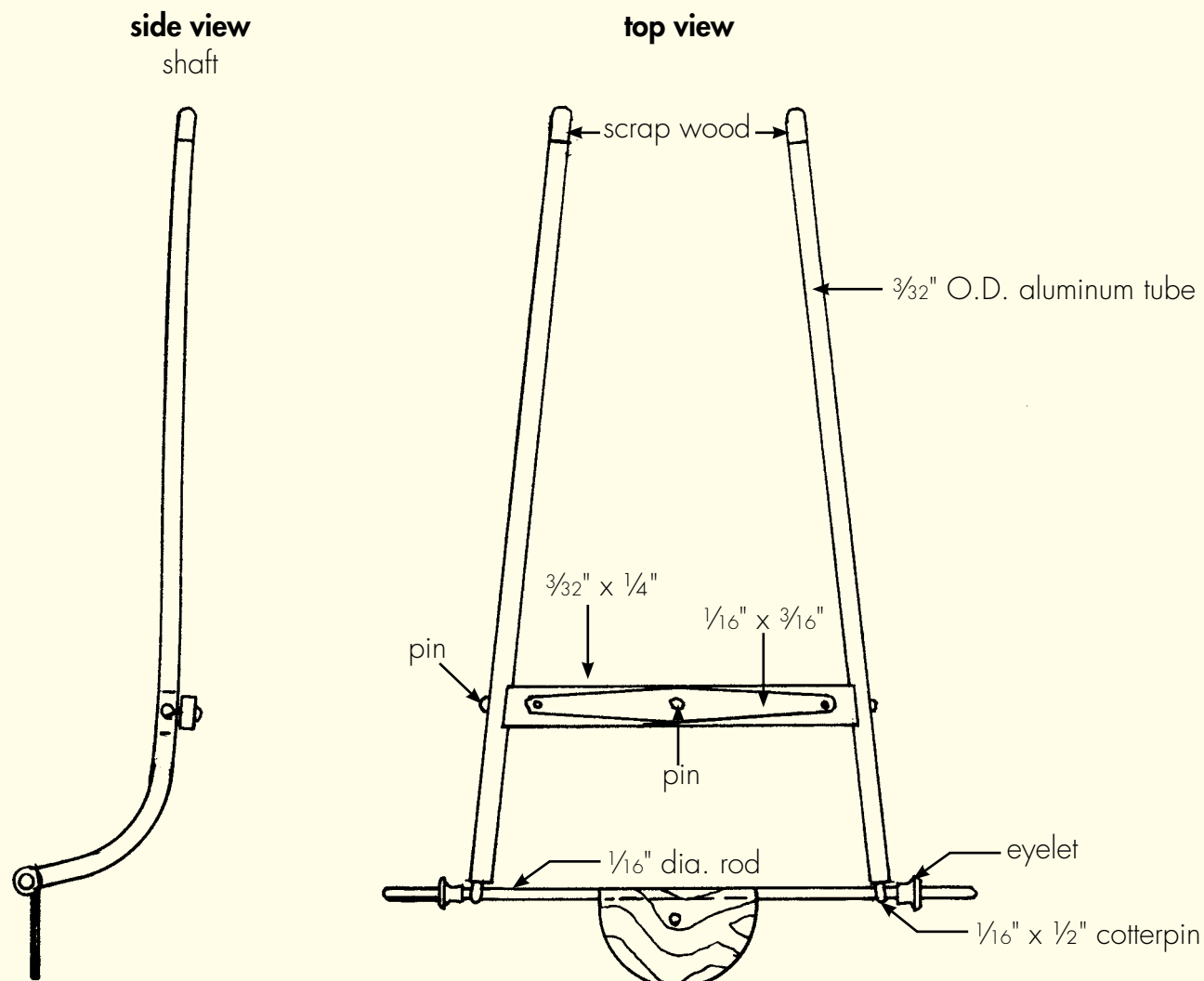


by Ted Stinson | Wiscasset, Maine



If you are modeling a railroad in a period prior to 1920, you will need a supply of horse-drawn vehicles. This surrey is the first of several to be offered.

The surrey was the horse-drawn taxi of its day. The prototype for this one was built of native woods and given a natural finish. The wheels for this model are made of laser-cut plywood and are available as separate items from Northeast Narrow Gauge (see below).

Construction

Begin construction by cutting out the "print wood" parts. The print-wood pattern can be copied and glued to a piece of 1/16"-thick firm balsa, which would be the easiest material to cut.

Begin by assembling the three seats. Sand the edges smooth and add the .040"-diameter wire handrails. Give each seat at least two coats of spray lacquer. Make the seat cushions from balsa. Add the pins and seal with clear lacquer. Paint the cushions black. When dry, glue them in place.

Now make the front axle and the shafts. These should be painted black. Since this assembly is made from dissimilar materials, use CA cement to assemble.

Now make the frame. Start with a piece of 1/8" x 1 5/8" x 5 1/8" ply. Add the 1/32" ply mud shield. Seal this with clear lacquer. The shield should be painted black. The main frame should be left natural. When dry, add the metal parts using CA cement. These should be painted black.

Now make the roof. Start with a piece of 1/32" ply. Add the framing. Seal with clear lacquer. When dry, add the brass-rod supports.

Final assembly

Glue the seats to the frame. Glue the axles in place. Assemble the wheels. Seal and paint these to suit. Before gluing the roof in place, add the fringe. Make the fringe from bias tape (available at fabric stores) cut in half lengthwise. Fray the cut edge back about 3/16"—this will produce a quite believable fringe. Glue the tape around the roof edge. Now fit and glue the roof in place.

As a final touch, make six steps from .040"-diameter wire and a 1/4" cardstock disc, made with a paper punch. Paint these black. When dry, glue the steps in holes drilled in the edge of the frame.

A surrey, because of its size, would have a large horse, such as a Morgan. One possibility is a Breyer "Paddock Pal" Morgan, available from toy stores, tack shops, or online.

This sheet is a supplement to the October 2005 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.

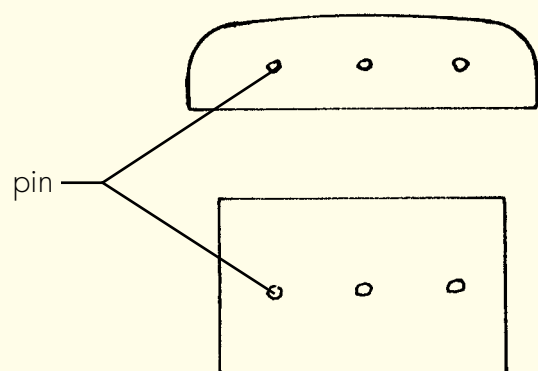
Laser-cut wheels for this project are available from Northeast Narrow Gauge for \$6 + \$2.50 shipping for a set of four. If you would like a complete surrey kit (including wheels, less horse), it is available for \$25 + \$6 s&h. Order from Northeast Narrow Gauge, PO Box 191, Wiscasset ME 04578. Web site: www.nemodel.com

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Composite View

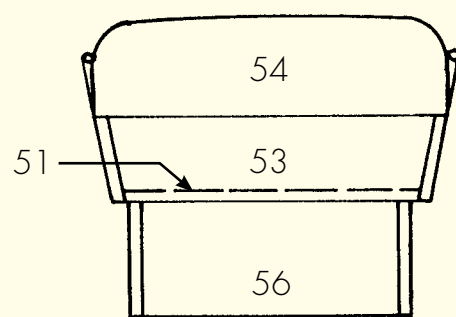
SEAT make 3

cushions
make from 1/8" balsa

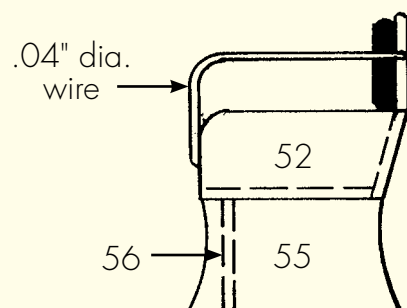


Cushions: make the cushions from 1/8" balsa. Cut 3 seat backs and 3 seat bottoms. Round the edges and sand smooth. Push the pins into the balsa, cutting off any excess. Apply thin CA glue to the back to lock the pins in place. Seal with clear lacquer. When dry, paint the seat cushions black. Glue the cushions in place after painting the seats.

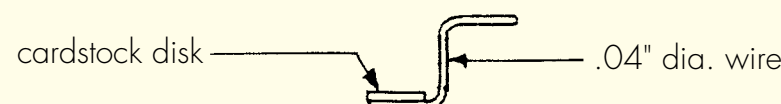
rear view



side view

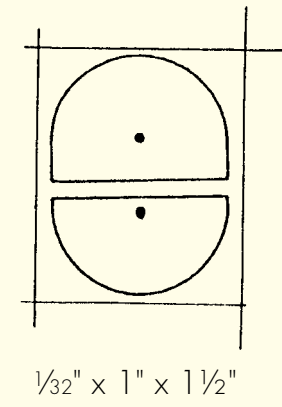
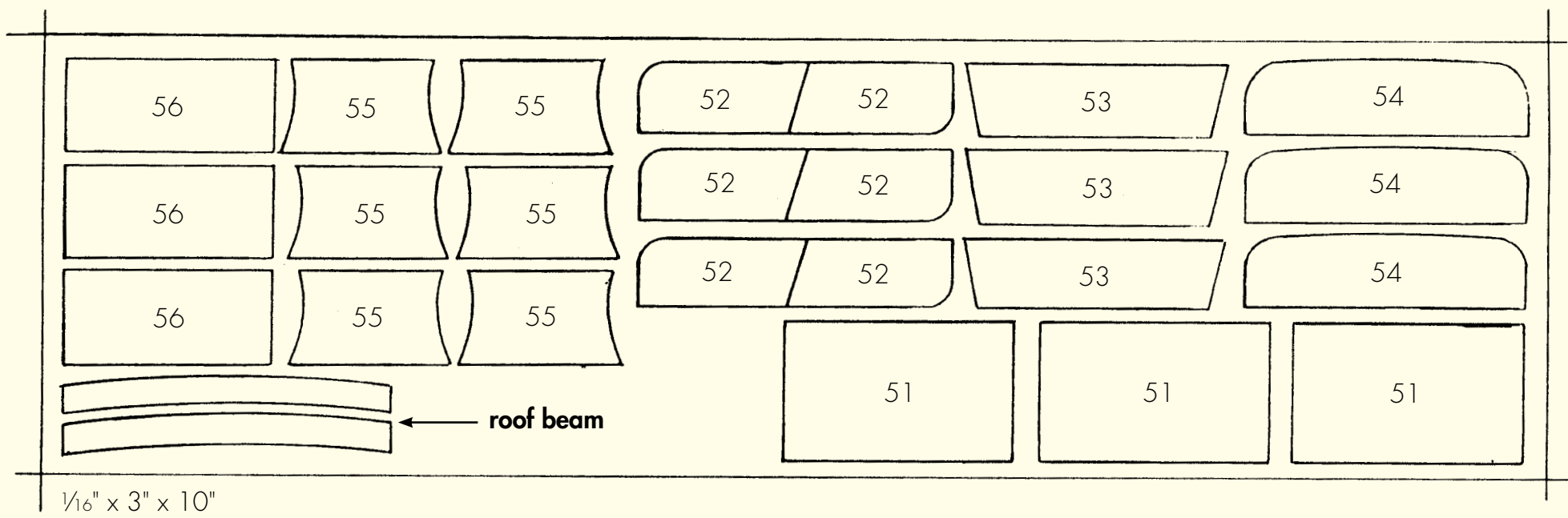


STEP make 6



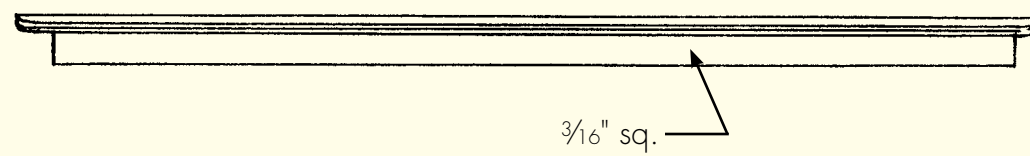
Are you working in a different scale?

If you are working in **1:32 scale**, reduce these drawings to 63%
 If you are working in **1:29 scale**, reduce these drawings to 70%
 If you are working in **1:24 scale**, reduce these drawings to 88%
 If you are working in **1:22.5 scale**, reduce these drawings to 90%
 If you are working in **16mm scale**, enlarge these drawings to 107%
 If you are working in **1:13.7 (7/8") scale**, enlarge these drawings to 148%

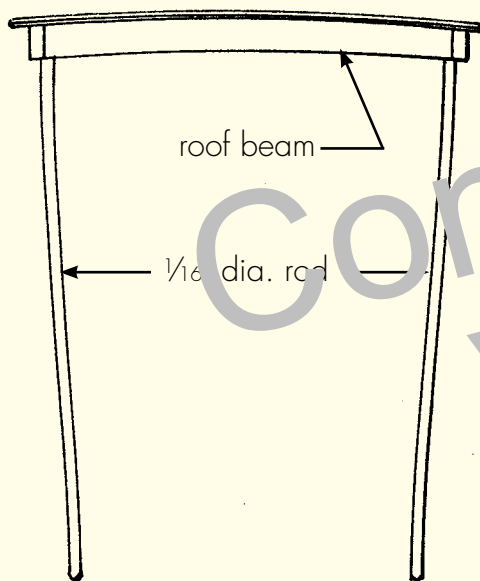


ROOF

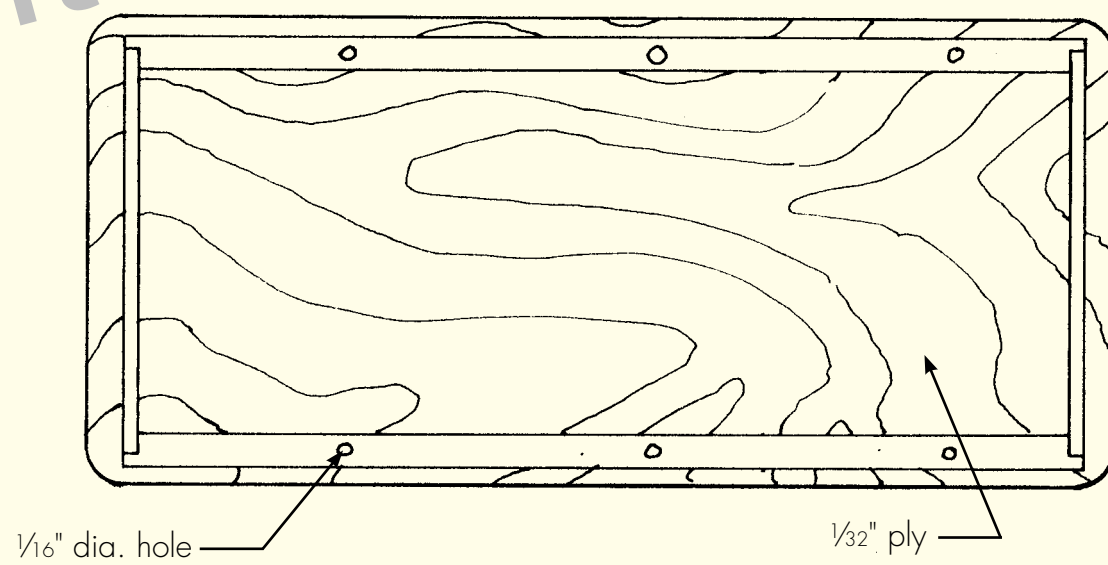
side view



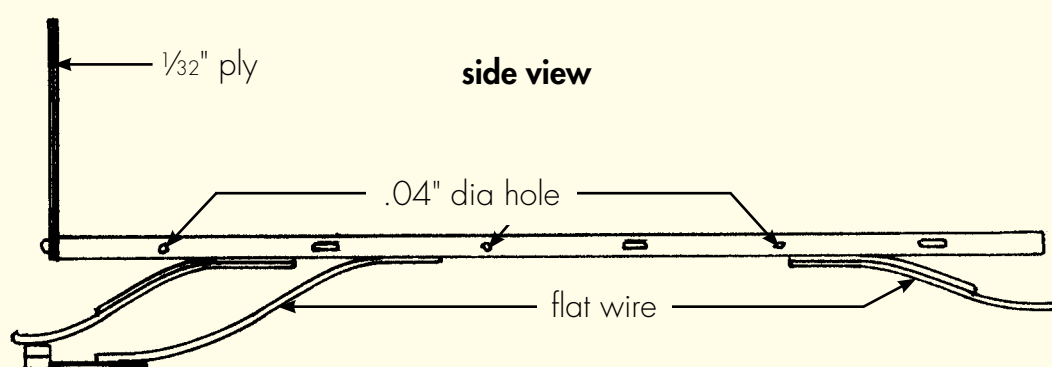
end view



bottom view

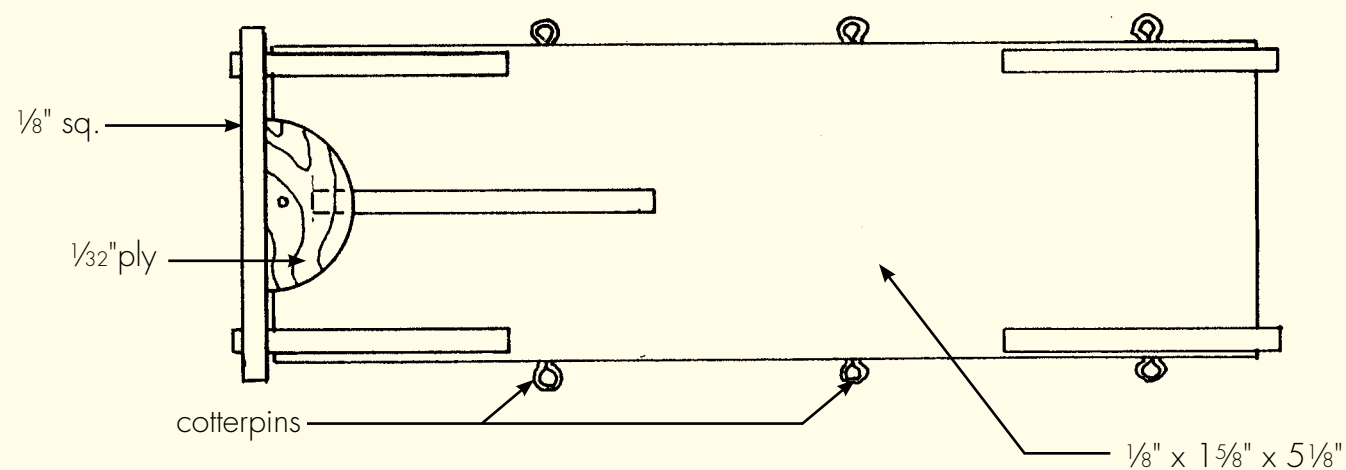


side view

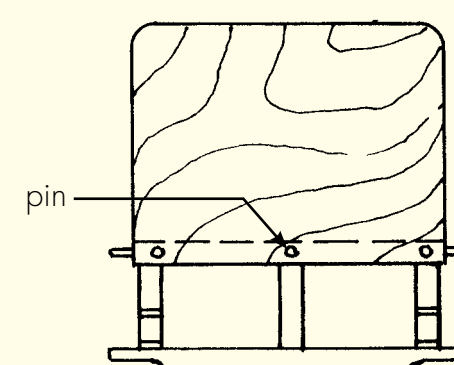


FRAME

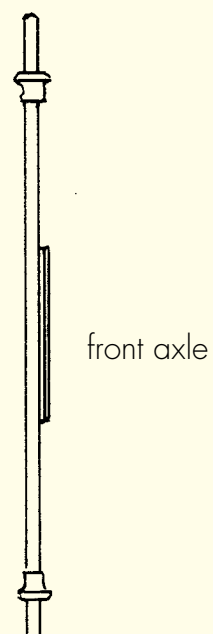
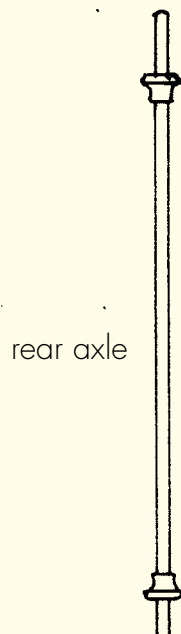
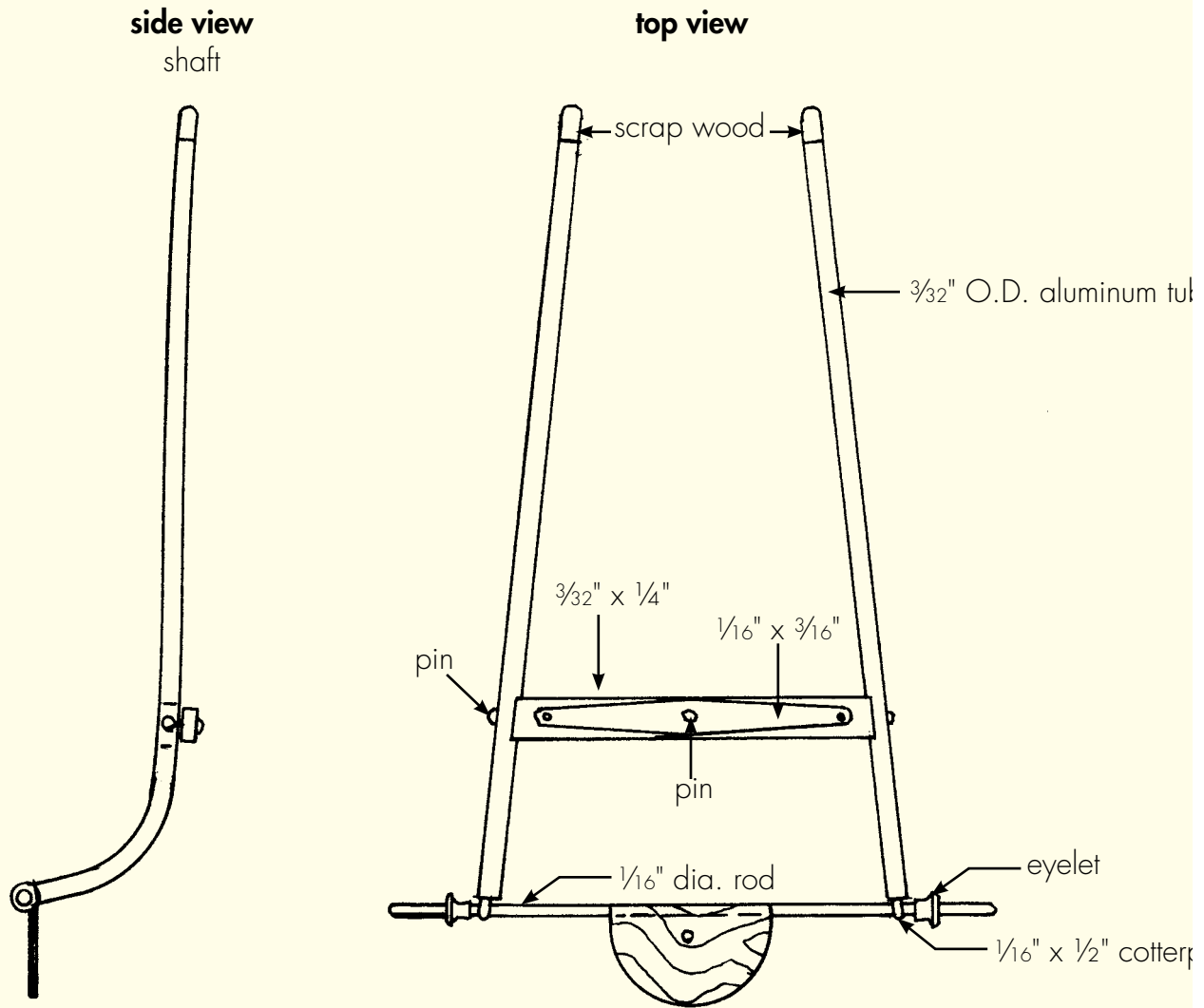
bottom view



front view



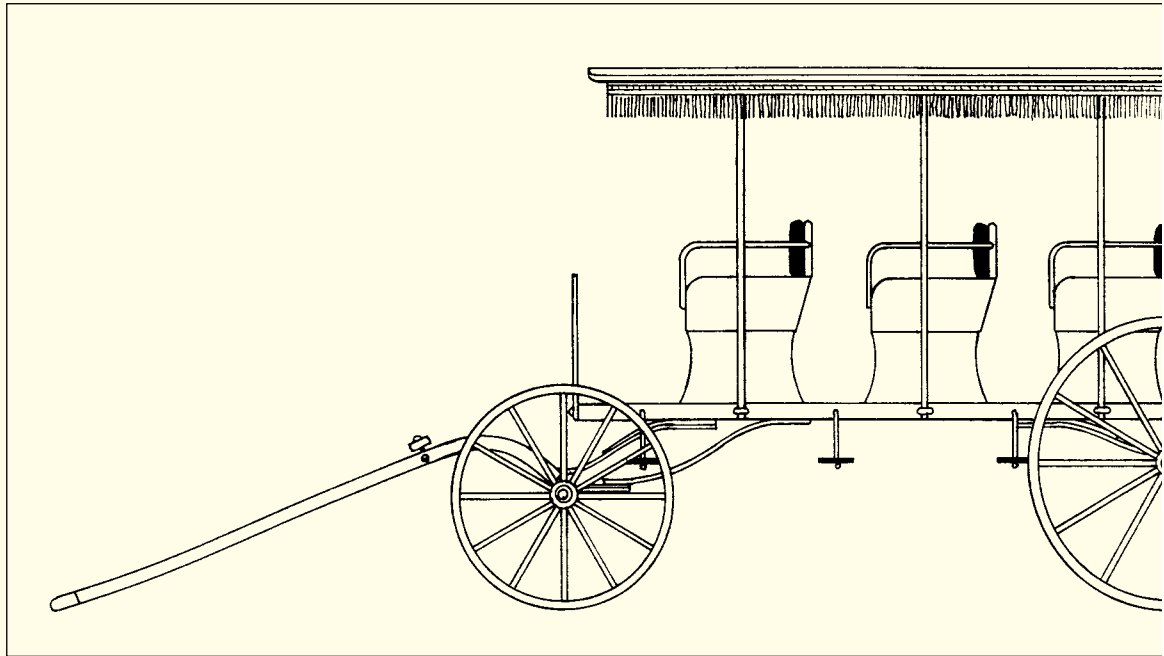
FRONT AXLE AND SHAFTS



1:20.3 surrey (with a fringe on the top)

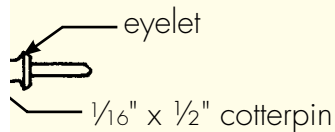
by Ted Stinson | Wiscasset, Maine

$\frac{1}{32}$ " O.D. aluminum tube



If you are modeling a railroad in a period prior to 1920, you will need a supply of horse-drawn vehicles. This model is several to be offered.

The surrey was the horse-drawn taxi of its day. The prototype for this one was built of native woods and painted black. The wheels for this model are made of laser-cut plywood and are available as separate items from Northwood Models (see below).



Construction

Begin construction by cutting out the “print wood” parts. The print-wood pattern can be copied and glued to a firm balsa, which would be the easiest material to cut.

Begin by assembling the three seats. Sand the edges smooth and add the .040"-diameter wire handrails. Give the seats two coats of spray lacquer. Make the seat cushions from balsa. Add the pins and seal with clear lacquer. Paint the seats black. When dry, glue them in place.

Now make the front axle and the shafts. These should be painted black. Since this assembly is made from wood, use CA cement to assemble.

Now make the frame. Start with a piece of $\frac{1}{8}$ " x $1\frac{5}{8}$ " x $5\frac{1}{8}$ " ply. Add the $\frac{1}{32}$ " ply mud shield. Seal this with clear lacquer. The shield should be painted black. The main frame should be left natural. When dry, add the metal parts using CA cement. The metal parts should be painted black.

Now make the roof. Start with a piece of $\frac{1}{32}$ " ply. Add the framing. Seal with clear lacquer. When dry, add the balsa ribs.

Final assembly

Glue the seats to the frame. Glue the axles in place. Assemble the wheels. Seal and paint these to suit. Before painting, add the fringe. Make the fringe from bias tape (available at fabric stores) cut in half lengthwise. Fray the edges to $\frac{3}{16}$ "—this will produce a quite believable fringe. Glue the tape around the roof edge. Now fit and glue the roof to the frame.

As a final touch, make six steps from .040"-diameter wire and a $\frac{1}{4}$ " cardstock disc, made with a paper punch. When dry, glue the steps in holes drilled in the edge of the frame.

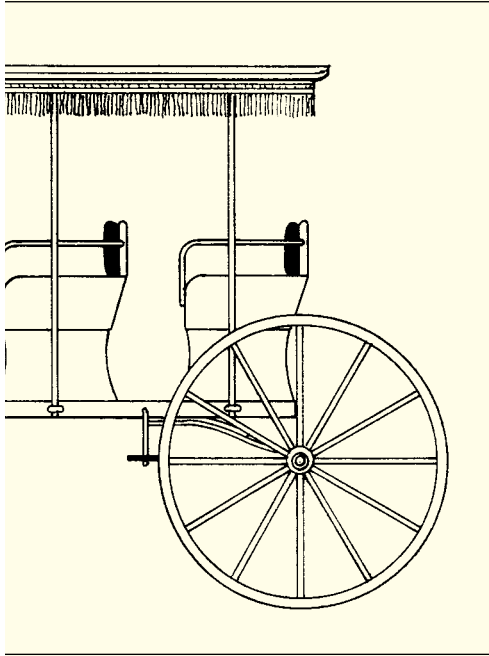
A surrey, because of its size, would have a large horse, such as a Morgan. One possibility is a Breyer “Padlock” horse, available from toy stores, tack shops, or online.

* * *

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on the top)

Plan set #73



horse-drawn vehicles. This surrey is the first of
 s built of native woods and given a natural fin-
 separate items from Northeast Narrow Gauge

an be copied and glued to a piece of 1/16"-thick.

liameter wire handrails. Give each seat at least
 al with clear lacquer. Paint the cushions black.

is assembly is made from dissimilar materials,

ly mud shield. Seal this with clear lacquer. The
 , add the metal parts using CA cement. These

acquer. When dry, add the brass-rod supports.

d paint these to suit. Before gluing the roof in
 n half lengthwise. Fray the cut edge back about
 e. Now fit and glue the roof in place.

c, made with a paper punch. Paint these black.

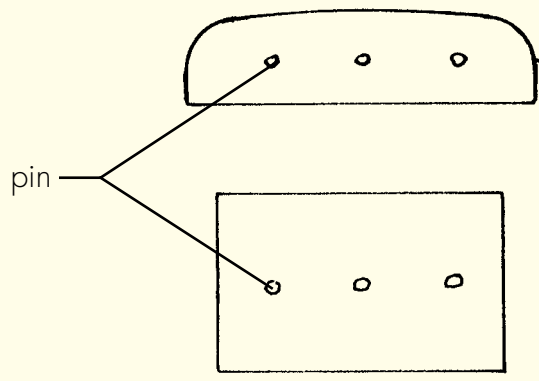
possibility is a Breyer "Paddock Pal" Morgan,

While supplies last, extra copies of these drawings
 < 460222, Denver CO 80246 USA. A complete list
 d envelope to the above address.



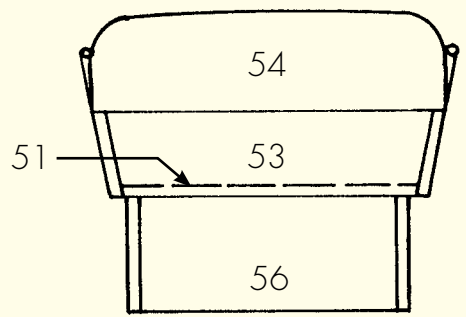
SEAT
make 3

cushions
make from 1/8" balsa

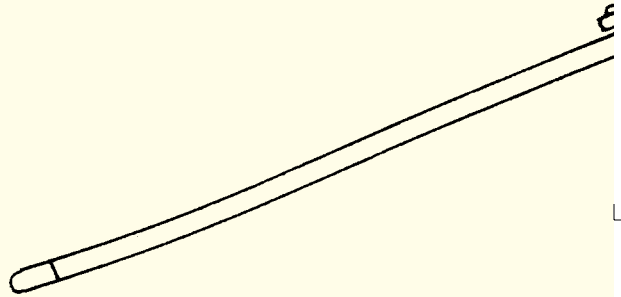
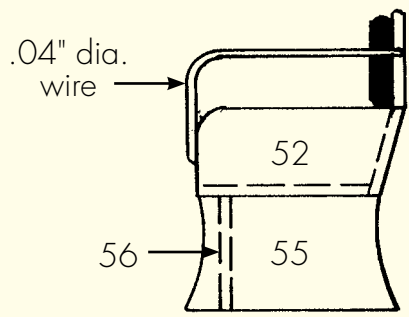


Cushions: make the cushions from 1/8" balsa. Cut 3 seat backs and 3 seat bottoms. Round the edges and sand smooth. Push the pins into the balsa, cutting off any excess. Apply thin CA glue to the back to lock the pins in place. Seal with clear lacquer. When dry, paint the seat cushions black. Glue the cushions in place after painting the seats.

rear view



side view



$\frac{3}{16}$ "—this will produce a quite believable fringe. Glue the tape around the roof edge. Now fit and glue the roof

As a final touch, make six steps from .040"-diameter wire and a $\frac{1}{4}$ " cardstock disc, made with a paper punch. When dry, glue the steps in holes drilled in the edge of the frame.

A surrey, because of its size, would have a large horse, such as a Morgan. One possibility is a Breyer "Pad" available from toy stores, tack shops, or online.

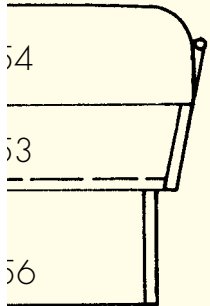
* * *

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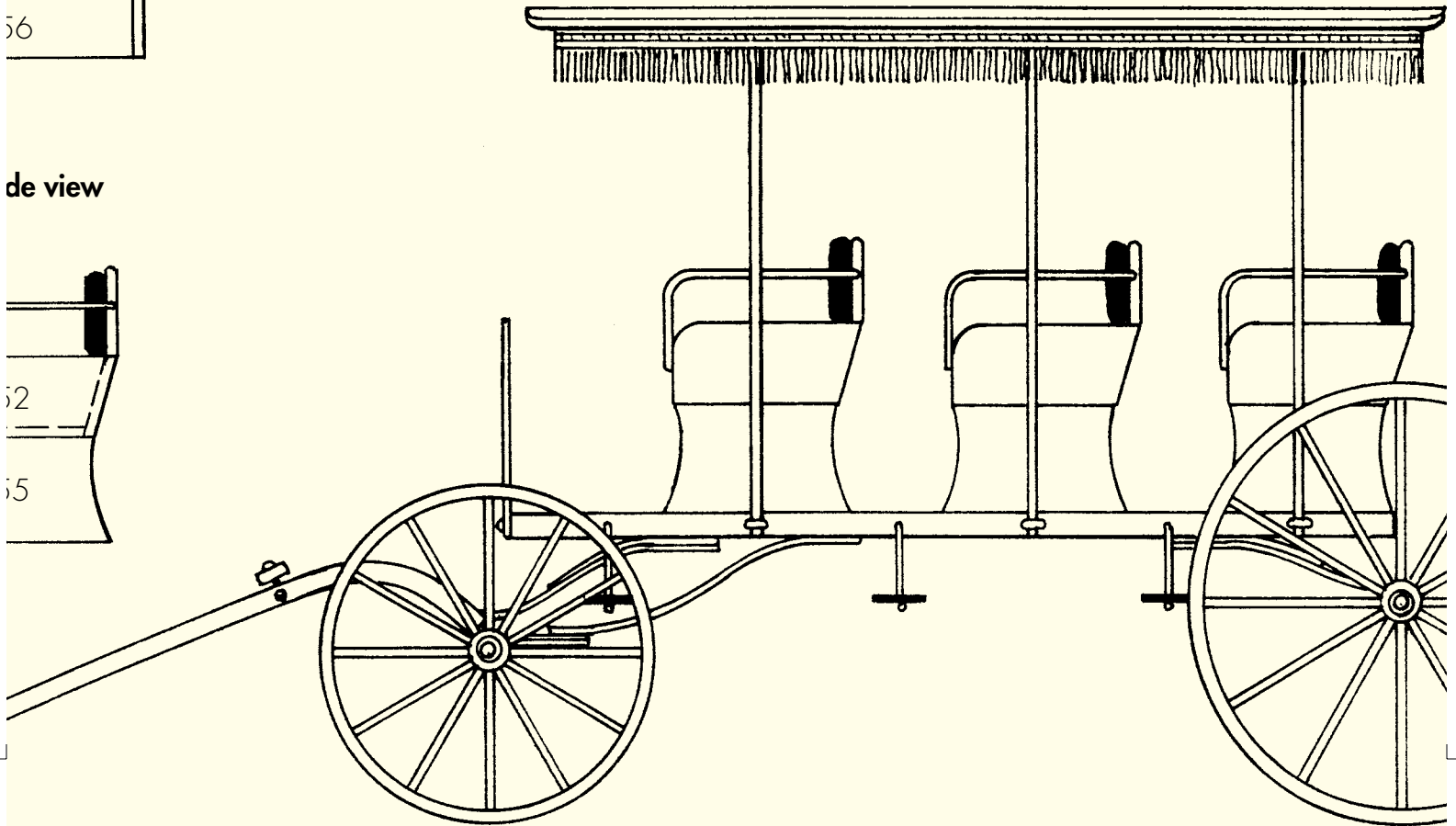
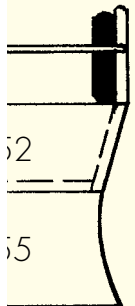
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view



side view



STEP
make 6

cardstock disk ————  .04" dia. wire

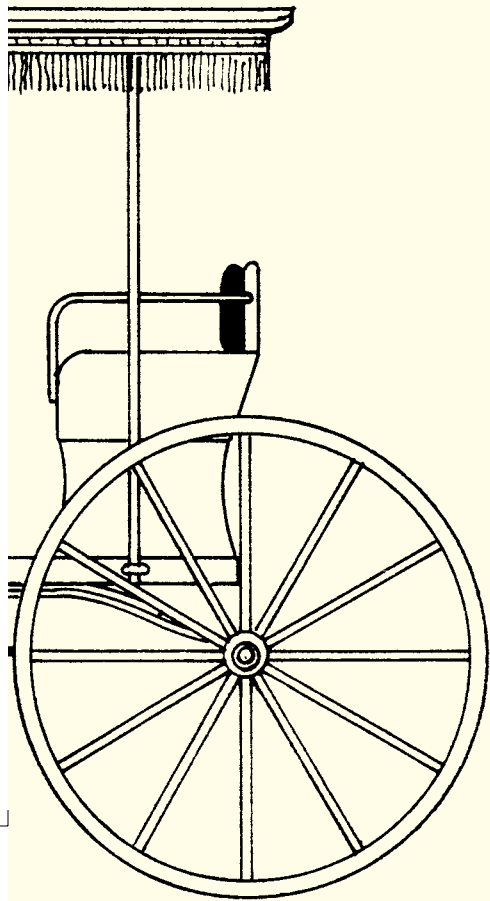
e. Now fit and glue the roof in place.
c, made with a paper punch. Paint these black.

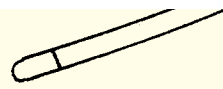
possibility is a Breyer "Paddock Pal" Morgan,

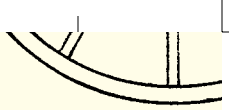
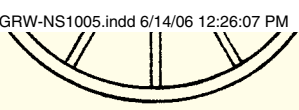
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and envelope to the above address.

For \$6 + \$2.50 shipping for a set of four. If you
order \$25 + \$6 s&h. Order from Northeast Narrow

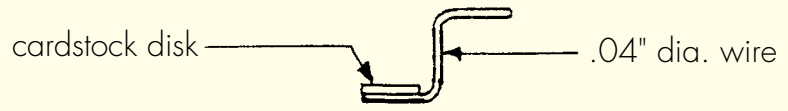
Do not be photocopied by individual modelers for their
use without written consent from the publisher.

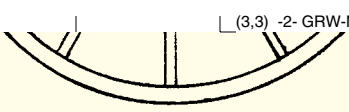






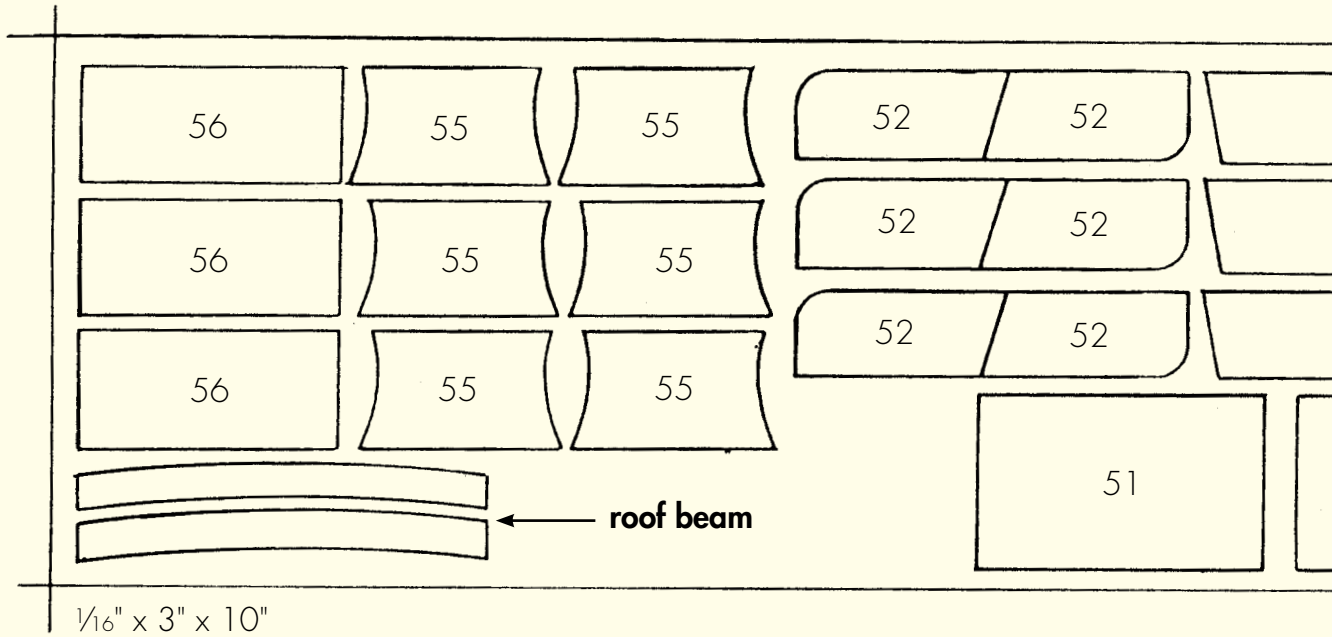
STEP
make 6





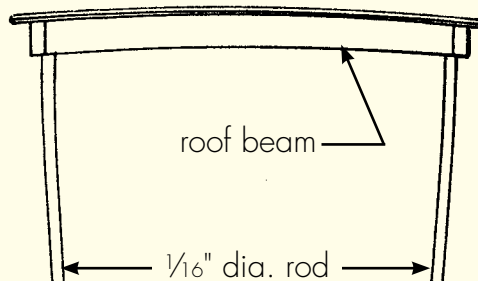
wire

©2005 Northeast Narrow Gauge



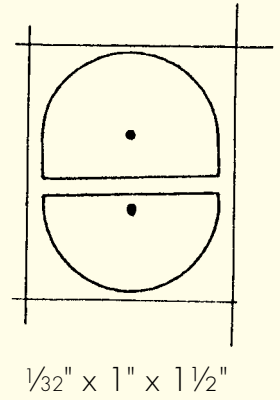
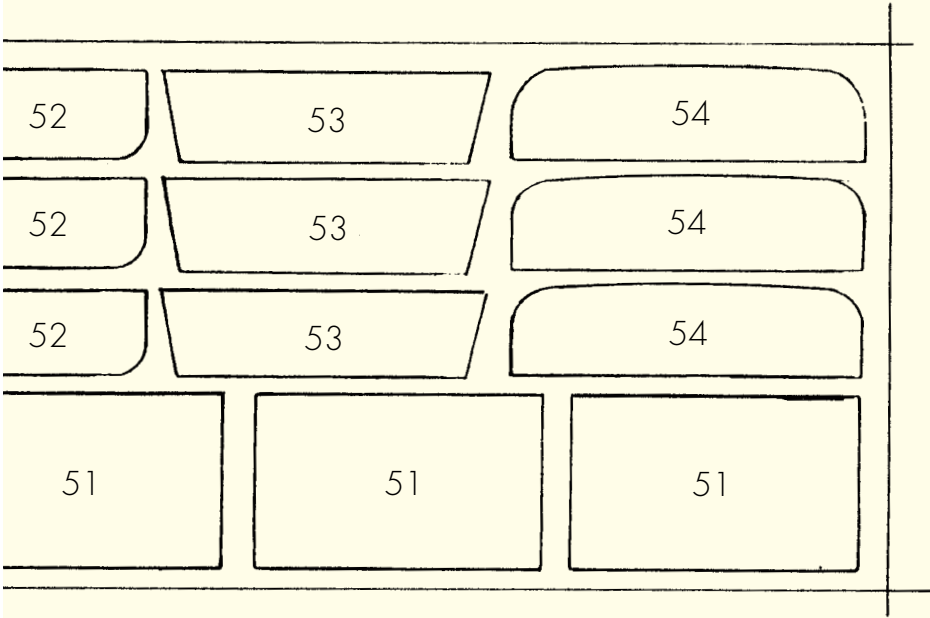
ROOF

end view

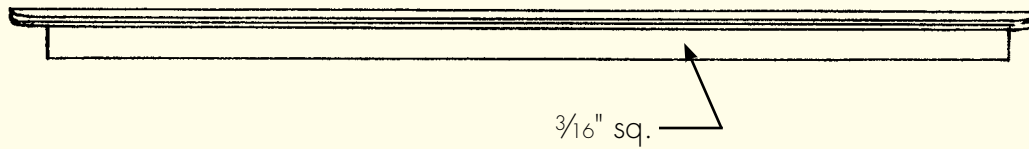


Are you working in a different scale?

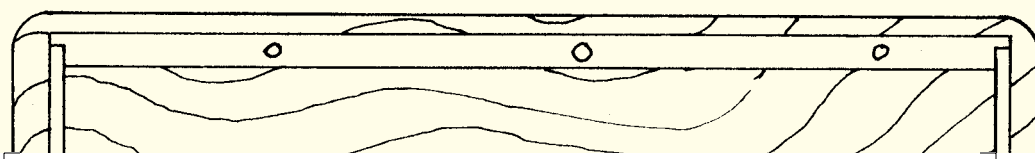
If you are working in **1:32 scale**, reduce these drawings to
If you are working in **1:29 scale**, reduce these drawings to
If you are working in **1:24 scale**, reduce these drawings to
If you are working in **1:22.5 scale**, reduce these drawings to
If you are working in **16mm scale**, enlarge these drawings to
If you are working in **1:13.7 (7/8") scale**, enlarge these dra



side view

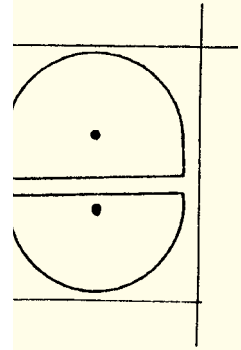


bottom view

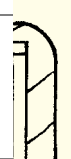


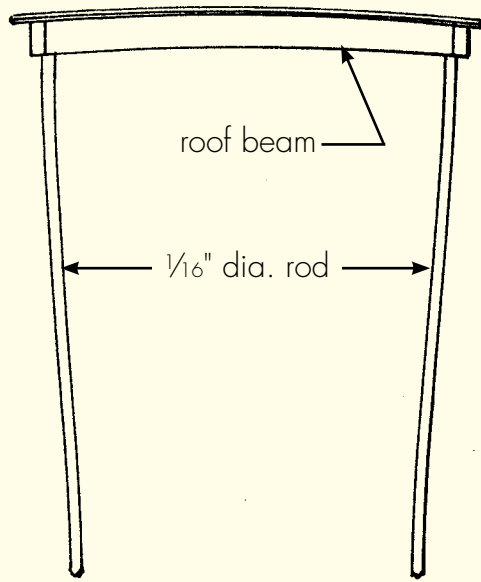
erent scale?

- , reduce these drawings to 63 %
- , reduce these drawings to 70 %
- , reduce these drawings to 88 %
- le, reduce these drawings to 90%
- le, enlarge these drawings to 107%
- '8") scale, enlarge these drawings to 148 %

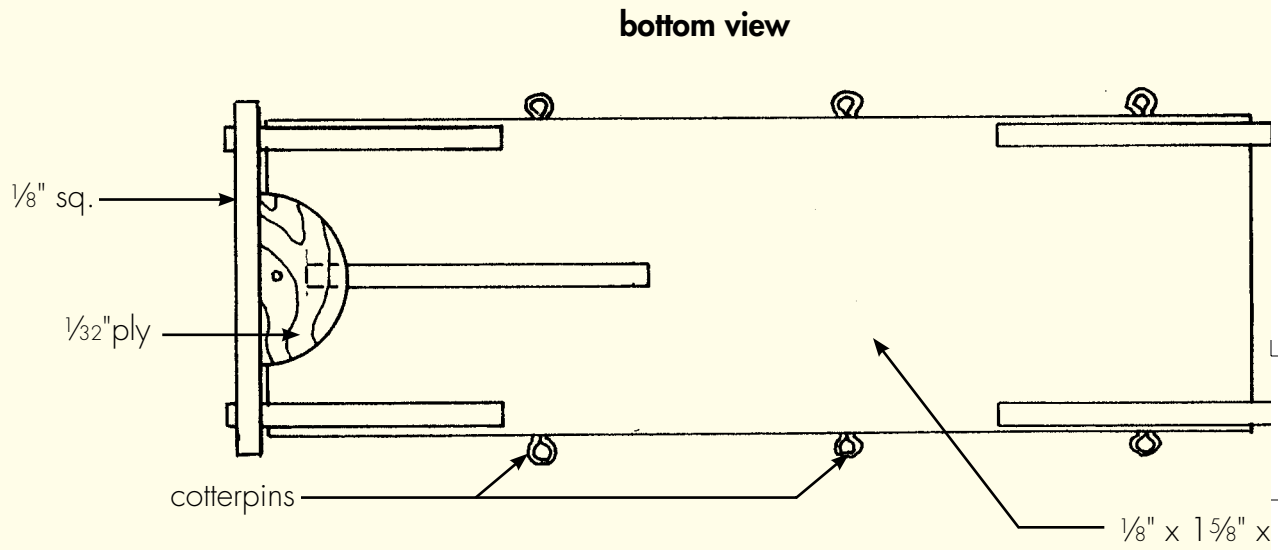
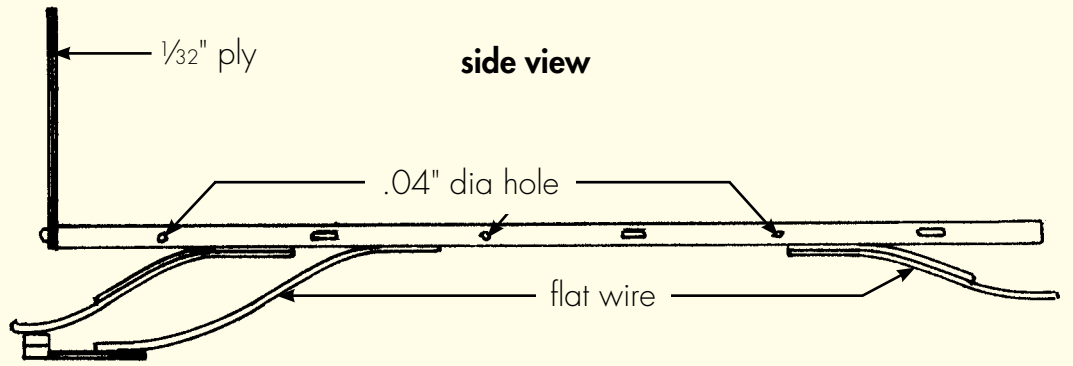


12" x 1" x 1 1/2"

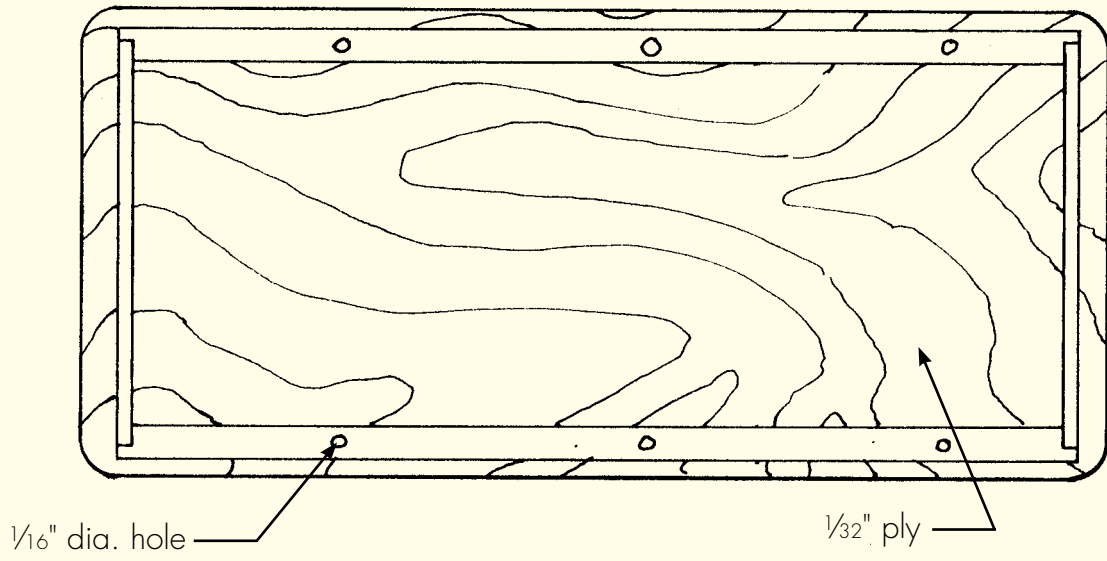




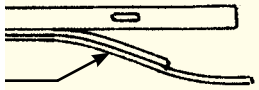
$\frac{1}{16}$ " c



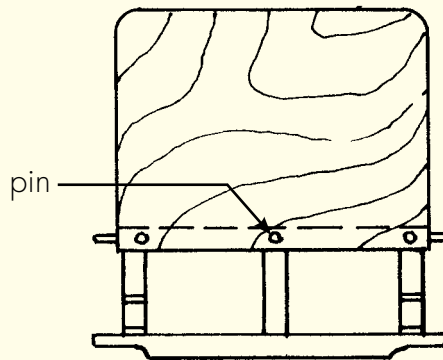
bottom view



FRAME

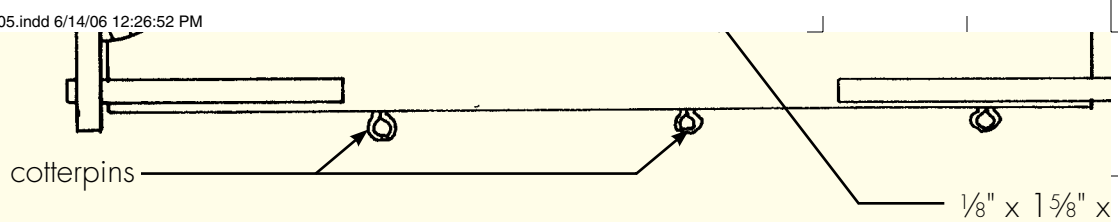


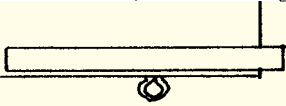
front view



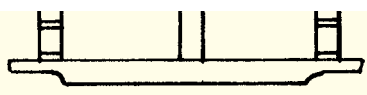
1/8" x 1 5/8" x 5 1/8"







1/8" x 1 5/8" x 5 1/8"



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