

# 1:20.3-scale Climax

Plan set #82

by Ted Stinson | Wiscasset, Maine

This is a generic, 1:20.3-scale Climax. The class-A Climax was the first widely used logging locomotive. It was designed to give maximum tractive effort with minimum weight. Speed was sacrificed for power, and flexibility was its hallmark. The class-A Climax used a two-cylinder marine steam engine, usually located in the cab, out of sight. In operation, they were very slow and very noisy.

This model is designed to use NWSL Magic Carpet Drives (#8633-4) and USA Trains archbar-truck sideframes. Fit one Magic Carpet Drive to each truck for adequate power.

## Construction

Begin construction with the floor. Use a 1/8" piece of ply, 4 1/4" x 13 1/2". On what will become the bottom side, add the stripwood framing as per the drawing. This is best sealed with clear lacquer and painted flat black at this time. Fit the trucks with the Magic Carpet Drives, then screw them to the floor. Add the couplers of your choice at this time.

Now make the tank and boiler. Use 1/8" plywood for the substructure of the tank. The wrapper can be made of manila card-

stock. The boiler is made of a wood dowel that is 1 3/4" in diameter. For the period of this issue (through September 30, 2007) Northeast Narrow Gauge will offer a castings package that includes the dome base, the smokestack base, and the smokebox cover with number plate (see below). The oil lamp is an Ozark Miniatures part. The straight stack shown here is appropriate for an engine that burned coal. If you intend your Climax to burn wood, some sort of spark arrestor would be called for.

When the boiler is assembled to your satisfaction, fit and glue it to the floor. Then make the cab. Make the side and back walls using the drawing as your guide. Before assembling the structure, add the scribed-wood siding. Do not add the clear plastic glazing to the windows until the locomotive has been painted.

Assemble the cab and add the roof using 1/16" sheet. Seal it with clear lacquer and paint the locomotive to suit. When dry, fit the glazing in the windows. Finally, fit the cab over the floor.

Make 20 U-bolts from .04"-diameter wire. Drill and fit these in place. They can be painted black before the cab is permanently

fixed in place. Add the handrails, whistle, and any other details that please you. A little research may inspire you to superdetail the Climax, particularly the interior of the cab, where you will find the steam engine and lots of plumbing.

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This is an online supplement to the August 2007 issue of *Garden Railways* magazine. To purchase previously published paper plans, see the list of those available at [www.sidestreet.info](http://www.sidestreet.info)

A kit for the Climax (#119rev), not including the Magic Carpet Drives, is available from Northeast Narrow Gauge for \$100 + \$10.00 s&h. Also available for a limited time is a castings package that includes 4 poling pockets, the dome base, the smokestack base, and the smokebox cover with the number plate for \$7 + \$3 s&h. Order from Northeast Narrow Gauge, PO Box 191, Wiscasset ME 04578. Web site: [www.nemodel.com](http://www.nemodel.com)

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## Are you working in a different scale?

If you are working in 1:32 scale, reduce these drawings to 63%.

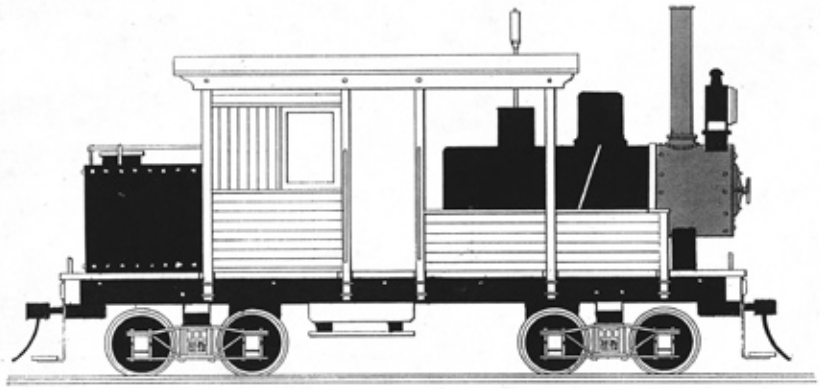
If you are working in 1:29 scale, reduce these drawings to 70%.

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%.

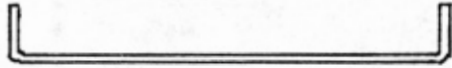
If you are working in 16mm scale, enlarge these drawings to 107%.

If you are working in 1:13.7 (7/8") scale, enlarge these drawings to 148%.



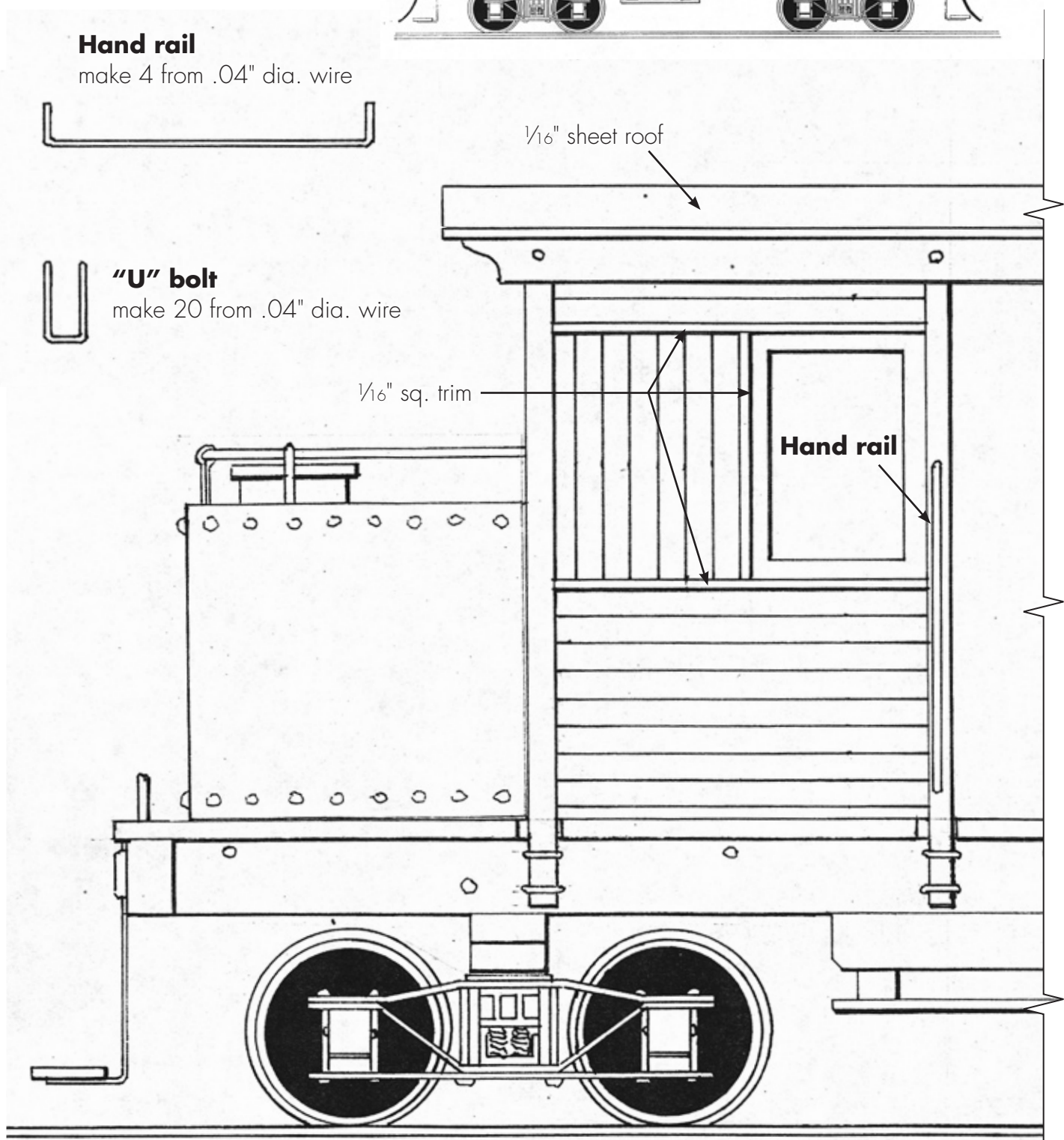
**Hand rail**

make 4 from .04" dia. wire



**"U" bolt**

make 20 from .04" dia. wire

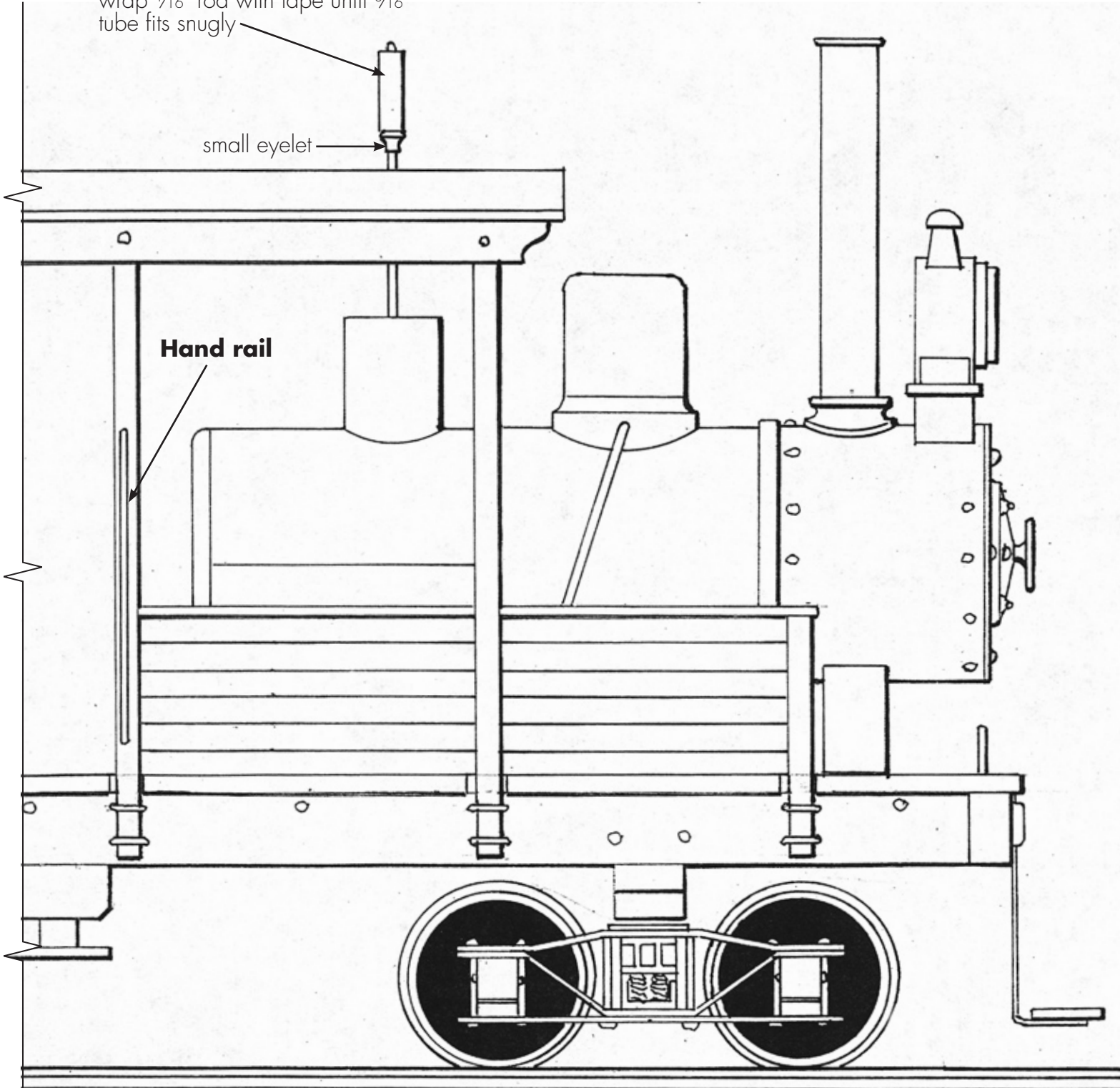


**Whistle**

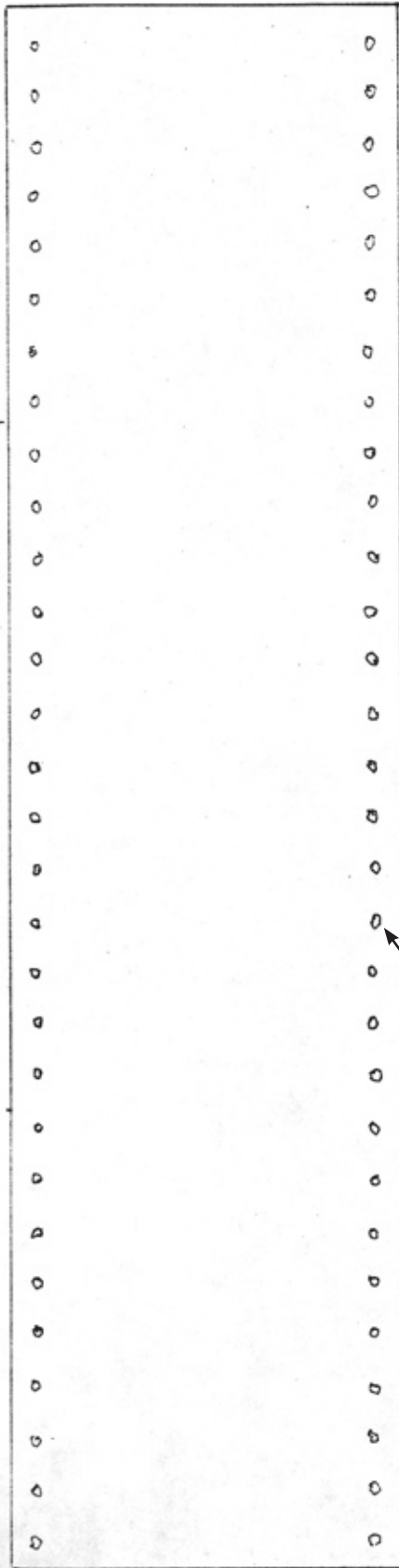
wrap 1/16" rod with tape until 3/16" tube fits snugly

small eyelet

**Hand rail**



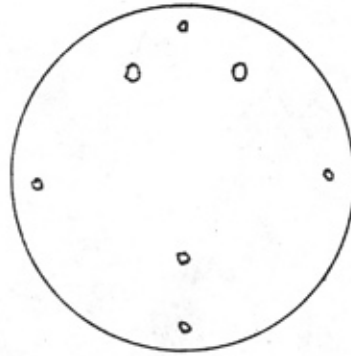
**Tank wrapper**



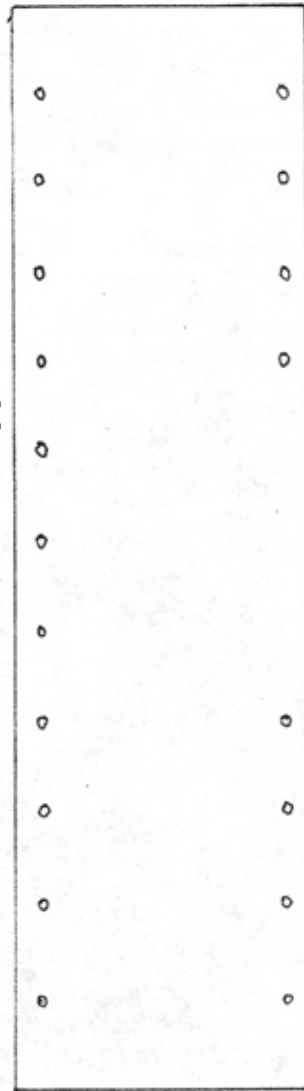
"E" pin location



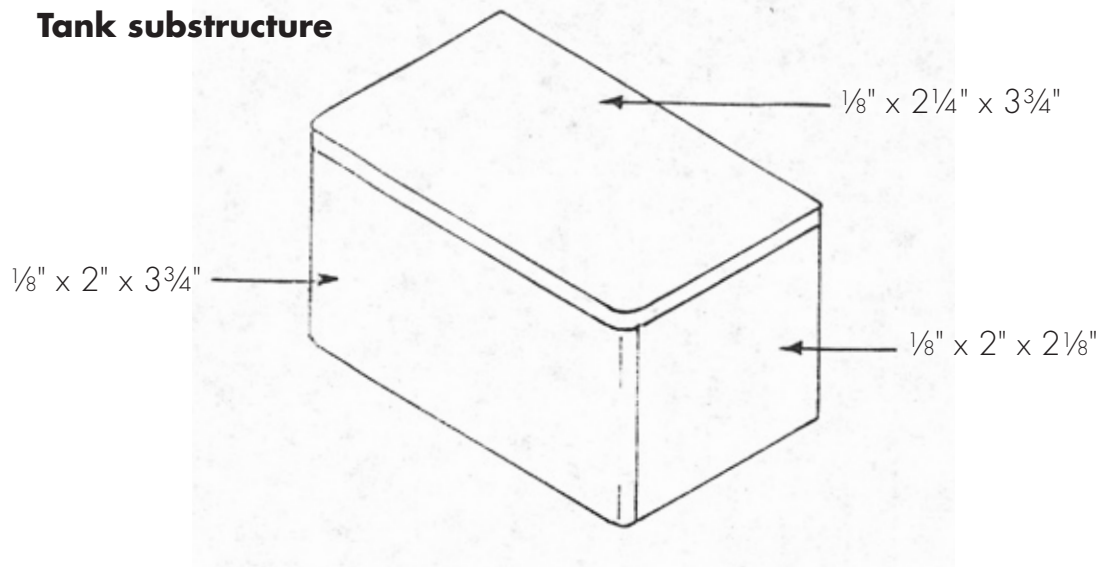
**Smoke box wrapper**



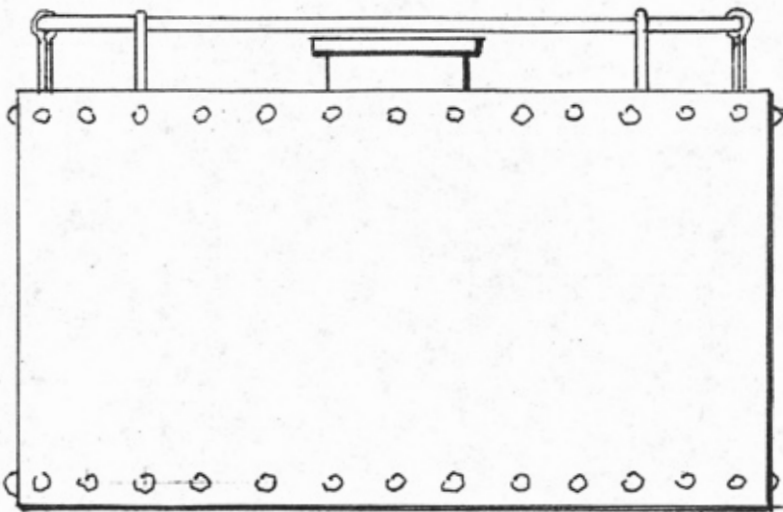
**Smoke box wrapper**



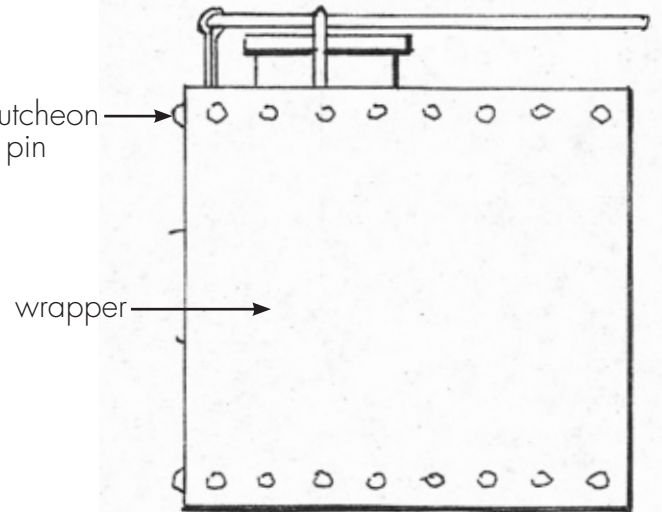
### Tank substructure



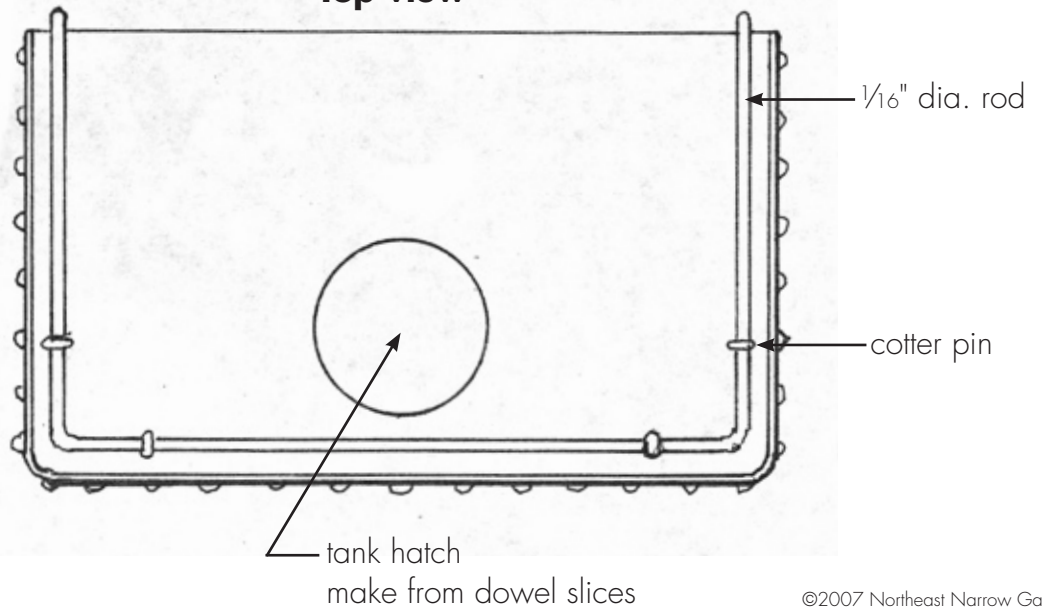
### Rear view



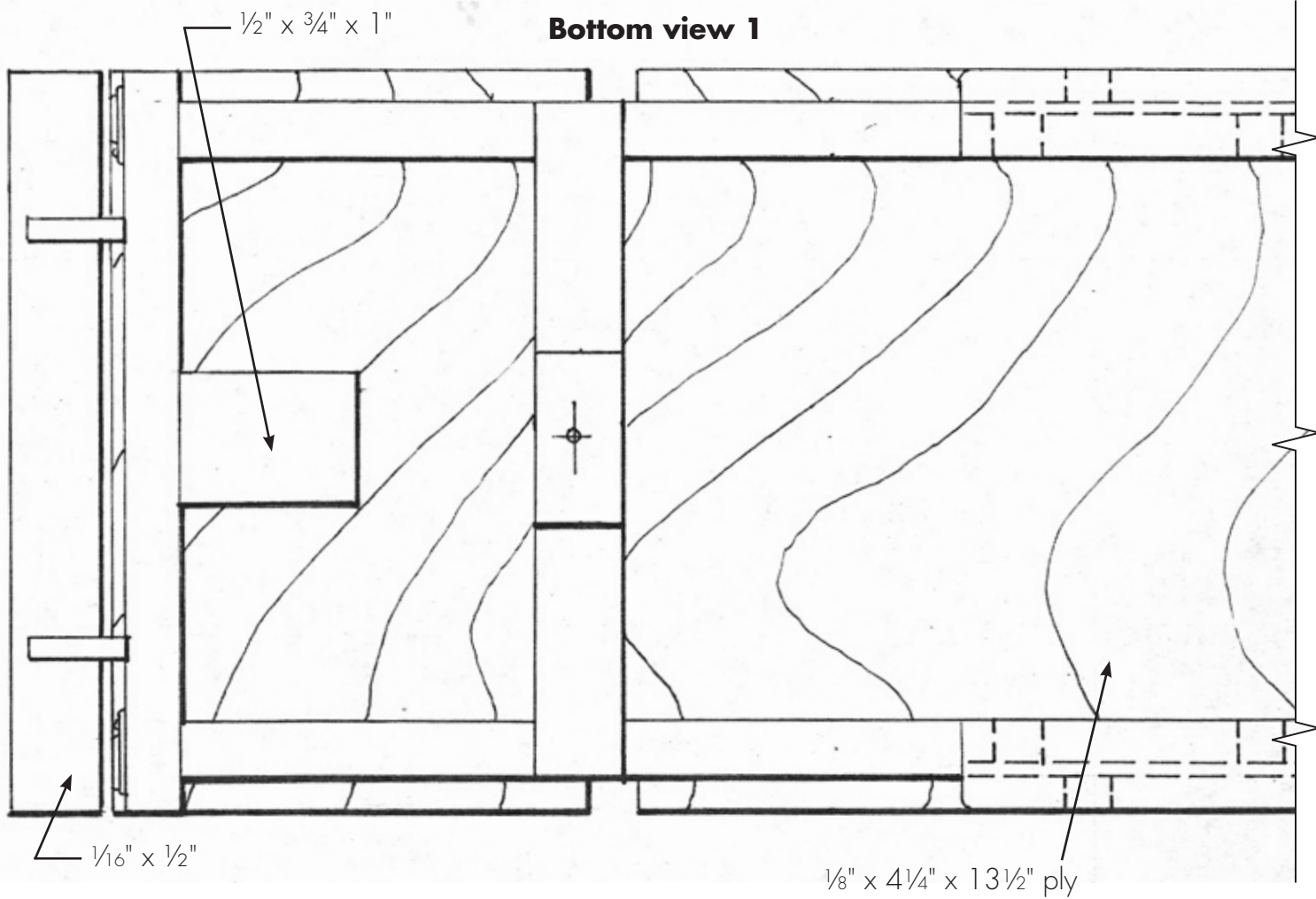
### Side view



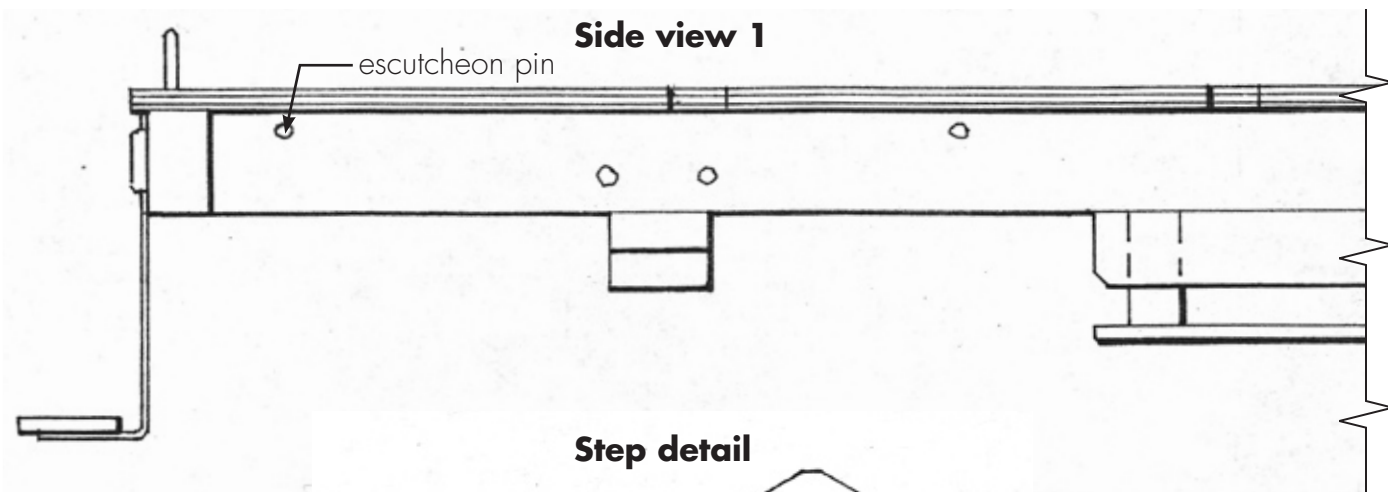
### Top view



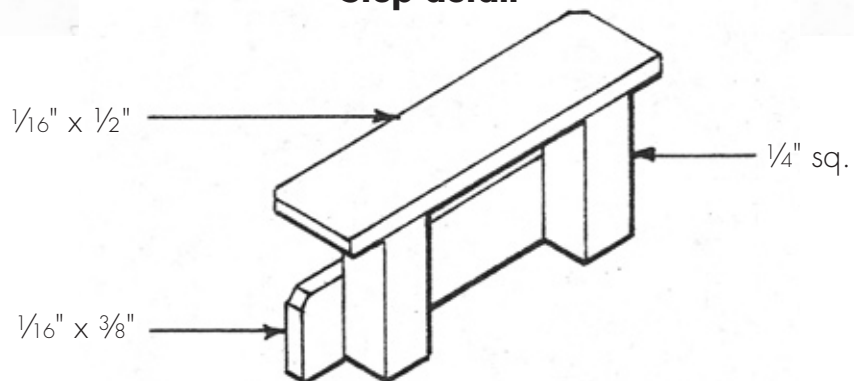
**Bottom view 1**



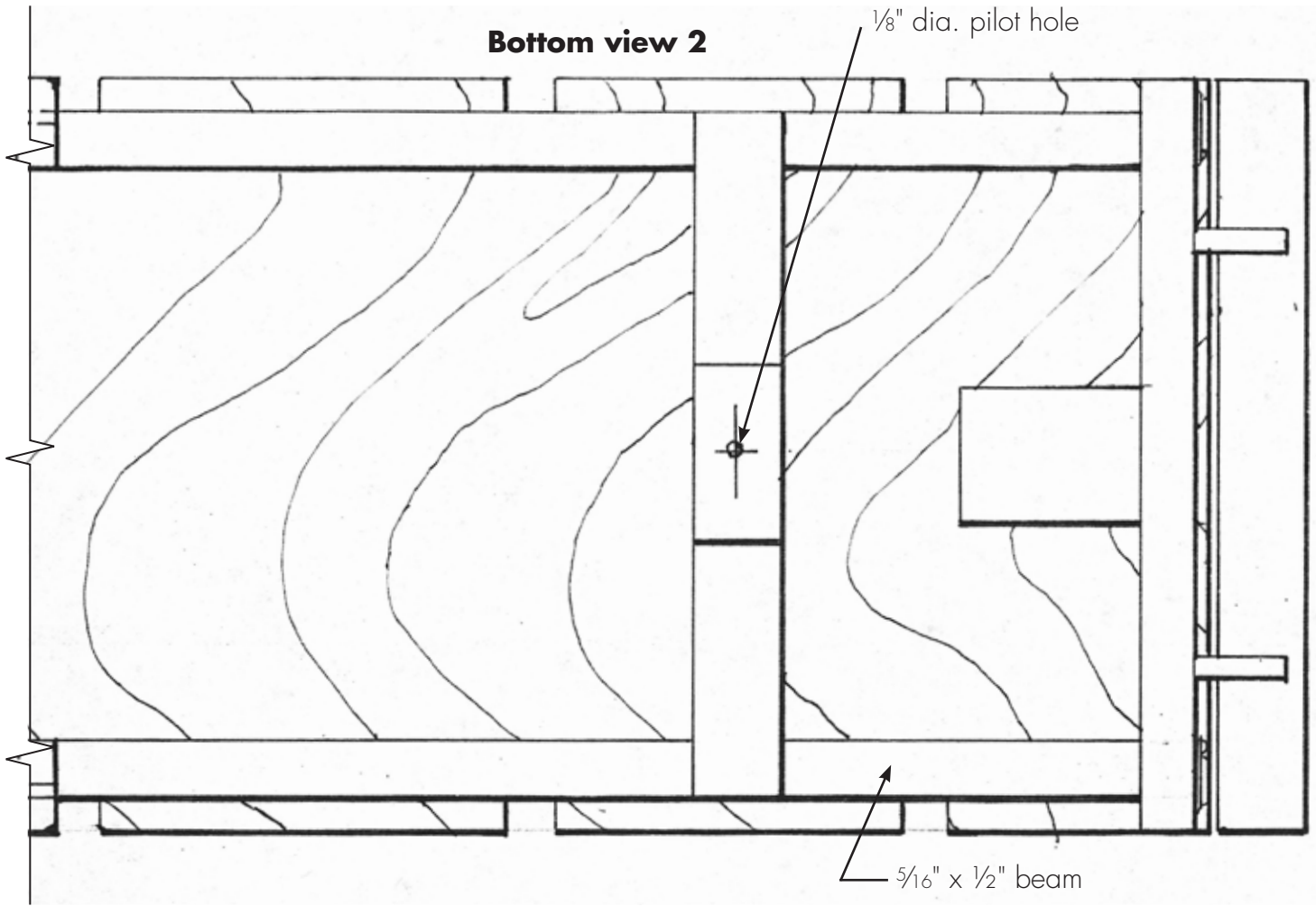
**Side view 1**



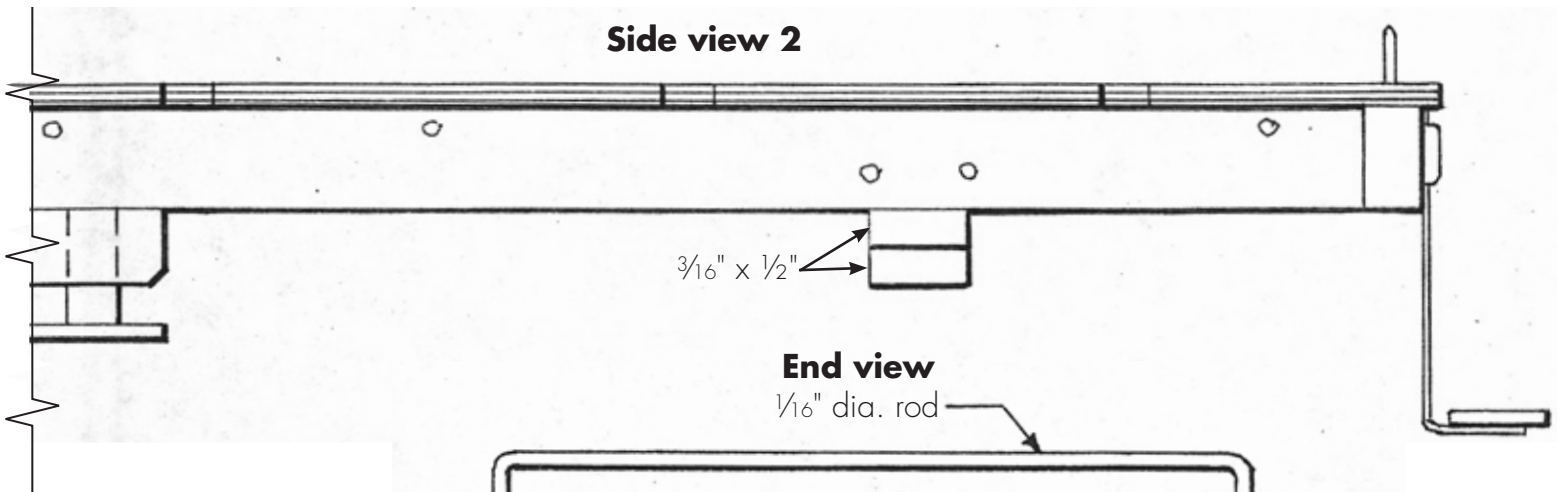
**Step detail**



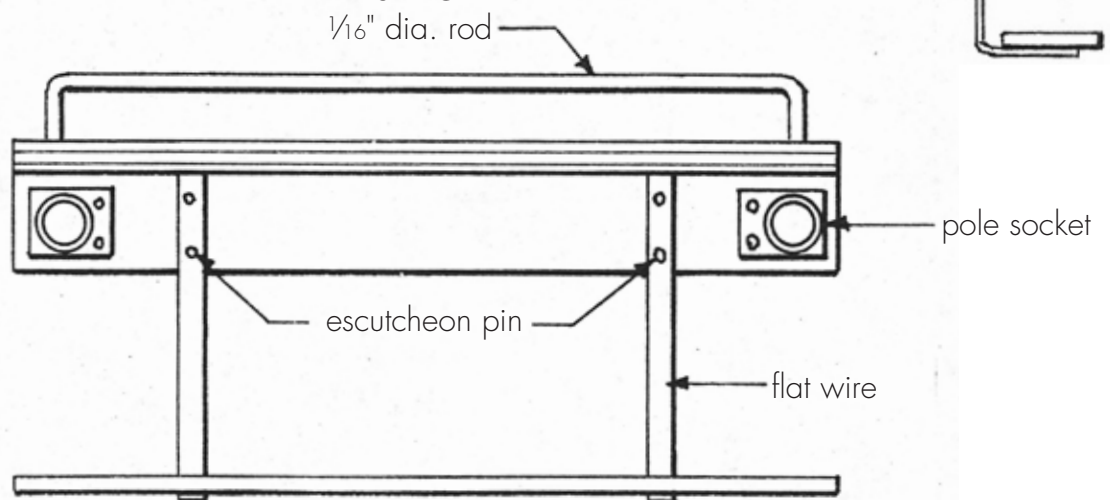
**Bottom view 2**

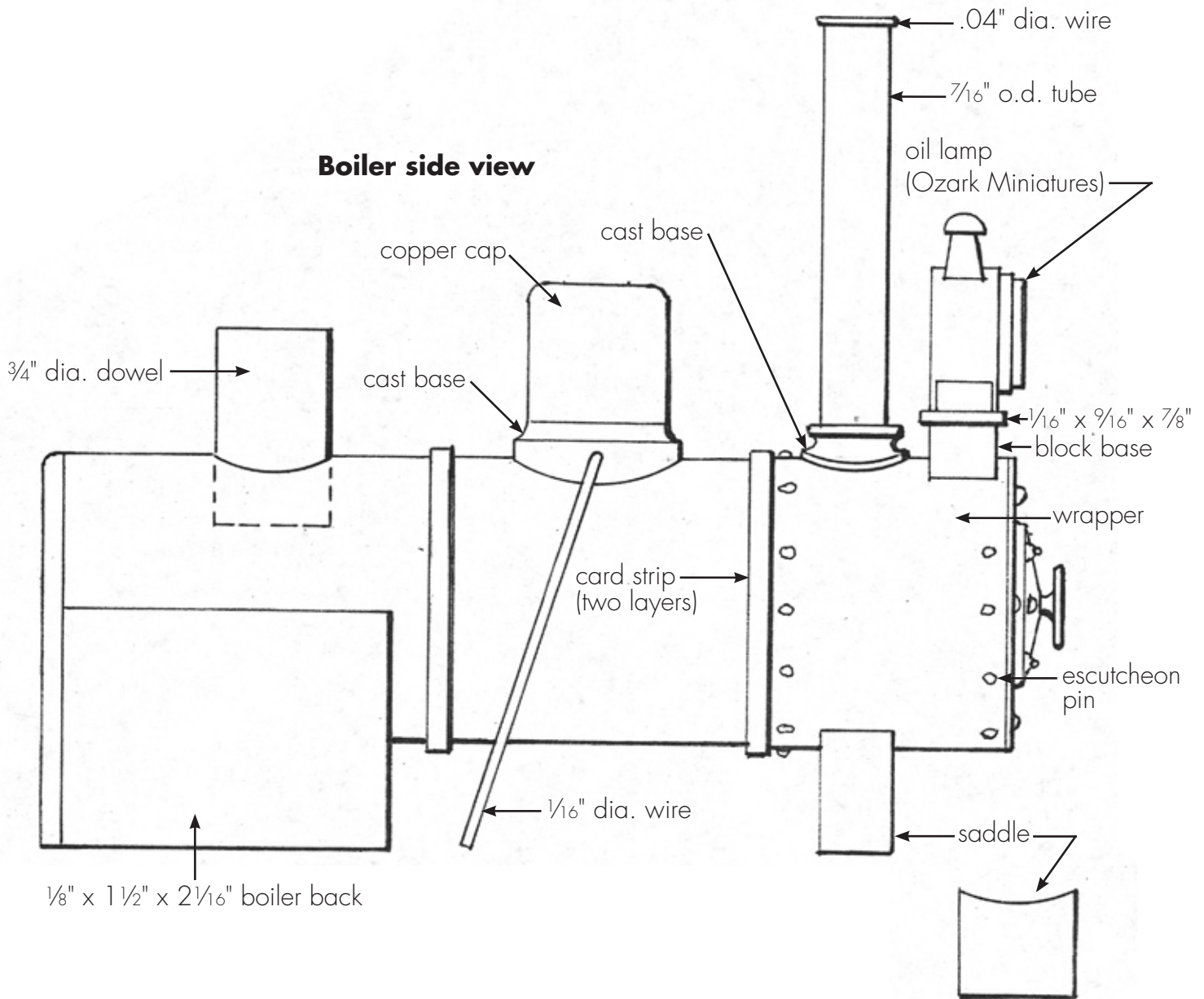


**Side view 2**

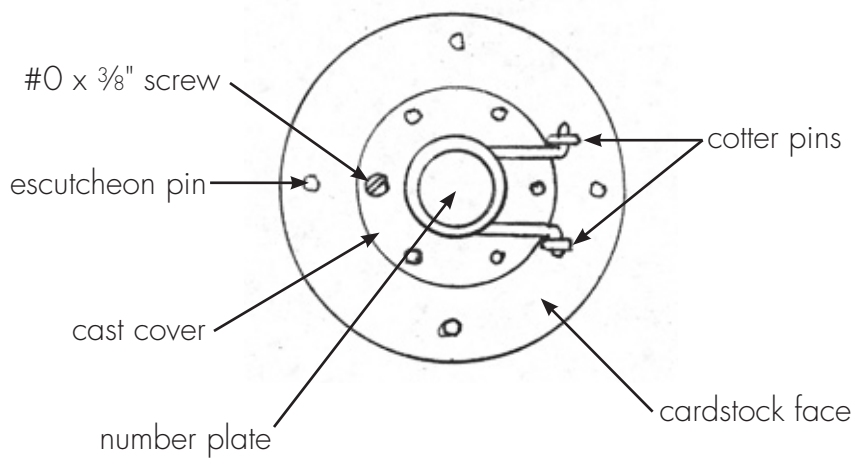


**End view**



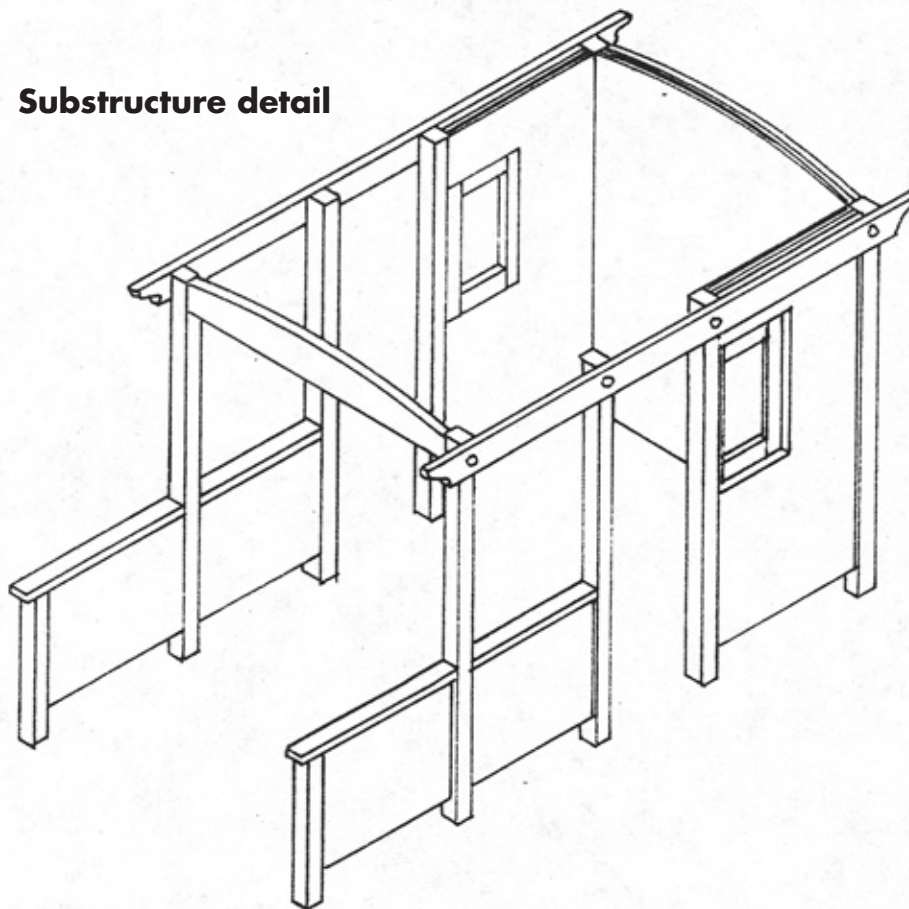


### Smoke box front

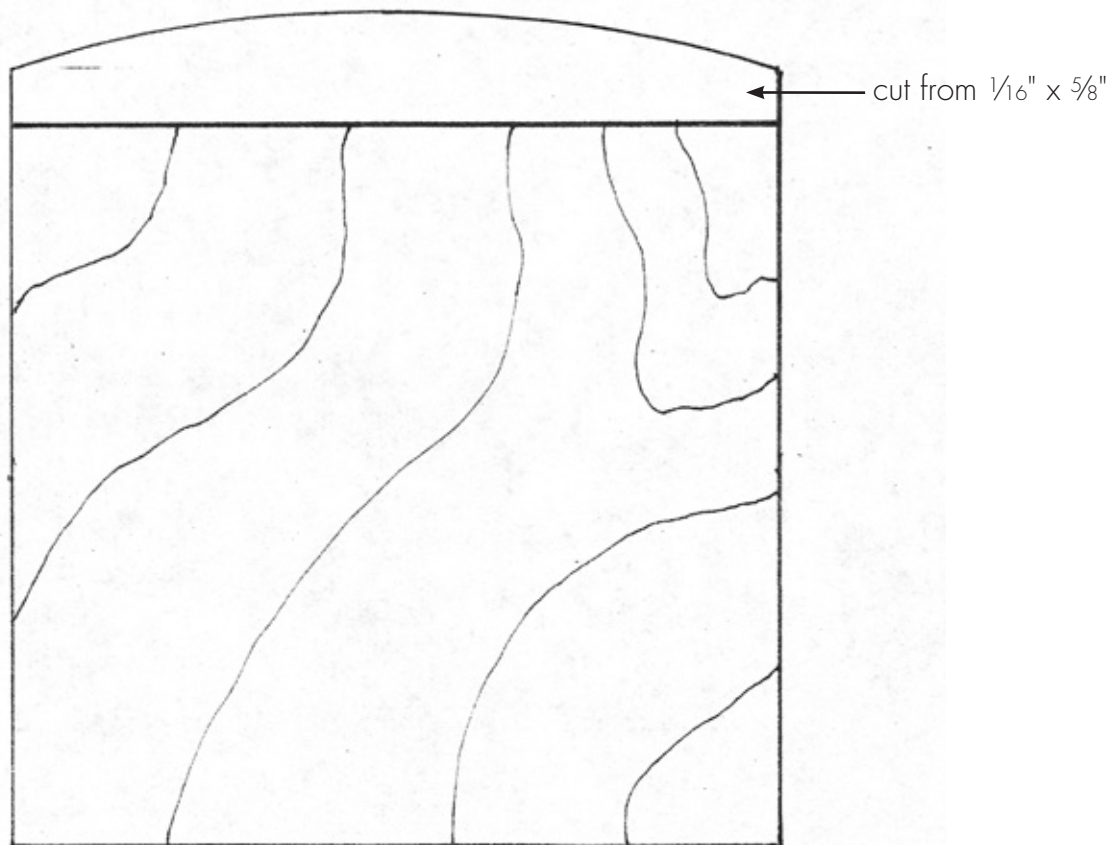




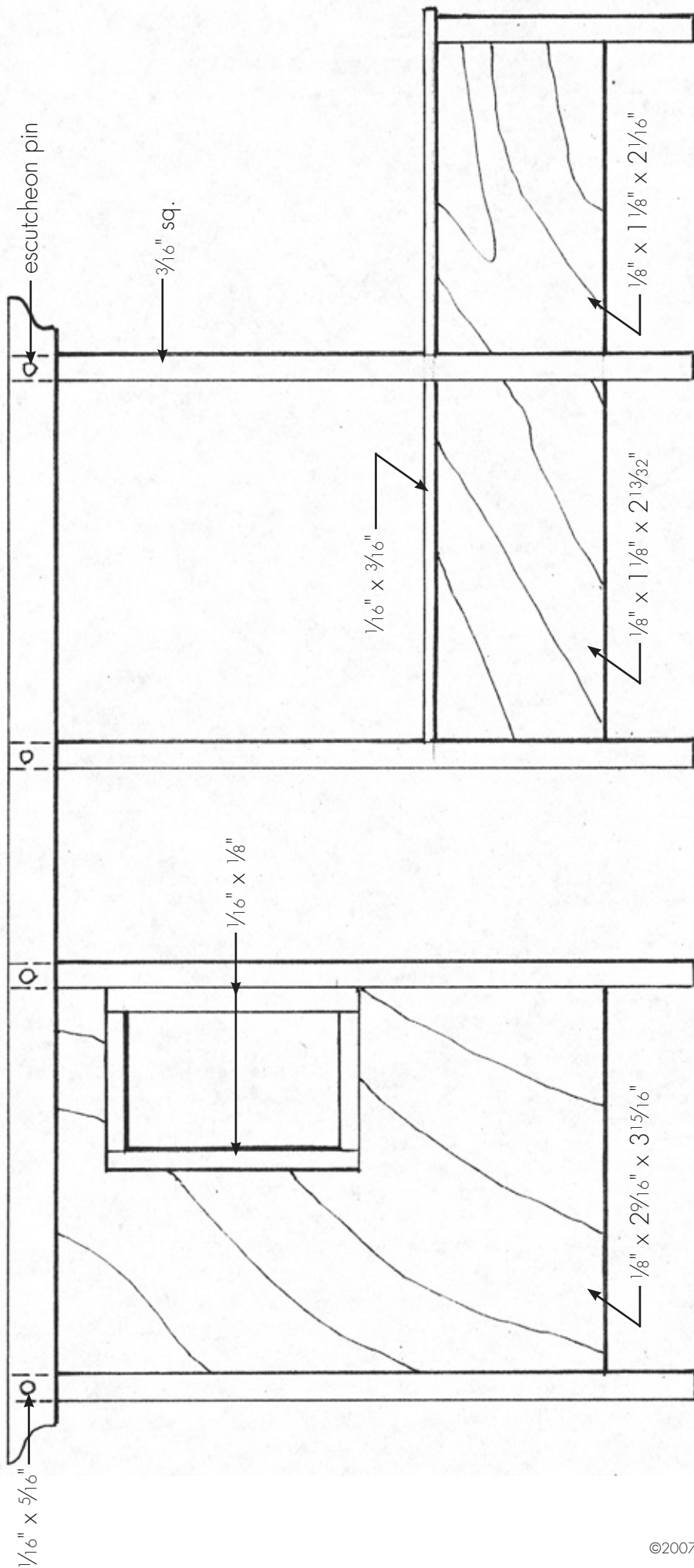
### Substructure detail



### Rear wall



Right side



Left side

