Smoky Mountain Model Works, Inc.
35 Springwood Drive ● Asheville, NC 28805
Web: www.smokymountainmodelworks.com
Ph. (828) 777-5619 ● Email: jimking3@charter.net

Argent Lumber Co.
20' Pulpwood Rack
(On30 Scale)

INTRODUCTION

This car is designed in Solidworks and printed using a FormLabs' "Form 4" resin printer at 50-micron (.002") layer thickness. It's construction is considered "entry-level craftsman" but weathering may ***appear*** to be a challenge for some modelers. Only patience and basic hobby tools are needed to produce a top-quality model. Tools you'll need include a flat working surface, hobby knife with #11 blade, assorted jeweler's files (preferably diamond coated), needle nose pliers, "gap filling" CA glue, flat head jeweler's screw driver, artist's oils, powders, thinner, and small paint brushes. 60-grit sandpaper is used to scratch in wood "grain". "Bondo Stage 2 Glazing & Spot Putty"® is needed to cover the brass weights.

WARRANTY: SMMW will replace any part(s) found to be defective due to manufacturing or shipping. Send the damaged part(s) to us for replacement and include $10.00 shipping to cover USPS 1st Class mail return in the Lower 48 states only.

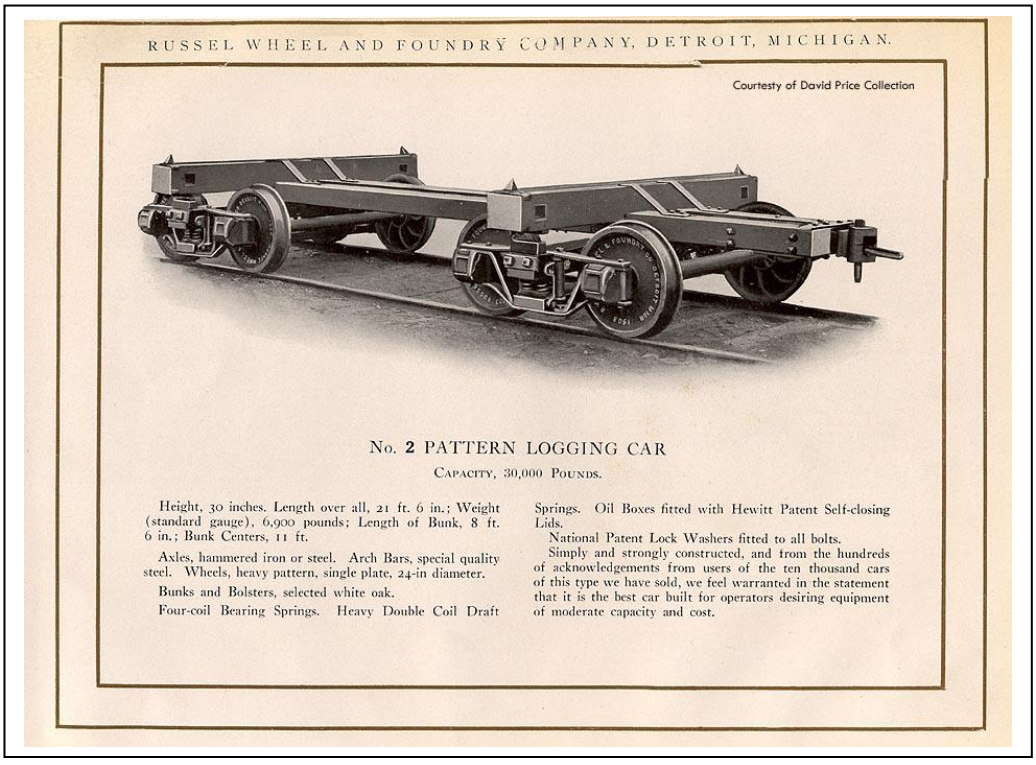
LIABILITY: SMMW, Inc. will not be held liable for personal injury or health problems, short term or long term, resulting from the use and/or misuse of tools, adhesives, material, castings, resin-printed parts, paints, or any other product(s) used to construct this kit. This kit is recommended for builders over age 15.

WARNING: This kit contains resin-printed parts that have been washed in 99% Isopropyl Alcohol during the post-printing process. These may contain materials during filing and sanding that may cause temporary respiratory problems if air circulation or ventilation is not provided. Be sure to work in a well-ventilated area. Wear a dust mask or respirator and safety glasses for maximum protection. Wash hands when finished, especially before eating.

COMMENTS ON THE PROTOTYPE

The best resource to study the Argent Lumber Company is the "Last of The Swamp Rats" book by Mallory Hope Ferrell. An accompanying 20-page publication by Thomas Yorke called "Industrial & Light Railway Quarterly", Volume 2, Number 4, is also handy. A third resource with minimal content not covered in these two publications is the June 1956 TRAINS Magazine.

Ferrell notes that "The Argent" began in 1916 using forty-two Russel Wheel & Foundry Co.'s "Pattern 20" log cars to haul logs from areas close to the Hardeeville, SC mill. Based on Google research, I found Russel advertising photos of three log car types (Pattern 2, 24 and 26). I've not found a "Pattern 20". The Pattern 2 is very close to the Argent car but the spliced sections "don't add up" since Russel's car used a single, parallel set of white oak timbers. In my opinion, Argent spliced together a pair of "disconnected log trucks" to make a single car of approximately 22 feet long. Russel's Pattern 2, a standard gauge car, is stated to be 21' 6". See ad below. The Argent bunks are "beefier" and have more robust log keepers on the ends than the Russel "spikes".



RUSSEL WHEEL AND FOUNDRY COMPANY, DETROIT, MICHIGAN.

Courtesy of David Price Collection

No. 2 PATTERN LOGGING CAR

CAPACITY, 30,000 POUNDS.

Height, 30 inches. Length over all, 21 ft. 6 in.; Weight (standard gauge), 6,900 pounds; Length of Bunk, 8 ft. 6 in.; Bunk Centers, 11 ft.

Axles, hammered iron or steel. Arch Bars, special quality steel. Wheels, heavy pattern, single plate, 24-in diameter.

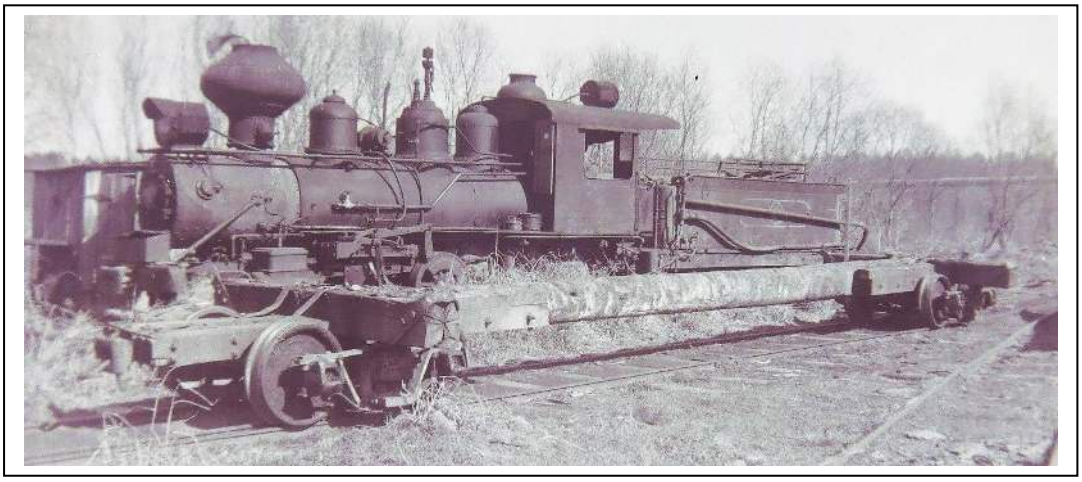
Bunks and Bolsters, selected white oak.

Four-coil Bearing Springs. Heavy Double Coil Draft Springs. Oil Boxes fitted with Hewitt Patent Self-closing Lids.

National Patent Lock Washers fitted to all bolts.

Simply and strongly constructed, and from the hundreds of acknowledgements from users of the ten thousand cars of this type we have sold, we feel warranted in the statement that it is the best car built for operators desiring equipment of moderate capacity and cost.

In 1951, many cars were lengthened by splicing a single, straight log between the underframe sections to enable hauling new Cypress, Tupelo and Gum timber from recently tapped swamp land on the Georgia side of the river. On Page 5 of Yorke's publication, Ferrell states from a 1955 visit that "*most cars were 24 feet long, some much longer 36 foot cars were noted*". Since the original Pattern 2 car was 21' 6", it's logical that some of Argent's "short" cars were longer than others. It's highly doubtful a large percentage of their cars were "identical". After all, this was a logging operation on a shoestring budget using whatever they had to get by. The photo below (taken in Hardeeville, circa 1955) shows a lengthened car that could be close to 36 feet long.



Regular rail operation ended in April 1956, followed by the company's closure in January 1957 and scrapping in 1958-59. Very few photos of equipment, let alone ***color*** photos, have surfaced over the years. A typical photographer of the era focused on "train shots" or engine roster shots. The photo below was gleaned from eBay while researching the car's design, including the Russel trucks, none of which retained journal box lids. It was taken in Hardeeville, SC on April 19, 1957, a year after the railroad shut down. Notice how the wood has split, bowed lengthwise, weathered to a medium grey and all of the steel parts, including wheel treads, are a fairly uniform shade of rusty brown. This photo is invaluable for painting and weathering.

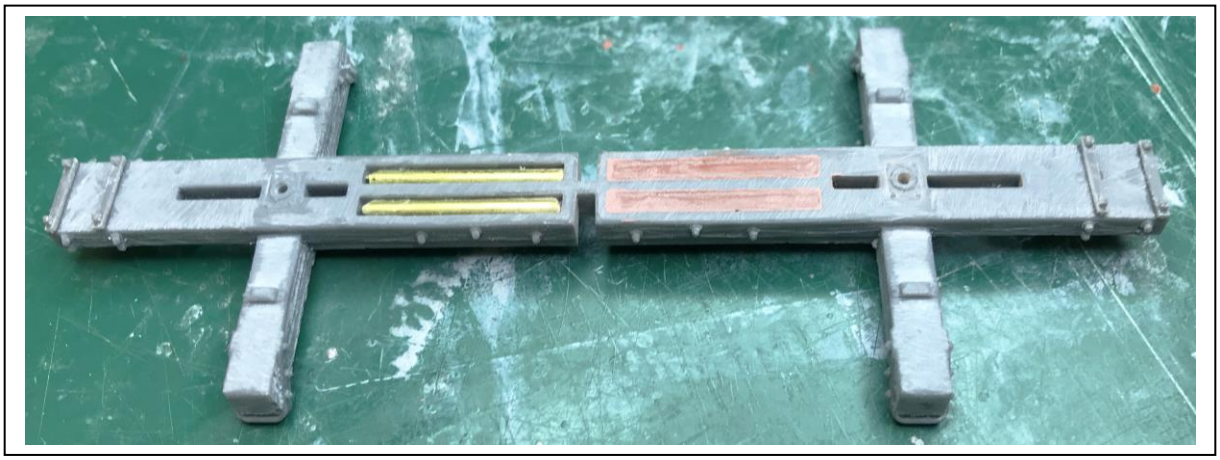
CONSTRUCTION

- **Prep the printed parts:** Use a paper towel sheet between your work surface and kit parts as a "pad" to prevent damaging NBWs, etc. Use a thin wire to place tiny drops of CA where parts are attached. While the 3D printed parts are durable, they can break. Fortunately, CA will quickly bond broken parts together. All parts have been washed in 99% Isopropyl Alcohol as part of the printing and curing process. No additional washing in detergent is necessary. Use a small, diamond-coated jeweler's flat file, a #11 X-Acto® blade, and a brass-wire brush or Nylon bristle toothbrush to remove printing support "nubs" and brush away dust. Smaller parts will have these nubs on one edge … remove these as you need them during assembly to avoid losing until them.

- **Add wood grain:** Use the #11 blade tip to gouge wood grain into all "wood" surfaces and the brushes to remove dust.

- **Brass weights and truck mounting screw holes:** A length of 3/32" brass rod is included. Cut (4) pieces to fit inside the pockets on the underside using heavy duty side cutters or a razor saw. Glue each in place using CA then apply Bondo putty to cover the pockets. File smooth when dry.

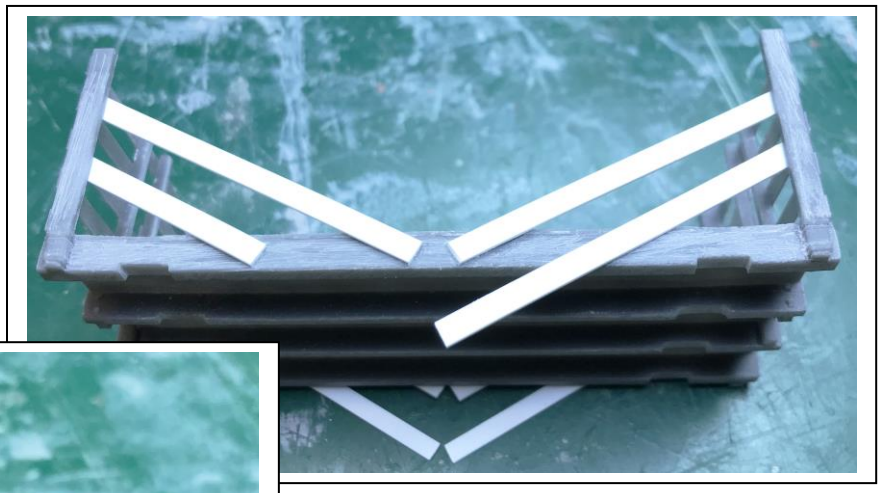
  While the putty is drying, ream the truck mounting screw holes with a #55 bit. DO NOT deepen the holes or you'll risk breaking through the bunk. No tapping is necessary.

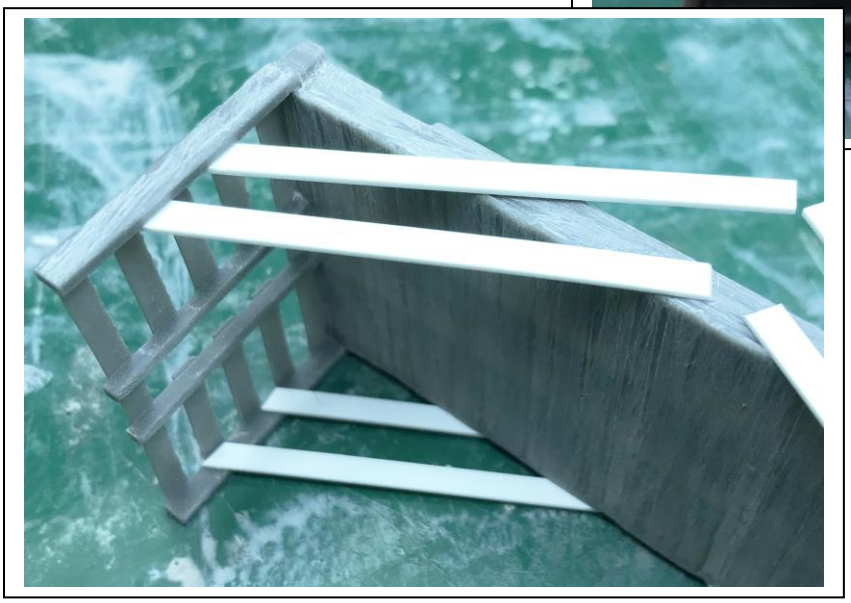


- **Deck weathering:** Use 60-grit sandpaper to create distressed wood grain in the deck boards by dragging the paper from edge to edge parallel to the joints. The boards are different heights so individual boards should be distressed. The same sandpaper can be used to lightly scratch the sides and end slats but since these are surfaces that didn't see a lot of distress, just a few light passes will suffice.

- **Diagonal braces:** Slatted ends are held in place with diagonal braces. It's best to cut each styrene strip a little long before mitering (1) end to match your angle. Cut (4) of each length: 2 1/4" and 1 1/2".

Make a pencil mark on each side sill at the halfway point. Building the pilot model, I found it best to first attach the longest board inside a corner post where it intersects the 2nd-from-top horizontal board. As the CA cures, position the other end near the pencil mark, add a drop of CA behind the strip, and attach to the side sill. Repeat this for the shortest board. When all glue joints are cured, use the #11 blade to cut off the excess.





- **Painting/weathering:** Read through the "Painting/weathering" paragraphs before applying any paint. Non-wood surfaces (plastic) can be made to look like wood using spray paints ("rattle cans"), oils, and powders. New wood would have a yellowish-tan tint (oak and pine) that quickly began weathering to a grey caused by rain, grime, and sun bleaching. Paints used on this project are shown below (Rust-Oleum "Lemongrass" and "Frosted Glass" dull coat, Krylon "Ruddy Brown", Dupli-Color Grey "Scratch Filler Primer", and "Payne's Gray" oil). Log cars were rarely painted. The grey primer is a great base coat that provides a dull surface for additional weathering. Truck sideframes and "metal" parts should be "rusty and crusty" … use a base color of grey primer, then Ruddy Brown overspray, followed by black and dark brown powders.

  There are numerous on-line and printed resources describing how to weather non-wood surfaces to look like wood. Most start with a light grey base as noted above, then add VERY thin layers of artist's oils and powders to depict shading, etc. Weathering plastic and diecast metal to look like wood requires working in thin layers and a LOT of patience. Artist's oils and lacquer sprays (when applied with a brush) are thinned with "Turpenoid", an odorless alternative to traditional turpentine. Using too much thinner greatly lengthens drying time. Powders can be added to the tacky oil surface to bond in place. If you added split wood, grain, and/or damaged spots with the #11 blade and 60-grit paper, the thinned oil will migrate to those areas.

  If modeling a well-worn car, you can skip the "Lemongrass" application. Note that it comes out of the can with very dense, opaque coverage so be sure there is at least 12" between the can and what you're painting. You're trying to get a VERY thin coat to lighten the grey printed resin.

  The photos show Winton artist's oils and Alphacolor powders I've used to weather everything … steel or wood. I now use "PanPastel" weathering powders ("Rust & Earth" and "Greys, Grime & Soot"). Orange, red, and browns simulate rust. The oils are (left to right): Soft Mixing White (to lighten other colors), Payne's Gray (black), Raw Sienna (fresh rust), Raw Umber (aged rust). Burnt Sienna also works well for "aged" metal base coat. White is rarely used.

  This is the order used to paint and weather the pilot model:

  1. Body: If your model will show some "new" wood under the grime, start with a light coat of "Lemongrass" followed by Grey Primer to blend the yellow. If "old" wood, skip the yellow.

     PanPastel dark grey was liberally brushed on the deck (parallel to the boards) and on all visible surfaces. A few areas were dusted with earth colors on top of the grey.

  2. Underframe: These cars were likely a weathered grey from very early days in their lives so skip the Lemongrass. Spray the entire underframe except inside the coupler pockets with Grey Primer. Ruddy Brown was sprayed unto a scrap of styrene and brush-painted on the "metal" parts like coupler box straps, log bunk straps, and bolts. Lacquer thinner was used to thin the Ruddy Brown for brushing. Use a Number 10/0 artist's brush for the Ruddy Brown.

     PanPastel dark grey was liberally brushed on the deck making sure to get it into the gouges and corners, then some earth colors were added. Any spots where Ruddy Brown paint needed to be removed were scraped off with a #11 blade followed by more powders. This highlights the scratched wood grain and different board thicknesses. Use a Number 10 "Fine" 3/8" wide artist's brush for powders.

  3. Trucks: Spray Grey Primer base coat, followed by brush-painted Ruddy Brown for "metal" parts, then dark weathering powders (or oils, if you prefer). Use a Number 10 "Fine" 3/8" wide brush for powders.

     Wheel faces and axles should be grimy from many years of accumulated dirt due to oil leaking from the journal boxes. A "gritty", textured wheel face is completely prototypical so use your imagination. They should be between brown and dark grey. Paint the axles the same way. Nothing should be shiny on this car. Use painter's tape to

cover wheel treads, then apply Ruddy Brown to axles and wheels, followed by powders on the face or just dust the faces with powder.

After the oil has dried overnight and you've added powders (optional), spray another light coat of "Frosted Glass" to seal everything. Oils and powders will rub off when handled if left unsealed.

An operating car will have dull, silverish-grey wheel treads and inner flanges. A quick way to polish the treads and flanges is to crease a piece of 220-grit sandpaper over the rails of an HO standard gauge track section, then with **MINIMAL** finger pressure, run the truck back and forth until the grey diecast color hiding under the black oxide coating appears. See photo below.

- **Tea leaves:** No piece of logging equipment was ever "clean". Bark chips from loading/unloading operations piled up in corners and places. Depending on the type of load you want to "haul", chips would vary in color. A reddish-brown color is a good choice for Pine. Less red, more brown, matches Oak and Hemlock. Bark chips would turn grey over time. The tea leaves below are a good choice because they are coarse compared to "American" brands which tend to be fine and have less red tint. "Numi Honeybush" organic tea and an American brand were used on the pilot model.

  Apply Canopy 560 in small puddles around the corners and behind the diagonal braces. Use a toothpick or wire to spread into a thin layer then sprinkle tea leaves on top. Gently press leaves into the glue with your finger and let set. Turn the car upside down and tap the body to release loose pieces that can be reused.

The completed pilot model is shown at lower right. Tea leaves are actually brown … the green tint comes from lighting. If modeling a removable body, be sure to add tea leaves to the log car around/under the bunk straps and along the centersill.

I use link 'n pin couplers so coupler box height will be a little tall for traditional HO/On30. Using Kadee "overset" #145 couplers to lower height is an easy option.

Color instructions are on my web site.

Thank you for purchasing this kit. Contact me via email if you have any questions that arise during construction.

Jim King
SMMW 7/8/2025