



Art of the Steel

SACRAMENTO NORTHERN STEEL TRAINS

(IN ORIGINAL AND CONVENIENT "TAKE-HOME" SIZE.)

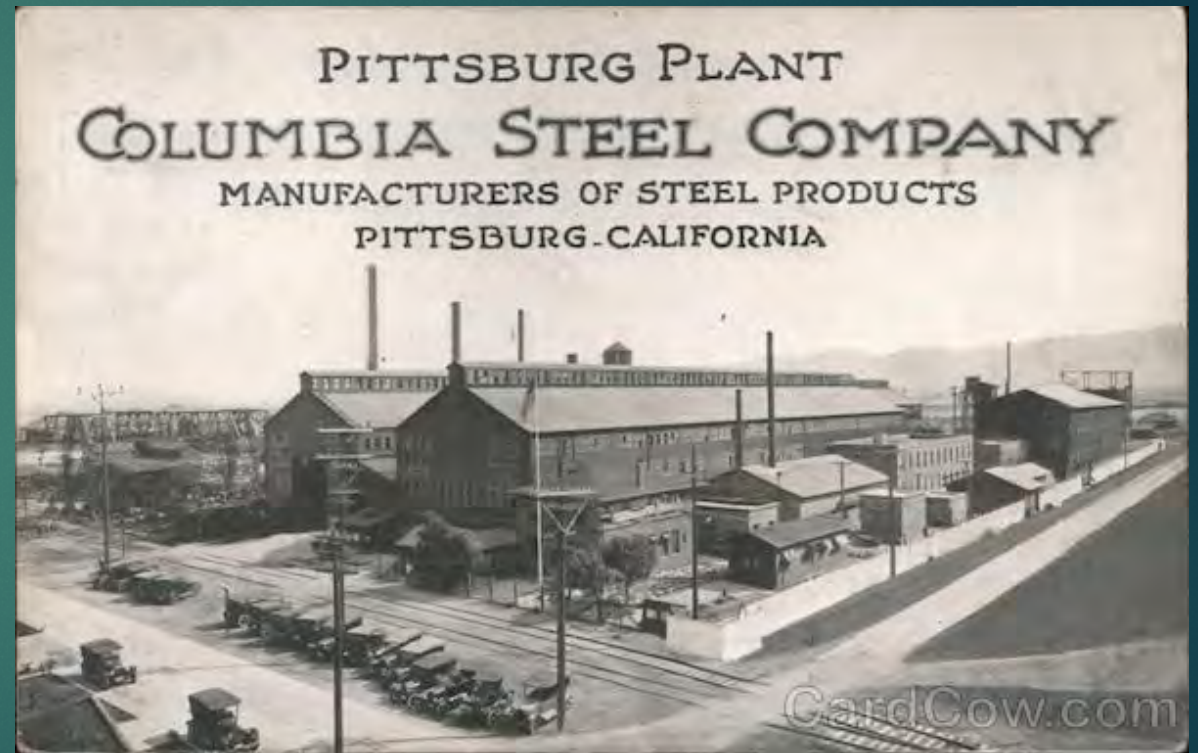
Presentation & Purpose: (aka Why the *heck* are we all here, anyway?)

- ▶ History (*What is it? How did it come to be that way?*)
- ▶ Process: (*How did I go about building a model of it?*)
- ▶ Motivation: (*Why did I choose this as a modeling project?*)

Steeltown, CA

(That's *Pittsburg*... not *Pittsburgh*!)

- ▶ First facility on site built by Columbia Steel Company, roughly between 1908 and 1910.
- ▶ Melted pig iron and miscellaneous scrap metals to make "steel".
- ▶ Described at various times as having open-hearth furnaces, "sheet and wire mills" and a foundry.
- ▶ Reorganized in 1922 as "Columbia Steel Corporation" and merged into the Utah Coal & Coke Company.



Bringing Organization to Chaos:

- ▶ Corporate assimilation led to large-scale standardization.
- ▶ Coke, limestone and iron ore provided by a company-owned blast furnace in Provo, Utah.
- ▶ These materials then transformed into steel by facilities in Pittsburg and two other West Coast locations.
- ▶ Consistency in practices and supplies of raw materials led to improved consistency in product quality.
- ▶ Entire operation rolled into United States Steel Corporation in 1929.
- ▶ Company poised to ride economic boom into the 1930s! **cough**

Putting Steel to Steel:

- ▶ Extending SN's Pittsburg Branch to mill and other nearby customers first proposed in 1927.
- ▶ Opposed by both Southern Pacific and Santa Fe, but welcomed by pretty much everyone else involved.
- ▶ Opened for service on April 1st, 1930.
- ▶ Coil loads moved via the D&RGW to Roper Yard, then on the WP to Sacramento, followed by the Sacramento Northern across Suisun Bay to Pittsburg.
- ▶ So yes, this means that 70-ton steel coil loads were traveling by...



Photo by Dudley Thickers ~ Courtesy of Western Railway Museum Archive



W. C. Whittaker photo ~ Garth G. Groff collection

M.V. Ramon

*The saltine cracker
that went to sea*

An Inauspicious Start:

(We really didn't think this through, did we?)

- ▶ From the outset, management found itself thoroughly unprepared for providing this new service.
- ▶ Service first provided with WP's fleet of composite General Service gondolas.
- ▶ Fleet supplemented with cars borrowed from sister road, Denver & Rio Grande Western.
- ▶ Scratched-together fleet was barely adequate for 1930s traffic.

...And then came World War Two!

War! What's It Good For?

(Profit margins... apparently.)

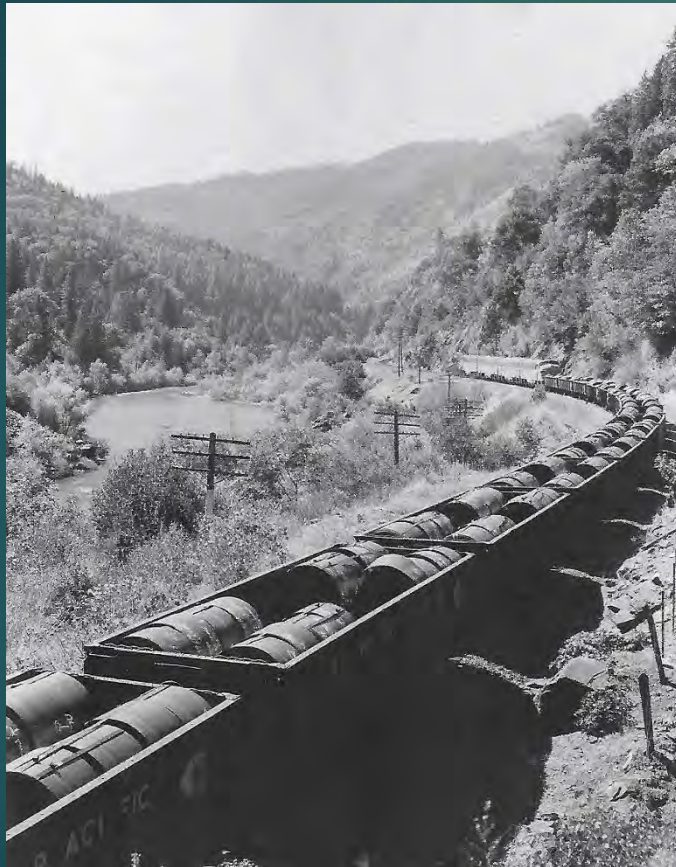
- ▶ Car loadings increased drastically, as demand for steel spiked.
- ▶ U.S. Steel christens a new furnace complex in Geneva, Utah in 1944, boosting traffic even further.
- ▶ Traffic levels briefly ebb at the war's conclusion, then accelerate again as the economy transitions to peacetime consumer production.
- ▶ Pittsburg works produce mostly tinned steel for California canneries.



U.S. Steel works in Geneva, Utah.

Carrying the Load:

(How to give a railroad a hernia.)



K. J. Meeker collection

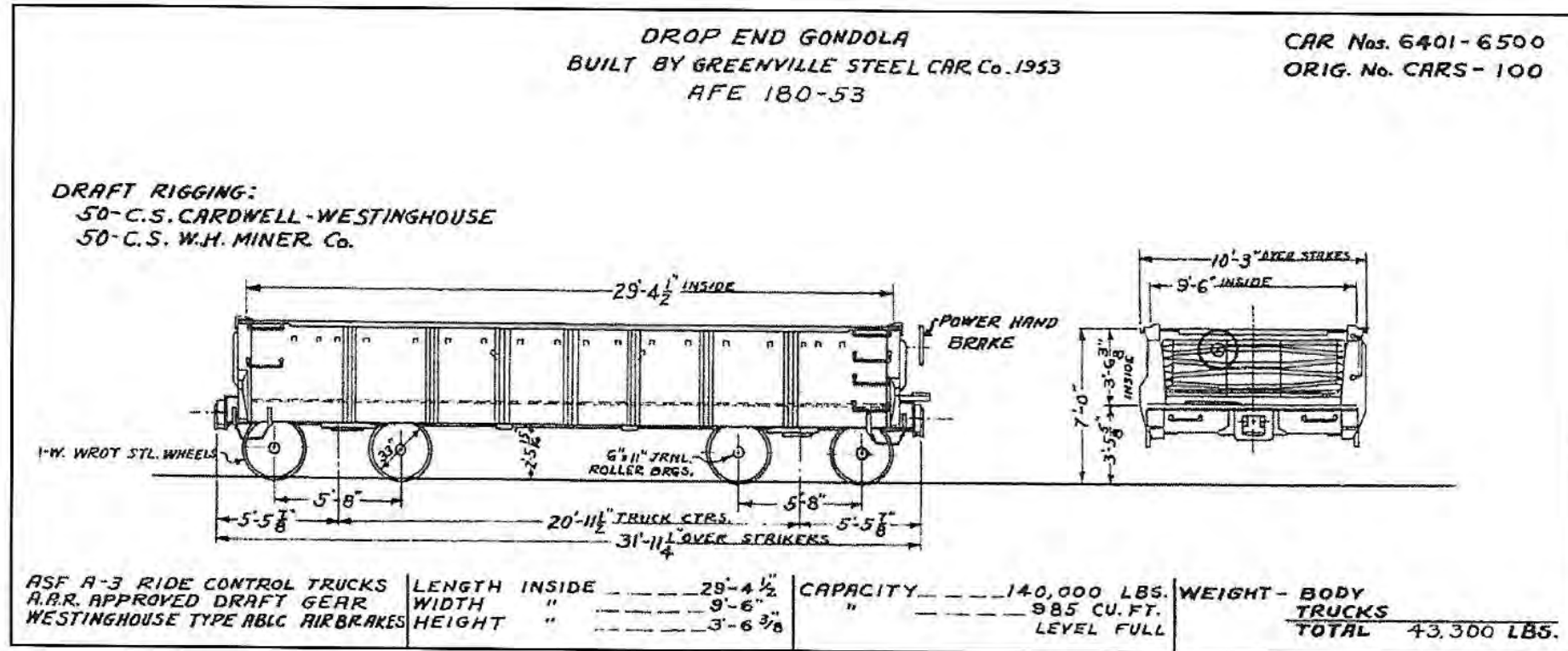
- ▶ U.S. Government “gifted” a fleet of mill gondolas to the D&RGW in 1944...
- ▶ Then transferred them to the Alaska Railroad in 1947.
- ▶ WP added to their own gondola fleet in 1949 with 200 52-foot cars (6601-6800) and 50 65-foot cars (9001-9050).
- ▶ Although this helped keep up with traffic, standard-length cars could only be loaded at their ends, rendering half the car as effectively dead weight.
- ▶ Older “plain bearings” proved problematic.

Baby's Got a New Set of Wheels!



- ▶ In 1951, Greenville Car Company delivers with a new fleet of 100 “bantam” gondolas!
- ▶ A total car length of only 29 feet-four inches saved 11,900 pounds of dead weight per car.
- ▶ Timken 100-ton roller bearing trucks provided both improved fuel economy and higher max-load limit.
- ▶ Decision was unusual, as roller bearings in that era were generally reserved for captive rolling stock.

Short and Stout: (Anatomy of a WP coil gondola.)



The 1950s: Turning a Corner!

(...and running straight into a wall!)

- ▶ By the middle of 1951, delivery of the bantam gondolas had mostly solved the persistent rolling stock availability/reliability issues.
- ▶ Resulting overall service improvements led to both happy customers and happy management.
- ▶ And then...



Robert A. Burrowes photo.

HOLY S#@T! Did Anyone Else *FEEL* That?



Robert A. Burrowes photo.

- ▶ On the afternoon of July 24th, 1951, the Arcade Trestle west of Sacramento committed suicide.
- ▶ Repairs would ultimately take almost three years to complete.
- ▶ “Temporary” arrangements were made to reroute shipments to Stockton, then via the AT&SF to Pittsburg.
- ▶ Resulting train was designated with the symbol “SND”.
(Sacramento Northern Detour)
- ▶ Lengthy repair process and reroutes would ultimately prove the end of the M.V. Ramon.

Adapt, Improvise & Overcome:

(New route... New rules!)

- ▶ Rerouting would keep trains on WP rails past Sacramento to Stockton, then via the Santa Fe to Pittsburg.
- ▶ As host road, AT&SF held operational jurisdiction.
- ▶ Required inclusion of pilot engineers and conductors.
- ▶ Sacramento Northern power deemed "insufficient" to task.
- ▶ Pair of F3s acquired from defunct New York, Ontario & Western, designated with locomotive numbers 301-A and 301-D.



Glenn G. Groff photo.

Getting the Run-Around:

(Re-imagining operations in a new reality.)



Robert A Campbell Sr. photo

- ▶ New format initiated to match route.
- ▶ Power typically positioned heel-to-heel, allowing for bi-directional operation.
- ▶ Twin cabooses, one at either end of train, became standard practice.
- ▶ Train could arrive into Stockton, run locomotives around to other end, and depart via the Santa Fe transfer track in the opposite direction.

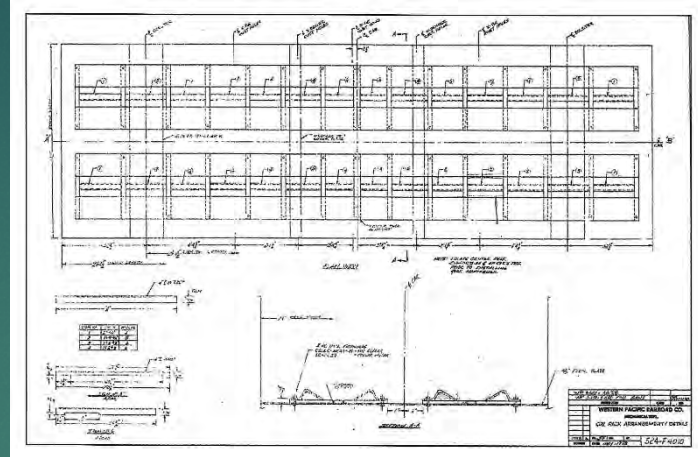
Rebuilding Year:

(Breathing new life into an old fleet.)

- ▶ By the mid-1970s, the bantam gons were *really* starting to show their age.
- ▶ Integrated racks for securing coils had suffered particular wear and tear.
- ▶ Conditions were so bad that U.S. Steel threatened to cancel contract and ship via SP instead.
- ▶ SP's coil gons were just as worn-out as WP's.
- ▶ 25 cars selected for rebuilding, starting in 1978.



Gondola # 6408, before and after its transformation.
Both Images ~ WPRM/FRRS Archive



Examples of coil racks, pre and post-rebuild, with a construction diagram of their design.

Part Two: The Build-Out

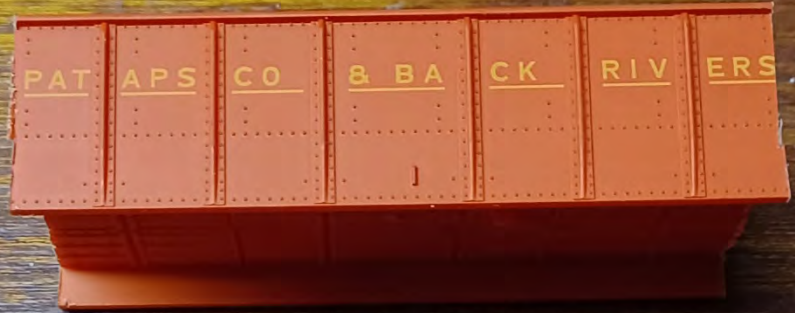
MAKING MINIATURE MODELS IS MUCHO... (SOMETHING M-WORD)!

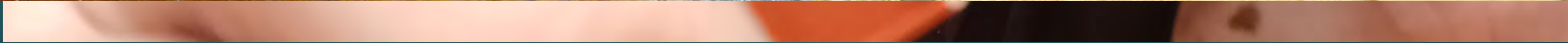
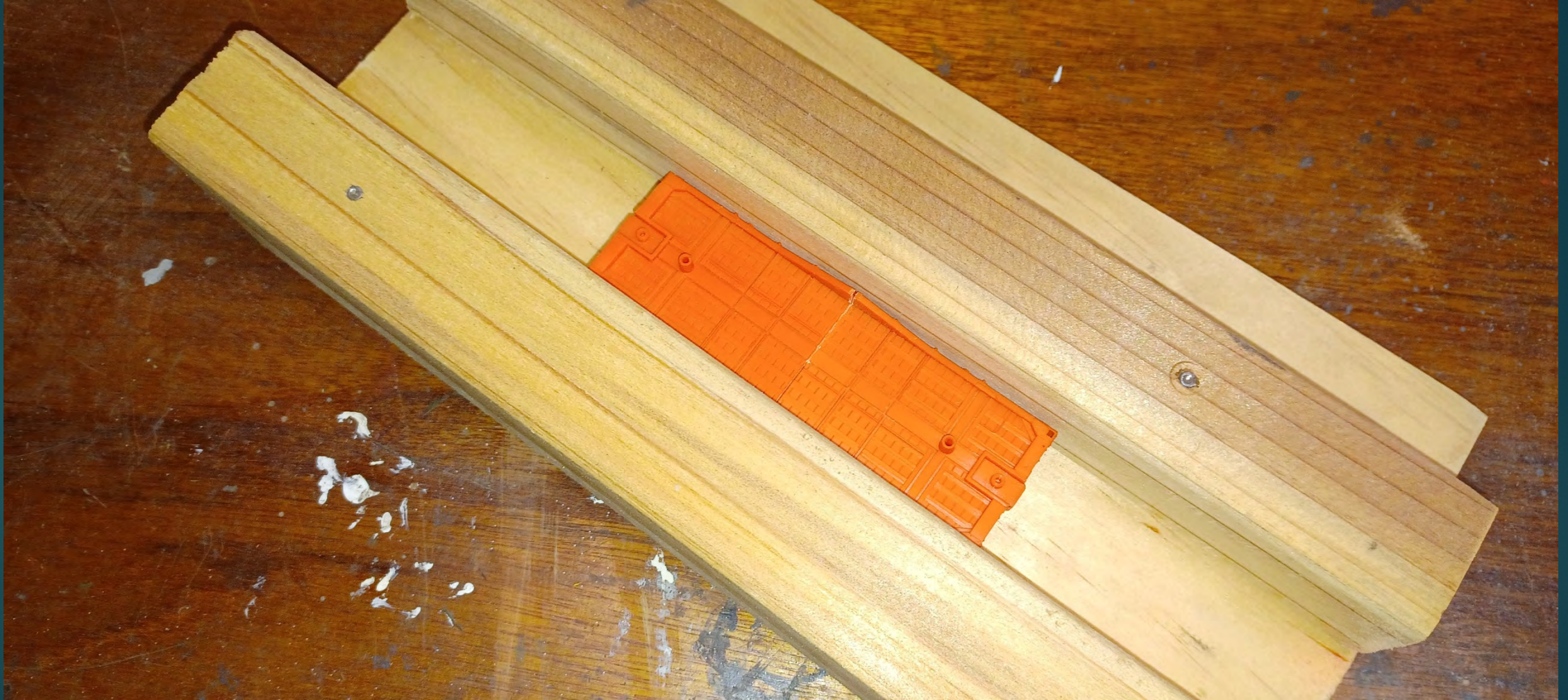


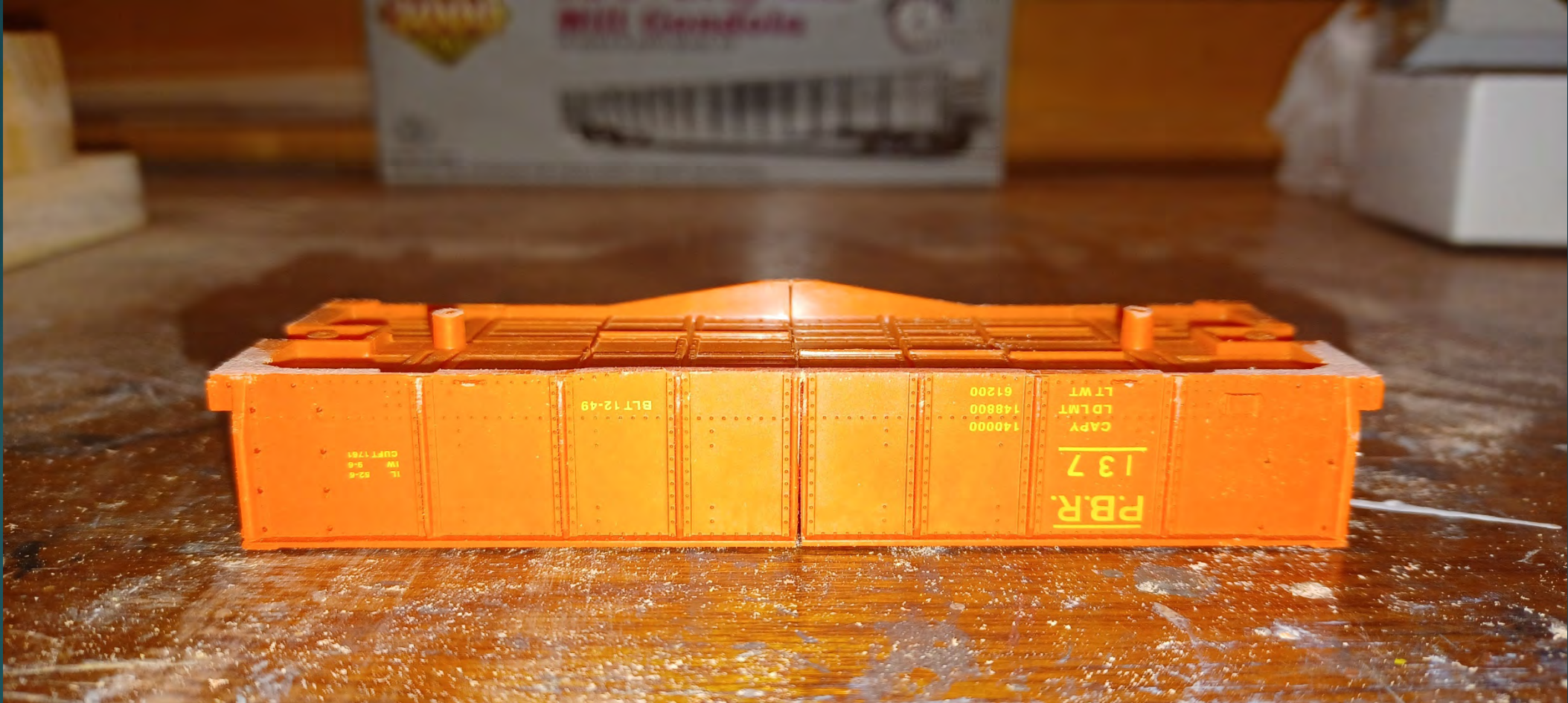
Starting Off:

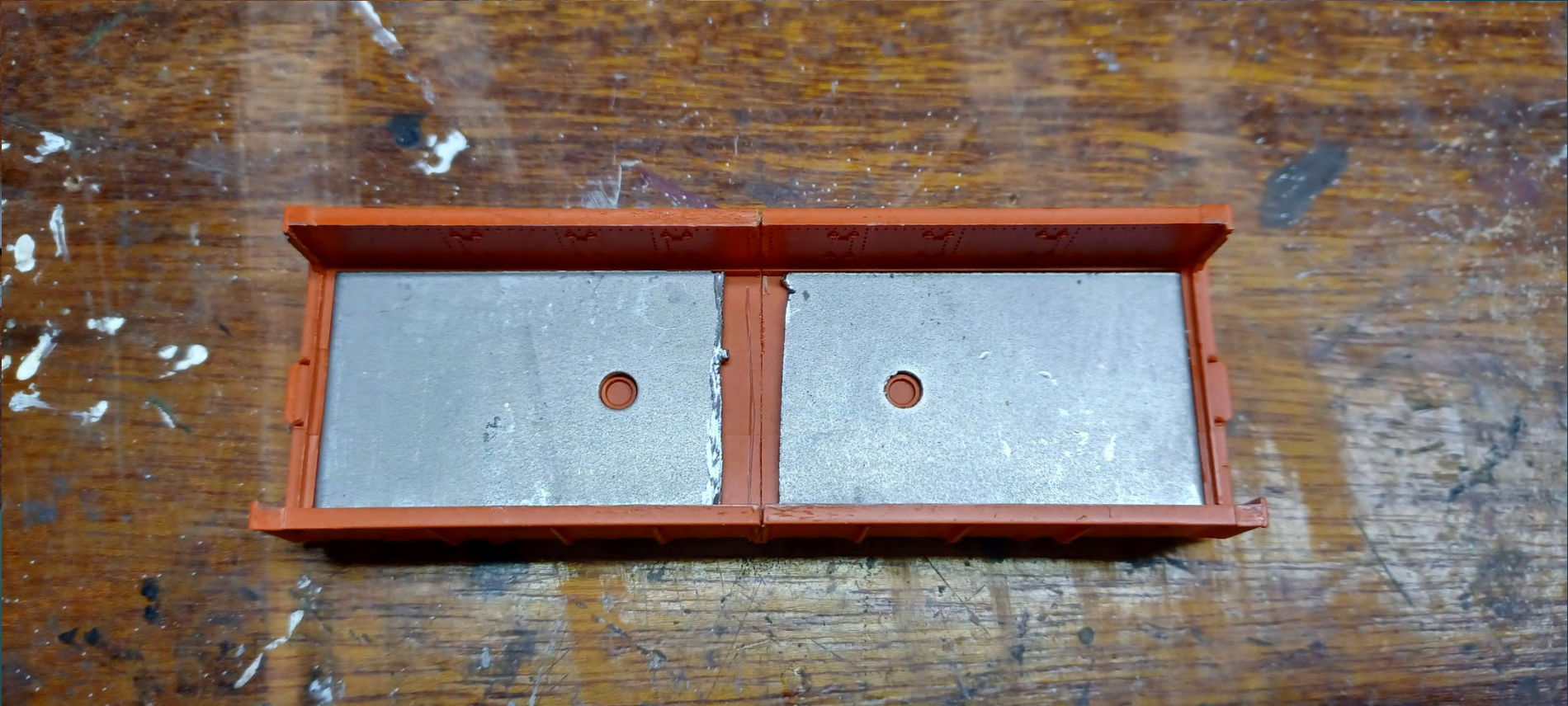
Even the longest journey begins with a small, single, half-hour trip to the hobby shop.

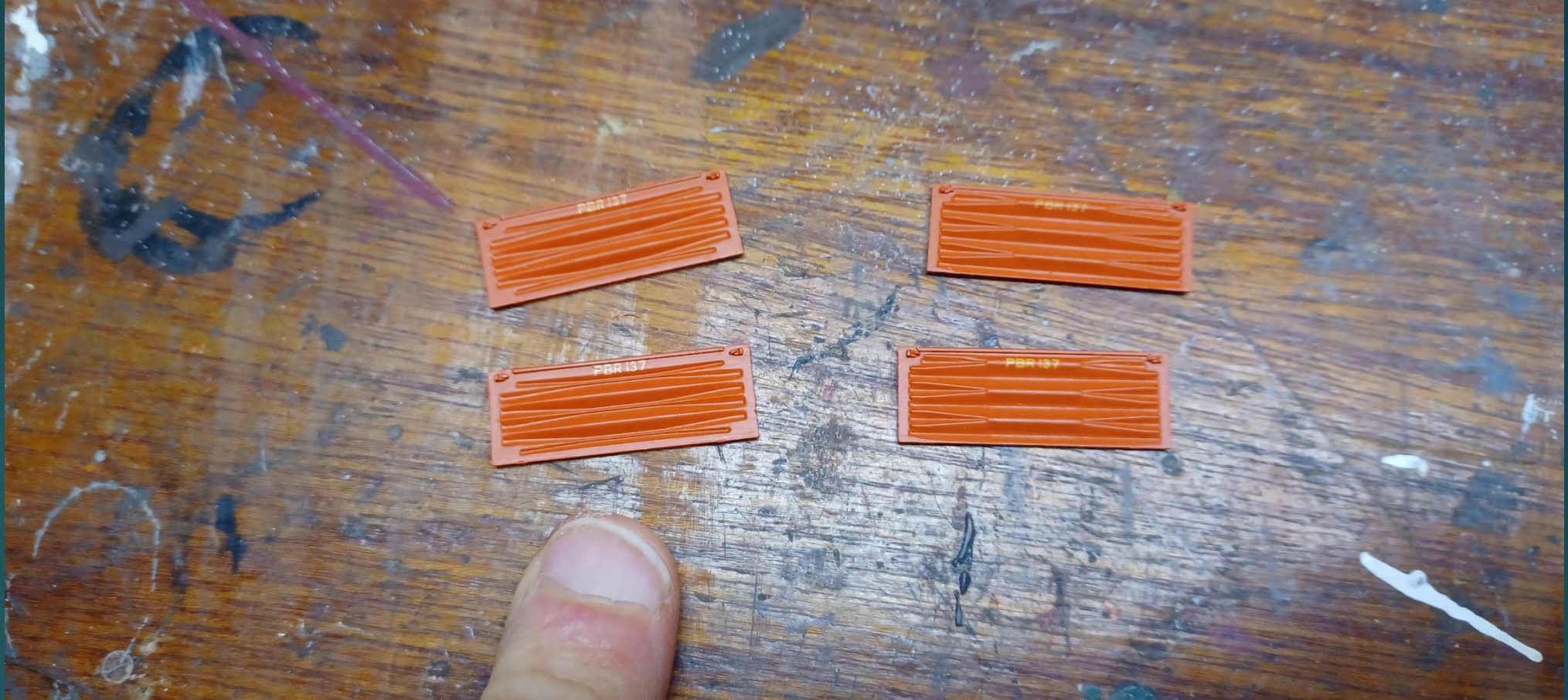


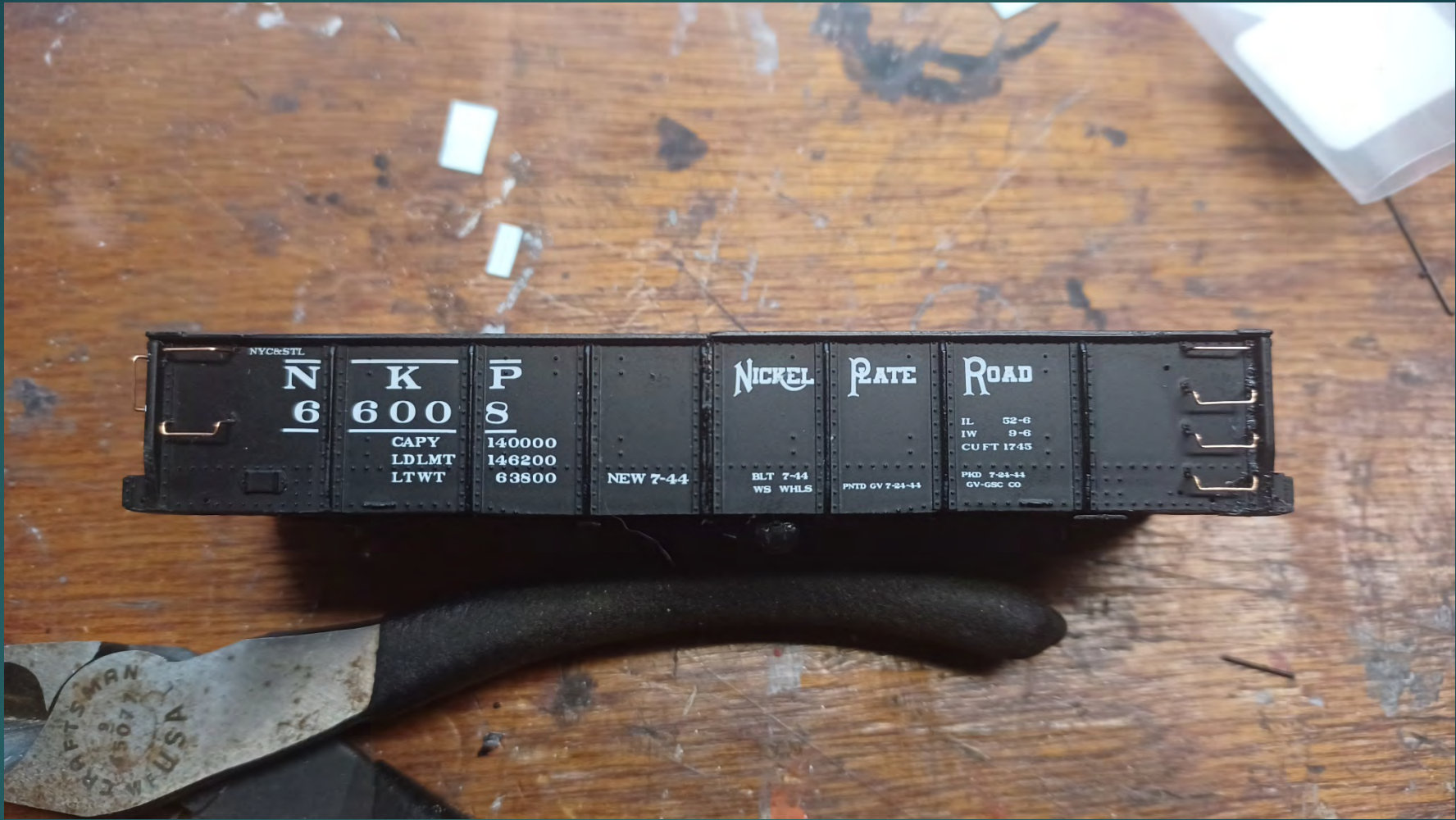


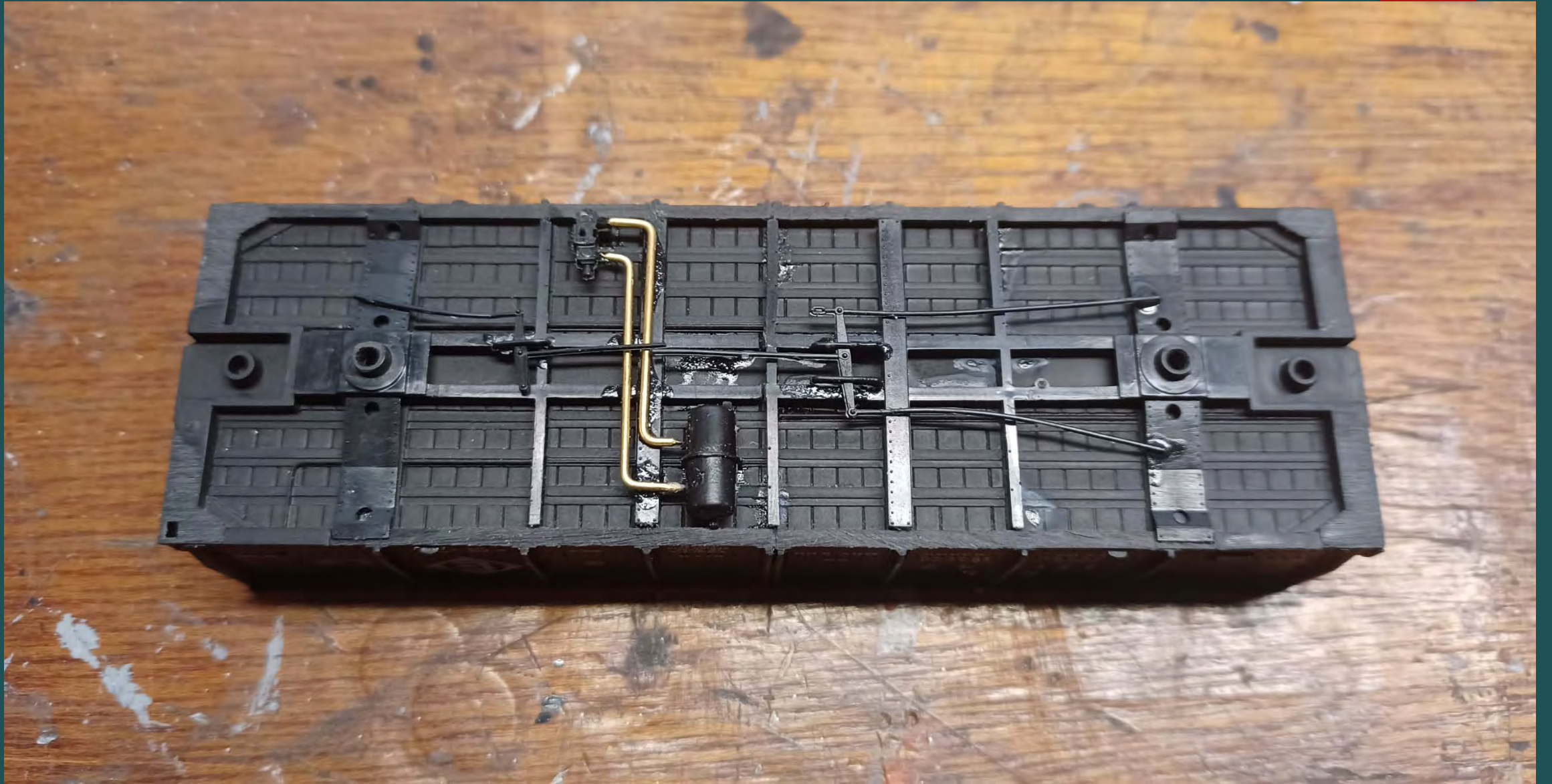


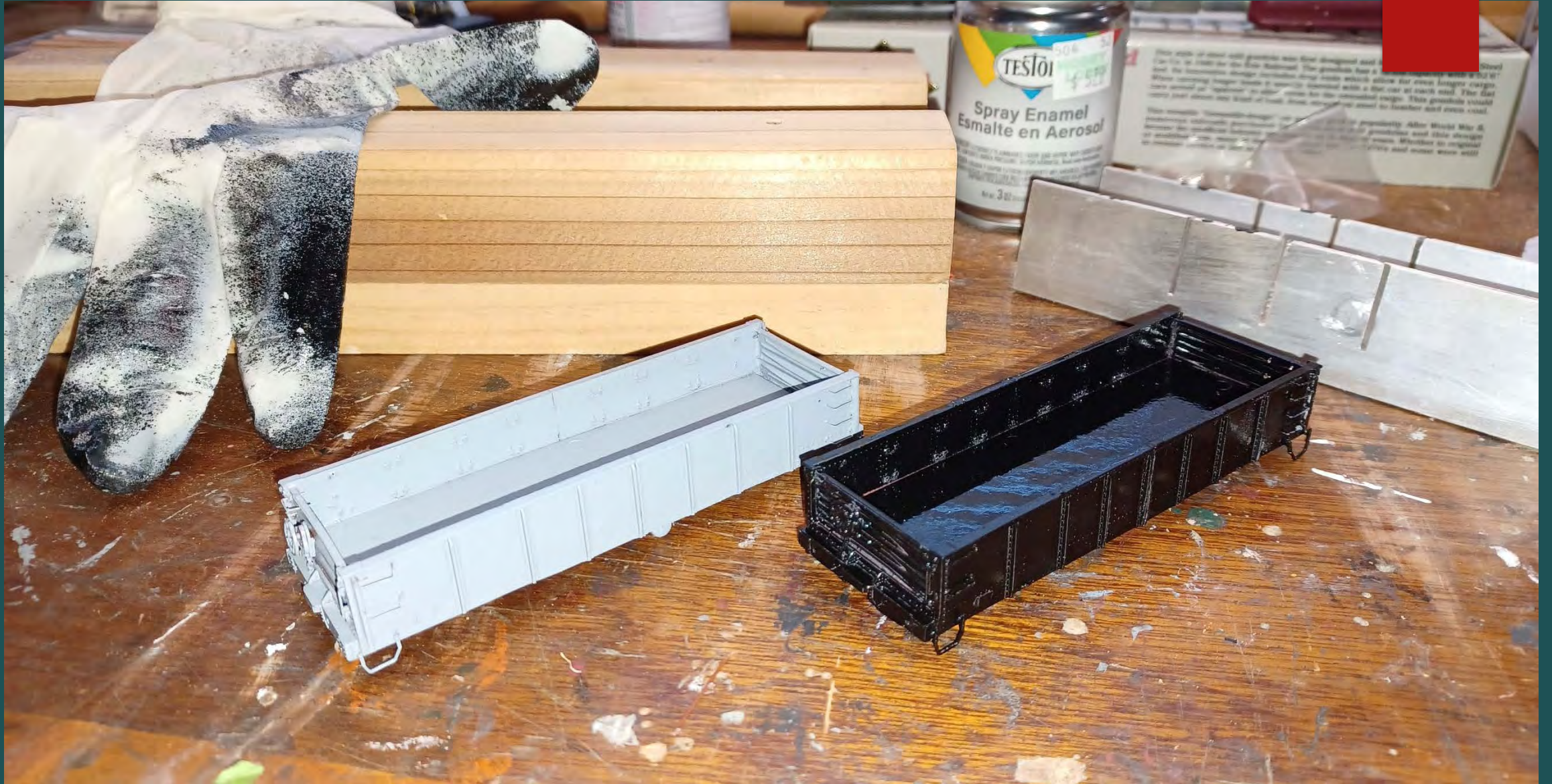












ROGER'S RAILROAD JUNCTION 825

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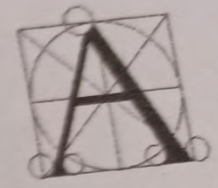
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90301

Gothic Block Letters & Numbers
White 10", 14", 18", 20"



Gothic Block Letters & Numbers
14", 18", 20"



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USA

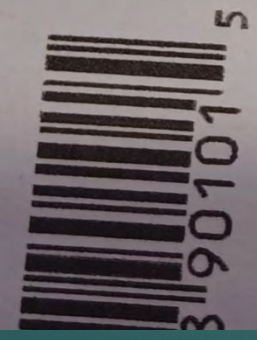
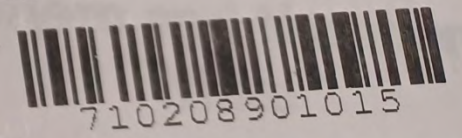
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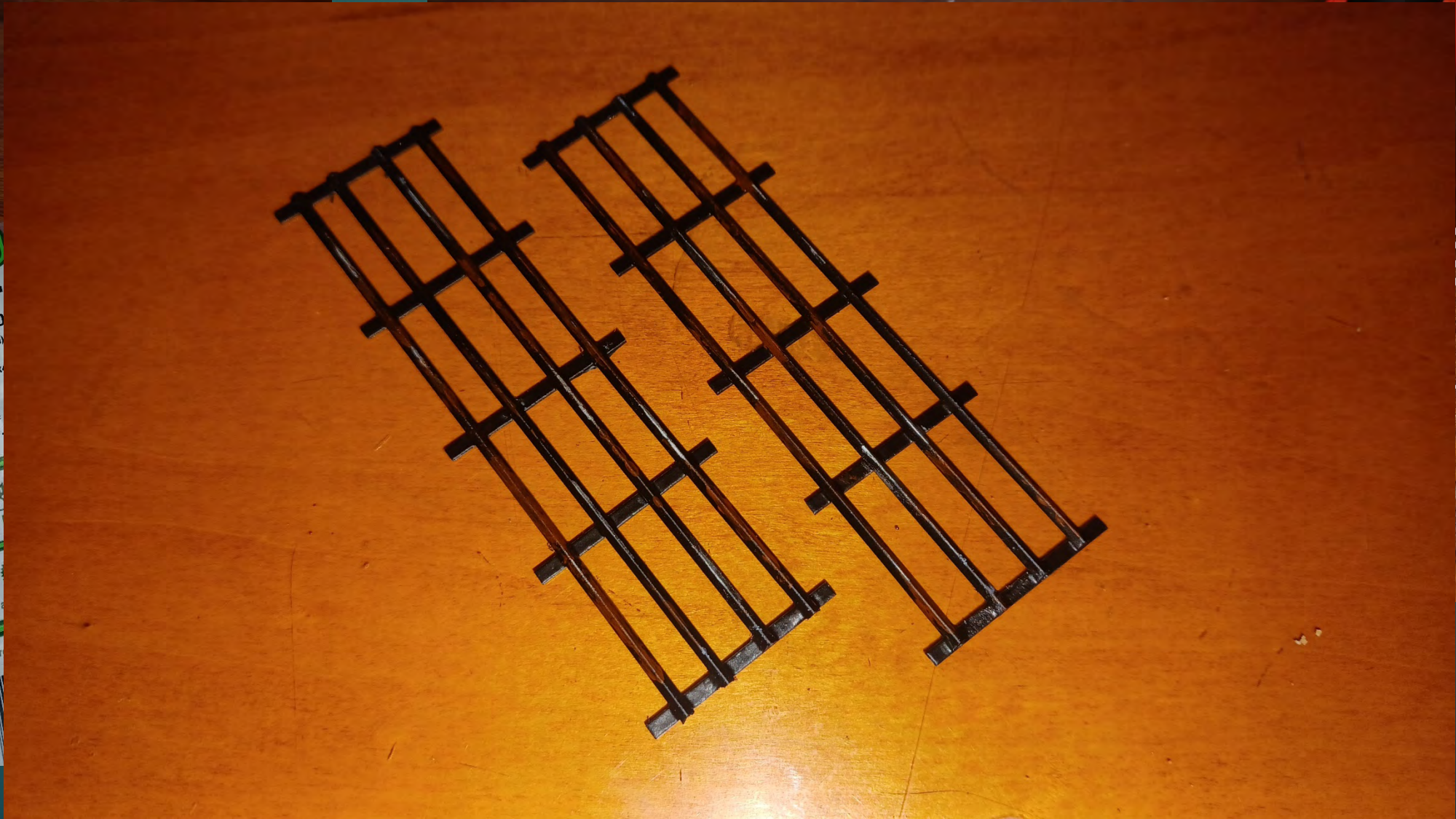


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BBCCDDEEEFFGGHH



My NEW best friend
in the world!







Finished Product:

Is..... THIS... your car?





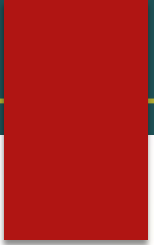
And the Final Step:

DO IT TWENTY MORE TIMES!



Part Three: Raison D'Etre

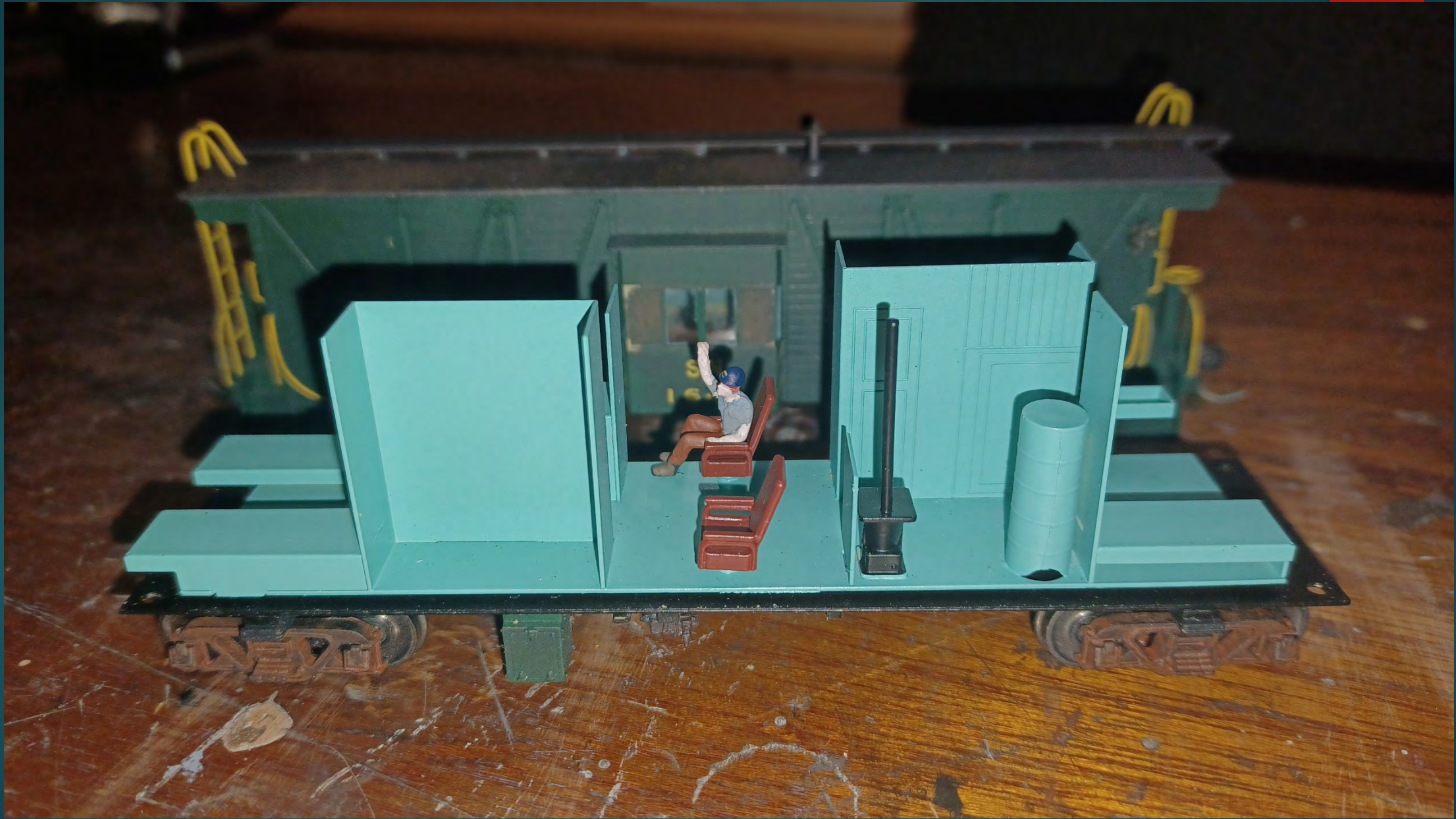
Or "Why, oh WHY, did I EVER choose to do this?"

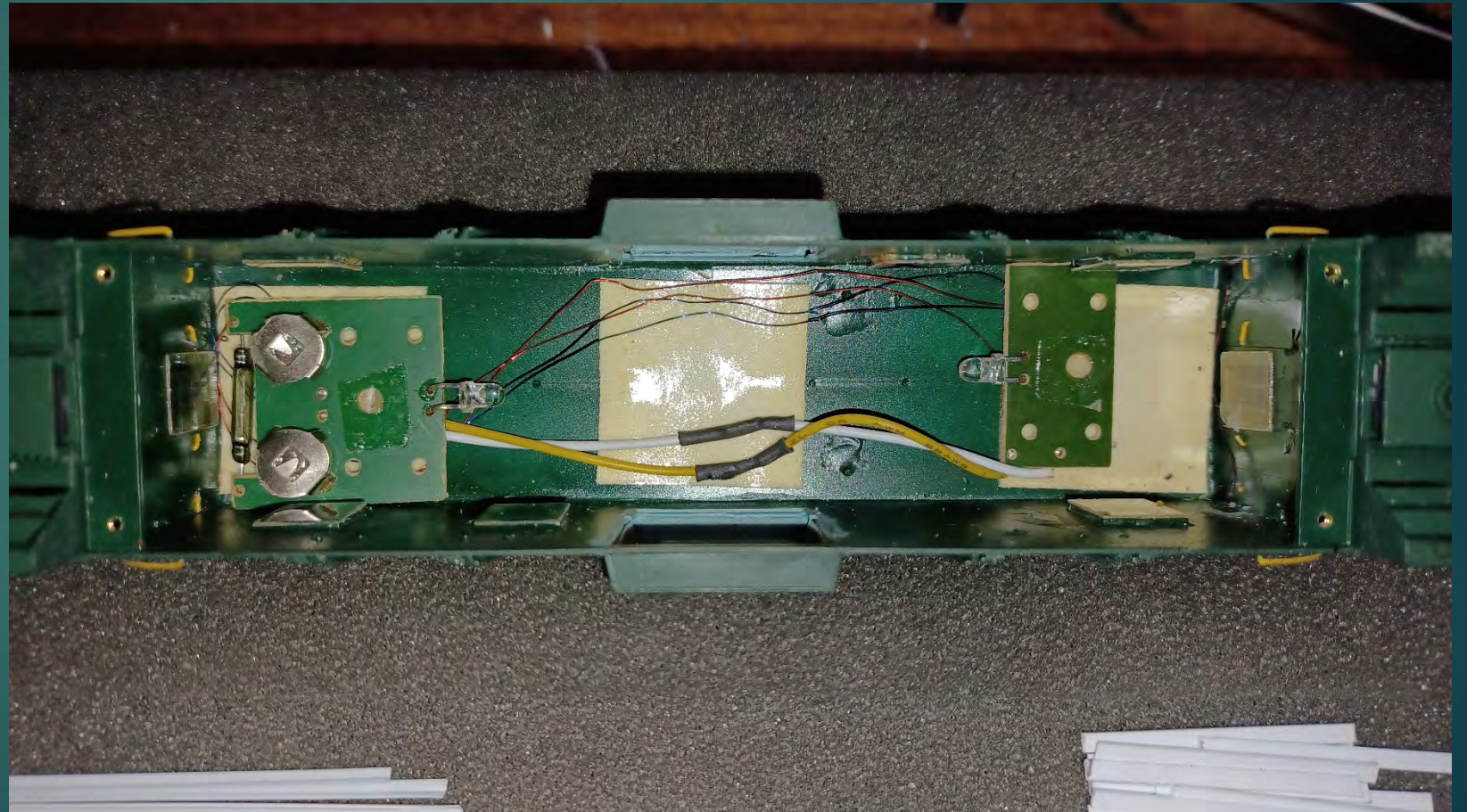


Ever wonder what happens when you overload plain bearings?



THIS is what happens when you overload plain bearings!









The Pay-Off!

All work and no play makes Jack a dead guy with a rich widow.















End

Special thanks to...

Mr. Garth G. Groff

Mr. Kenneth C. Jenkins

WPRM/FRRS Online Archive

Sacramento Northern Online

Mr. Robert A. Campbell

Mr. Robert A. Burrowes

*The Bank for People on
Horseback*

Mr. William Gilbert

Mr. Dudley Thickens

Western Railway Museum

*The Department of
Redundancy Department*

*National Association of Dead
People Who Nobody
Remembers*