Cornwall

The Shortest and Best Route

Scratch building Ore Cars
Wooden Gondolas and Hoppers

HO Scale 1:87.1

Maps: Google Earth

All photos provided by Mark Cain

All photos: Provided by Mark Cain

Color of Cornwall Iron Ore

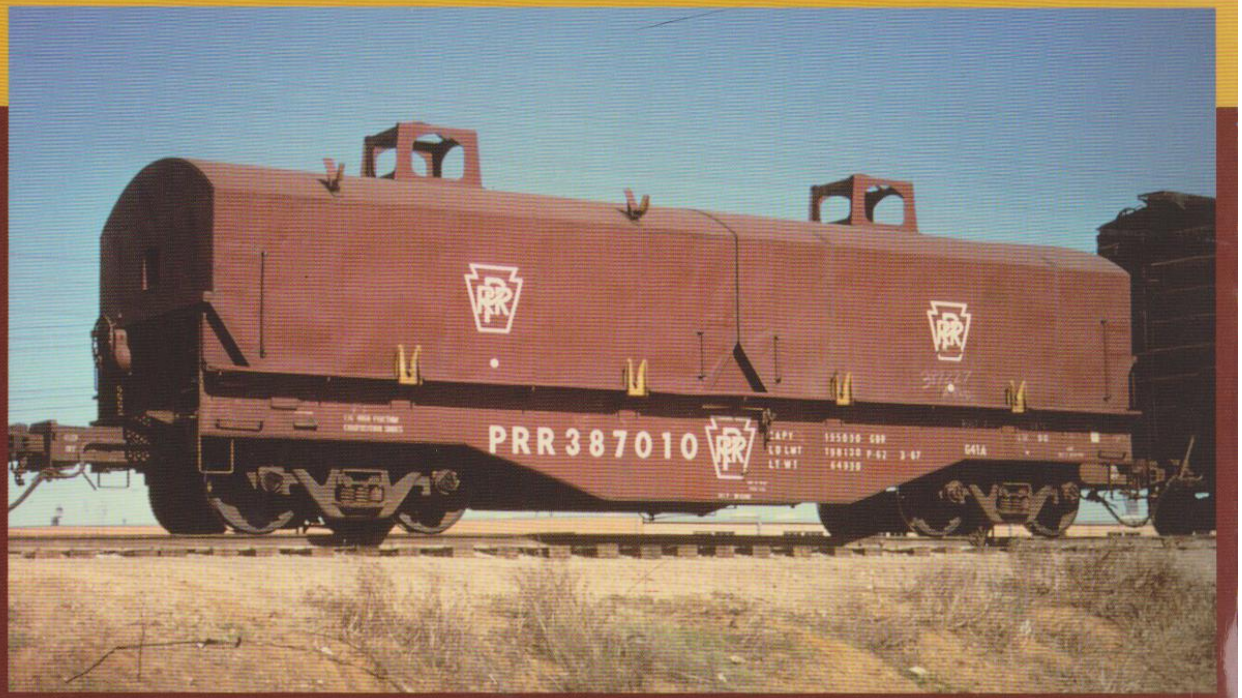
These modern ore cars were purchased much later, but are future scratch building projects

Scratch building a model is like cooking your grandma's chicken pot pie. You're going to need a recipe to figure out how it's made.

Step 1 – Go to the source.

PENNSYLVANIA RAILROAD GONDOLAS

REVENUE & WORK EQUIPMENT, 1869 to 1968



By

AL BUCHAN

and

ELDEN GATWOOD

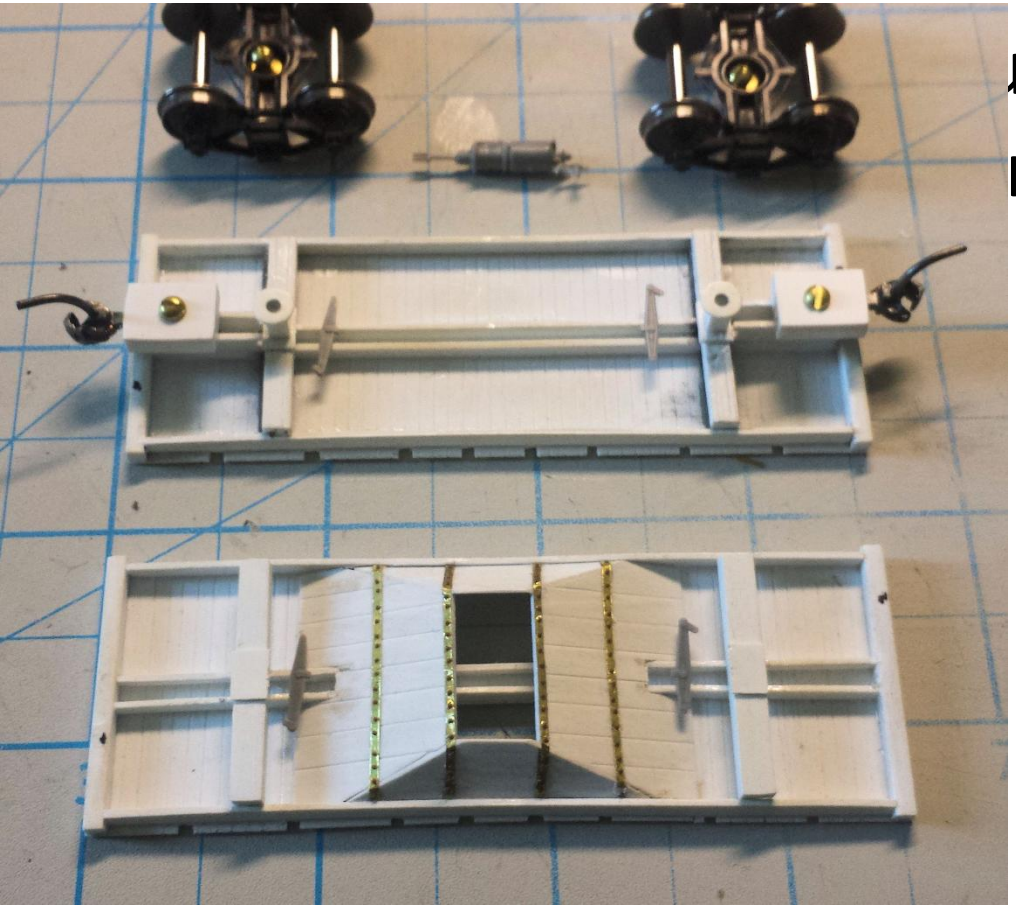
A Publication of the Pennsylvania Railroad Technical & Historical Society

Combining Data for Drawing

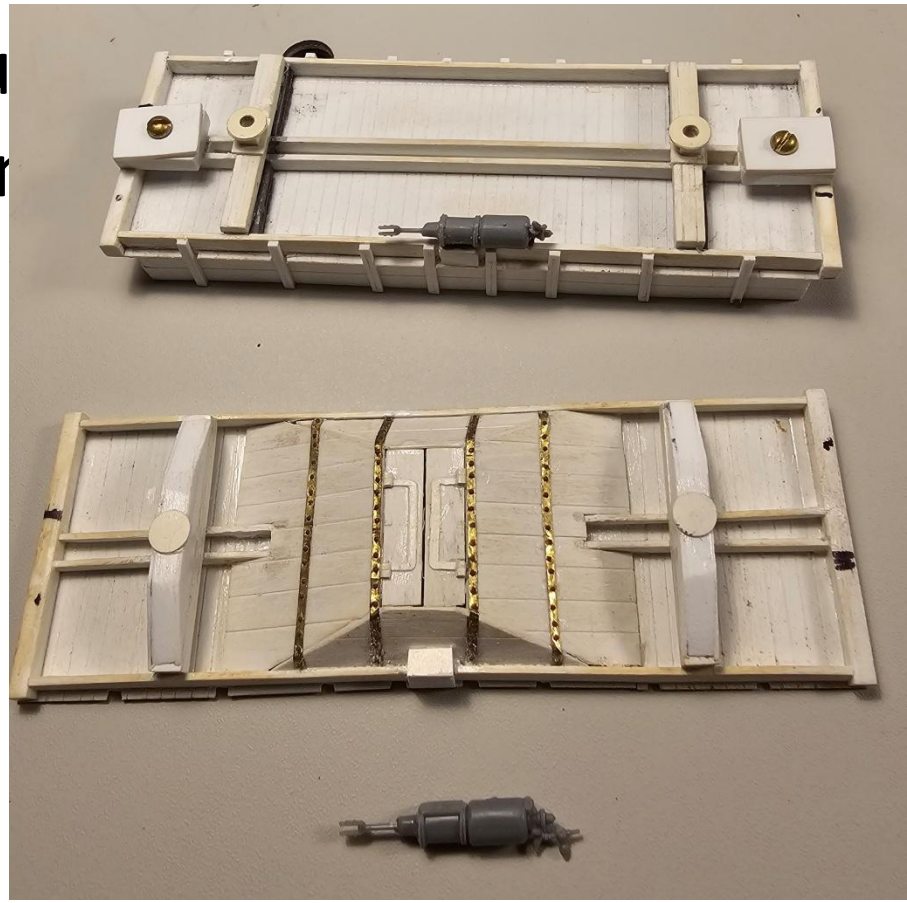
- Mark Cain drew the original drawing. I have made corrections and added details since the original.

Please standby while I open the…

Construction



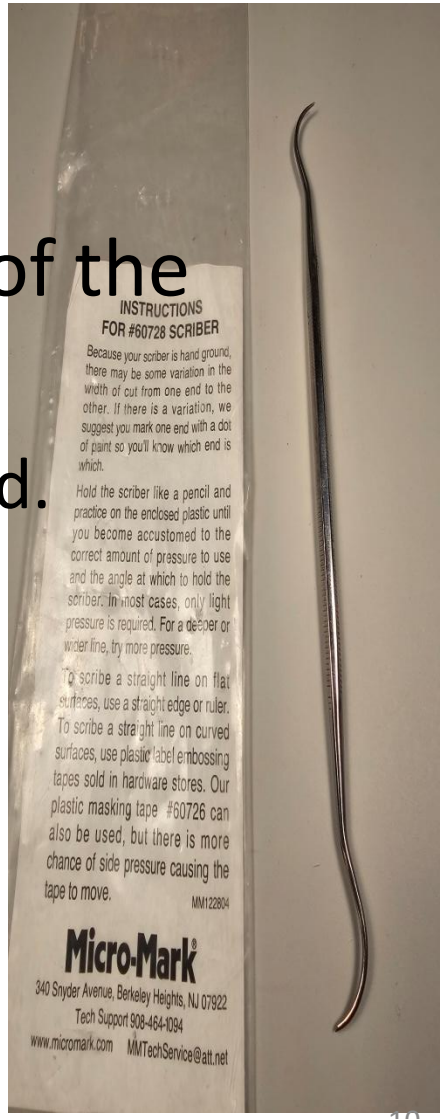
5/24/2018



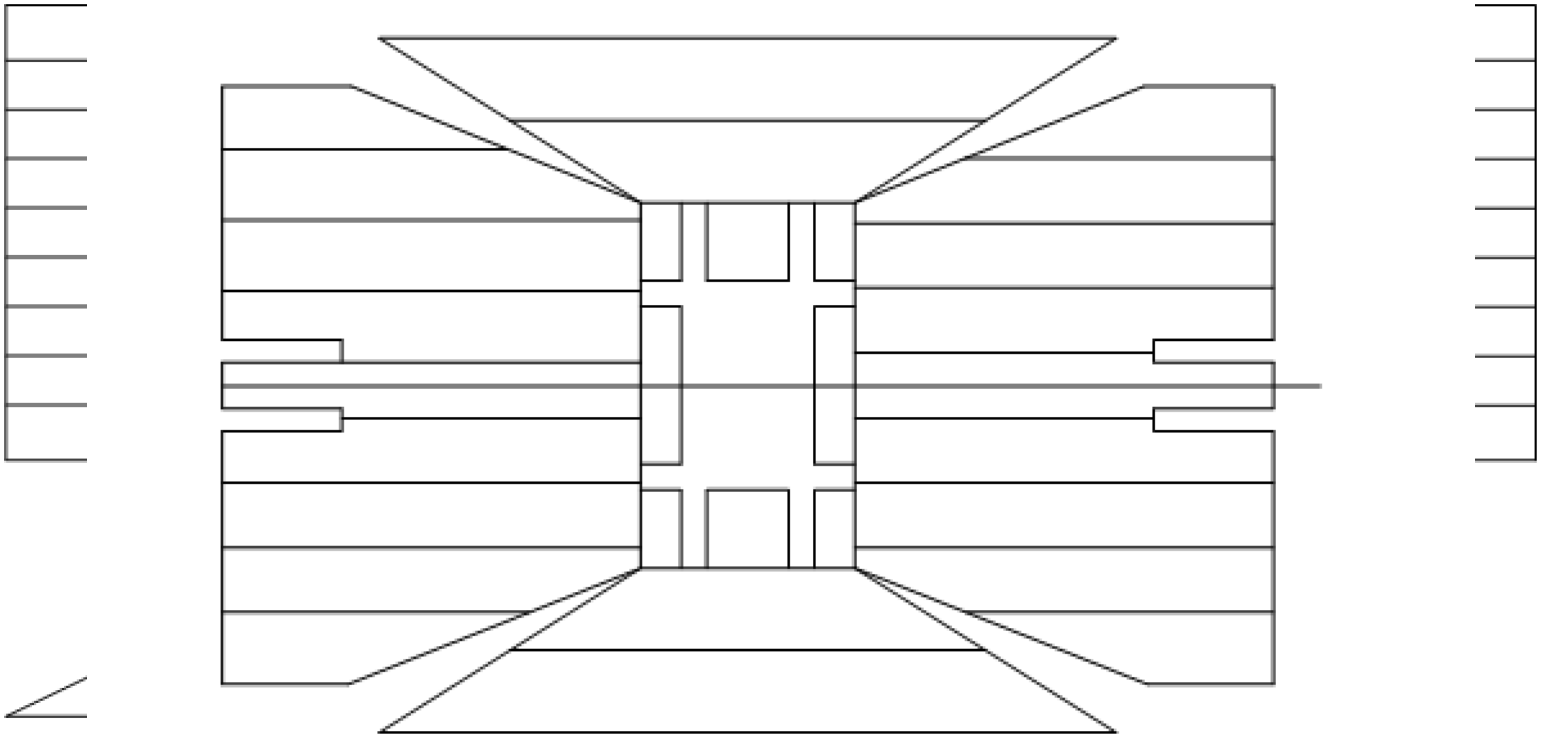
1/7/2026

Wood Simulation

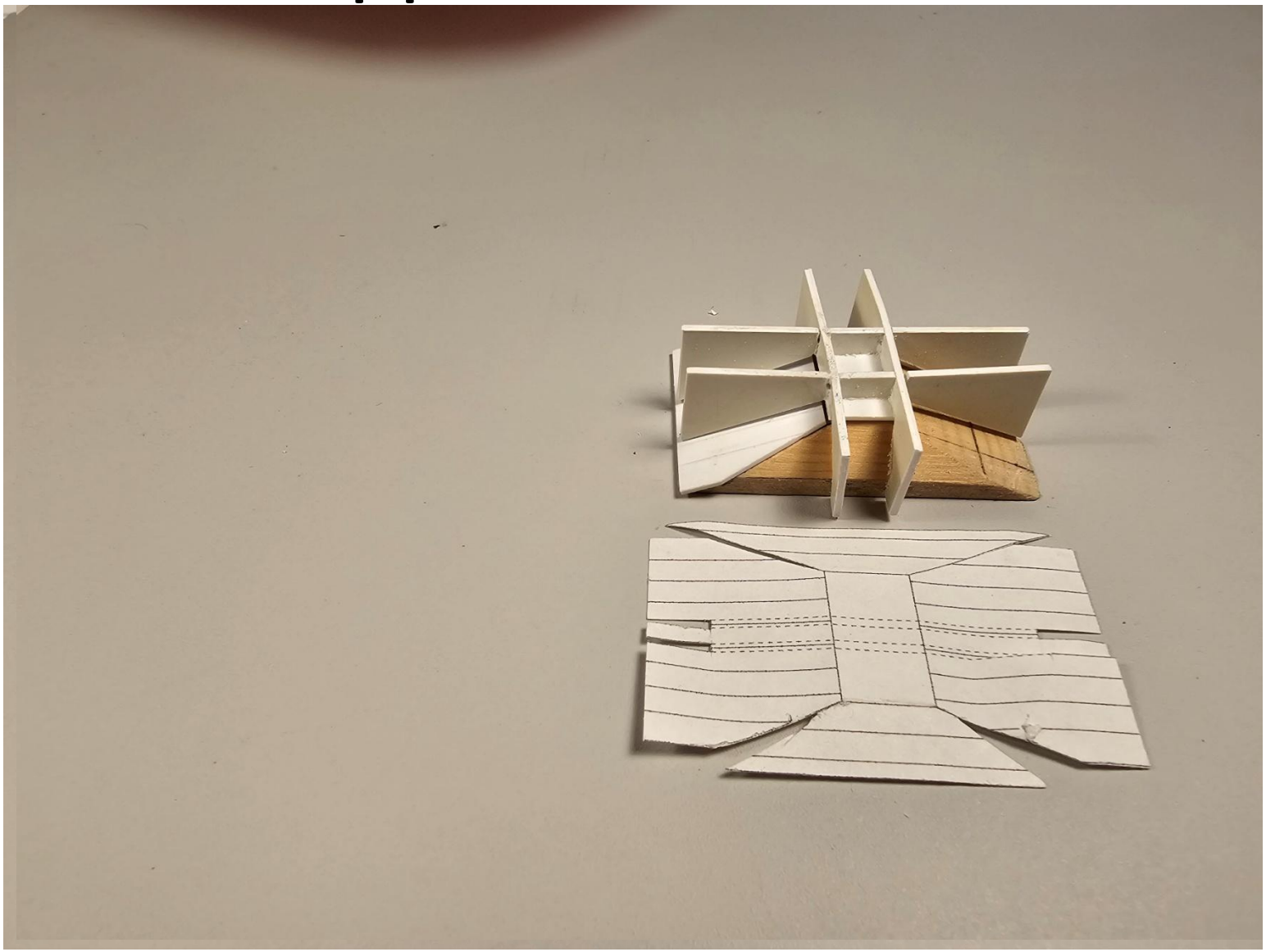
- I scribe the wood joint lines
- Wood grain simulated with either of the following:
  - Atlas track saw for heavily worn wood.
    - 80 grit sand paper works well too.
  - 100 grit sand paper most used.

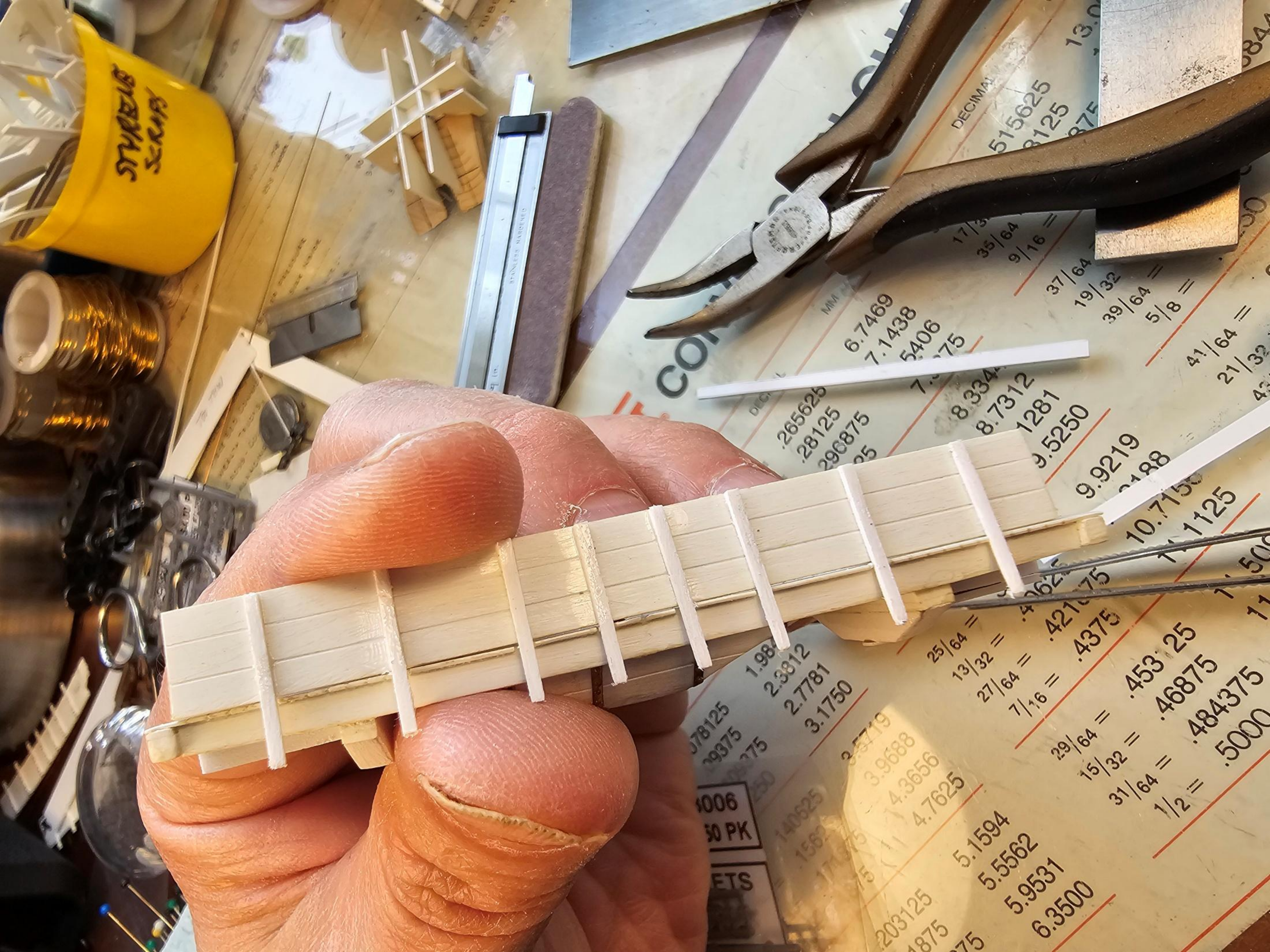


The Hopper Challenge

- 

Hopper Construction




STYRENE SCRAPS

Details

- Brake system
- Hand Holds and Side steps (not there yet)
- Stake pockets (working on it)
- Hopper door mechanism

Early Brake systems

Fig. 1356—Piping Diagram of Universal Common Standard Brake Equipment, Schedule UC.

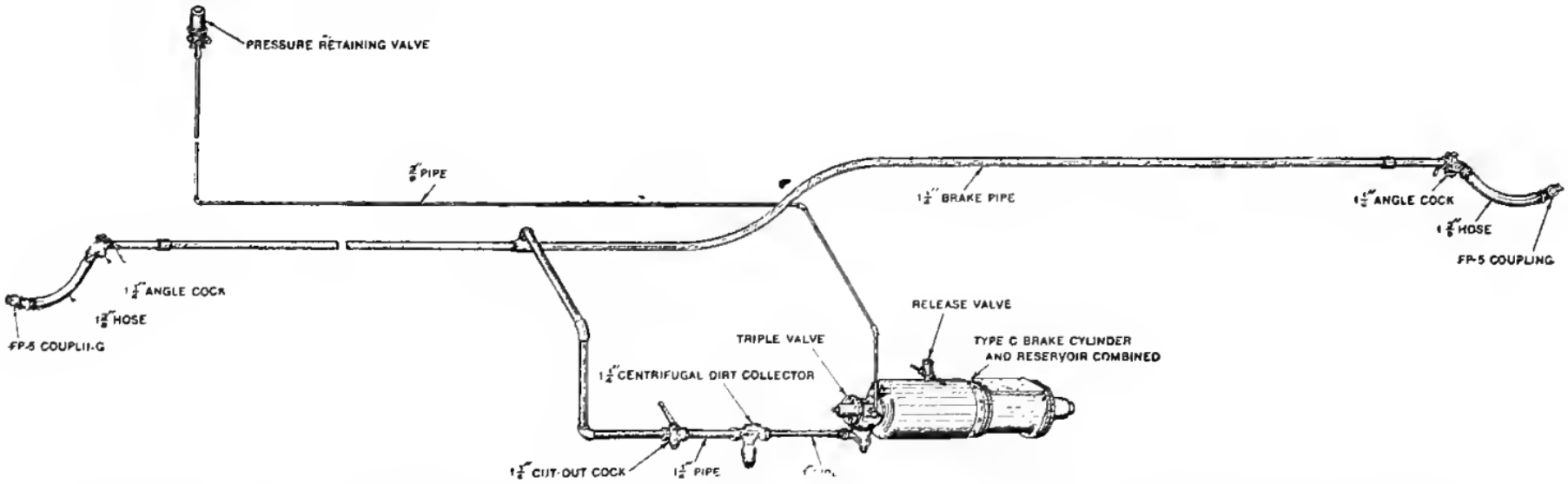
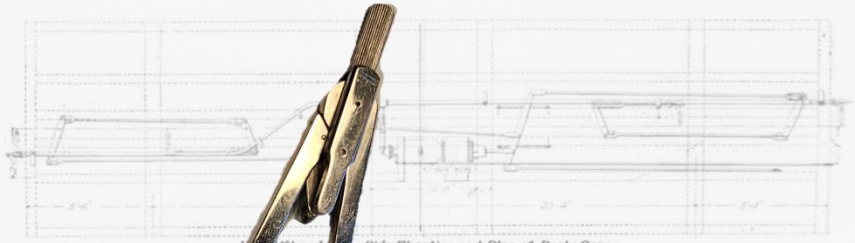


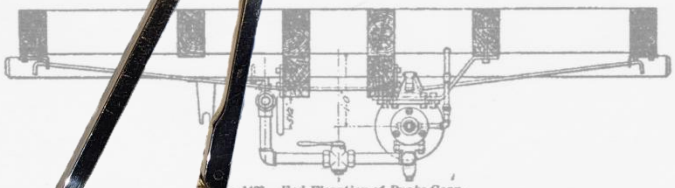
Fig. 1357—Piping Diagram of Standard Single Cylinder Freight Brake Equipment, Schedule KC.

Figures from book: 1916 Car Builder's Dictionary

Fig. 1464. Side Elevation of Brake Gear.

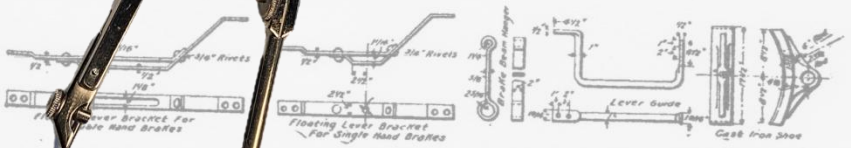


Figs. 1464 and [illegible] Side Elevation and Plan of Brake Gear.

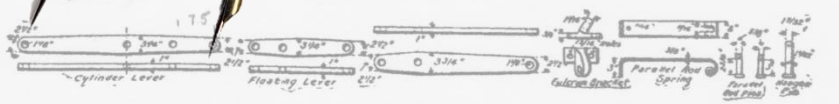


[illegible] 1495. End Elevation of Brake Gear.

FR[illegible] BRAKE GEAR FOR [illegible] SIDE HUNG BRAKES. CHICAGO, MILWAUKEE & ST. PAUL RAILWAY.
(Plan of [illegible] ement for inside hung brakes is shown in Figs. 1695-1698.)

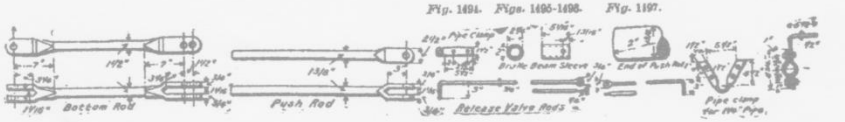


Figs. 1467-1468. Figs. 1469-1470. Figs. 1471-1473. Figs. 1473-1474. Figs. 1475-1476.

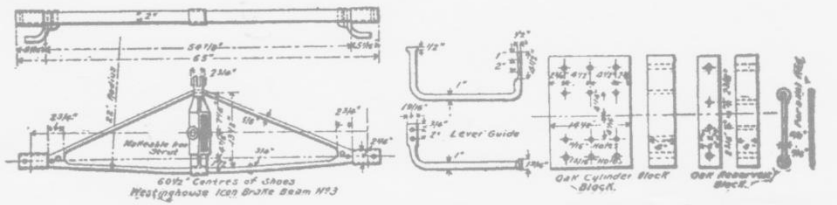


Figs. 1477-1478. Figs. 1479-1480. Figs. 1481-1482. Figs. 1483-1484. Figs. 1485-1486. Figs. 1487-1489

Fig. 1494. Figs. 1495-1496. Fig. 1197.



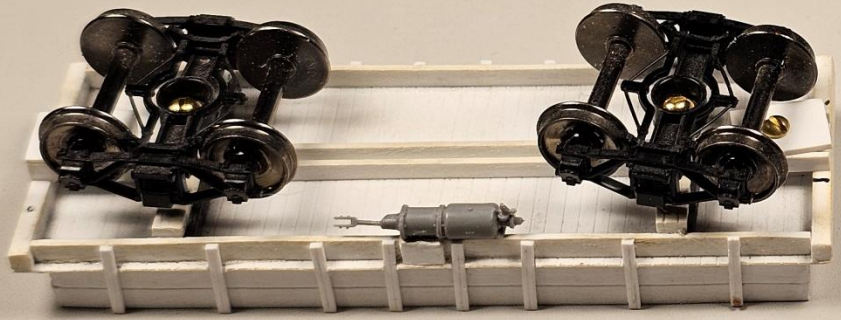
Figs. 1490-1491. Figs. 1492-1493. Figs. 1498-1501. Figs. 1502-1505.

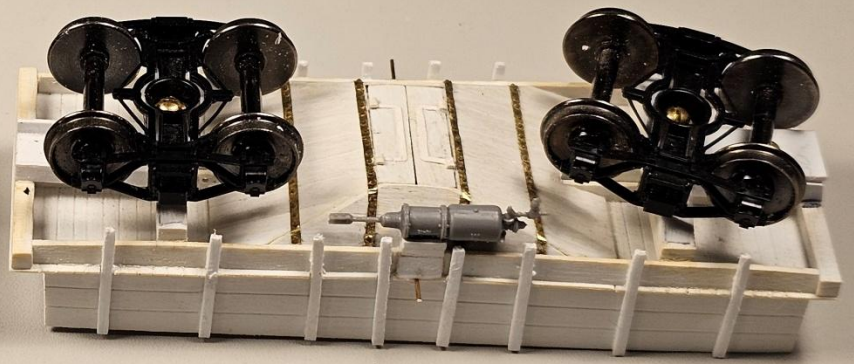


Figs 1504-1505. Figs. 1506-1507. Figs. 1508-1509. Figs. 1510-1511 Figs. 1512-1513.

DETAILS OF FOUNDATION BRAKE GEAR ADOPTED BY THE MASTER CAR BUILDERS' ASSOCIATION, 1889, 1890 AND 1891, EXCEPT THE WESTINGHOUSE BRAKE BEAM, WHICH WAS DROPPED IN 1893.

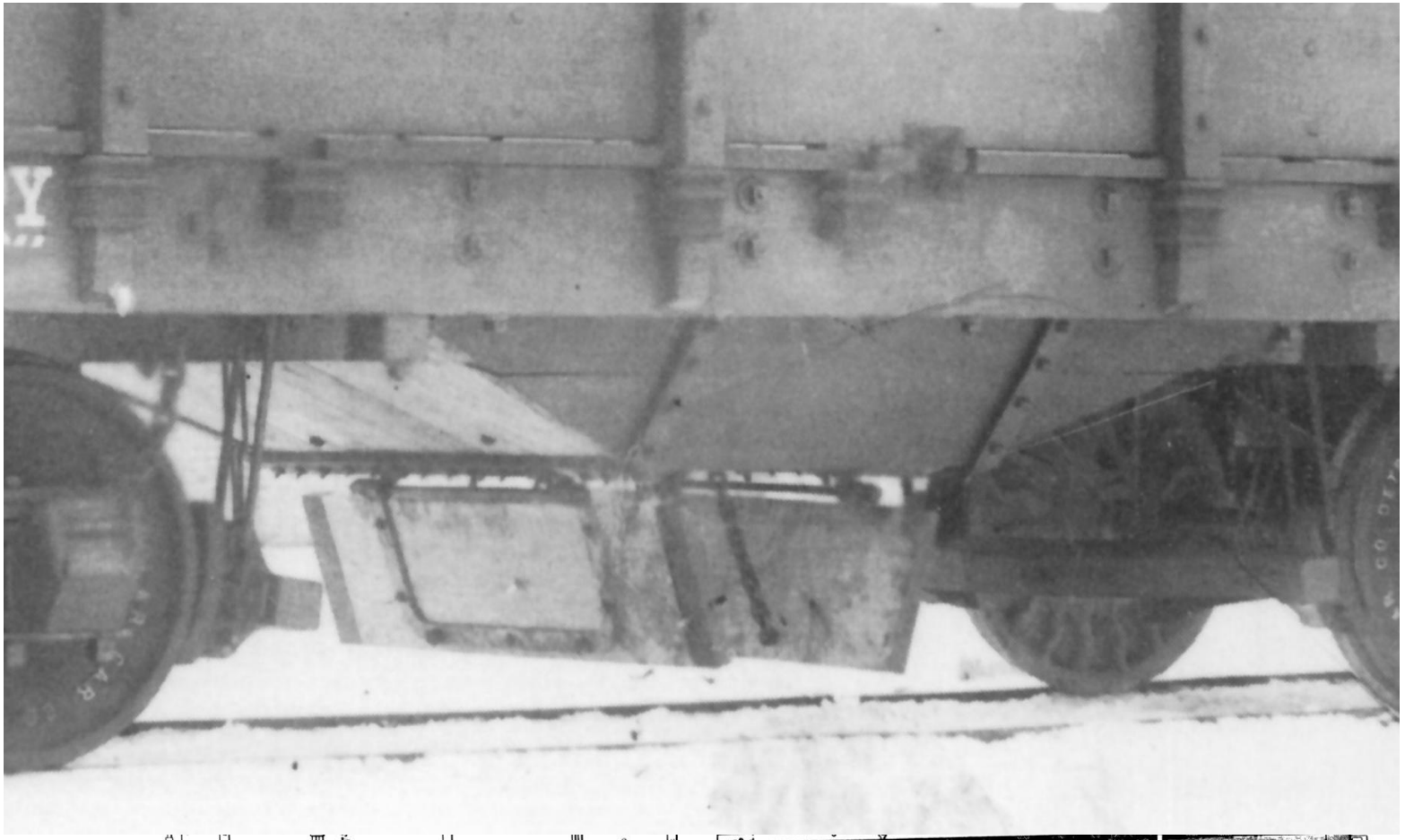
(156)

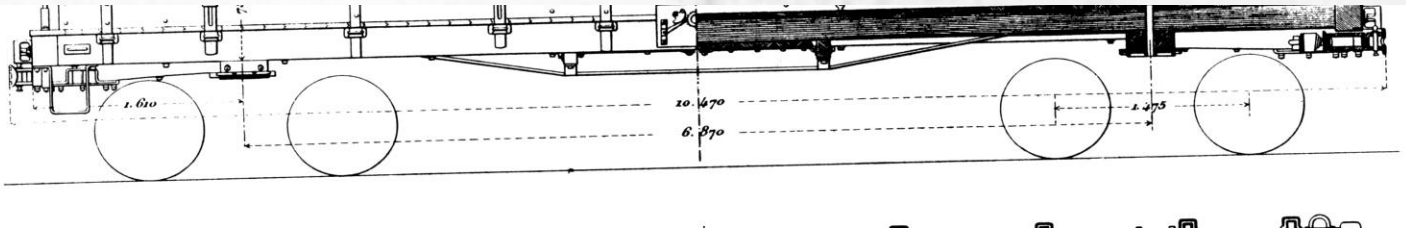





LIBERTY

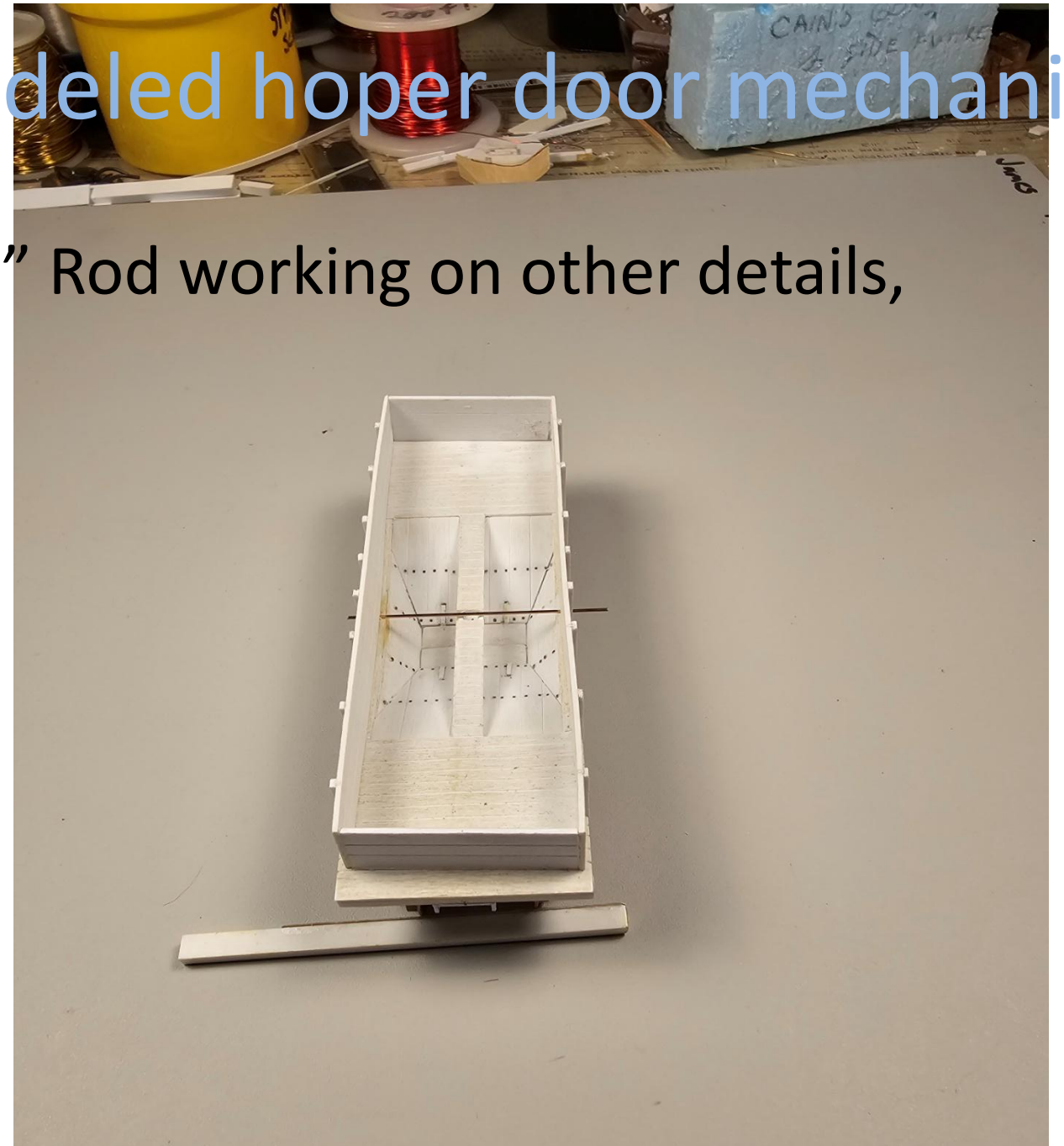
Hopper Door Mechanism



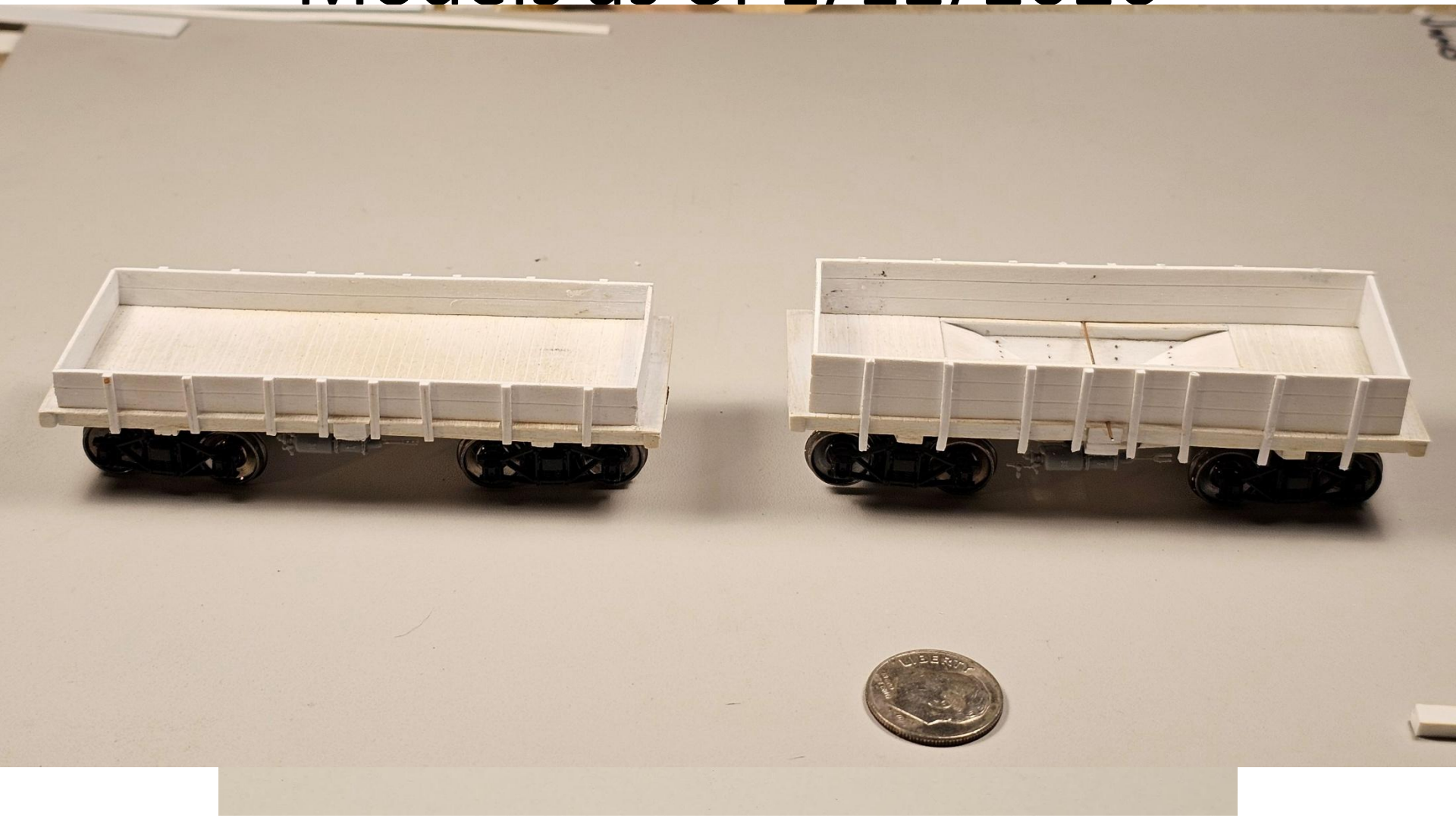


Modeled hoper door mechanism

- .020” Rod working on other details,



Models as of 1/12/2026



Valley Forge RPM in Malvern, PA

- March 19 to 22, 2026
- www.rpmvalleyforge.com

These models will be displayed @ this RPM meet. I hope to see you there.

Cornwall Railroad INFO

- www.cornwallrailroad.com
- https://cornwallrailroad.blogspot.com
- Cornwall Iron Furnace (presentation by Mark Cain)
  - youtube.com/watch?v=F9E7d2HqAuQ
- Home Video of the Cornwall RR (est. taken in 1962)
  - youtube.com/watch?v=mzbpmacxs