Taking Fast Tracks to the Next Level

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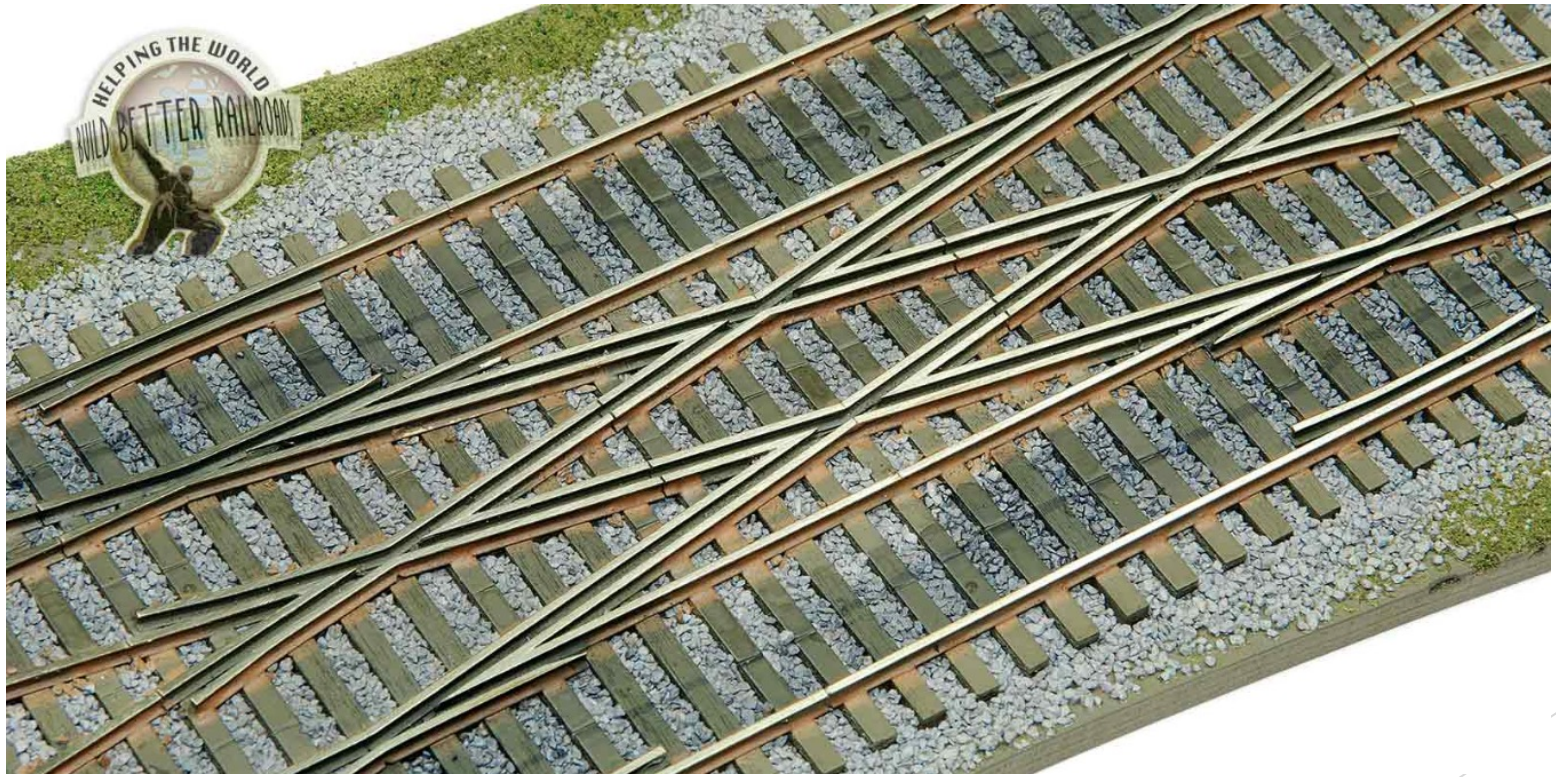


What is this Clinic?

- It's a collection of methods and ideas that can improve the construction experience, reliability and the look of your Fast Tracks turnouts.
- It is NOT meant to replace the Fast Tracks instructional DVD or YouTube videos.
- It's not a way to speed up the construction of your turnouts.
- It is NOT an invitation to borrow my Fast Tracks tools!

My First Impression of Fast Tracks

I can't solder!!

Why would I do that?

That's what they make turnouts for

Absolutely NOT

NO WAY!

Talk to the Hand

Not for me!!!

Nuh-uh.

My Second Introduction

Third Time's the Charm

What Convinced Me

- Best quality turnout that I've ever owned
- Highly prototypical look
- Fast Tracks are repairable
- Materials cost is about half of a commercial turnout
- Fun to build

Some Easy Basics

Manage the Mess – Get an Apron! ($12.68 on Amazon)

These are the filings from ONE stock rail

https://www.amazon.com/gp/product/B0B47J9SZ3/ref=ppx_yo_dt_b_asin_title_o06_s01?ie=UTF8&th=1

Some Easy Basics

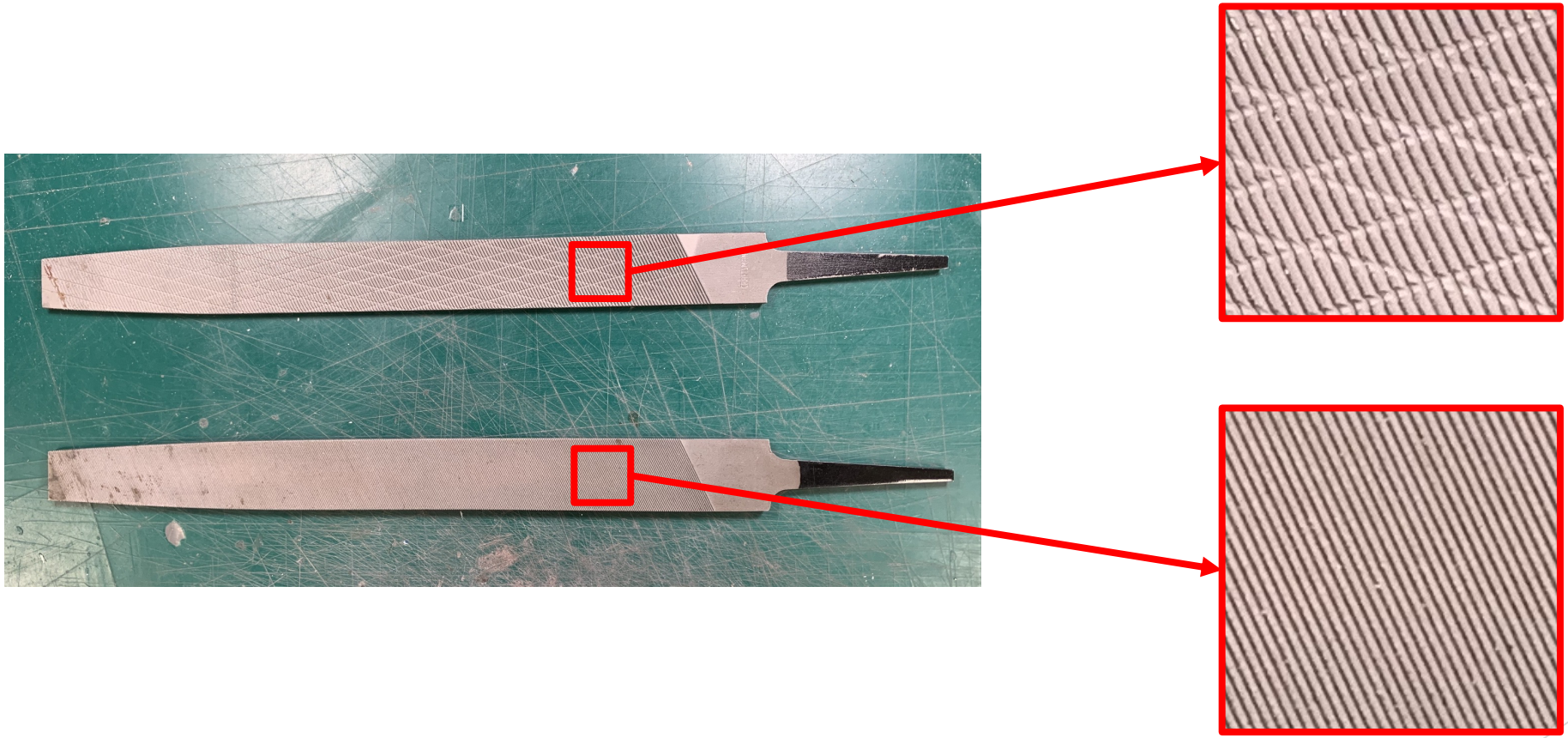
Lacquer Thinner is Your Friend

This is the dirt and oil from one three-foot piece of rail.

- Clean your rail before you start to allow for the best bond for your solder.

Some Easy Basics

Use Multiple Files



- Start off with a more aggressive double-cut file. Finish with a less aggressive single-cut file

Smooth the Exposed Filed Surfaces

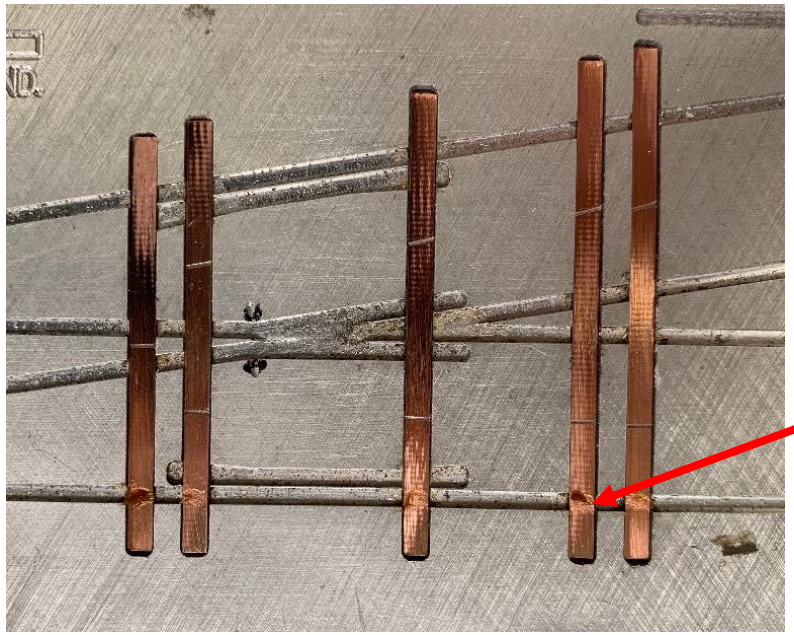
Note the grooves and rough surfaces after filing

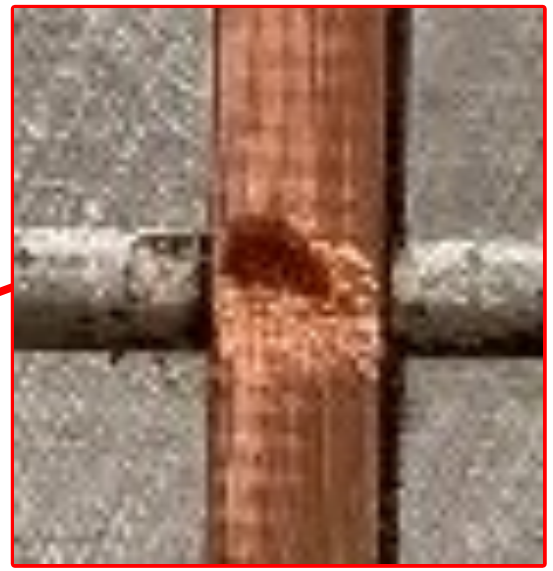
- The grooves and rough surfaces left from filing are dirt collectors that allow dirt to spread around your layout.

Smooth the Exposed Filed Surfaces

- Use a 320 grit sanding twig to polish/burnish your exposed filed surfaces ($2.35 for a pack of 20)
- Durasand Link: https://durasand.com/collections/popular-picks/products/sanding-twigs?variant=42140831907 95
- A “dirty” sanding stick will nicely burnish your rail.

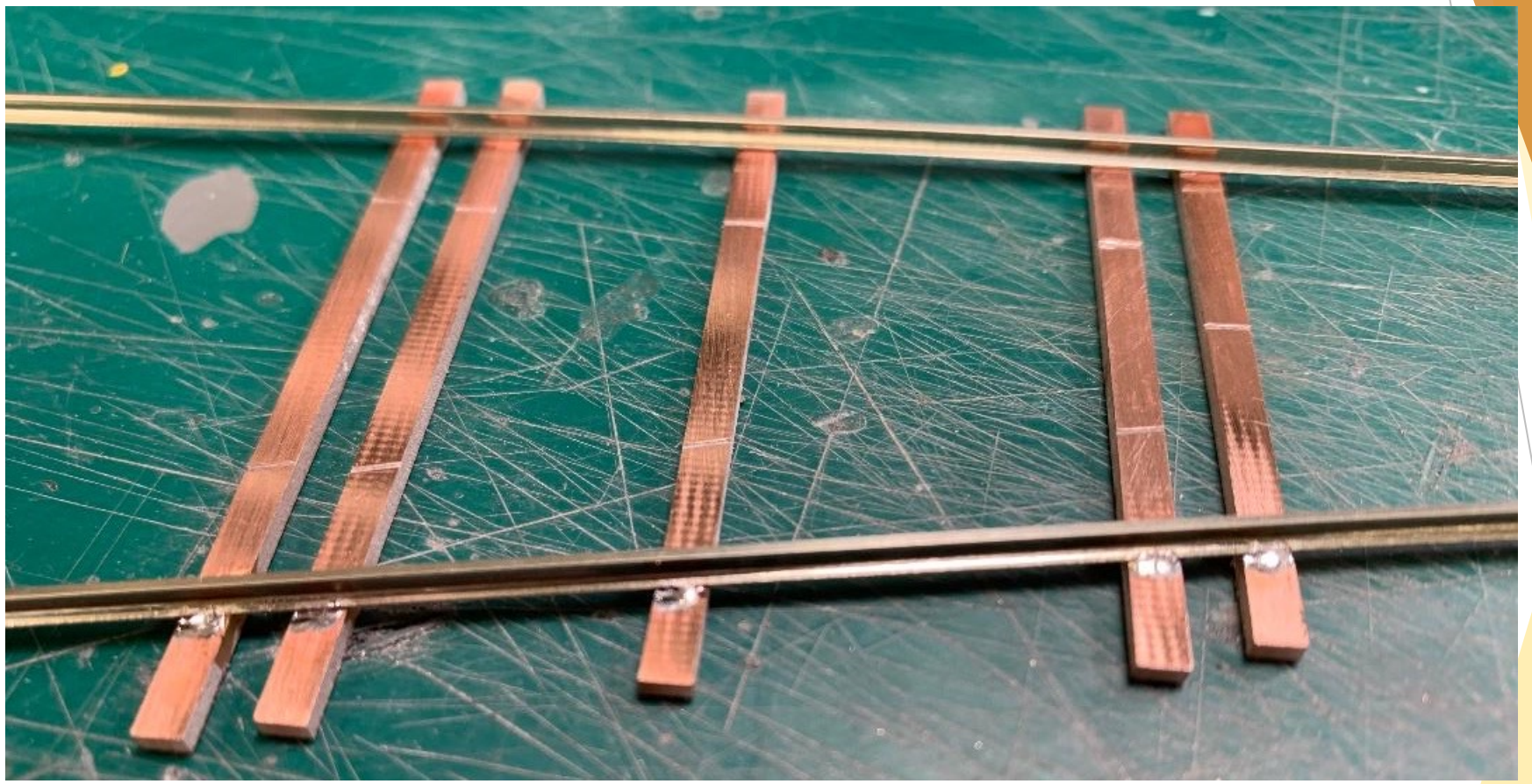
Apply Flux Like a Plumber





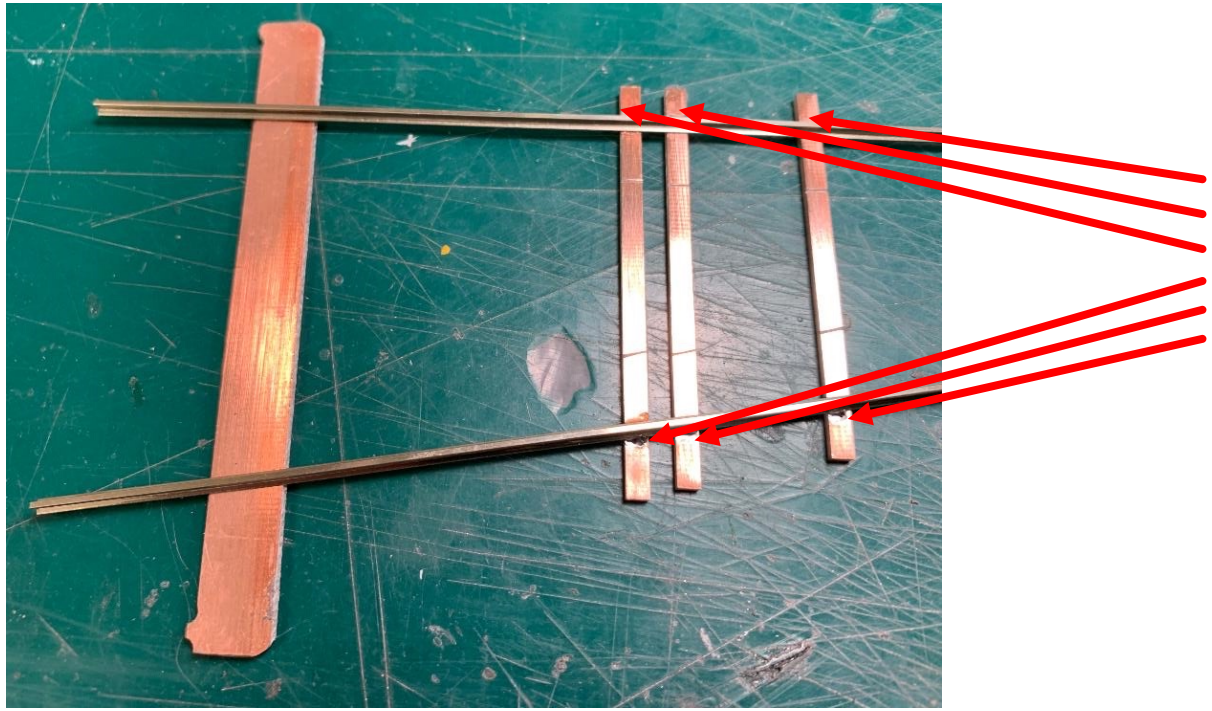
- The Fast Tracks videos recommend installing the copper cross ties and rails and then adding flux at the joint on each side of the rail. This is not conducive to having solder flow between the cross tie and rail joint. Solder joint is then limited to the exposed surfaces and results in a “chunk” of solder at the rail/cross tie interface.
- Instead, apply solder on the cross tie at the intersection of the rail. Then lay the rail in the fixture. The idea is to apply flux where you want the solder to flow.

“Reflow” the Solder



- Fast Tracks tools are made from aluminum, which acts as a heat sink.
- This heat sink results in the solder cooling faster than normal, resulting in a less finished looking solder joint.

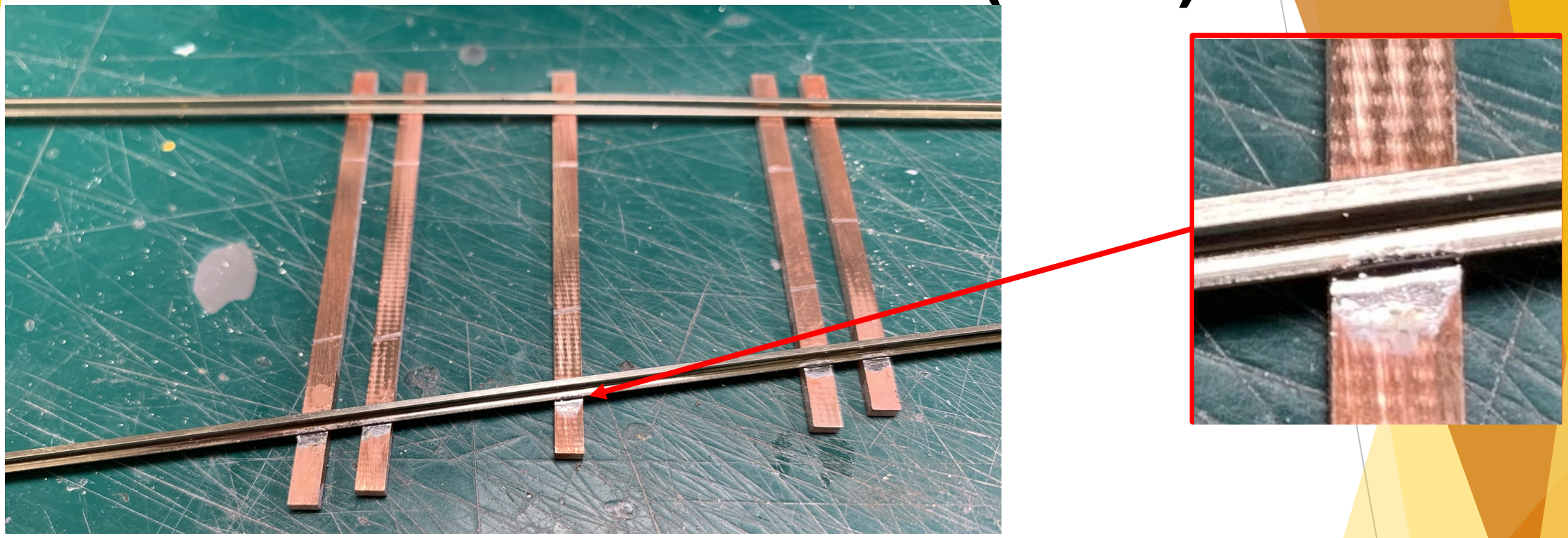
“Reflow” the Solder (cont).



Touch the hot soldering iron tip to each of these points to reflow the solder into the joint

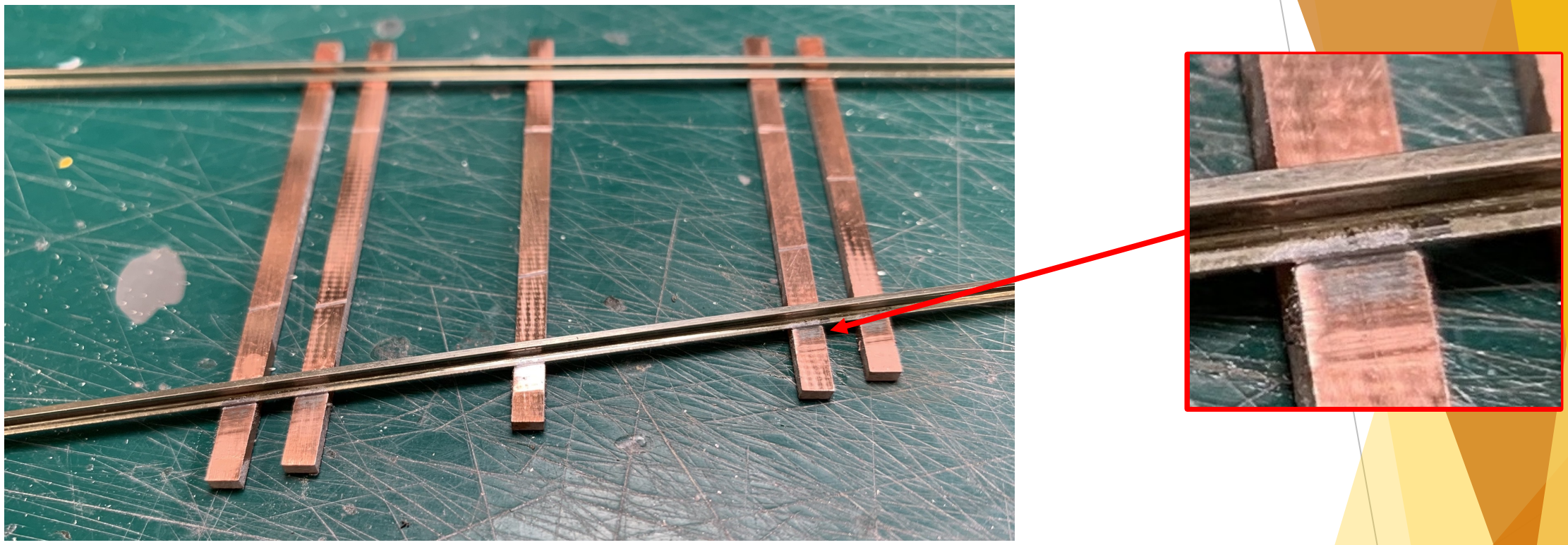
- Remove your work from the Fast Track tool to reflow your solder.
- Hold the rail down with either your fingers, a pair of pliers, or the filing tools.
- Reflow the solder by touching the tip of the soldering iron to the joint.
- The ends of the turnout can be supported by the waste copper carrier strip to prevent the rails from moving.

“Reflow” the Solder (cont).



- The result is a very nice smooth solder joint with the majority of the solder between the rail/cross tie joint.

Final Cleanup



- Any final finishing can be accomplished with some very light sanding using the 320 grit sanding sticks.

“Butter” Your Frog Rails

- Apply flux to both sets of the frog rails with a micro-brush to enable easy soldering and a robust joint.
- Micro brushes - $5.99 for a pack of 500

https://www.amazon.com/gp/product/B07JYX17B1/ref=ppx_yo_dt_b_asin_title_o01_s00?ie=UTF8&th=1

Make a Cast Frog

- Instead of just joining the rails together with solder, fill the area behind the frog with solder
- Hold the soldering iron tip somewhere close to the ends of the point rails and feed the solder into the tip. This will fill the void behind the rails.
- Drag the soldering iron tip toward the point to completely fill in the gap and to smooth the top surface
- Finish the top with a sanding stick

- Important Tip: Frog must be in the Fast Tracks tool to make this work!!!

A Little “Diversion” on Frogs

Prototype Frog

Fast Tracks “Cast” Frog

Did my Railroad Use Cast Frogs?

- The short answer is: Almost definitely yes!!!!

A Little History:

In 1902, the Pennsylvania Railroad installed the first cast frog in North America as a trial.

They found that the old joined rail style frog required 17 times more maintenance!!

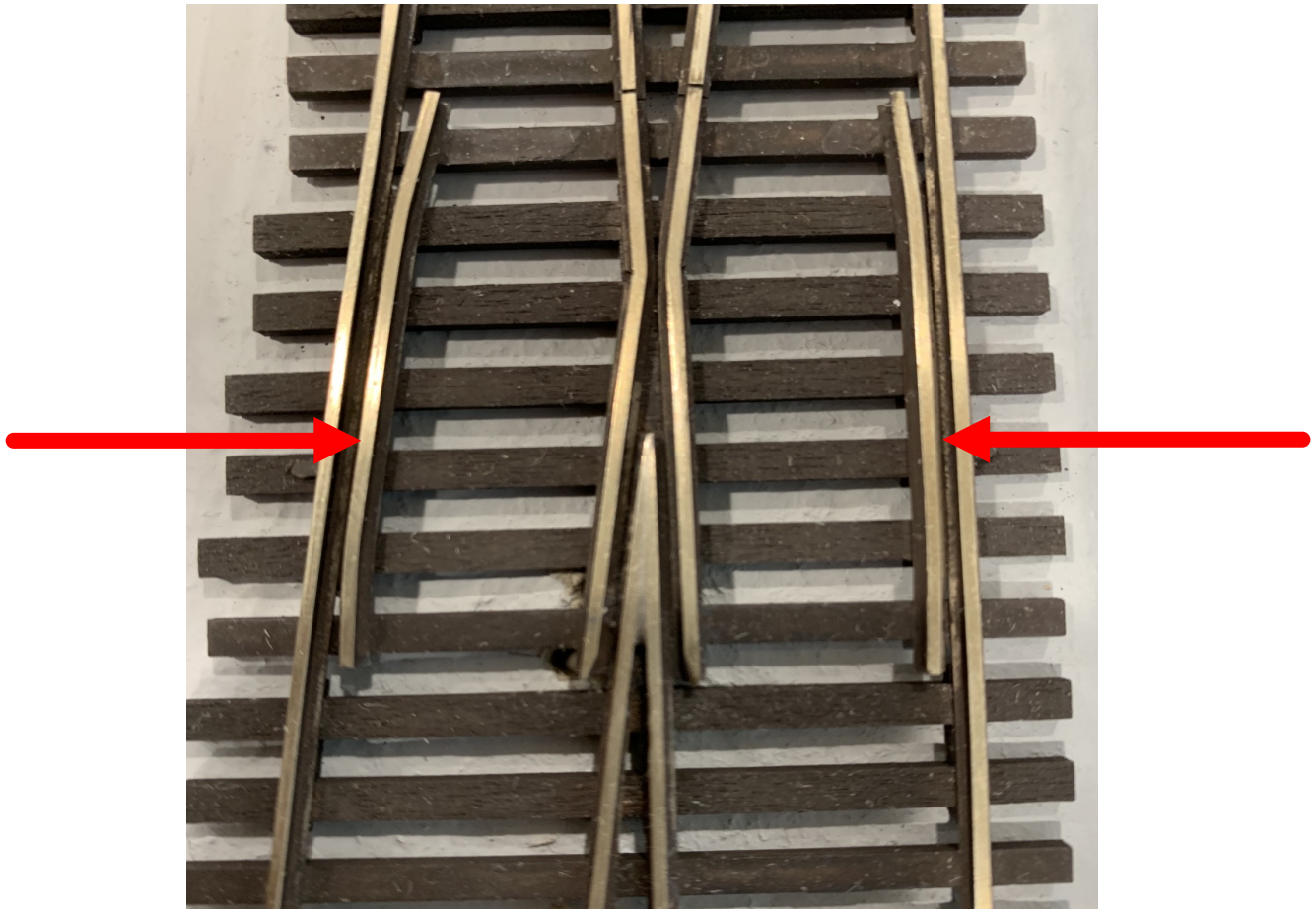
If you model any time after 1902, your railroad probably used cast frogs.

Why?

Cast frogs are made of manganese.

Manganese frogs get harder but not more brittle every time a wheel roles over it.

There Has Never Been a Silent Derailment



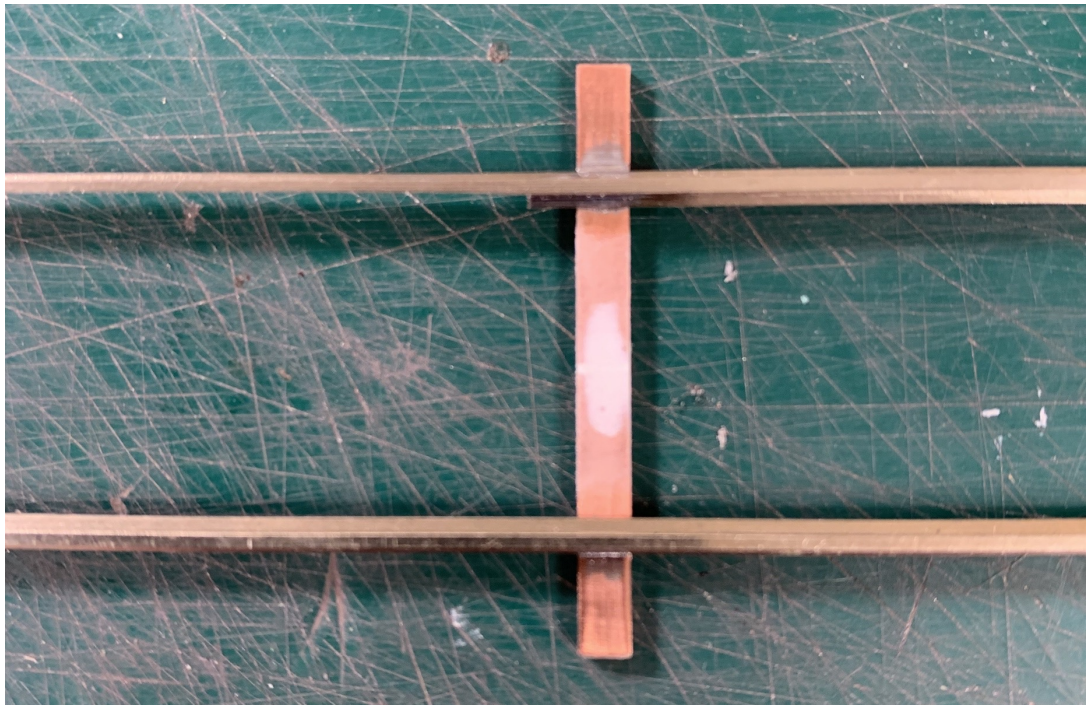
- I bump the guard rails inboard a very very small amount. I find that trucks glide through the turnout easier and quieter with this adjustment.

Keep it Clean

Scrub your completed rail/copper tie assembly with lacquer thinner and a toothbrush

Fill in the Gaps

- The gaps cut into the copper ties are necessary for electrical isolation.
- Use Tamiya filler putty to fill in those gaps in the ties.



How to Best Apply Pliobond

- The instructional videos tell you to apply a bead of Pliobond to the rails and then to the wooden ties. Wait for the Pliobond to set up, and then join the two together.

- I’ve had mixed results with the quality of the bond using this method.

- Instead:
  1. Apply a bead of Pliobond to the wooden ties as a “primer” layer.
  2. Apply a bead of Pliobond to the rails.
  3. Finish with a second bead of Pliobond on the wooden ties.
  4. After the Pliobond sets up, join the rails and ties together.

Weight the Turnout Down for a Day

Use some concrete bricks and a piece of glass to make the Pliobond joint solid forever.

Concrete bricks make GREAT weights for a variety of things as you are building your layout.

- They are heavy, flat, have square corners, and cheap! ($.68 at Lowe's)

Miscellaneous Tips

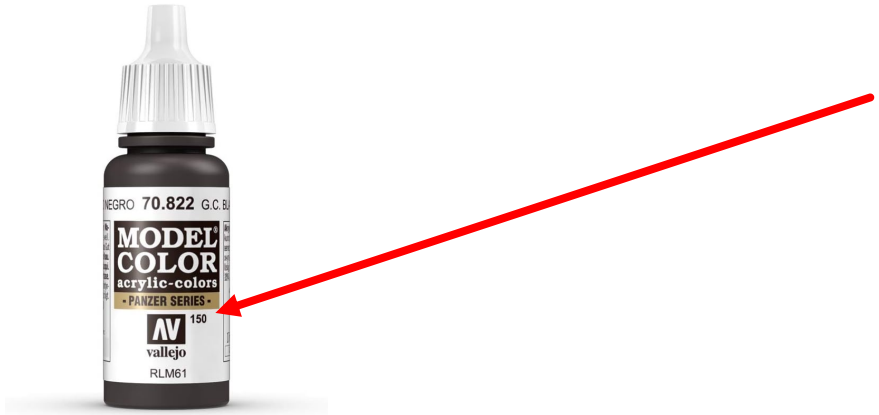
- Micro-Engineering Rail comes in 1½-foot sections and 3-foot sections. You will have VERY little waste if you buy the 3-foot sections. You will have a LOT of wasted rail if you use 1½-foot sections.

- Fast Tracks gives progressively higher discounts (both dollars and percentages) as you buy more. Order everything you need at once for the largest discount.

- I use a Weller WP-35 soldering iron (35 watts) with an ST7 conical tip

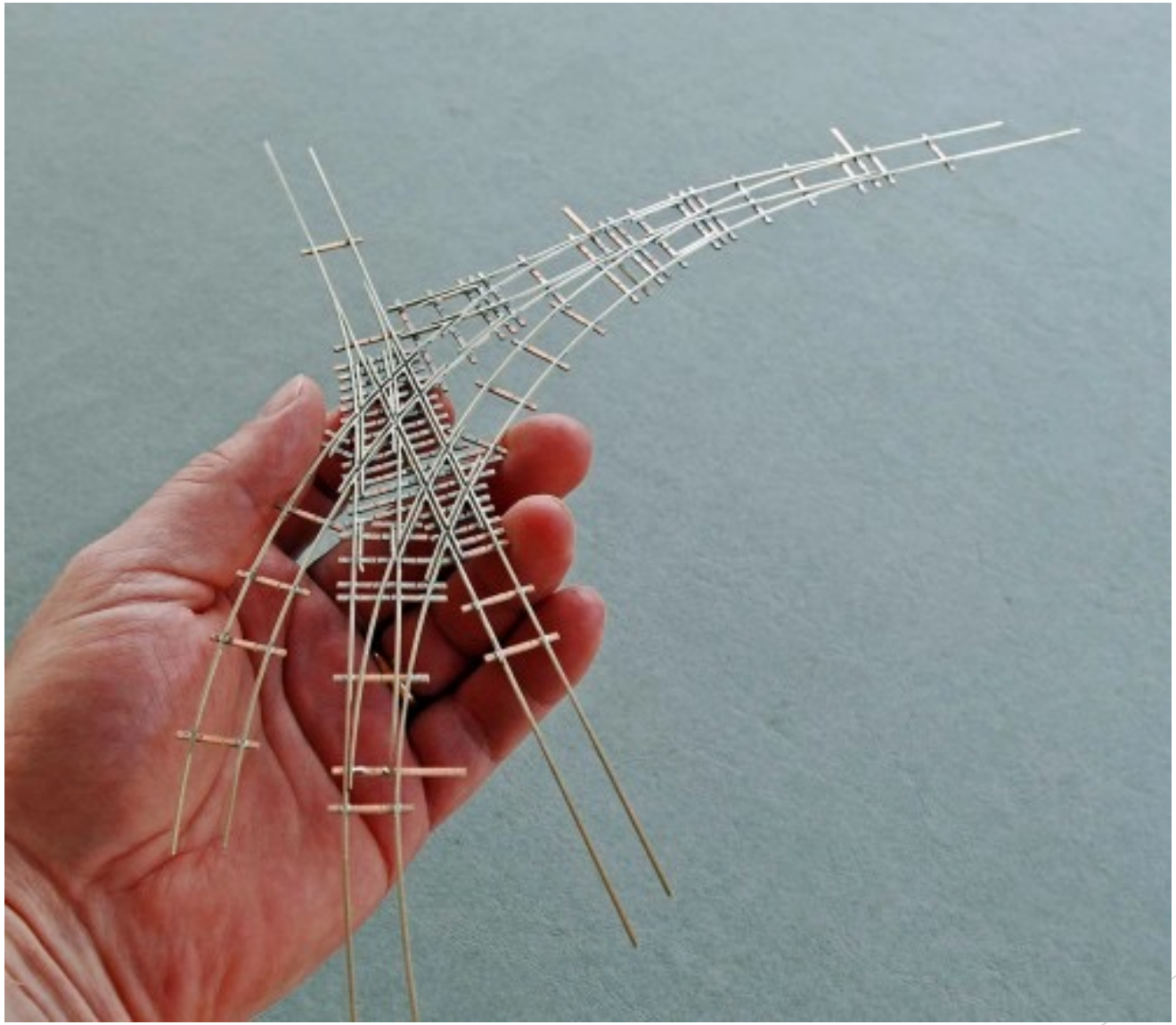
Miscellaneous Tips

- A great paint color for fresh creosote is:
  Model Color 70.822 German C. Black Brown by Vallejo (Bottle #150)



This is the 150th bottle on the rack

Some Impressive Trackwork



A section of trackwork from the Bronx Terminal

Modeler's Challenge!

Build an exact replica of the new Brightline Turnout to the Florida East Coast mainline at Cocoa Beach, Florida.

- Turnout is a #32.
- The turnout is 436 feet long.
- It takes 5 switch motors to operate it.

Thank You!