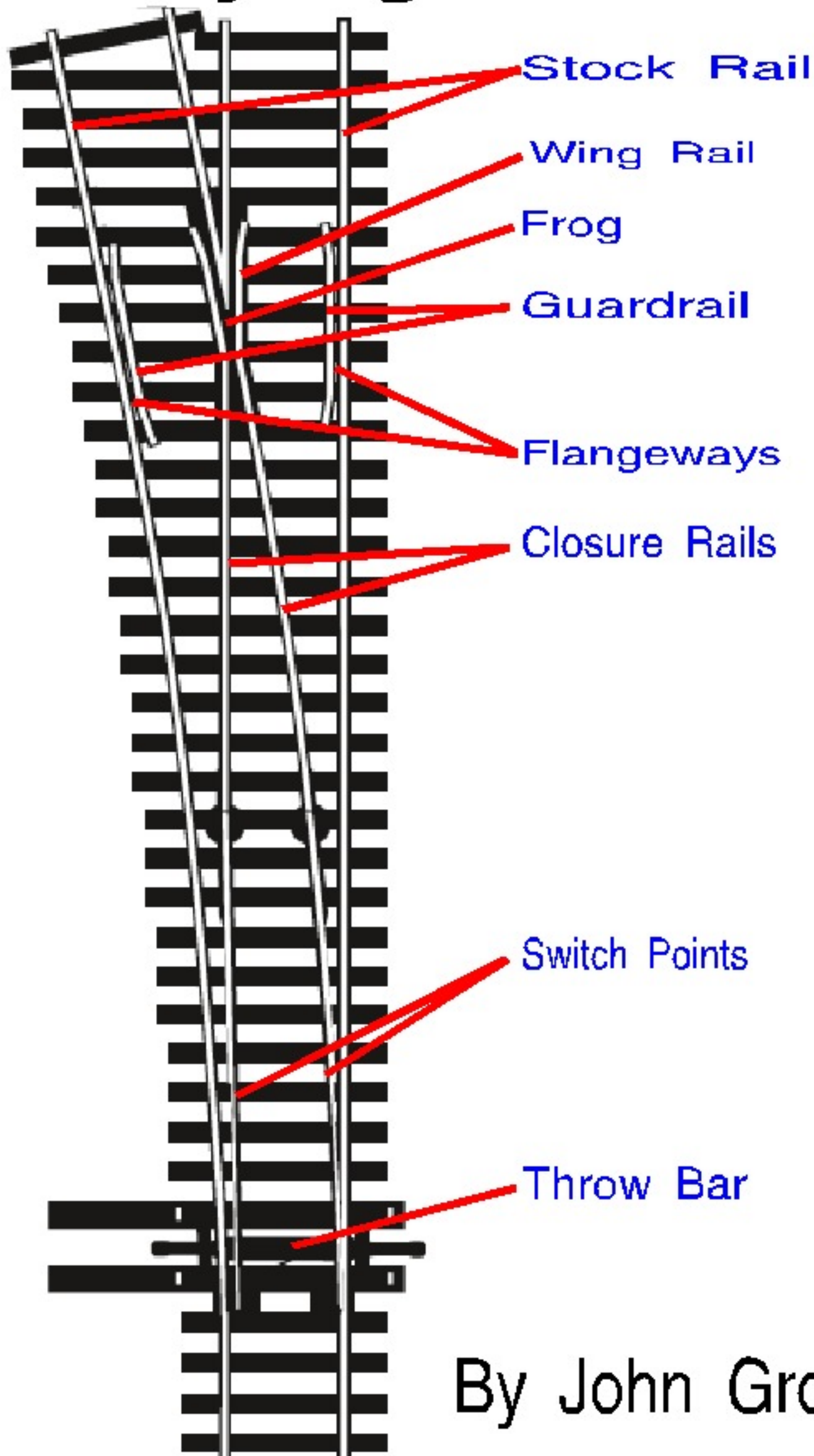


# Handlaying Turnouts



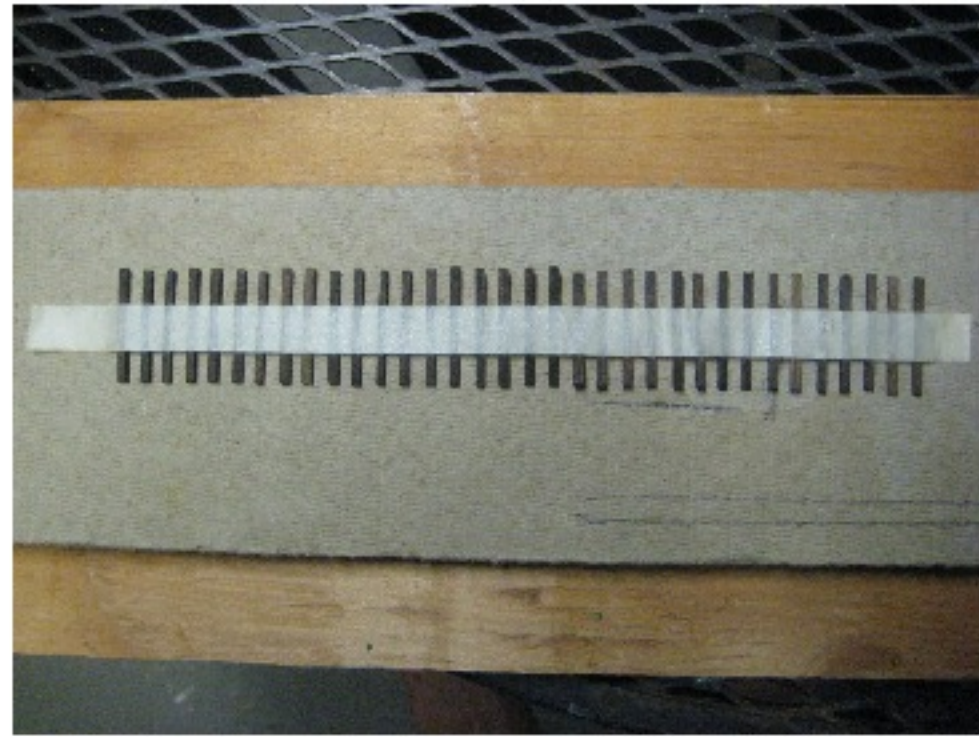
By John Grosner

**1**



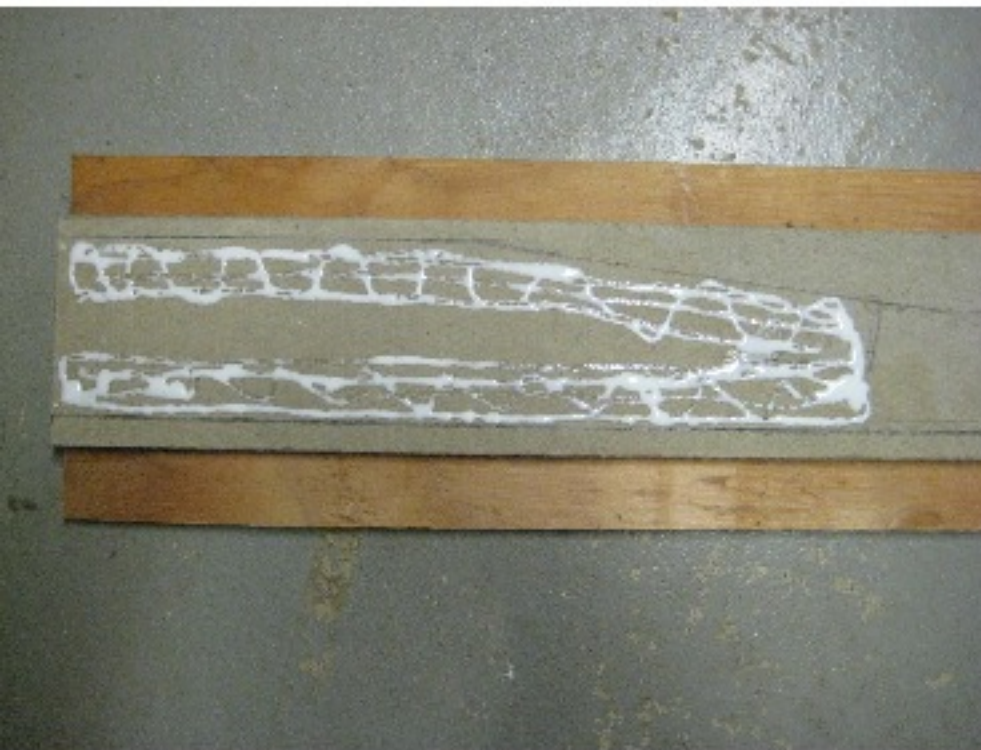
**1/2" plywood w 1/2 homsote**

**2**



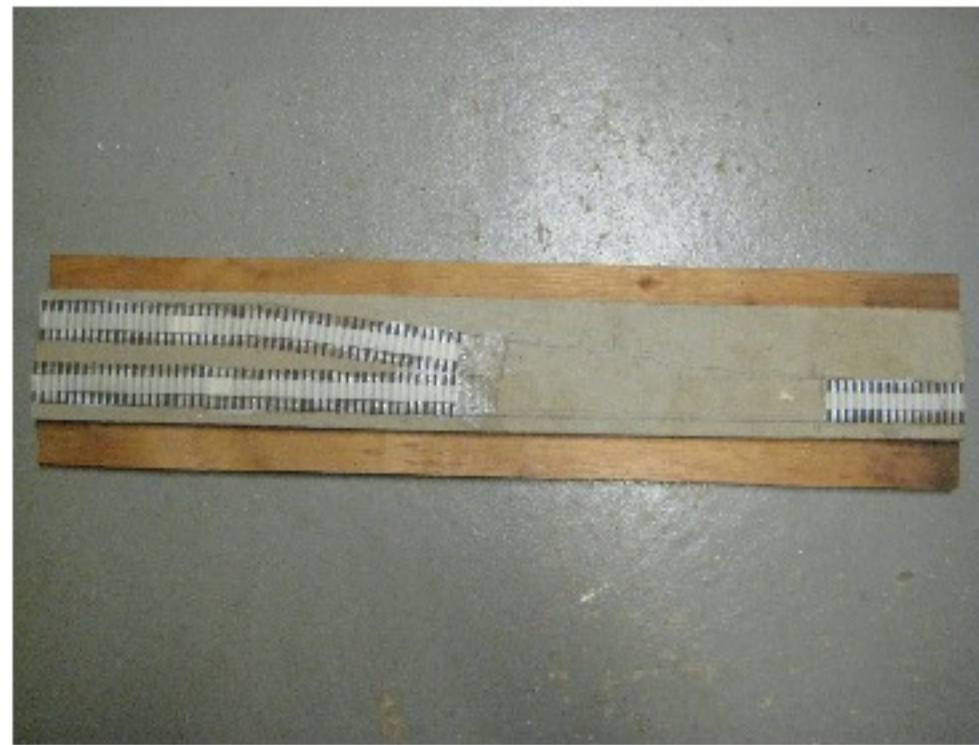
**Taped ties from Rmax jig**

**3**



**Tie lines drawn  
White glue application**

**4**



**Regular ties in place**

**2**



5



Closeup

6



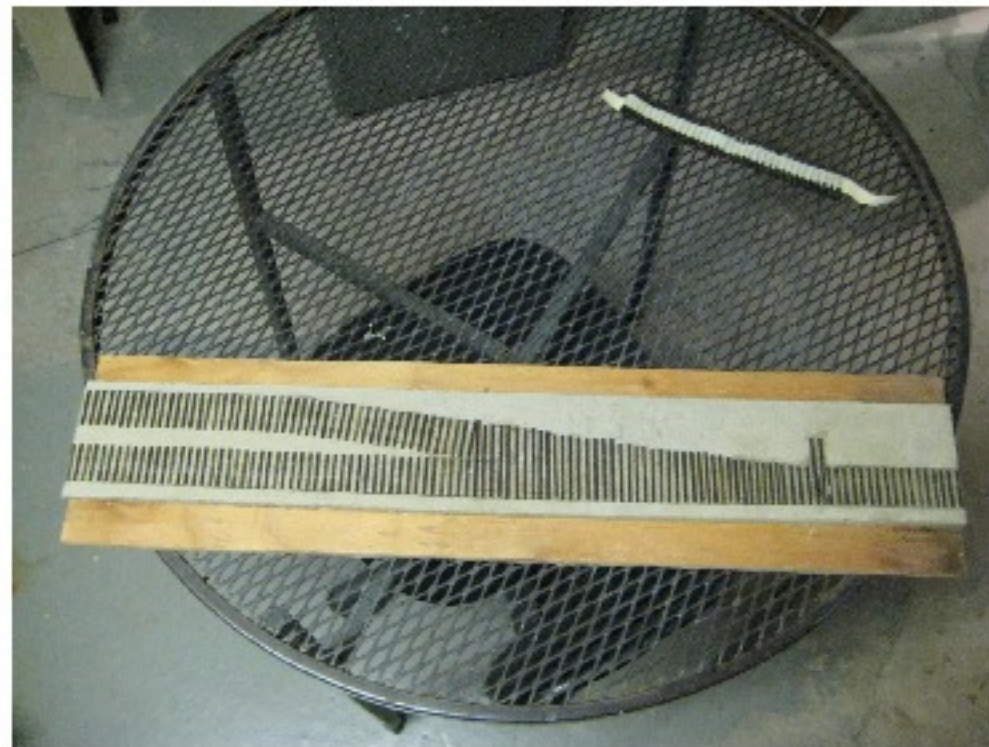
Add weight

7



Switch ties in place

8



Ties ready for ballast



9



Drill & elongate throw bar hole

10



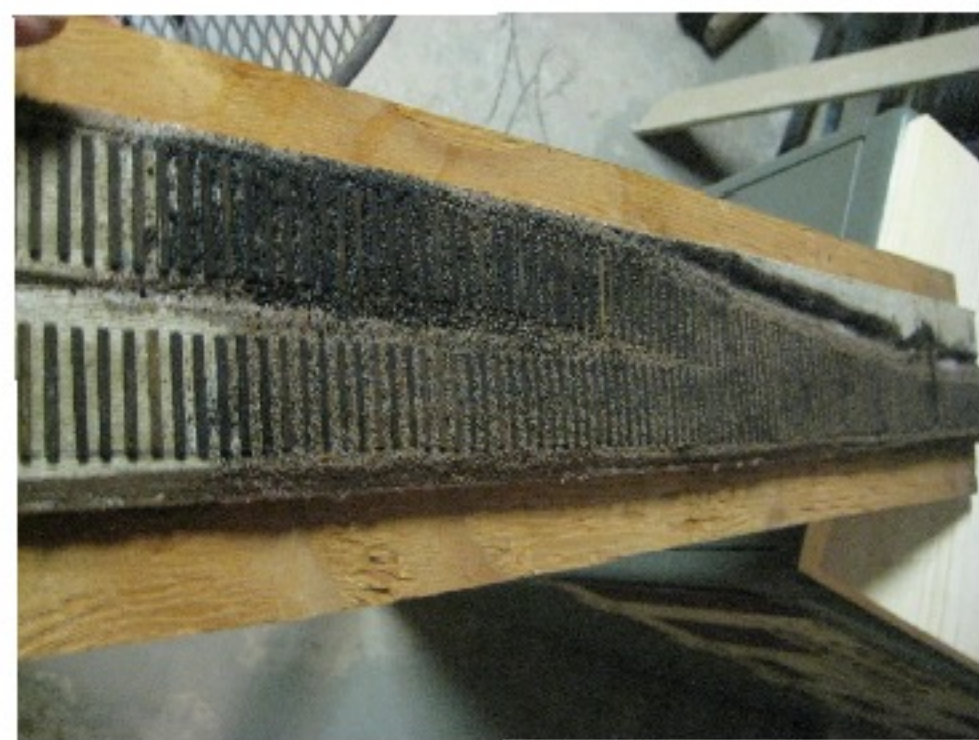
Bottom view

11



Ballasted

12



Mainline vs siding ballast



13



**Another view**

14



**Rail sander**

15



**Stock rail w web removed**

16



**Diverging rail spiked**



17



**Through rail spiked**

18



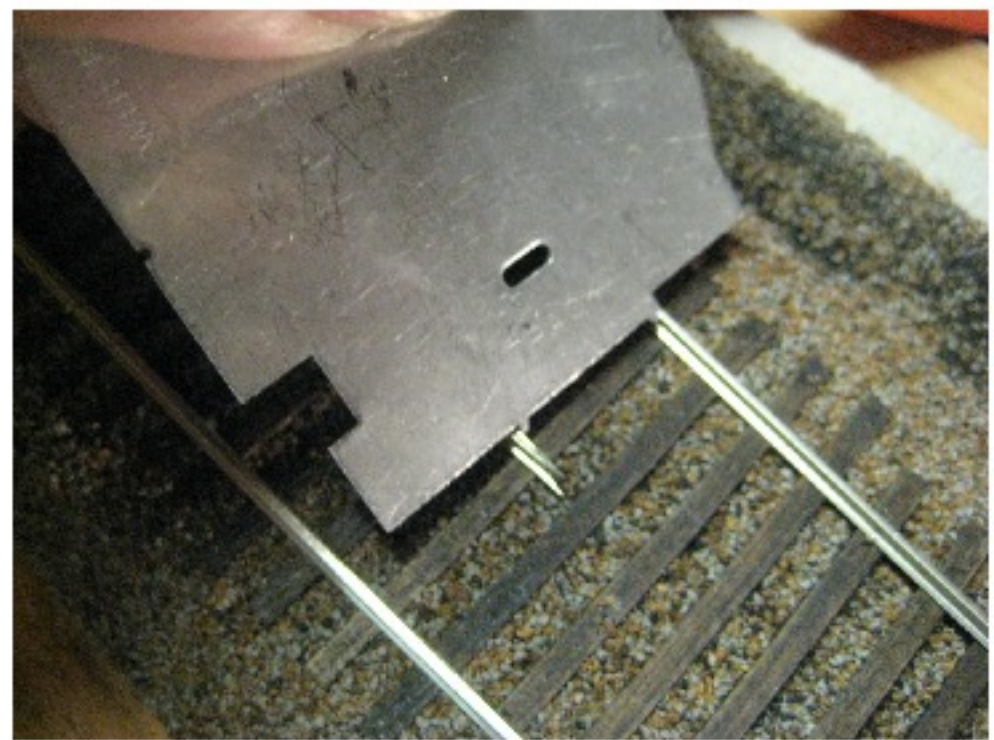
**Close-up of point area**

19



**Frog rail spiked w Rmax gauge**

20



**Determining end point of frog**



21



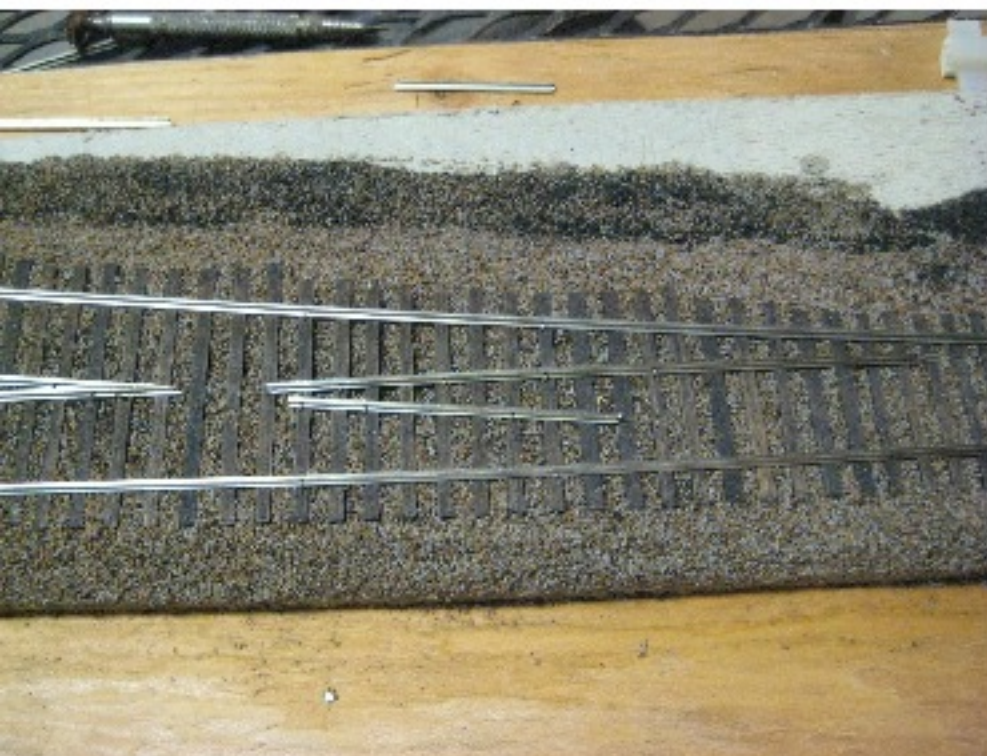
Checking other side w NMRA guage

22



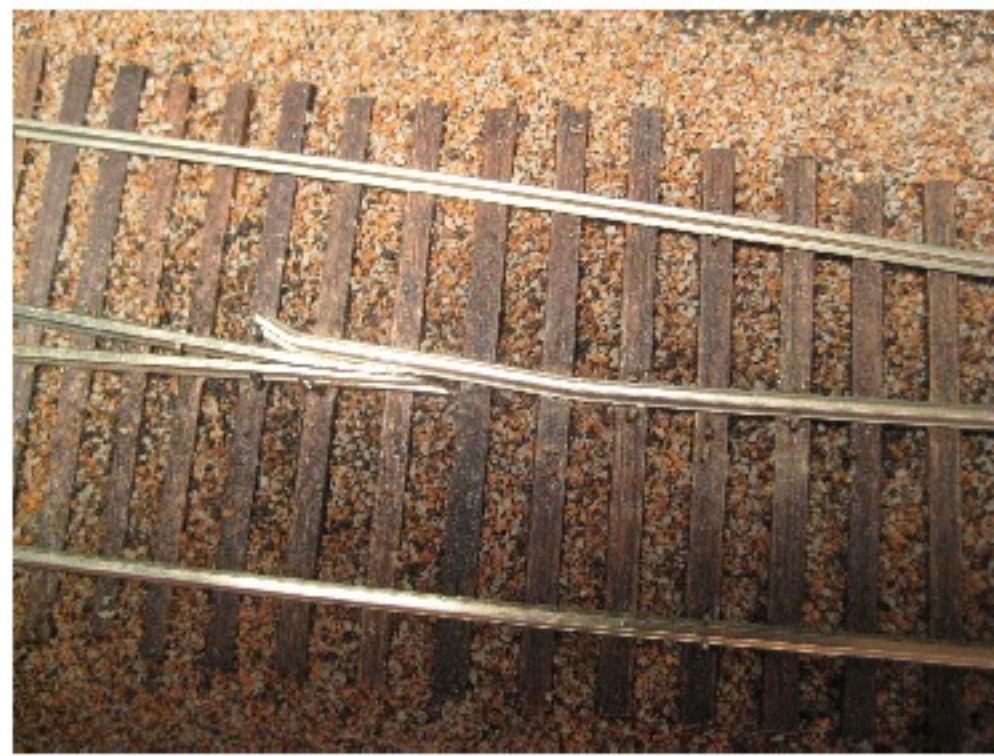
Frog complete

23



Temp closure rails spiked

24



Bend wing rail



25



Cut point the length & sand base off

26



Install diverging closure & point rail

27



Drill hole for frog wire

28



Drill holes for closure rails



29



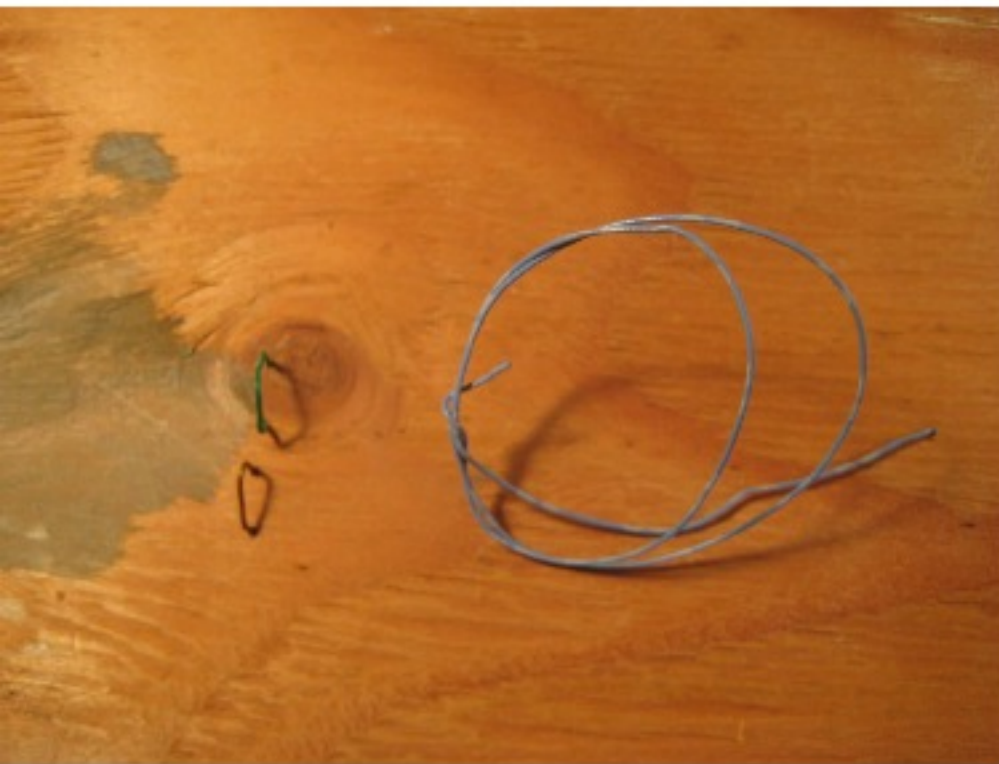
**Closure rail wiring**

30



**Frog wiring**

31



**Bottom view**

32



**Solder frog**

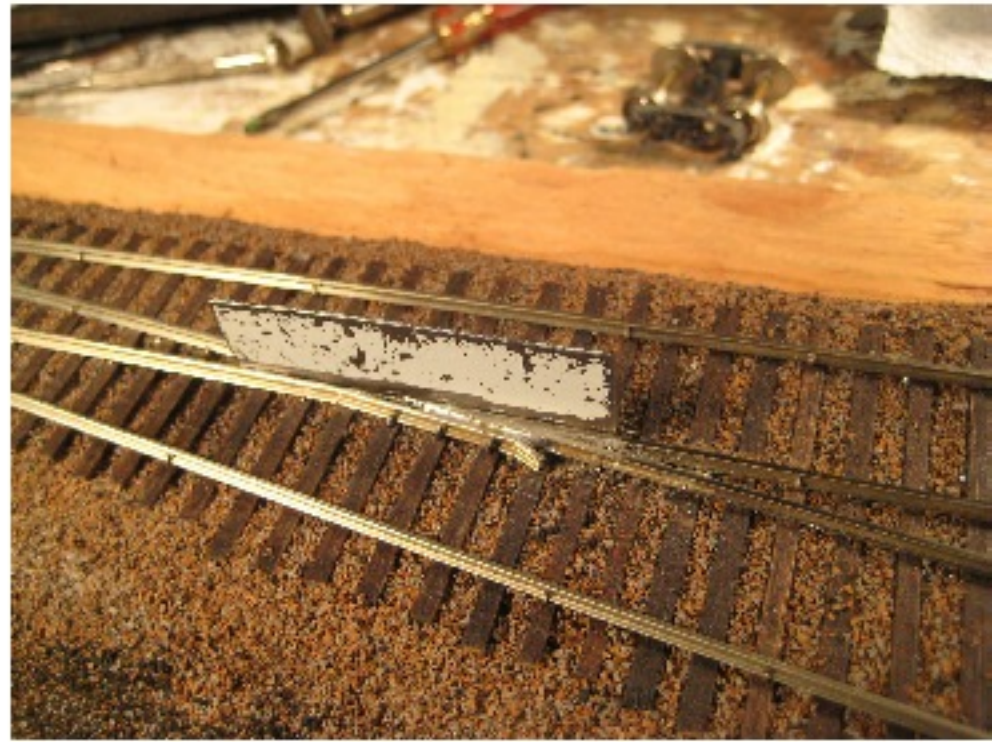


33



**File rail head even if needed**

34



**Cut flangeways w broken 4" piece of hacksaw blade 32 TPI**

35



**Finished frog**

36



**Prepare throwbar for soldering**

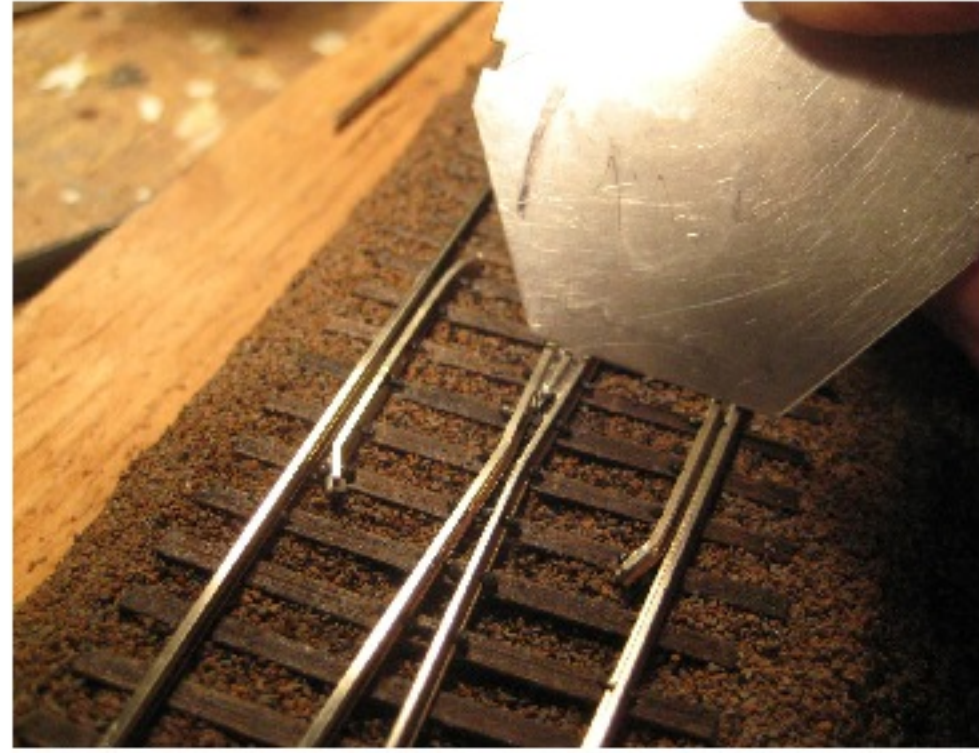


37



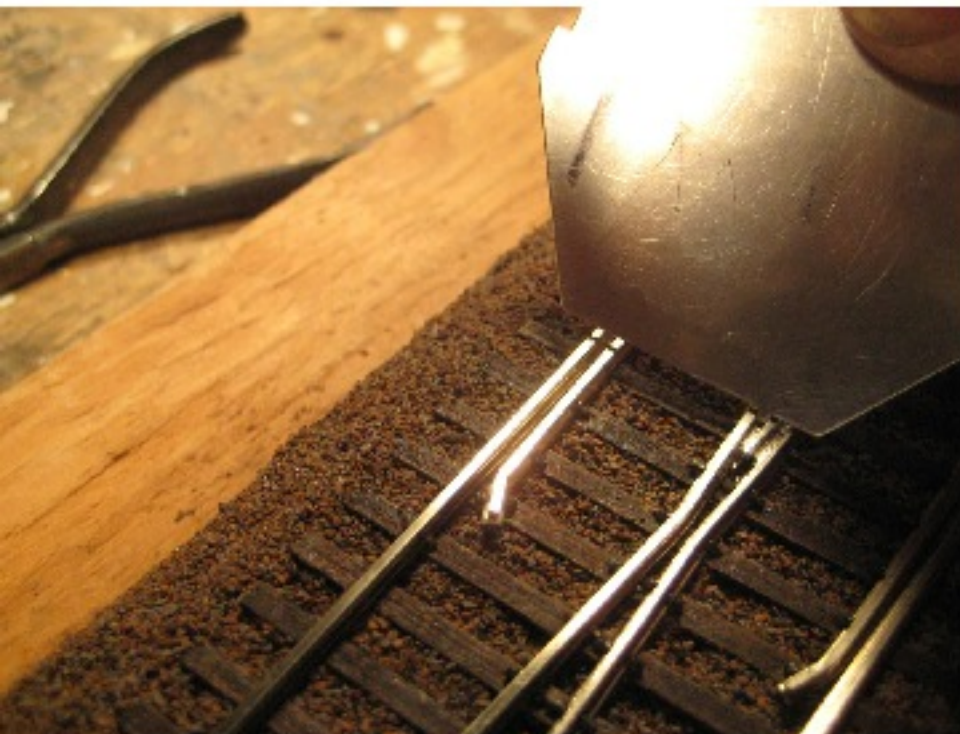
**Throw bar soldered to points**

38



**Guard rail placement**

39



**More placement**

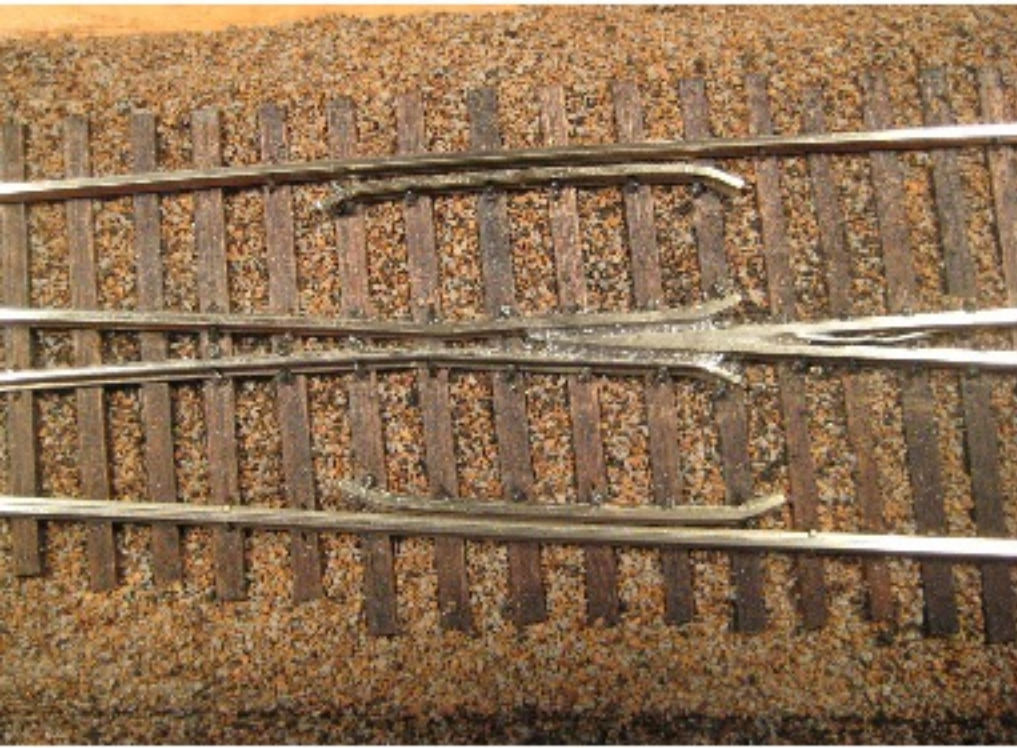
40



**Guard rails spiked in place**

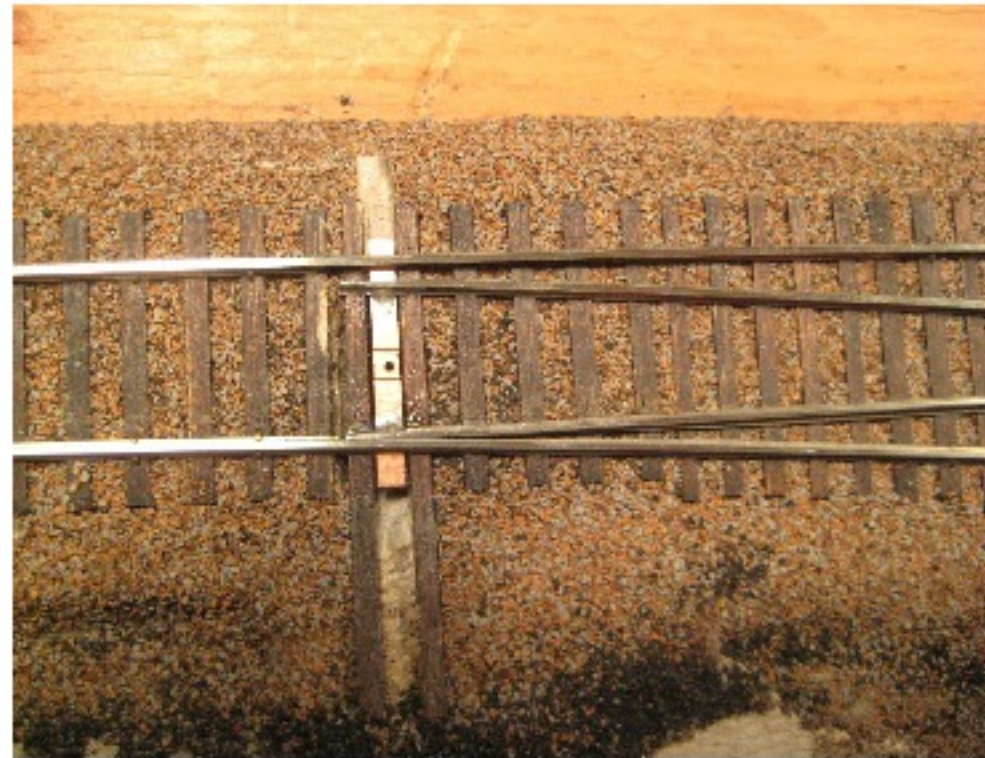


41

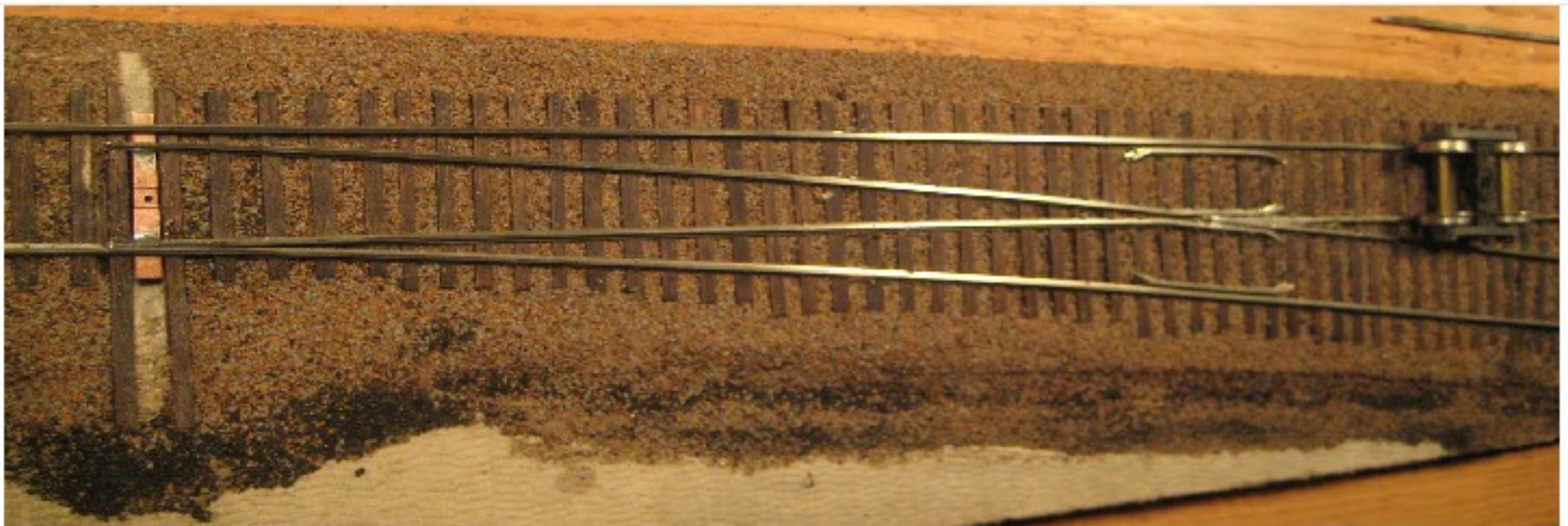


**Frog done**

42



**Points done**



**Finished Turnout**