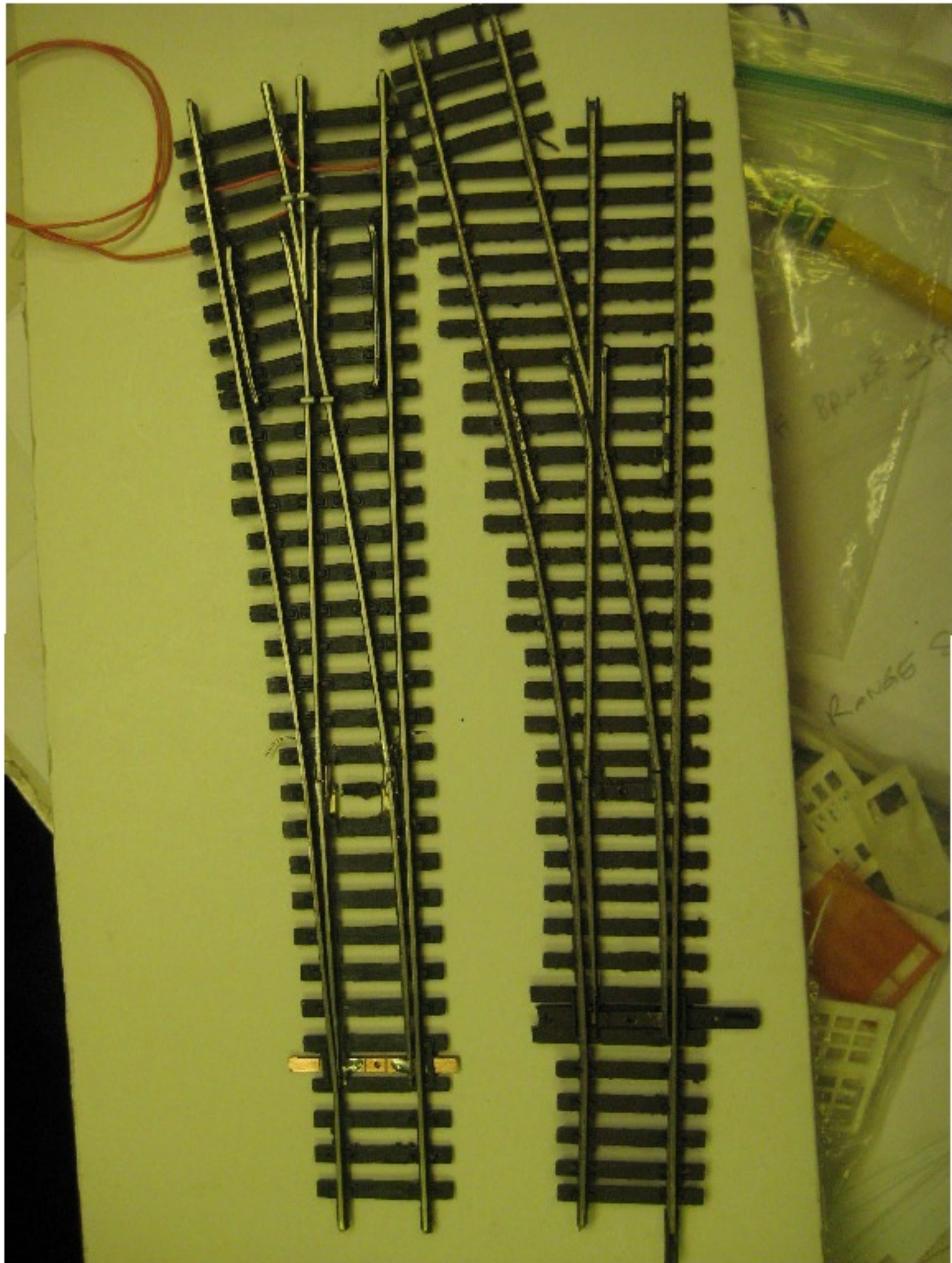


# Transforming a DC Turnout into one that's DCC Friendly



By John Grosner

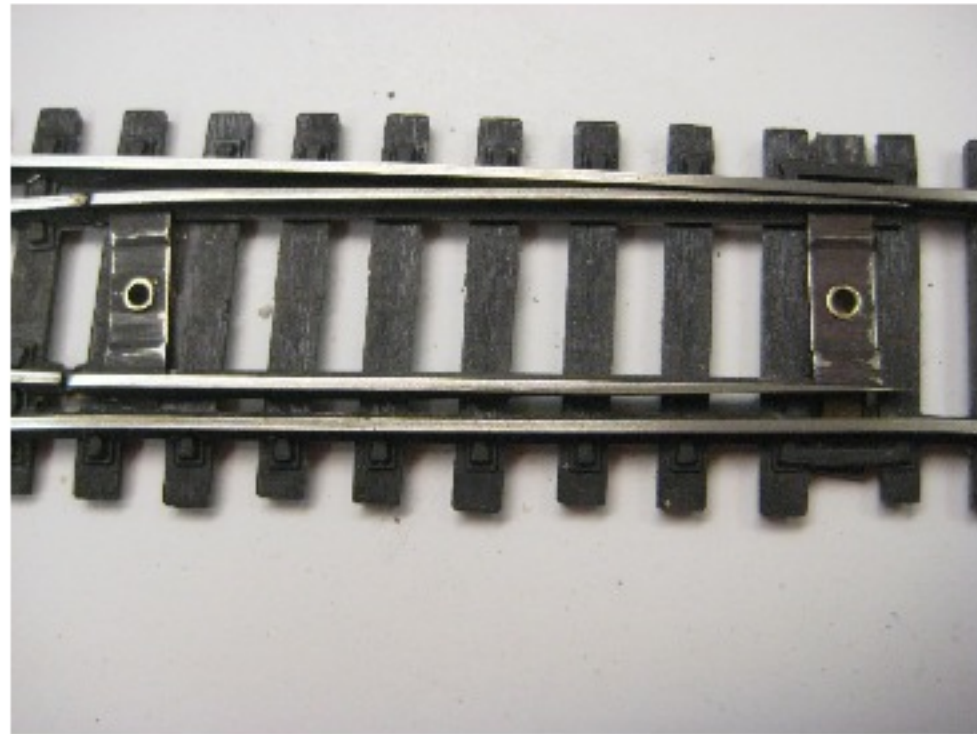


1



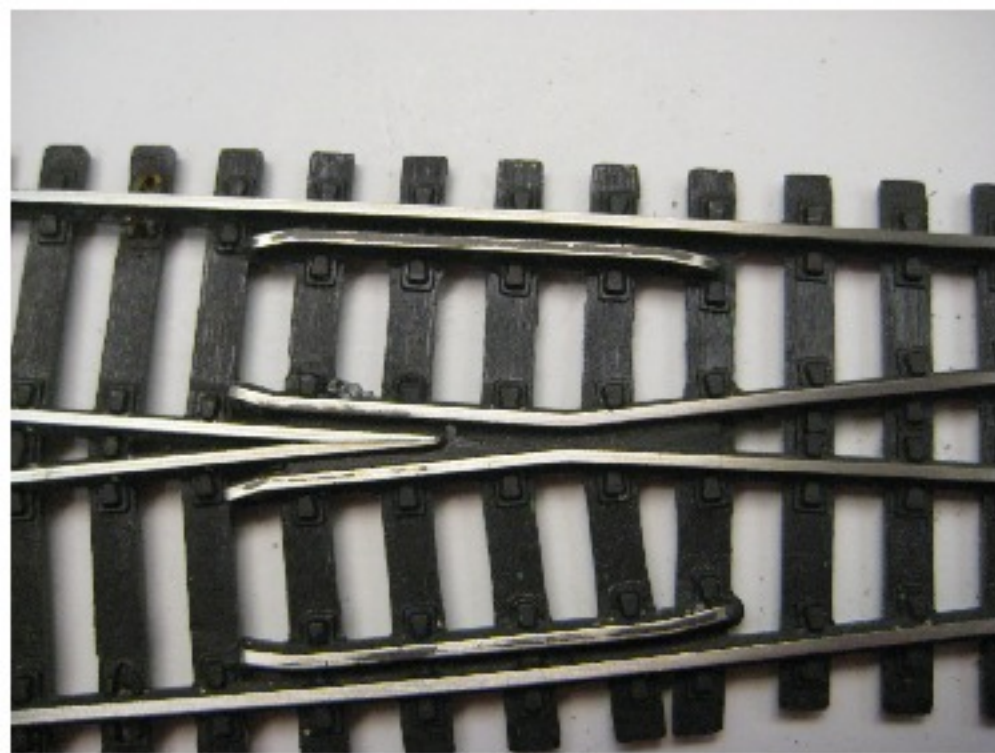
Shinohara DC Turnout

2



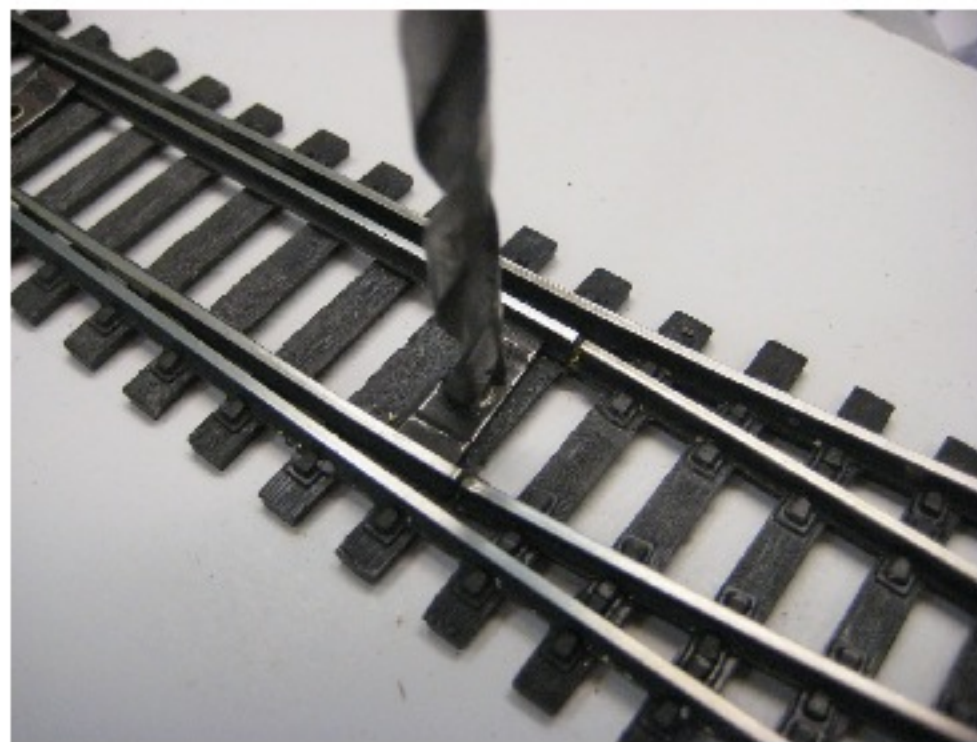
Shinohara DC Turnout  
(metal throwbar)  
Everything same polarity

3



Uninslated Frog

4

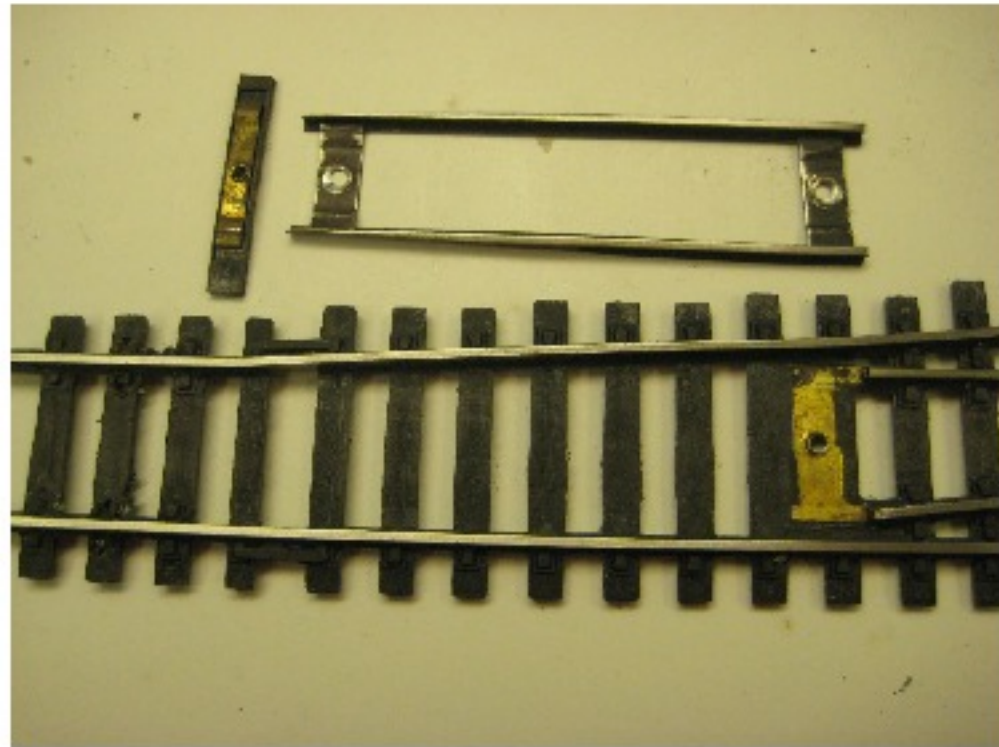


Remove Points- drill rivets

2

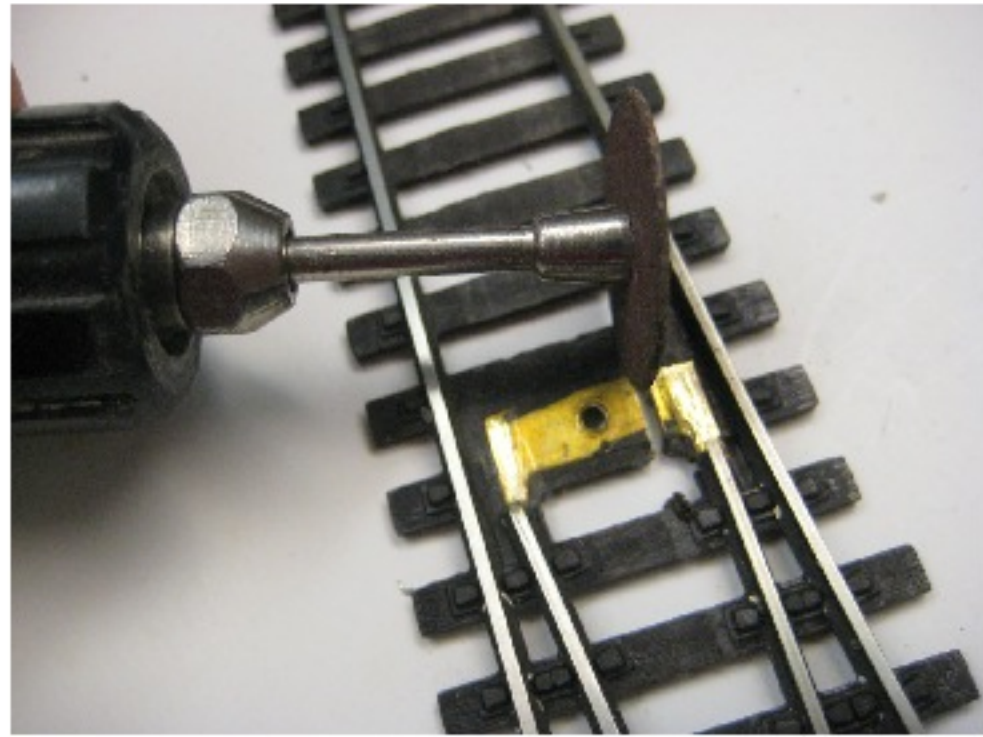


5



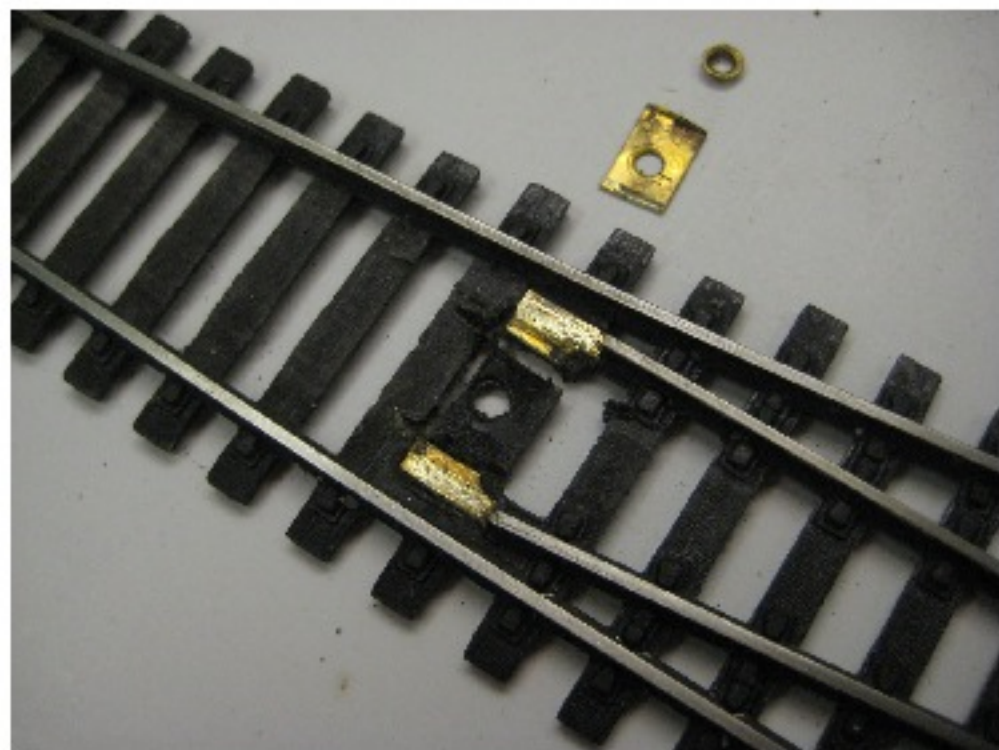
Points removed

6



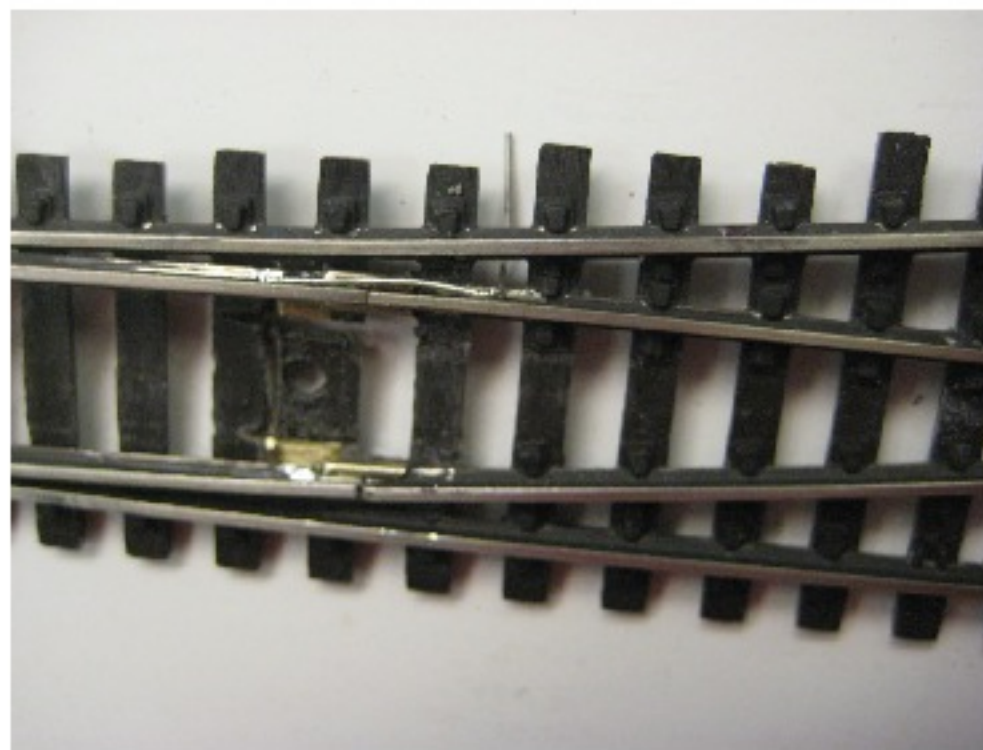
Cut to insulate closure rails

7



Done

8

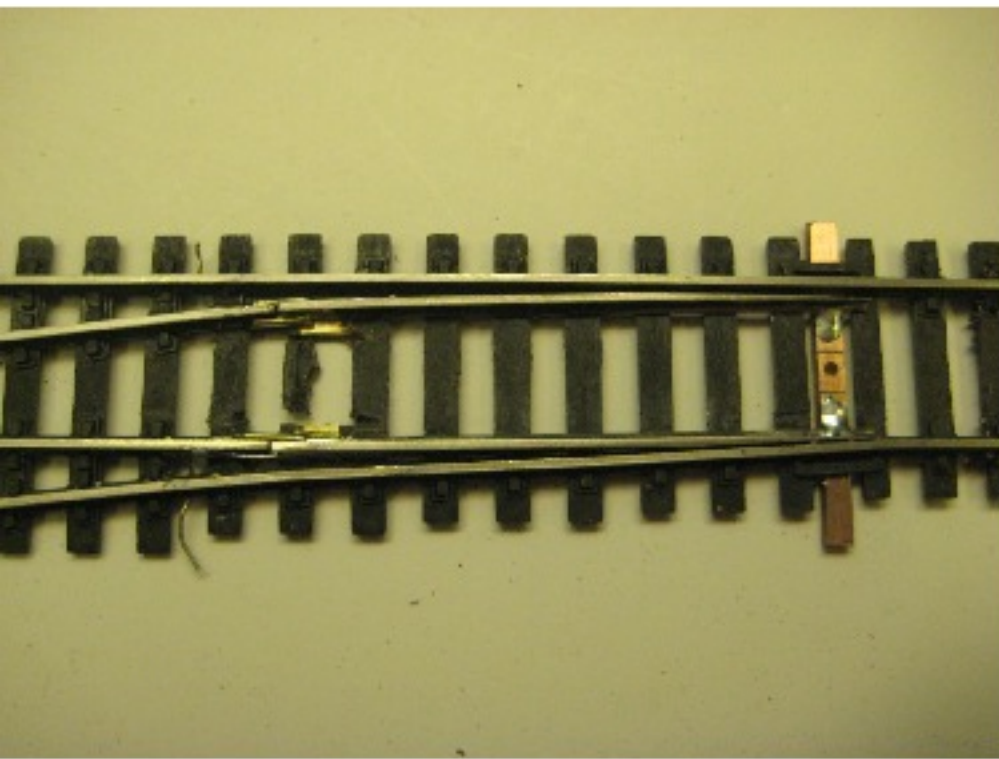


! / 2 rail joiners installed w jumper wire from points to closure rail to thru rail

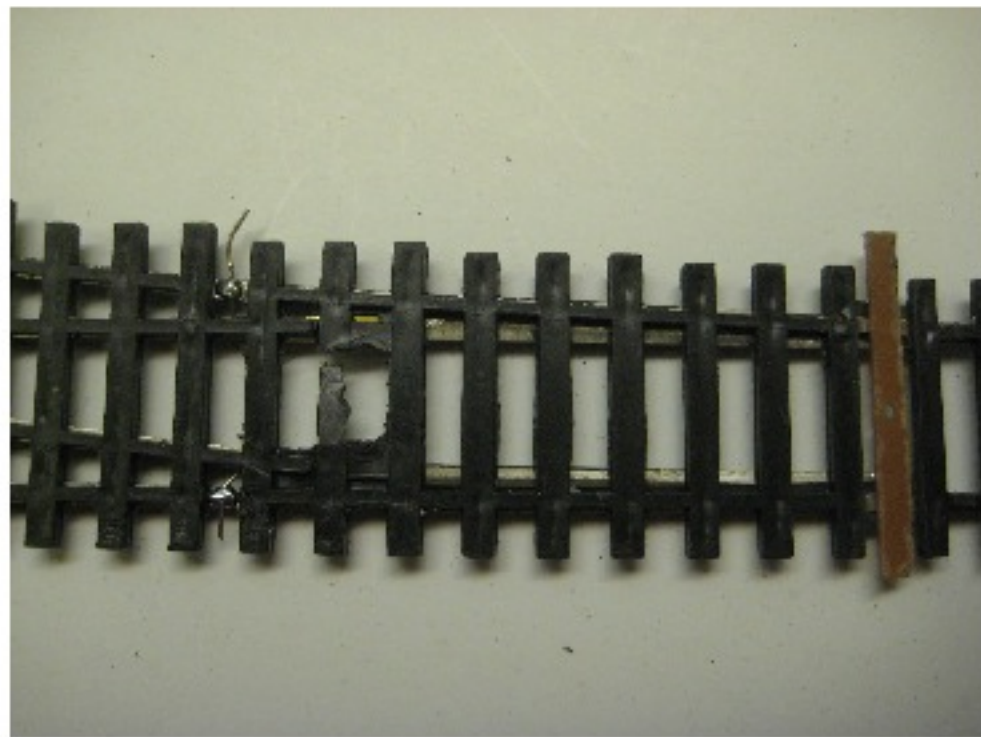
3



9



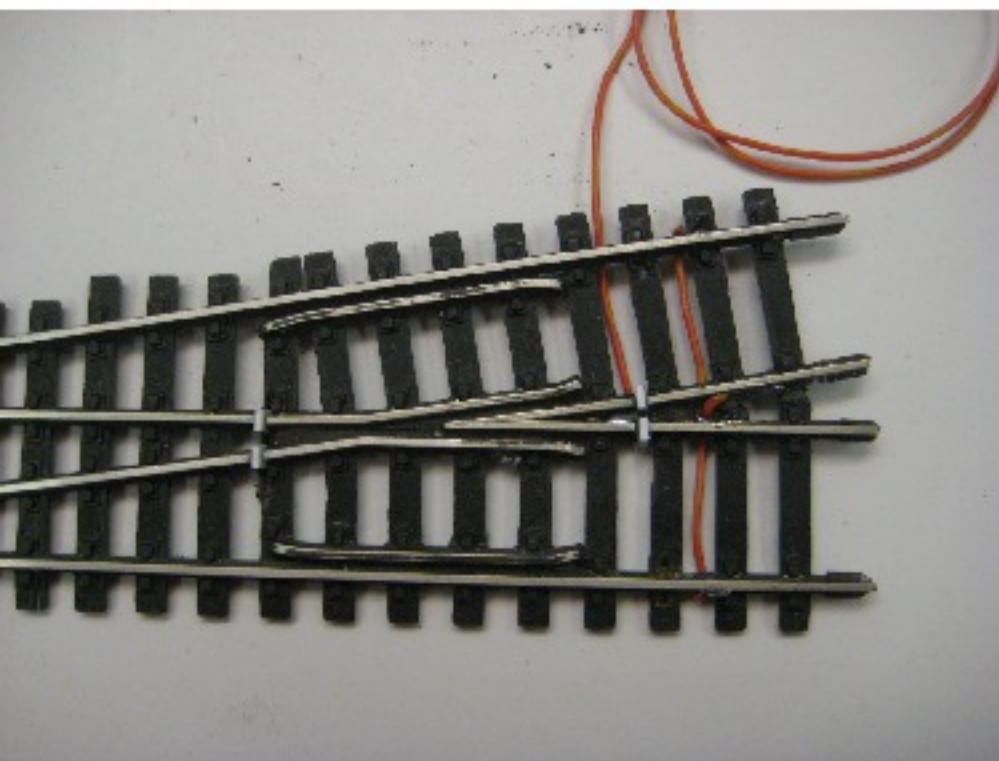
10



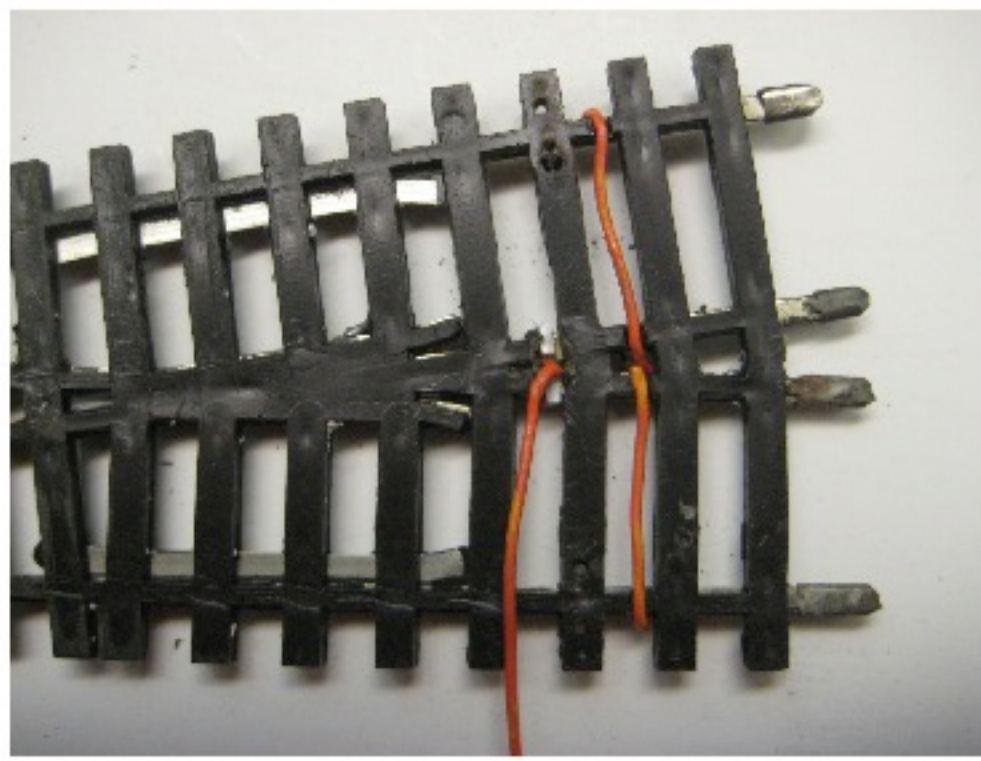
PC board throwbar soldered to points

Bottom view

11



12



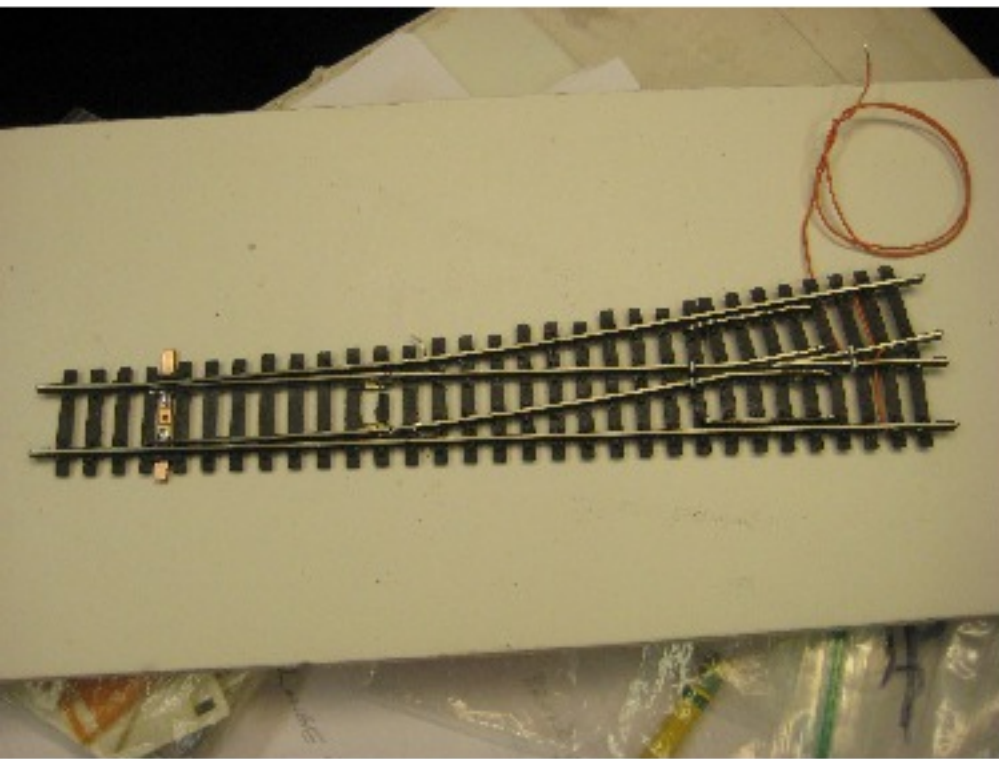
Insulated Frog w plastic insulators glued in  
Through rail jumpers  
and wire to electrify frog

Bottom view

4

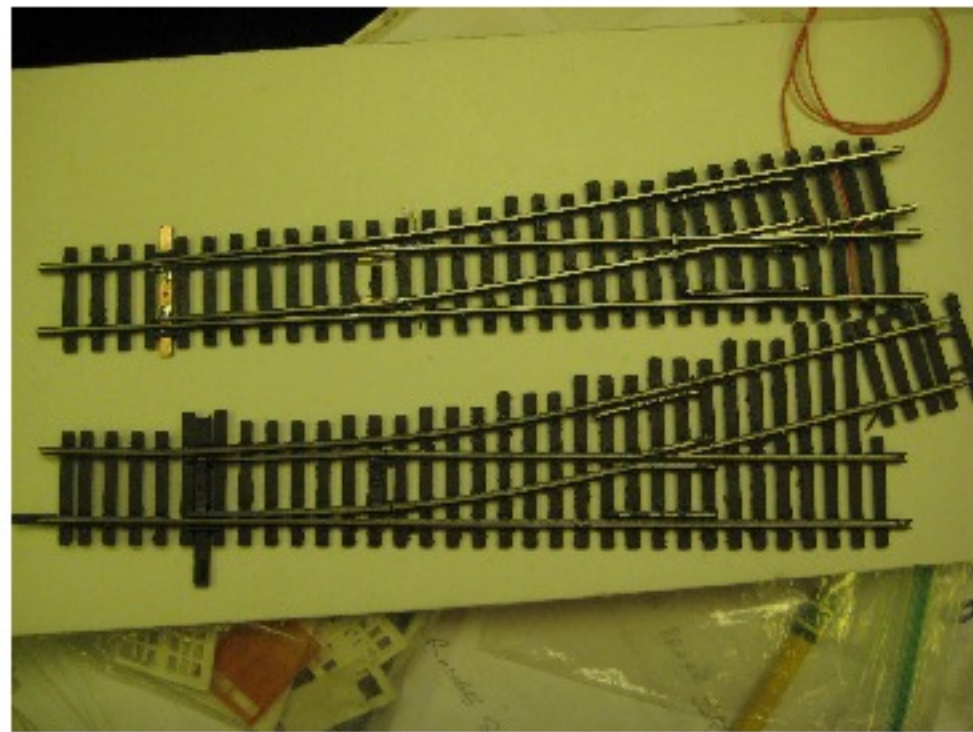


13



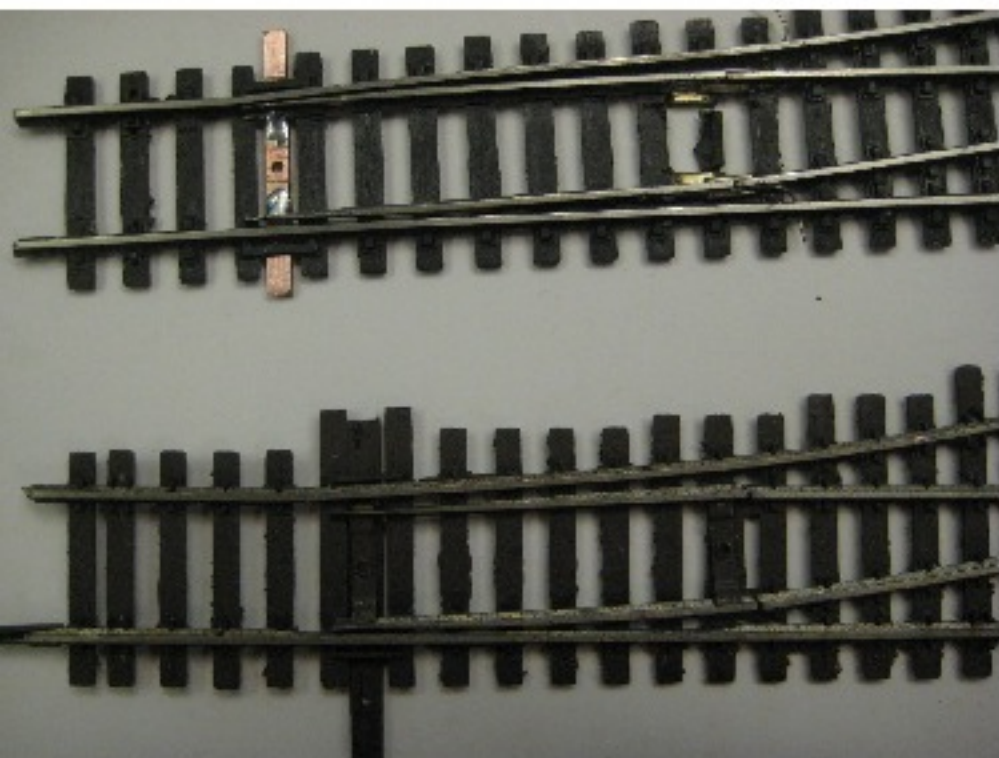
Finished turnout

14



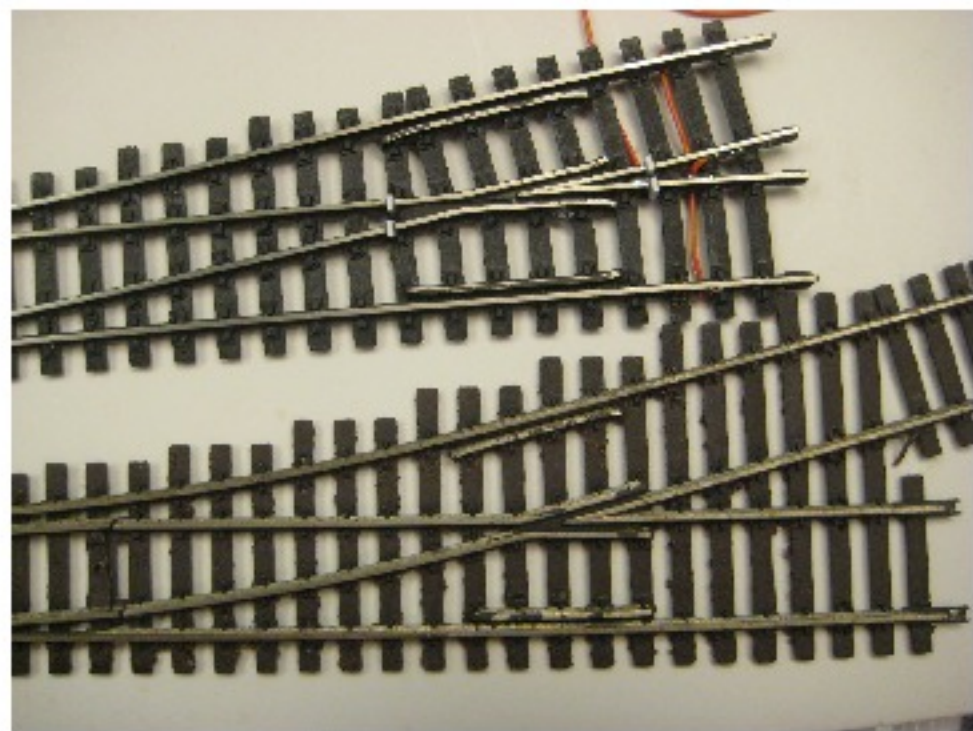
Old / new comparison

15



Comparing old / new points

16



Old / new frog area