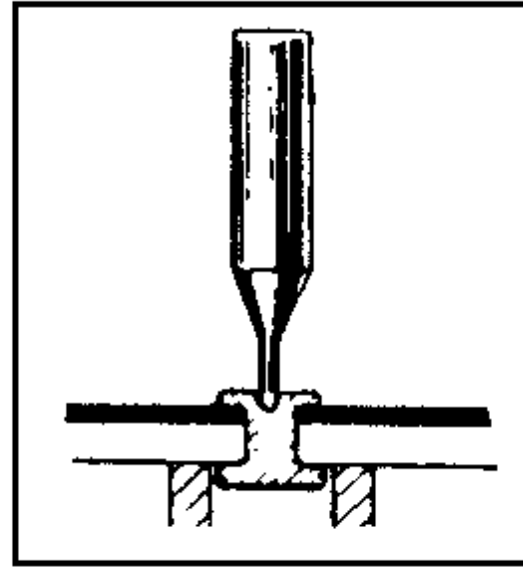


# SERVICE MANUAL

OTTP 95

Do not attempt to drill out the rivets since the drill will only cause the rivet to spin. To push out rivets use Punch ST350-20 and Anvil ST350-22 which are included in the ST-350 Riveting Set.

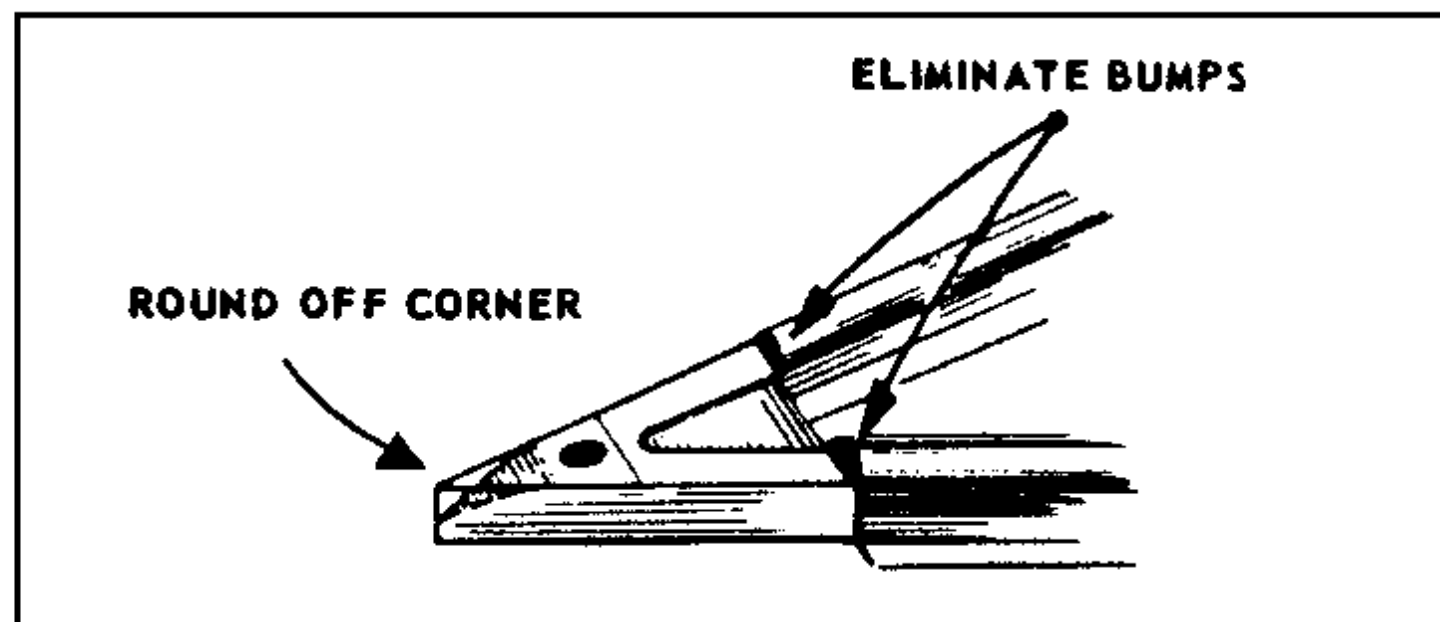


## 5. Locomotive derails on the switch.

**Reason a:** Locomotive wheels are not properly gauged but are either too close together or too far apart. When checked on a piece of curved '027' track the locomotive wheels should not bind against the track. When moved from side to side on a piece of straight '027' track the locomotive wheels should have between 1/16" and 1/32" play between outside rails. Check front and rear truck wheels as well as driving wheels.

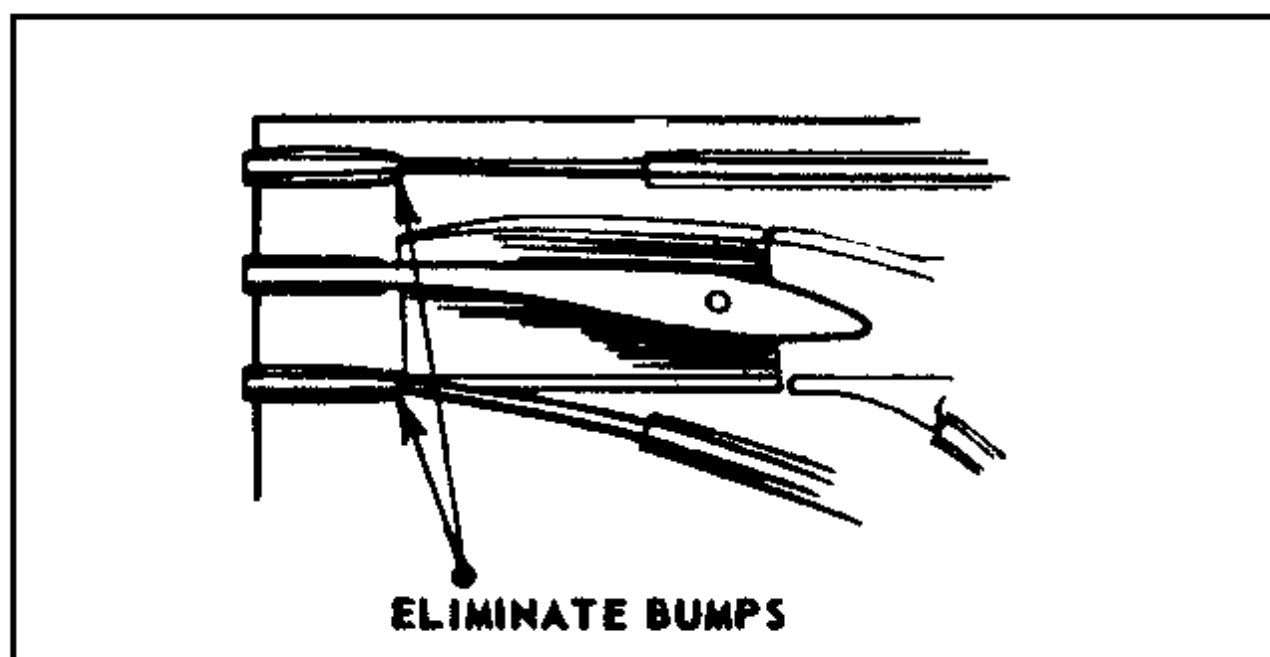
**Reason b:** Locomotive wheels bounce off the Frog Point.

**Correction:** Replace with right and left Frog Points 1122-137 and 1122-138. It is recommended that this replacement be made on all switches serviced.



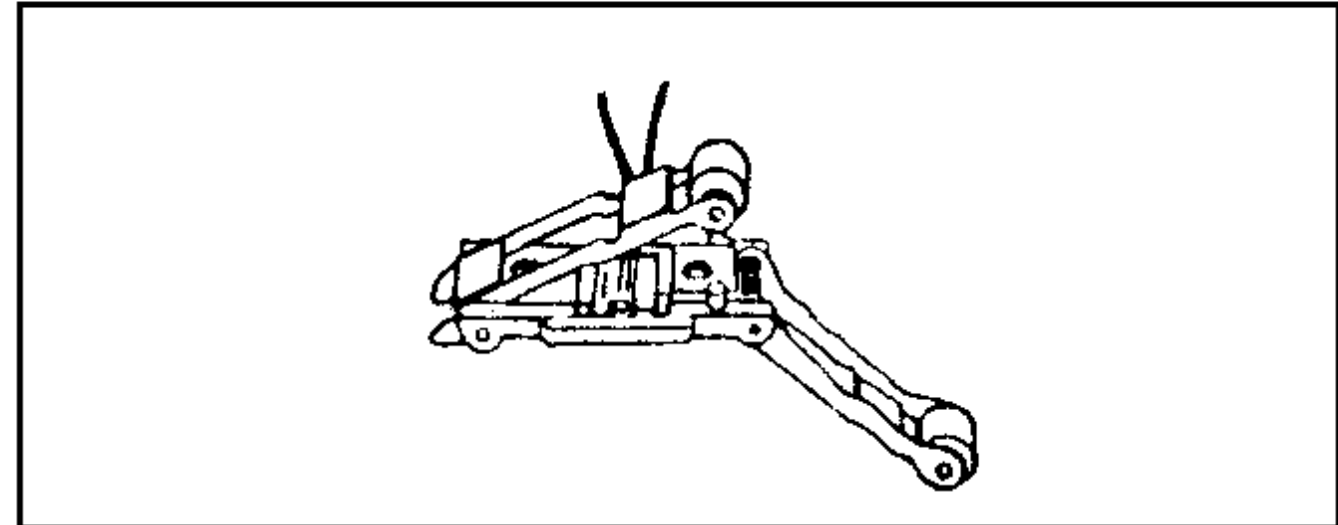
**Reason c:** Locomotive pilot wheels hit rail ends either coming off the Frog Point, or coming off the swivel rail.

**Correction:** Using a light hammer or a pair of pliers eliminate rail projections making all joints between rail sections as smooth as possible.



**Reason d:** Contact roller arm exerts too much pressure against the center rail throwing locomotive off.

**Correction:** Relieve tension on contact roller arm spring. Let down the collector assembly and bend collector arm back as illustrated below.



**Reason e:** Gears on inside of locomotive driving wheels are lower than the running surface of the wheel and ride up on switch guard rails. Locomotives of this type are listed on page 1 of this section.

**Caution:** In cases of this kind do not attempt to repair by filing down the switch guard rail, or you will make the switch unusable by diesel and electric type locomotives which have relatively small wheel flanges.

**Reason f:** Additional locomotives which may cause difficulty for one reason or another when operated on 1122 switches include: 1654, 1655, 1666 and 2026 (slide shoe model). On most of these locomotives it is advisable to improve grounding of front and rear trucks by inserting a washer or suitable spring at the swivel points of the trucks.

## 6. Locomotive "shorts" going over switch.

**Reason:** Center driving wheels touch frog rail on curve.

**Correction:** Replace frog rail with 1953 rail which is considerably narrower. When replacing the frog rail the 1952 bushing should also be replaced.

**NOTE:** An auxiliary rail, intended to minimize wear of the switch base, was incorporated in a number of switches made in early 1953. However, it was found to cause derailing of certain locomotives and was eliminated in subsequent production. The auxiliary rail has no electrical connection to any part of the switch and may be removed simply by pulling it off the switch base.

