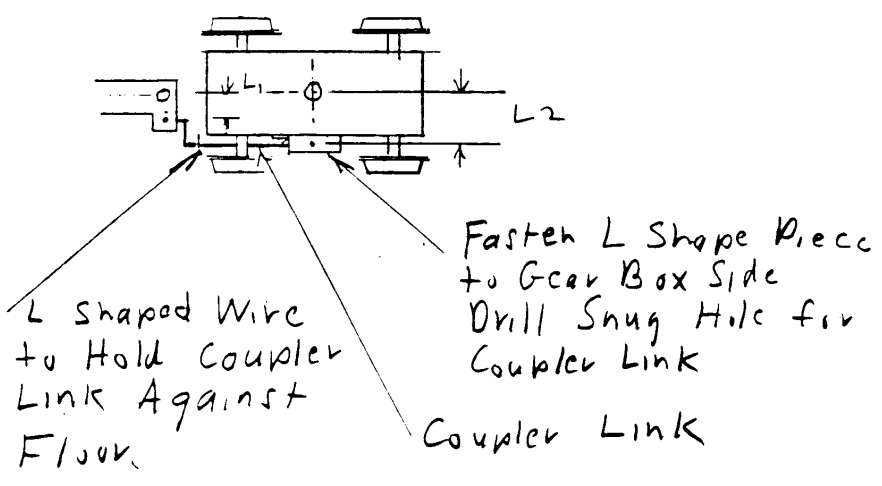


Coupler Link for Gear Boxes Looking Toward Bottom of Car



L Shaped Wire
to Hold Coupler
Link Against
Floor.

Fasten L Shape Piece
to Gear Box Side
Drill Snug Hole for
Coupler Link

Coupler Link

Guide Lines for The Use of The Linked Radial Couplers Or of Truck Mounted Couplers (Talگو Trucks) For Coupling on Sharp Curves.

The simplest thing is to use Talگو trucks with truck mounted coupler if the truck center is approximately 6.5 scale feet or less from the end of the car or locomotive body.

Under these conditions, the coupler will only be projecting slightly toward the outside of the center of the track on a sharp curve.

If one is also using the linked radial couplers on some cars, it is necessary to use the guides on the Talگو couplers. If all the freight equipment has truck mounted couplers, it may be possible to do without the coupler guides.

Standard railroad freight cars, steeple cab locomotives, some trolley flat cars, some interurban freight trailers, and a few freight motors have their trucks close to the end of the car and therefore can use truck mounted couplers.

The easiest way to operate “no hands on” trolley freight trains is to choose freight equipment of this type with truck mounted couplers.

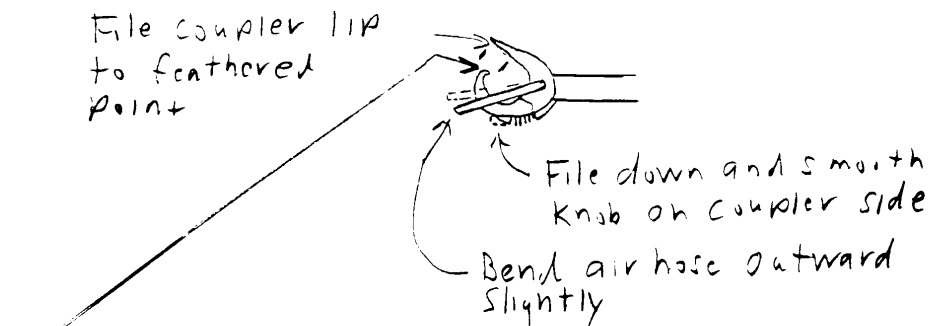
Most interurban railway equipment was built to operate on city street trackage with required side clearance when passing on a double track curve. To equalize the clearance at the ends of the car with that of the center of the car when traversing a sharp curve, the truck centers were pushed back farther from the end of the car. If such equipment was to be coupled to other cars, radial couplers were required.

Typical distances from the end of the car to the truck center was 8-11.5 feet. A truck mounted coupler would stick way out from the center of the track on a sharp curve. Also the longer coupler support would cause greater coupler twisting of the truck and could result in more derailments.

Interurban passenger cars, most freight motors and most interurban freight trailers would fit into this category.

It is necessary to use the linked radial coupler described previously for coupling such equipment on sharp curves.

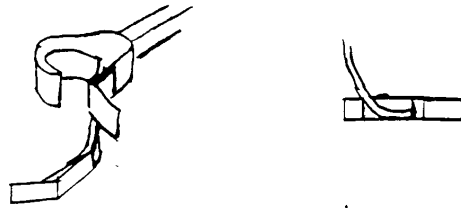
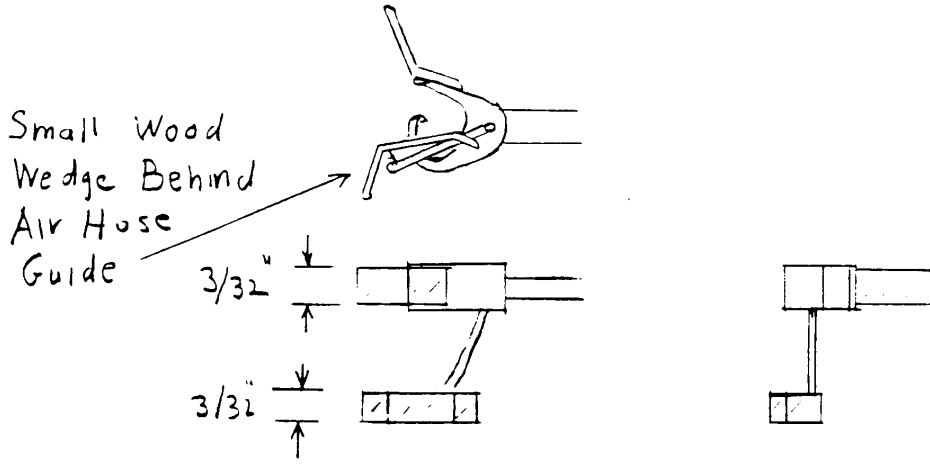
Kadee Coupler Modifications



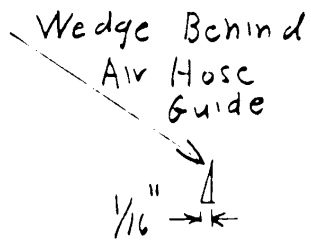
If Using Long Cars It Maybe Necessary to File Down Some What The Hook Inside Coupler as Well as Smooth The Insides of Coupler. This is Necessary to Cause Uncoupling over Magnetic Ramps

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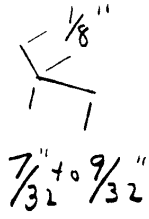
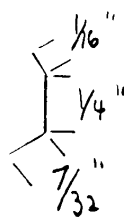
Coupler Guides (Necessary)



Glue on Guides with Ambroid Cement



Air Hose Guide

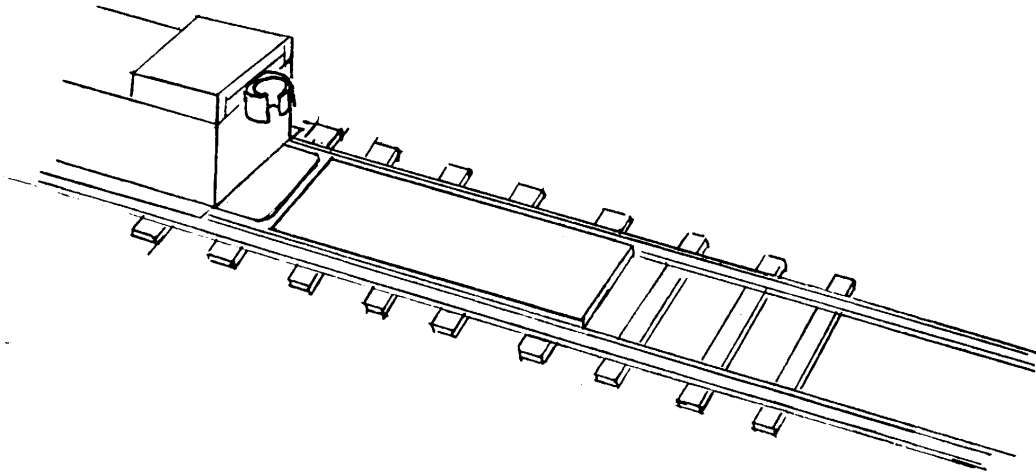


Coupler Lip Guide

.012" Brass

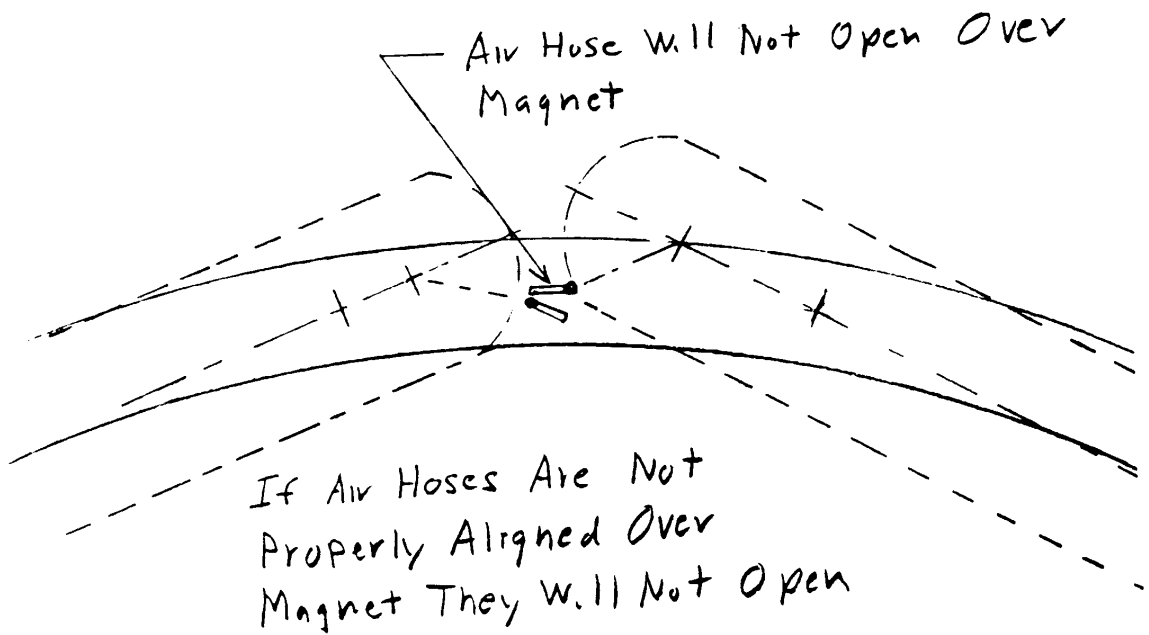
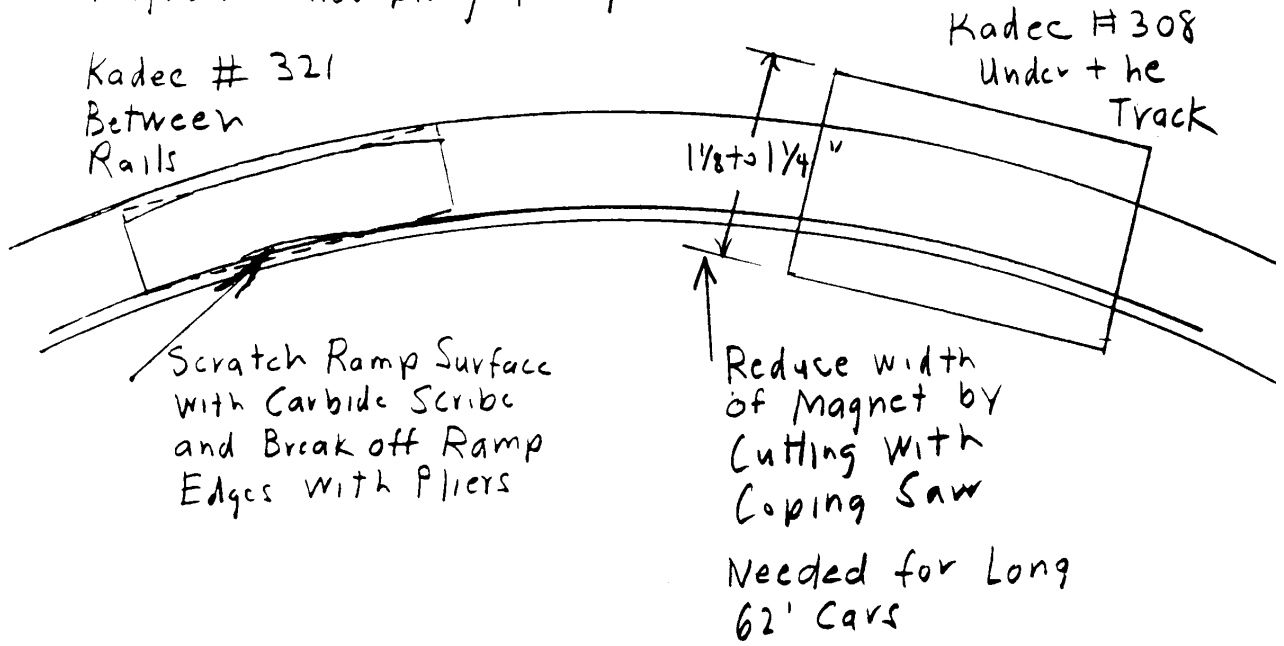
Jig for Setting Up Couplers

Kadee #205
Coupler Gauge



Cut Wood Piece Width Equal
to Inside Spacing of Wheels
to Keep Truck Stright

Magnetic Uncoupling Ramps



EXPECTATIONS:

- (1) When operating with radial equipped trolley freight cars of customary length of around 50 feet and with standard railroad cars with Talgo trucks: (This is what I have been doing for 8 years).

Because the couplers are connected mechanically to the truck the coupler can exert a twisting force on the truck. As a result, derailments can occur if the track is not carefully made. These problems are significantly reduced by increasing the car weight, lubricating truck and coupler mechanism with graphite, using oversized guard rails and keeping the wheels cleaned.

Because of slop in the car trucks and occasional inability of the Kadee couplers to snap back into a center position in the draft gear, sometimes it will be necessary to try a few times before a coupling or an uncoupling is made on a sharp curve.

Coupling very reliable on straight track.

Can operate freight trains for hours with only a occasional (one or two) derailments.

Coupling problems rare.

Can use cut down Kadee #321 between track magnets. No delayed coupler operation.

Three cars can be pushed around a 1800 65' radius curve.

Five to six cars can be pushed around a 900 65' radius curve.

Shorter trains means less trouble.

- (2) Including 62 foot long passenger cars makes the operation more sensitive to problems: Necessary to file down inside Kadee coupler including the hook to make uncoupling more certain.

The use of cut down Kadee #308 under track super magnets maybe required.

WIRE FROG WITH MOVABLE POINT FOR BACKING THROUGH FACING DIRECTION

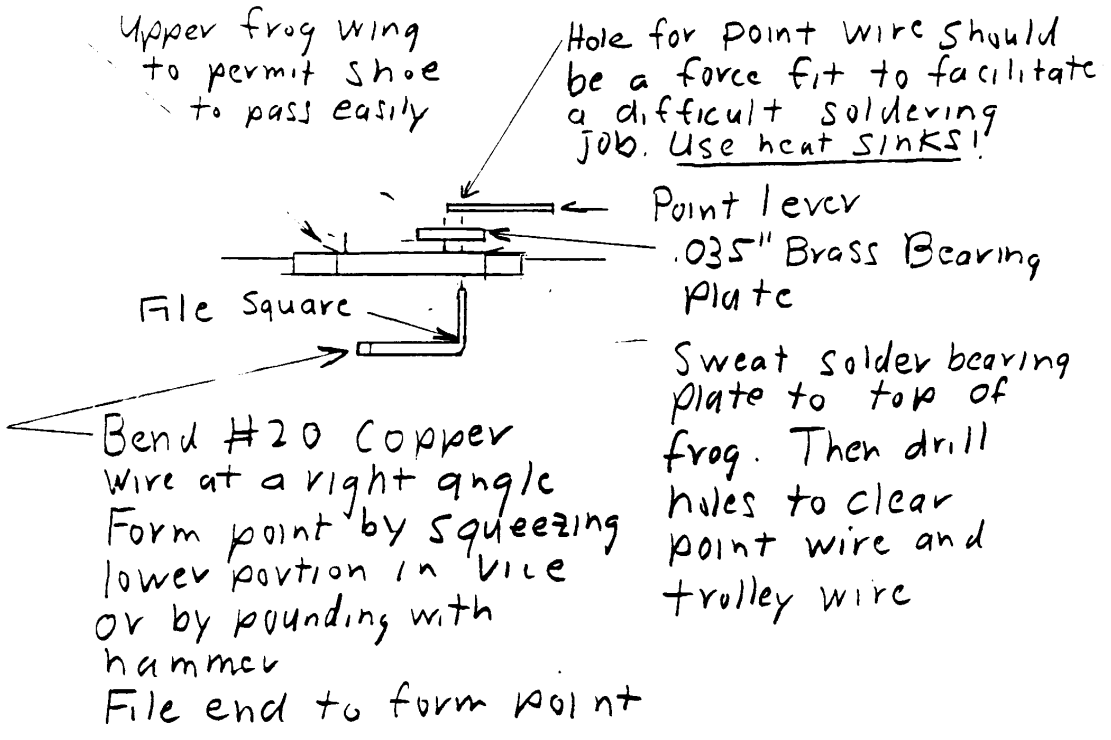
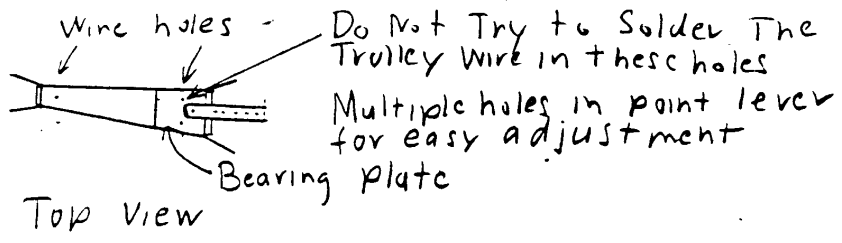
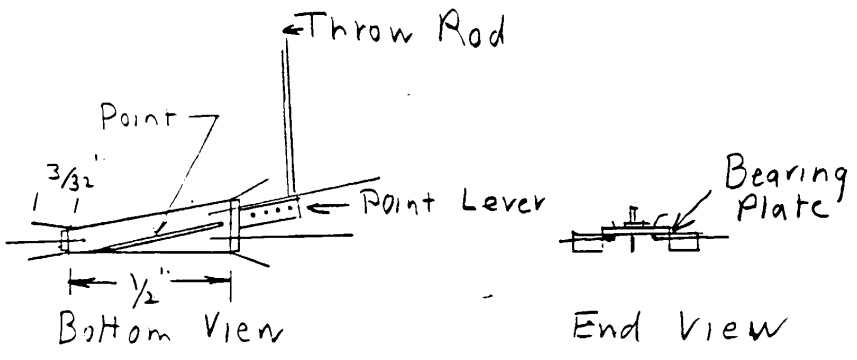
CONSTRUCTION OF WIRE FROG

CRANK LINKAGE TO SWITCH POINTS AND SWITCH MACHINE

LOCATION OF WIRE FROG

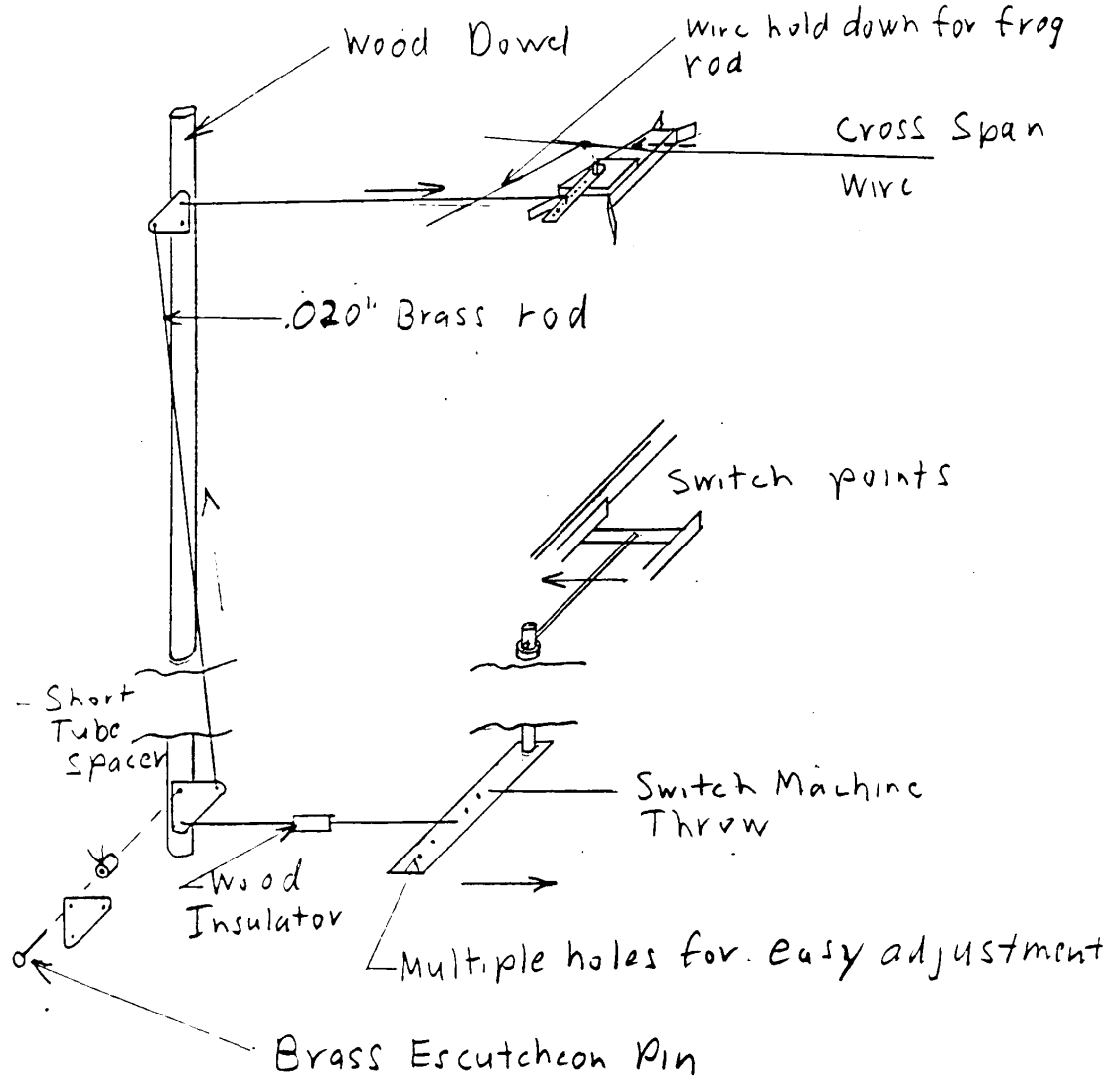
ADJUSTMENT TO FROGS WITH NO POINTS FOR ONE WAY BACKUP DIRECTION

Wire Frog with Movable Point for Backing Through in Facing Direction



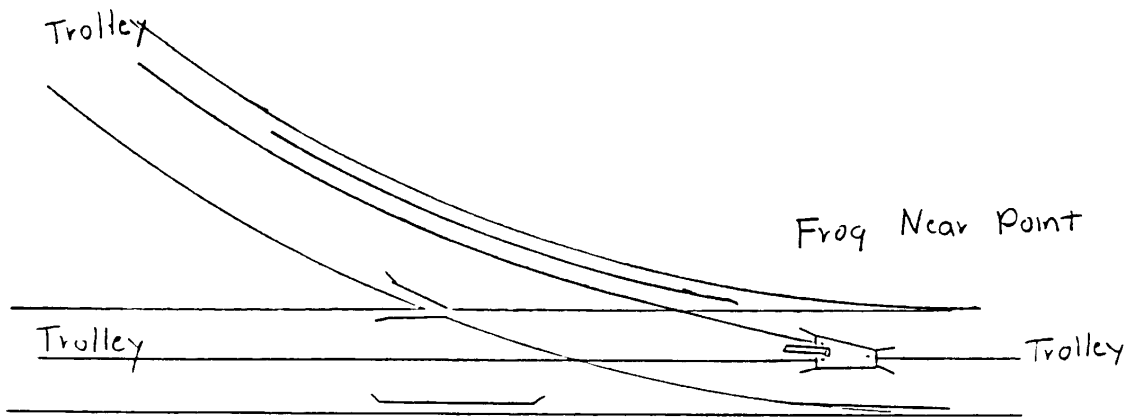
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Crank Mechanism for Wire Frog



Be certain Cranks are Set Up So Wire Point Moves with Switch Point
 In correct direction can be rectified by turning a crank over and reconnecting
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Movable Point Wire Frog Needs to be Located Near Switch Points so that the Trolley Shoe Passes Thru Parallel to Frog Sides



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