

# 29 Build a slide-detector fence

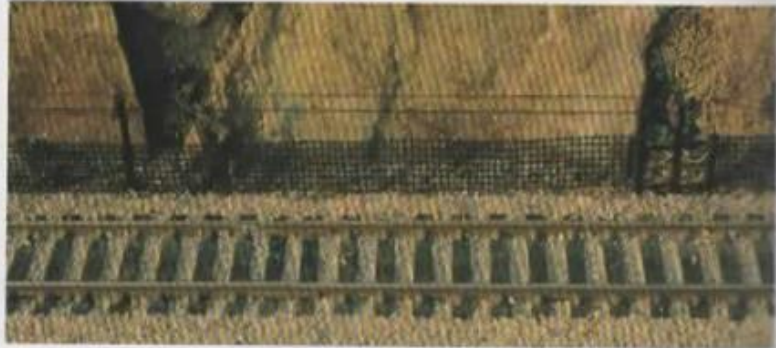
This modeler followed a Northern Pacific prototype

BY BRIAN THOMPSON  
PHOTOS BY THE AUTHOR

Many railroads, especially those that travel through mountainous terrain, have their tracks next to steep slopes or rocky cliffs. Not surprisingly, they constantly face the hazard of falling rocks. Railroads often deal with this problem by constructing slide-detector fences.

A typical railroad slide-detector fence is constructed from spring-supported woven wire that restrains moderate-size rocks, but will yield to large rocks that could endanger trains. (Small rocks that go through the fence are not considered a hazard.) This type of fence is much cheaper than building a barrier large rocks cannot penetrate.

The height of these fences can be anywhere from 3 to 15 feet or even higher, sometimes extending over the top of the track. The style and materials used may vary even on the same railroad.



A slide-detector fence in service protecting the main line on the author's HO scale Bitterroot Lines RR.

A low-voltage DC current runs between the fence supports, so that if the fence is broken or stretched enough to foul the track the circuit is broken. Once the circuit is broken, the track signal circuit is closed, which sets the signals protecting the block to red.

The prototype for my model fence is located on the former Northern Pacific Ry. main line (now part of Montana Rail Link) at

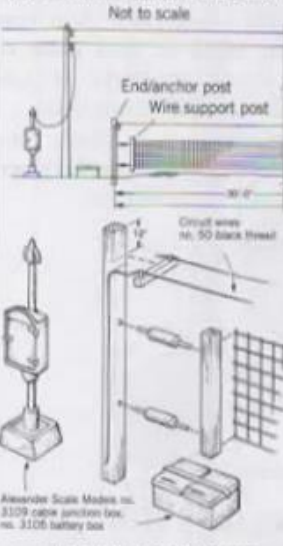
Fish Creek, Mont., 46 miles west of Missoula.

## Construction

I compressed the fence's size for better model appearance. The prototype distance between support posts is 54 feet; I shortened mine to a scale 30 feet. Dimensions can be modified to suit your needs.

Start by cutting a piece of window screen wire to the correct

Fig. 29-1 MODEL FENCE INSTALLATION



Distance between fence support posts is 54"0" on the prototype (NP) and the fencing is not rigidly connected to the intermediate post

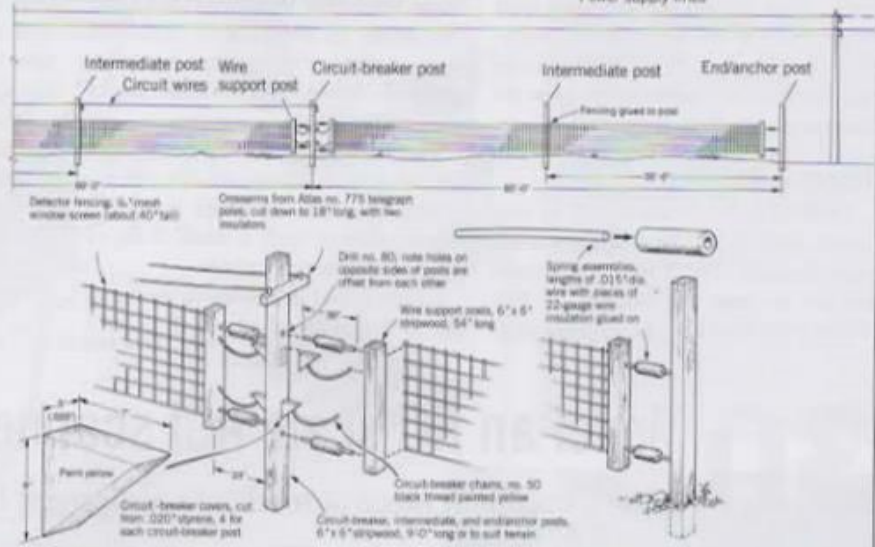
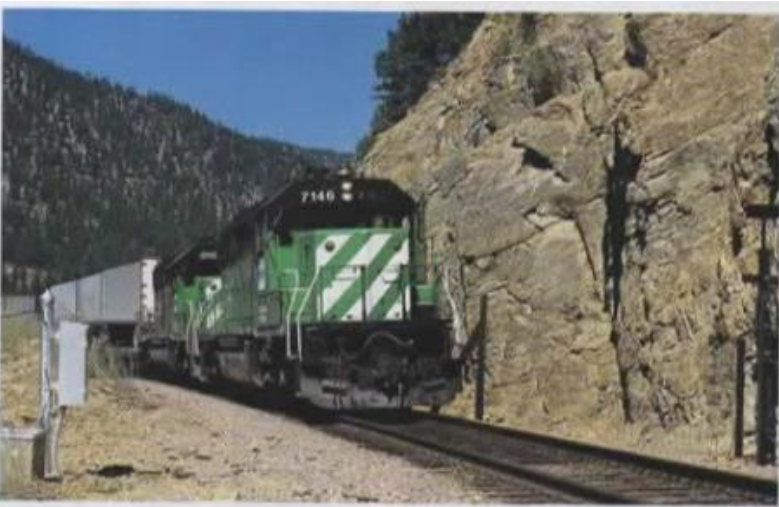


Fig. 29-2 CONSTRUCTION DETAILS



Two Burlington Northern SD40-2s ease a piggyback train past the slide-detector fence stationed alongside a sheer rock cliff at Fish Creek, Mont. The train is a BN run-through on Montana Rail Link.

### Bill of materials

- Alexander Scale Models**
  - 3105 battery box
  - 3109 cable junction box
- Atlas Tool Co.**
  - 775 telegraph poles
- Floquil**
  - 410013 Grimy Black
  - 410015 Oily Black
  - 410031 Reefer Yellow
- Miscellaneous**
  - Size 50 black thread
  - 6" x 6" scale stripwood
  - Window screen
  - .015" wire
  - 22-gauge insulated wire
  - .020" styrene

length and height for your model location. Then cut all the needed support posts to the correct length. Use a straight pin or a no. 80 drill bit in a pin vise to drill holes in the wire support posts and all but the intermediate posts (they don't have spring assemblies). Refer to figs. 29-1 and 29-2 for hole locations.

Next, cut lengths of .015" wire for

the support wires. Remove short lengths of insulation from 22-gauge wire, and glue them onto the middle of the lengths of .015" wire to represent spring assemblies (fig. 29-2). With a pair of tweezers or needle-nose pliers, push the spring assemblies into the holes in the anchor and circuit-breaker posts from the side.

Now push the wire support posts onto the open end of the spring

assemblies (fig. 29-2). Cut circuit-breaker covers from .020" x .060" styrene, and glue them to the posts. I used size 50 black thread for the circuit-breaker chain. Cut it just a bit longer than the distance between the posts.

Assemble the fence in sections measuring no longer than 120 scale feet. This makes handling much easier and prevents damage.

Glue the wire fence to the back of the support posts. The intermediate posts must be glued to the back of the fence, 30 feet from each end (fig. 29-1). Once the fence wire is in place, it's time to glue on the

insulator crossarms. The top of the crossarms should be one scale foot from the top of the support posts. The circuit wires need to go only to the farthest circuit-breaker post as shown in fig. 29-1.

### Layout installation

Drill  $\frac{1}{16}$ " holes in the layout 30 feet apart, and check the clearance with your longest cars. The fence should be set so that the bottom of the fence wire touches the ground in a

few places. Insert the fence sections, then glue them together. Glue the posts in place with Walthers Goo or diluted white glue. Sprinkle ground foam, dirt, and rocks around the posts.

The battery and relay boxes can be put in now, along with the circuit wires. Glue size 50 black thread to the insulators with a small drop of glue for the circuit wires.

I found that the fence is too fragile to be airbrushed, so I used a

brush to paint it with a dilute solution of oily black color. Add rust and grimy black or mud color to age the fence. Paint the circuit-breaker covers and chains yellow.

Once the fence is in place, your train crews will feel a lot safer when they pass the rocky slopes!