

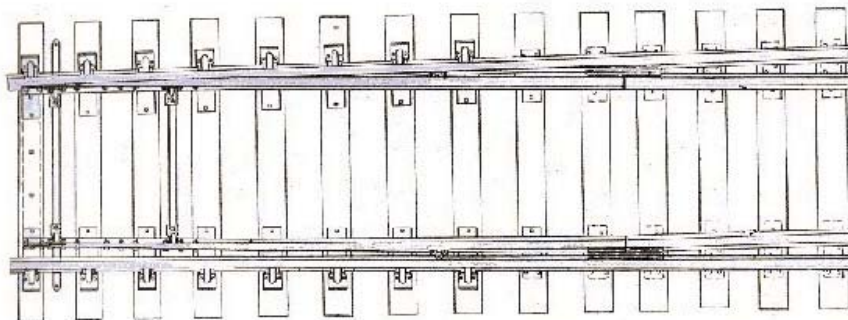
# Grand Scales

Q U A R T E R L Y

## Safety First

### WHAT'S THE POINT(s)?

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Switches. Railroads were pretty simple affairs until someone thought of a way to switch from one track to another. They are a focal point of activity. As rail enthusiasts, we love switches. We can't get enough of them. If someone offered us all the free switches we wanted, each Grand Scale railroad would be filled with passing sidings and branch lines and multi-track yards. Switches add interest and variety. They are the proverbial fork in the road that represents an option where before there wasn't one. "The road less traveled" and all of that.

Switches are where things happen. Unfortunately, sometimes they are where the wrong things happen. There are a number of things that can go wrong around switches. Some of them are simple and irritating. Others can be downright dangerous.

#### THROWN CORRECTLY

The first issue regarding any switch you are coming to on the line is, of course, to be aware of which way it has been thrown. Engine crews on "full size" railroads would sometimes call out to each other the alignment of a switch in the same way they would call out the indication of a signal, making double sure of the alignment for the sake of safety. Since there is normally only one member of the crew on our engines, he or she might look a bit strange, loudly calling out "mainline!" or "siding!" to no one in particular. But the lesson is clear: check switch alignments; don't assume. You just never know when some child has been able to tamper with things.

When you come to a facing point switch (coming to the points before the frog), a mistake may just lead you up a long branch where you can sheepishly stop and run back. But if you are "making time" and the siding is short or there is a train or cars on the siding, an accident is almost certain.

When you come to a trailing point switch (coming to the frog before the points) that is improperly aligned

you'd just better hope that switch is sprung. But if the switch isn't sprung, something is going to break ("splitting the switch"). It will damage the switch and likely cause a derailment, which always had great potential to damage life, limb, and equipment. Of course, going through a sprung switch the "wrong way" is often a standard procedure when running around a balloon track.

Really, though, giving attention to switches starts not in the cab but on the ground. On any given day we will usually play the role of engineer, fireman, brakeman, conductor, and maybe yardmaster and station agent to boot. Even if there is only one train running, even if there is only one member of the crew on the whole railroad, make sure things are set the way they should be. Never walk away from the switch without asking yourself, "Is this the proper alignment for the next train?"

For the sake of novelty, let's look at what an old rulebook says. Southern Pacific Company Rules and Regulations, January 1, 1898, Rule 87: "At stations where yardmasters are employed they will be held responsible for the proper position of switches. All main line switches in yards must invariably be set and locked for main track. Inside switches may be left as used. At stations where yardmasters are not employed, agents will be held responsible for the proper security and position of switches, which must be set for the main track and locked; they must know personally, at least ten minutes before regular trains are due, and before leaving the station at night, that switches are secure."

It was serious enough to the "big boys" that they outlined specifically who would hang, if a switch was improperly aligned.

#### THROWN COMPLETELY

Nearly every railroad I can think of, from little electric trains up to the huge Class 1 railroads, has had something get caught in the points of a switch,

leaving them partially open, resulting in a derailment. One of the scenarios is very simple. As the switch is thrown, the opening point catches the top of some little rock and manages to flick it up to the stock rail. When the switch is thrown back the other way, that rock has kept the points open, maybe very slightly. The next flange that comes along picks it open, and there is equipment on the ground.

Another problem could be the mechanism of the switch itself. Perhaps the stand or the throw rod or the connections have too much slop in them. Is there positive pressure on the point, keeping it against the stock rail?

Again, if the train is backing slowly into a siding, the derailment may be corrected in a few minutes. If a fully loaded train is coming to a facing point switch at "track speed", this could result in serious damage and/or injury.

#### SOLUTIONS

What can we do to defend ourselves? In the engine, do we always take a second to look at the switch stand and the points themselves to make sure it's thrown the right way? Are we mindful of the "hazard point" and ready to stop the train quickly. . . as we ought to be at all times?

On the ground, do we always double check the alignment of a switch before we walk away? Do we make sure that no ballast or any other debris is in contact with the moving parts of the switch? (One railroad makes sure the ballast around the points is always one full inch below the tops of the ties.) When we throw a switch do we check to make sure everything "looks right"? Do we regularly inspect, maintain, and lubricate the switches at a time when we're not in a hurry to "get the trains rolling"?

Always check: "Is the switch thrown CORRECTLY and COMPLETELY?"

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