QUESTIONS AND ANSWERS

Holding cars/trains on a grade

Q. **How do you guys hold cars or trains on a grade? I checked the archives and saw a couple of ideas using wire and paint-brush bristles. I have an industrial siding that will need something to hold the cars so they don't roll out to the mainline, and I have to hold a train on a grade while I do some switching. What has worked for you?**

– Brian, Thomas G.

A. Tell your brakeman to tie some hand brakes!

I had a similar problem – if the cars rolled, they'd roll right into the cars I was switching. The layout owner provided no way to secure the cars, so I simply placed the leading truck of the first car left behind on the ground. It is not an ideal solution, and certainly not very prototypical, but it had the desired result.

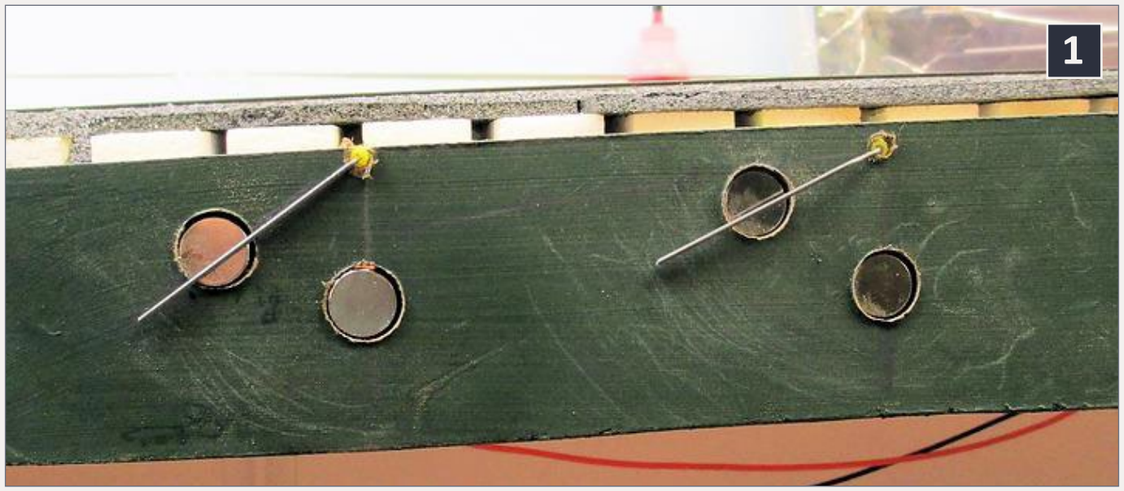
Some people place coupler springs or other small springs on one end of their freight car axles, between the wheel face and the truck frame, to act as a brake. This adds rolling resistance, so if you move a lot of long trains, it might not be a very good option. It does add enough resistance when installed on one or two axles in each car to prevent undesired movement though.

At a local model railroad club we have several "blue flags" for industries. They are pins with a blue plastic handle. Those are pinned into the middle of the track when cars are left at industries, particularly at industries where cars would roll to foul the main if left without being secured.

– James Ogden

Building a retractable wire stop can keep cars from rolling away. Thomas Gasior uses hollow plastic pull rods left over from Fast Tracks Bullfrog ground throws, and piano wire from the local hobby store. He drilled holes for the pull rods, then drilled holes for super magnet locks to be embedded in the fascia.

Push the piano wire through the hollow pipe, bend the end on the track at a 90-degree angle, and cut it to size to just contact a freight car axle. Mount the stop off-center between the rails, to keep the wire out of couplers (1-2, next page).



1-2: The completed car stop. The wire brake positions are marked with a yellow dot on the side of the rails. Once operators learn how to use them, they don't give them a second notice. Thomas Gasior photos.

3: Joe Atkinson's brakes disengage automatically – the wire falls back in the hole when the car is pulled away. Joe Atkinson photo.

Bend the wire sticking out of the fascia at another 90 degree angle, and cut it to fit over both magnets. Build time is less than 20 minutes per brake, once you work out the design and have the needed supplies. The magnet-anchored stops will hold a lot of weight.

Joe Atkinson uses a similar brake system, with a movable wire to hold cars in place (3). It's designed to disengage automatically as soon as the pressure of the axle against the wire is removed – the wire falls back in the hole when the car is pulled away.

That way, operators can't forget to disengage the brake and derail on the wire, or damage locomotive details. The wire was later painted grimy black, so it's now more difficult to see.

It's actuated using a knob on the fascia. It just requires a wood dowel long enough to reach from your fascia to the track, a wooden knob to fit on the end (sold at craft stores such as Hobby Lobby), and a length of piano wire. The wire is attached to the dowel by passing through a hole in the far end (away from the aisle) and then wrapping around it. Joe angled the piano wire away from the fascia as it rises from the dowel through the roadbed so that when you push on the actuator knob, you're raising the wire, setting the brake. That way, if someone accidentally bumps the knob, there's no fear of it releasing an applied brake. A short length of piano wire passes through the dowel just inside the fascia to act as a stopper to keep the dowel from pulling out more than about 1/4" or so when the brake is released.

See more about Joe Atkinson's modeling of the Iowa Interstate's West End in May 2005:
iaisrailfans.org/gallery/Sub4WestEnd

mrhmag.com/blog/joe-atkinson

George Booth's solution (4) is very simple: "I use an old eraser cut to fit tightly between the rails. Wedge it in when and where it's needed. No muss, no fuss, no installation issues. I had some old drafting erasers left over from my engineering days, and they work just fine."

On George's previous layout, he used a top-mounted system similar to Joe Atkinson's. "I had a pair of interchange tracks on a steep grade. I needed a way to keep cars on the tracks from rolling onto the mainline. My solution had the bonus of being automatically releasable and even looked like something that may be prototypical," George said. "The brake was constructed of brass rod and tubing and was installed in a recess under the

4-5: A surplus eraser can be trimmed to fit snugly between the rails, holding cars in place until it is removed. Another brake combined two L-shaped wires to create a flip-up car stop. George Booth.

track. An L-shaped piece of rod had a second piece of rod soldered to it at a 90 degree angle."

The L-shape rests in a recess between the rails with the short leg of the L extending beyond the track (5, previous page) such that it will clear the sides of a car. The second piece is positioned slightly off-center to avoid the car couplers. The L-shaped piece is allowed to pivot in tubing that is held in place by the track. The crossties are trimmed in the middle to allow the second piece to swing up or down. (A counterweight on the arm outside of the rails can act as an operating handle and keep the stop out of the way when it isn't needed.)

George's "New Great Western Railway" is at **users.frii.com/gbooth/Trains/index.htm**.

Patrick Stanley uses a couple of methods to prevent runaways.

One is to install some Woodland Scenics grass between the rails. He keeps it out of the center of the gauge so it doesn't interfere with Kadee coupler pins, and trims the height so it just contacts axles. The grass is enough to keep a car from rolling, but allows switching the spur without special considerations.

Patrick sometimes places a small clump of loose foliage in front of the car, on the downhill side. Like George Booth's eraser, it holds the car and has to be mechanically placed/removed during switching. But it looks more prototypical.

Bob Battles suggested using sisal rope. He cuts the stiff fibers to axle-height, and glues them in place as needed. They look like weeds growing between the rails. They are stiff enough to keep cars from rolling, but a locomotive can still pull or push the cars through the "weeds." For three or four cars in a small siding it works fine.

Richard Morrison suggests holding a motor tool roughly parallel with the rails and making a slight dip that's the same radius as a car's wheels (a smooth notch) in each. The notch should be just big enough so that the first wheel of a car or cars on the siding will rest there and won't roll past it unless it's pulled by a loco.

"Greenville" had a steep grade where he needed to set out cars. "I drilled a hole beside the rail big enough to fit the wooden part of a cotton-tipped applicator. I positioned the hole in front of a signal cabinet so I could find it. When I stop the train, I put the dowel in the hole and back the train slowly so the car on the uphill side of the grade rests against it. That also bunches the slack so I can uncouple. When the locomotive returns and couples to the train, I pull ahead slightly to make sure it coupled and remove the dowel. It works great and is hardly noticeable."

For many more ideas about holding cars on grades:

mrhmag.com/node/10339.

mrhmag.com/node/16879.

ACI label placement

Q. Could someone suggest where I would put an ACI label on this covered hopper (6 next page)?

– Deemiorgos

A. Jurgen Kleylein and Rob Spangler offered some general answers on placing ACI labels, but a prototype photo of the car hasn't turned up yet. On cars where ACI labels were original factory or railway paint shop installations, the location would be dictated by the lettering diagram (7 next page), and would be consistent from car to car in the series.

On cars retrofitted, it would mostly be done by some worker on foot with a rivet gun, so he would mount it someplace where he