

*It's full speed ahead on a 30-inch circle! Here's how to set up, and run, a prize model on a Lazy Susan*

## Mechanics and Handicraft SECTION

# The Speeding Train That Goes Nowhere

**By Carlton J. Bucher**

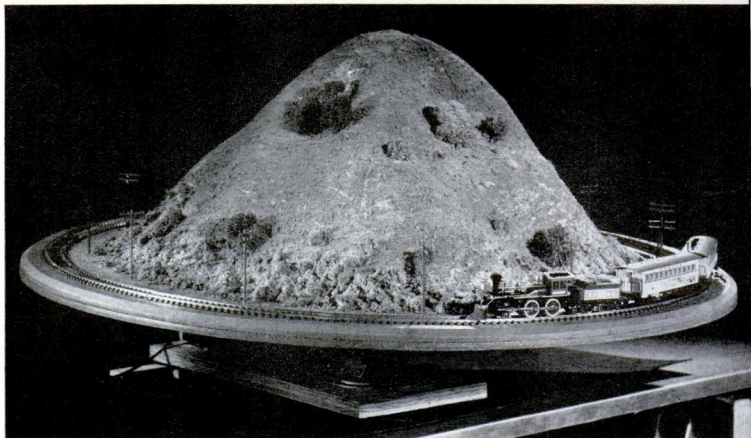
**T**HE little train above is running at full throttle—and getting nowhere. It's trying to climb the slight incline of a tilted circle of track, but it will never make it for two reasons: 1) gravity is holding it at the low side of the incline; 2) the track is mounted on a smooth-working turntable. The locomotive's spinning drivers can only kick the track beneath it, the way a donkey moves

a treadmill when it pushes against a fixed yoke.

But save your tears of pity. That energy is far from wasted. It puts the train in a position in which it can be observed in a very unusual way. You see the locomotive racing along like one in the movies—drivers pounding furiously, side rods and valve gear a blur of motion, landscape flashing by at what seems to be 100 m.p.h. Viewing it close up, you see engine and cars swaying from side to

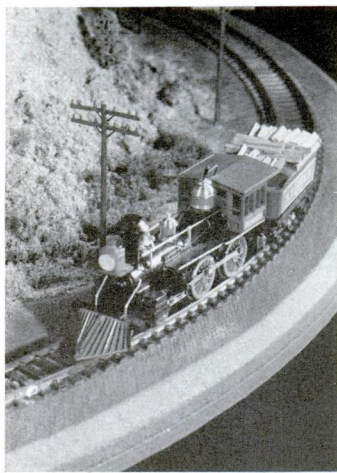
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**LAYOUT IS BUILT ON A BICYCLE WHEEL** to make a perfectly balanced turntable. One end of the base is elevated on two bolts to give the table a slight tilt. Gravity causes the train to swing

around to the low side of the incline. When power is applied, the locomotive's spinning drivers make the table rotate beneath it at a rate proportionate to the train's speed.



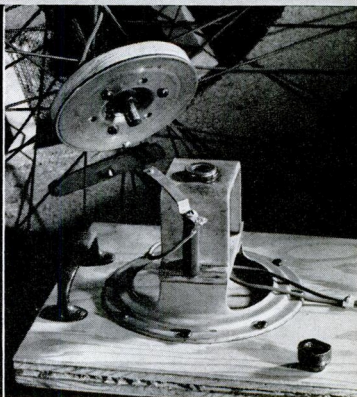
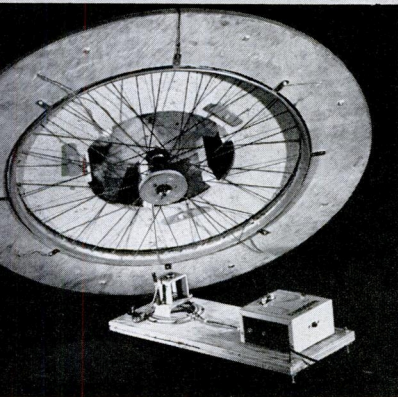
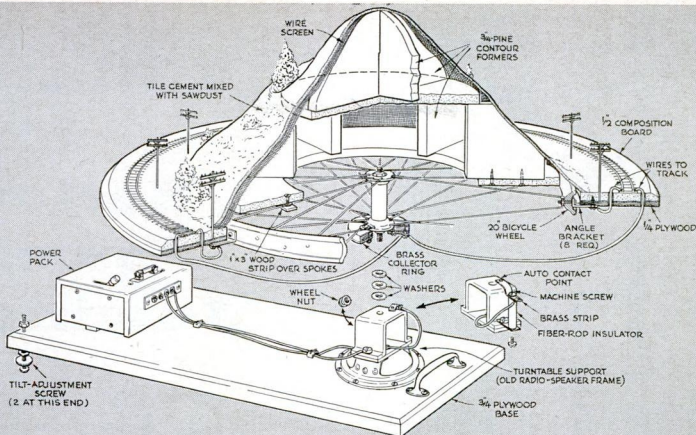
**SCENERY DETAILS** include evenly spaced telephone poles, shrubs and trees made of modeler's lichen or sponge, and flock for grass. Track is laid on composition board painted gray.

side, and there's a wonderful illusion of miles being traveled. It is a startling display that can be used as:

- A permanent conversation piece in a playroom.
- A setup to operate Christmas trains all year round in limited space.
- A store-window eye-catcher to attract passers-by.
- A proving ground for serious model railroaders to test new equipment. (You can run full throttle without fear of derailment, because no centrifugal force is exerted on the train.)

The framed setup shown on the preceding page is ideal for a playroom having one wall adjacent to a closet or utility room. You simply cut an opening in that wall and build a box on the opposite side to house your railroad. There are countless opportunities for dramatic effects such as lighting separately controlled to change from day to night while the train travels its endless miles.

*To build the layout*, you start with a bike wheel and a ring of  $\frac{1}{4}$ " plywood for the roadbed. Cut the outside diameter of the ring about 2" wider than the circle of track you're using, and cut the hole



**CURRENT GETS TO TRACK** through ignition point (photo at right), which rubs collector ring to make one side of circuit. Other leg is soldered to axle support, and current flows through the

bearing. Wires under turntable connect track to wheel and collector ring. Photo at left and cutaway of turntable and mountain (top of page) show construction details.

for a snug fit around the wheel. Fasten the plywood to the wheel with small angle brackets. For quiet operation, cover the plywood with a ring of 1/2" composition board such as Celotex or Homosote. Build up the contour of the mountain with formers cut from pine and covered with wire screening. There are many materials

suitable for surfacing the landscape, but ordinary linoleum cement mixed with fine sawdust was used for the model shown.

Fasten the track in position and drill evenly spaced holes for telephone poles. Note: If track is screwed down, use short screws into the composition board only. If long screws are driven through and



**Any store owner can make use of the train's eye-catching appeal**



**DISPLAY STAND** in place of the mountain can be made to rotate by the train, attracting the attention of passers-by. Arrange display merchandise so the turntable remains balanced.

into the plywood, they will transmit track noises.

**Current is carried** to the rails through the wheel and through a brass collector ring mounted on the hub. Insulate the collector ring by mounting it on a ring of plywood fastened to the hub. Connect one power-pack wire to the wheel axle, the other to an auto ignition point soldered to a strip of spring brass. Fasten the brass strip to the pivot support and bend it to make firm contact against the collector ring. An old radio speaker frame was used for the support shown, but a piece of strap iron or aluminum can be drilled for the wheel axle and screwed to a block of wood.

Mount the pivot support and power pack on a plywood base and drill holes in one end for two tilt-adjustment bolts. When the train table is placed in operating position, back off the adjustment bolts to raise one end of the base until the table has sufficient tilt to rotate easily under the weight of the moving train.

The speeding train that goes nowhere makes an attractive store-window display. For this, build up a stepped table in place of the mountain. Arrange the merchandise on the table with the train off the track, and rotate the table to be sure the items balance each other. Don't try to display heavy items: They'll throw the turntable out of balance.

# 7 Hints for Better Power Mowing

## PUSHBUTTON SHUT-OFF:

You can ground the spark plug by remote control with a modified auto manual-choke cable. Mount it on the most convenient cylinder-head or gas-tank bolts. It can be sized to fit almost any engine.

