How to Run a Railroad in Your Own Back Yard

Scaled down to fit your plot and pocketbook, but big enough to carry grownups, midget trains offer fun for the whole family.

By Harry Walton

GIVE the kids a train they can ride, and you'll share in the fun. Backyard railroading is a man-sized hobby for all the family. Once you handle the throttle of a midget engine and feel the thrust of drivers on rails, ordinary model railroading becomes a spectator sport.

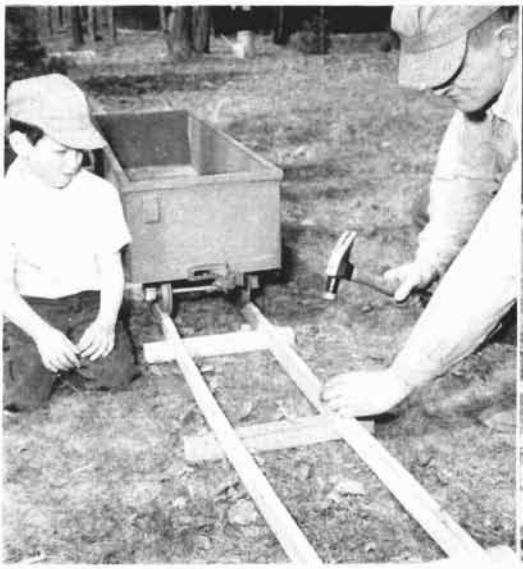
A passenger-carrying pike costs less than you may think. It can give you scope for as much or as little time and skill as you care to invest. Like its tinplate cousins, it can grow up along with the children from year to year.

You don't need a big lot. One type of track can be laid in a circle as small as 12′ across. Interesting layouts can be put on a city lot. Here's what it takes:

- A reasonably level space, preferably at least 30′ by 40′.
- As much cash as a modest electric-train layout would cost.
- Ordinary garden and hand tools.
- One or more children so that you can claim that you're doing it for *them*.

What will it cost? For as little as $20

Either wood or metal rail can start you on the right track



FURRING-STRIP RAIL is easy to lay in notched ties 1′ apart. Toenail it in with 6d. galvanized finishing nails. Creosote the ties for longer life. Fill hollows in ground to provide a solid roadbed. For curves, set one rail into ties 1′ apart, bend and hold it to the radius wanted (12′ is about the smallest possible) and then bend and press the other rail in place.

T-SECTION DURAL RAIL is the real thing scaled down. With aluminum ties, it forms sections as above. These can be laid or taken up like toy-train track. Metal straps (fishplates) are bolted across the joints. Dural rail can also be bought by the foot and spiked to creosoted wooden ties with roofing nails. The best roadbed for ties is a 2″ layer of gravel or cinders.

to $40 you can put down track and get a car rolling on it. The youngsters will enjoy pushing each other around on the car or coasting down an incline. The diesel streamliner, bridges and other trimmings can be added as you see fit.

You have a choice of using cash or ingenuity for many of these improvements. Gas or electric locomotives can be bought all ready to highball. Or you can buy only the parts you can't machine, and build your own engine with nothing but hand tools. If you can machine some parts from castings, the cost will be less.

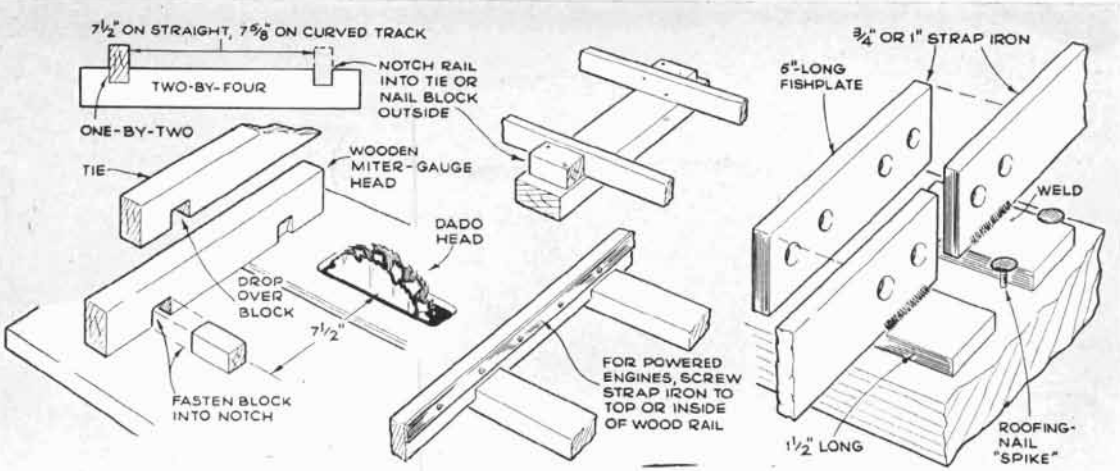
Which gauge is best? Live-steam enthusiasts barrel along behind cinder-spitting little engines on 3½″ track. Amusement-park roads run up to 15″ gauge. For home use, 7½″ gauge is a good compromise; it's big enough for even grownups to ride comfortably, and the cost is reasonable. Here is what you can use to lay 7½″ track:

Prefab strap rail. For $40, you get a package deal: a 12′ circle of knocked-down strap-iron rail and a hand-cranked car. This is light enough for tots to propel, yet husky enough to convert to power later. Various accessories, including power locomotives are available for this track.

Dural scale rail. De luxe track can be made with this, spiked to wooden ties and joined with fishplates. It's light and rustproof but comes to 25 cents a foot in 100′ lots, plus shipping costs. Even so, you can lay 50′ of track, build a car from an unmachined truck kit (which you can machine on a drill press) and still stay inside a $50 budget.

Wooden rail. For much less money, you can lay one-by-two furring strips on ties cut from two-by-fours. Five dollars will buy new lumber for about 40′ of track, and secondhand wood, if available,

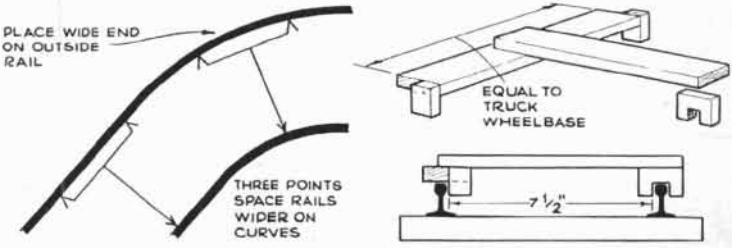
Handcar, trailer car, strap-iron rail, switches, crossovers, and the two 8225 ready-to-run locomotives are offered by The Charles William Doepke Mfg. Co., Inc., Rossmoyne, Ohio. Dural scale rail, castings for trucks and couplers, switcher chassis, locomotive drive and body parts, and castings for steam-type engines are available from Robert E. Miller, R.D. 1, Box 175, Bath, Pa.



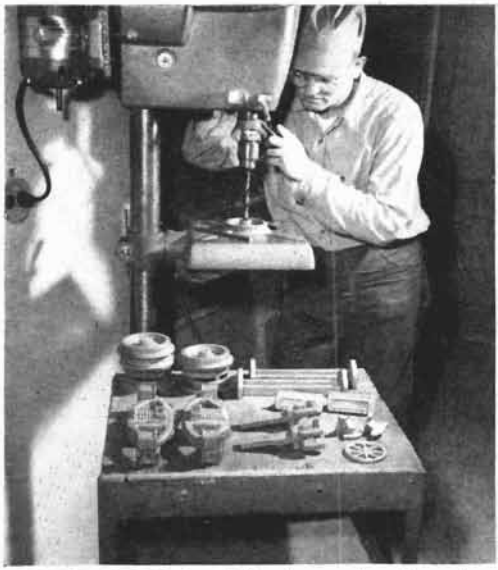
WITH WOODEN RAIL, use notched ties, or nail blocks outside rails. If you have a circular saw, mount a dado head and cut one notch in all the ties. Then fit a block into the miter-gauge head as shown. Drop first notch on block to cut second.

WITH A HOME WELDER, you can make rail from ⅛"-by-¾", or larger, strap iron. Bolt plates across joints.

SPACE RAILS ⅛" wider on curves. The home-made track gauge shown does this automatically if used with its wide end on the outside rail. To join rail lengths, nail the two adjoining ends to a common tie.



Easily finished kit of castings makes car trucks and couplers



DRILLING HOLES for ½" axles and a few pins is all it takes to finish these castings. The 47-lb. casting set makes two car trucks, two working knuckle couplers and a brake wheel.

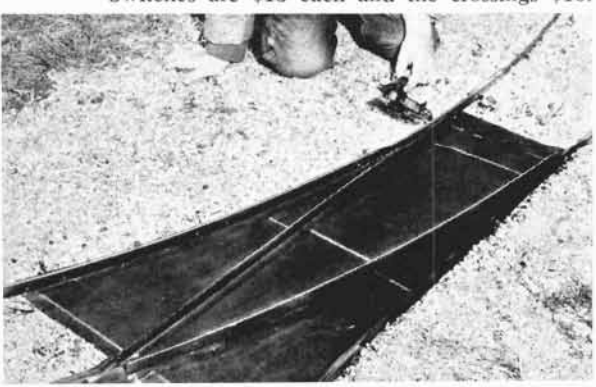
ASSEMBLED like the finished truck above, these units can be mounted on a plywood floor to make any kind of car. Fitted with sprockets or pulleys, they may be used in a locomotive.

This play pike can grow into a fully equipped midget railroad

A CIRCLE OF TRACK 12′ in diameter plus the hand-cranked car above costs about $40. The trailer car is $16. The power locomotives on the facing page can be run on the same track.

WOOD TIES COME SLOTTED and strap-iron rails predrilled for wire clips. These are bent as shown to assemble the track in either straight or curved form. Extra track runs $19 for 40′.

SWITCH OR TURNOUT comes right hand or left. It is spring-loaded so that wheels running into an open switch can trail through the points. Switches are $15 each and the crossings $10.



will halve even this very modest cost.

Unpowered cars will roll nicely on wooden track, but powered wheels may tend to climb the soft edge corner. You can lick this by shoeing the rails with strap iron when you have a locomotive.

Other rail. With a small welder, you can make low-cost rail out of strap iron by welding on foot plates, spacing them like ties. Track has also been made of angle iron, pipe, and conduit.

How about rolling stock? You have several choices, from buying ready-made cars to building your own. You can, for instance:

- Buy a trailer car to ride on the prefab strap rail. Price is $16.
- Get a casting kit to make realistic 1½″-scale car trucks. Mount these on a plywood floor, and you have a play push car that can later be converted into a caboose, box, tank or cattle car. Unfinished castings (they need only holes drilled in them) cost $15; ready to assemble, the kit is $22.50.
- Buy castings for the wheels only, and make the truck sides and bolsters

Riding behind a real powered midget locomotive is the greatest fun of all

out of steel plate, angle iron or hardwood.

Motive power. This is the most thrilling part of railroading, and you're limited only by your budget at one end or your ingenuity at the other. There's plenty of room in between.

For upwards of $200 you can buy a gas or electric engine ready to run.

A switch-engine chassis, fitted with electric drive, can be had for $150. You build the body yourself. By adding a trailer unit later, you can convert this into a super streamliner.

Machined power trucks, transmission and clutch assemblies, cast body parts, and so forth are available individually or as package deals. You can buy what you cannot make or improvise yourself.

The little handcar made for strap rail could be powered with a lawn-mower engine or a battery and auto starter. If the power plant leaves no room to ride, the engineer can perch on a trailer car.

One of the car trucks described (page 149) can be fitted with sprockets or pulleys for locomotive use. A centrifugal clutch or a belt-tightening arrangement, plus one or more jackshafts, will gear down a gas engine to drive it.

Battery power. Ford starter motors are widely used for electric drive. A battery charge gives several hours' run because the motor is cut in only at intervals, while the locomotive coasts between boosts. A home charger is, of course, a must. Electric power is popular because children can safely operate it unsupervised. Starter solenoids, controlled by a spring-toggle switch that snaps to *off* if not held, carry the heavy motor current.

If you go for steam locomotives, you can buy 8" driving wheels, side rods and other parts in the form of castings, but be prepared to machine them yourself. Realistic steam-type engines have been whacked up from food cans, sheet metal and hardboard. If you're really on the ball, you can find a way to synchronize sound and smoke with the drivers.

ELECTRIC-POWERED "DIESEL" made for use on strap-iron rail comes ready to roll. It has two forward and two reverse speeds. A trickle charger is provided to boost the 6-volt auto battery from the house circuit overnight. Both this and the gas-powered locomotive below are equipped with an electric horn and headlight.

A FOUR-CYCLE TWIN powers this gas-driven locomotive. The throttle is spring-tensioned to snap shut when not held, providing a "deadman" control for safety. Priced at $225 each, both engines above have bodies made of pressed steel and fiber-glass, finished in red and silver.

ON A POWER CHASSIS, you can mount a body of your own choice and construction. Plywood, tin cans, rod and tubing, and even parts from old toys can add up to a realistic engine. END