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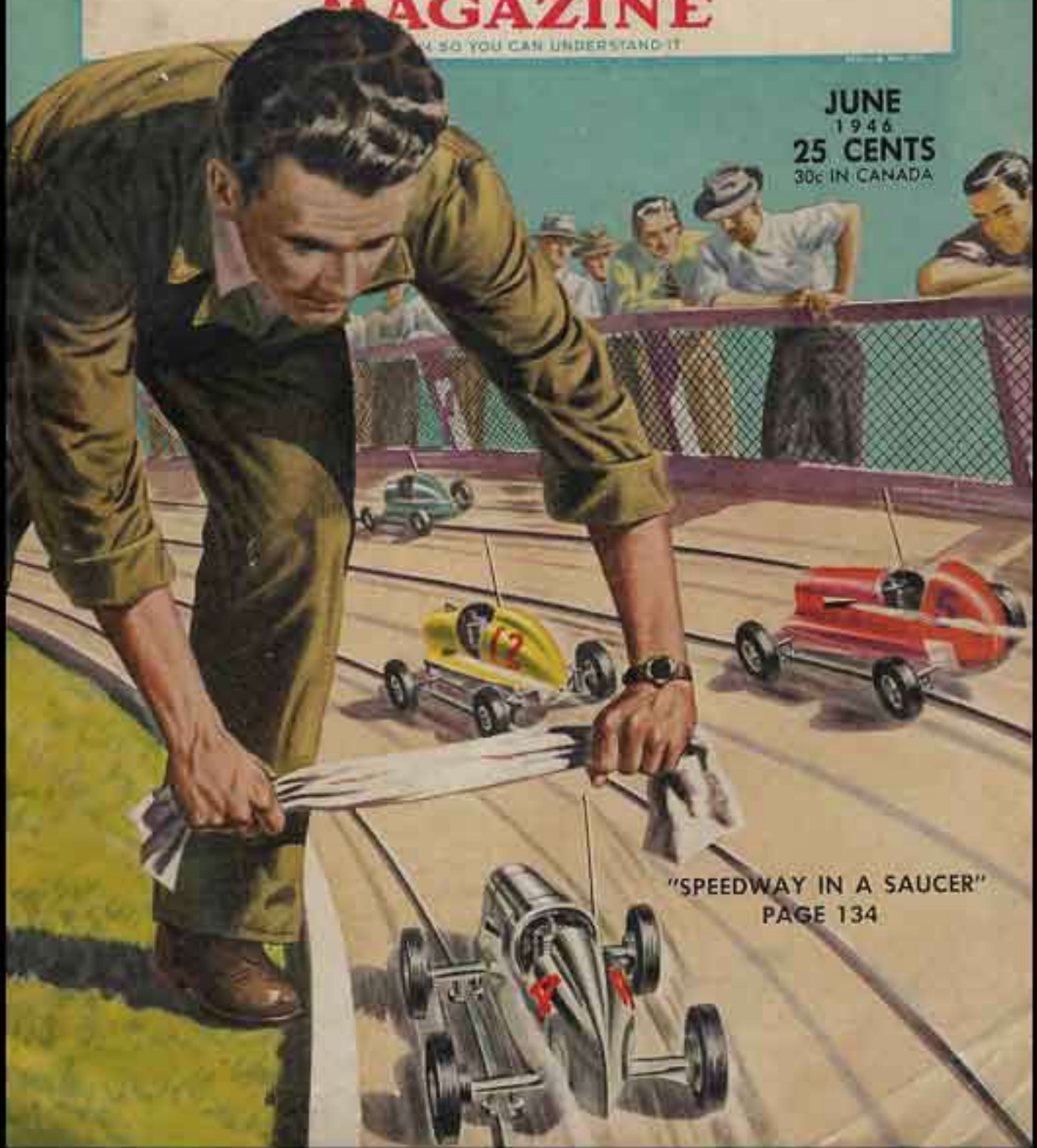

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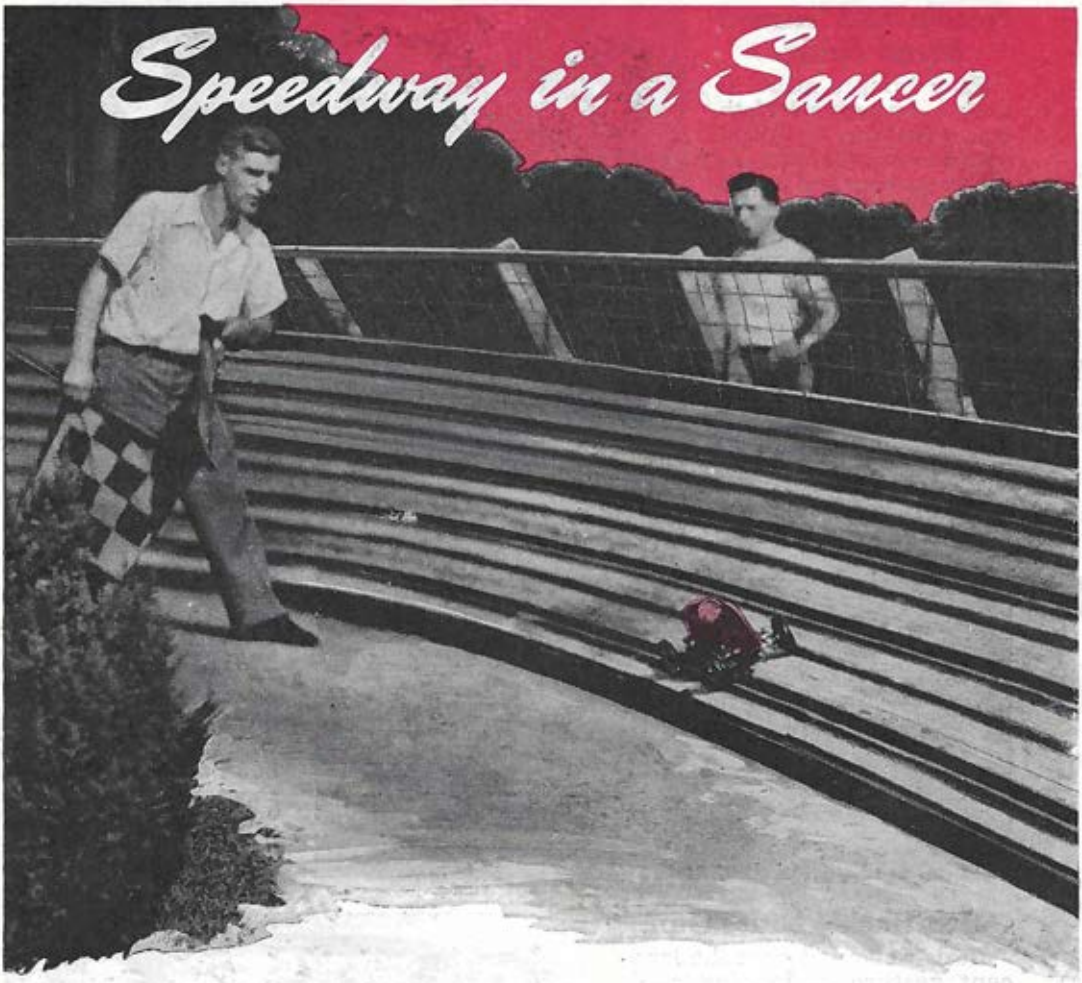
Speedway in a Saucer



By Clifford B. Hicks

WITH all the furor of major speedway events, races conducted at saucer-size tracks are attracting thousands of fans. Excited crowds whoop it up while six-pound model racing cars zip around a board track on a thimbleful of gasoline.

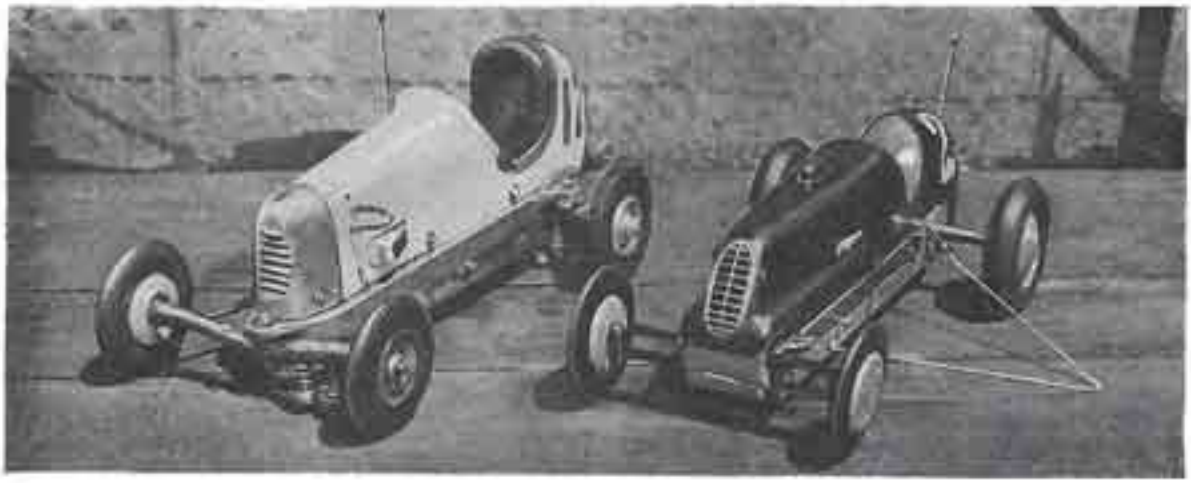
Motors roar and tires smoke on the turns, just as in the big-time races. Traveling at 75 to 80 miles an hour, the pilotless midgets circle a 264-foot course in slightly over two seconds.

Model racing car meets are held each summer on tracks spotted throughout the country. Thousands of enthusiasts, members of the American Miniature Racing Car Association, compete. Crack-ups, motor and tire troubles occur. Owners claim the sport gives all the thrills and chills of regular speedway meets without injury or death to drivers.

The A.M.R.C.A. is the group's national organization. It was formed in 1939 and is subdivided geographically into six leagues of some 300 clubs. The members enter their 10,000 cars in local meets, interclub competitions, regional meets and the National Races.

This year's regional meets are being held at New York City, in Illinois and in San Francisco in late June and early July. The National Races will be run July 31 to August 3 on two 1/16-mile tracks built by the city of Detroit.

Two different kinds of competition are held, one for "cable" cars, the other for the "rail" type. A cable car is fastened to the end of a cable which is anchored to a socket in the middle of the track. Once the car is started, centrifugal force keeps the cable taut as the model circles the track. Much faster speeds are attained by cable cars than by rail racers because of less friction on the track. The champion cable model traveled 114.64 miles per hour in setting its



Racer at left rides a flanged steel rail around the miniature track. Steel wire on model at right fastens to a cable for faster cable-track racing. World's record cable car zoomed the course at more than 114 miles an hour

But in a recent race one car traveled so fast that its locking devices failed to hold. The six-pound model left the track at waist height to hurtle 40 feet through the air like a chunk of shrapnel before it struck the ground.

Engineers claim that turns in the track should be banked about 86 degrees—almost vertical—for cars traveling at present speeds. A good track costs $1000 to $2000 to build. But owners and spectators have the thrill of watching the Tom Thumb cars compete against each other.

Rules of the association limit the maximum weight of the models to 1½ pounds for every 1/10 cubic inch displacement, minimum one pound for each 1/10 cubic inch. Most of the cars weigh from 6 to 7½ pounds, with a 12½-inch wheelbase and 7½-inch tread. They cost about $200 apiece, counting materials, motor and labor, and require two or three months of spare-time work to build from start to finish.

Frames made of magnesium are favored because they weigh about one third less than those of aluminum. A sheet aluminum skin covers this frame.

Two different styles are made, the "conventional," which is modeled after real racing cars, and the "streamliners," designed for speed rather than appearance. Streamliners average five miles per hour faster than conventional models, not because their lines are softer but because the design allows the power plant to be built lower to the track. Complete kits are manufactured for assembling the bodies.

Most of the engines are of a standard type called the "Hornet." The owner's ability to coax the most from his engine, coupled with the body style of his car, determines whether it is a winner. Engines cost about $35, although prices on second-hand power plants skyrocketed to $50 during the war. Like their big brothers, the engines and frames are rebuilt for each race.

Parts are machined to 1/10,000-inch tolerances. A tiny spark plug is mounted on top of the engine. The piston has more clearance than those in family cars, because the engine's heat quickly expands it. The engine develops an estimated ¾ horsepower turning at 15,000 revolutions per minute. Anchored securely to the frame, it packs terrific energy into the models.

Fuel mixture is 70 percent alcohol and 30 percent castor oil, with a small amount of amyl acetate added, depending upon the temperature. The cars carry about 100 c.c. of fuel, enough to run a one-mile race plus a few additional laps.

Wheels of the little racers turn at 7000 to 8000 revolutions per minute. Tires would fly off or disintegrate at this speed if not held against a surface before the cars are released. Wheels are touched lightly to the track to cut down their speed until the race starts. One owner was knocked unconscious for 15 minutes by a small fragment of tire that broke loose and struck him behind the ear.

Tires are made of soft rubber. Like those on big racing cars, they last only a short time, usually not more than three or four races. During the war they were not manufactured. Prices of used tires soared, with a virtual black market developing.

Eight cells from pencil-type flashlights are soldered together to furnish a three-volt battery of high amperage. One basic problem is to stop the car after it is in motion. A wire switch extending like an antenna an inch or more above the top of the model is the solution. When the car is to be stopped, a handkerchief is held above the track. As the pygmy roars past, the handkerchief trips the extended switch, disconnecting the battery. One owner tried to trip the switch with his hand. The wire almost severed a finger.

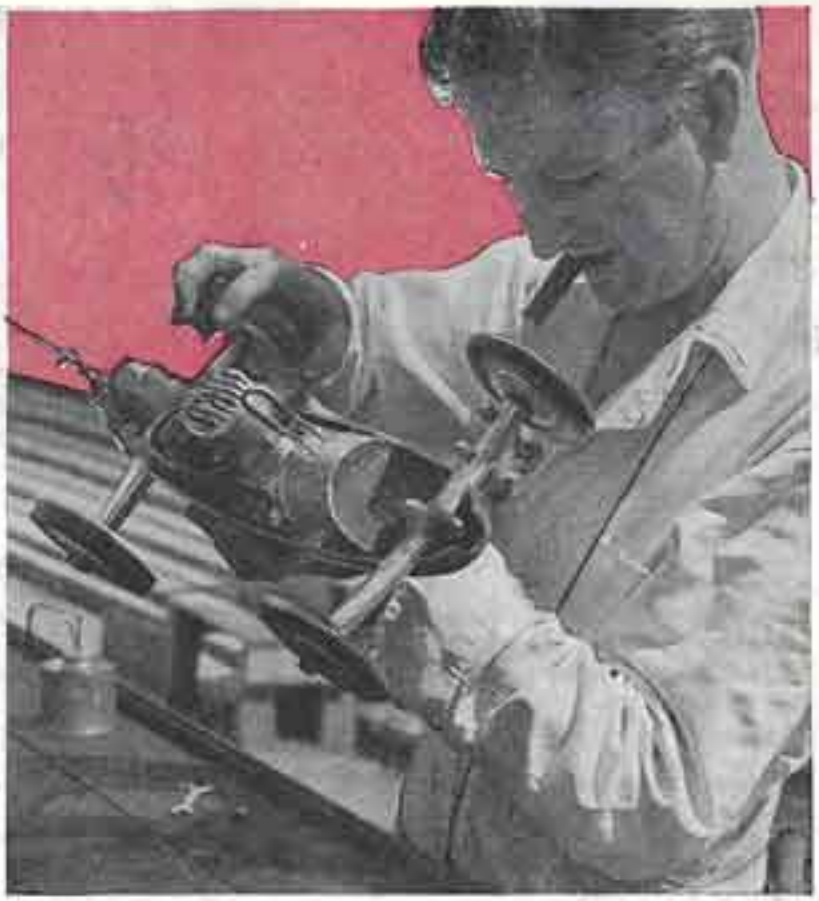
Official races are sponsored by the national association. Qualification and elimination races are run before the feature event, which is a one-mile race for the four fastest cars of the preliminaries. The car with the best qualifying time is given the outside lane in the preliminaries, the inside in the feature.

Ben Meskowski of Chicago holds the official world's record at 79.92 miles per hour. Unofficial record, made at a meet without national sanction, belongs to William Weller at 80.09 miles per hour. T. J. Thompson, president of the Chicago association, built one of the most consistent winners. It placed first in 19 of 24 races during 1945.

At the starting line the "starting roller," a revolving cylinder flush with the surface of the track, starts the cars by rotating their wheels. Each growling model is then held forcibly in position until the others entered in that race are ready. Down comes the flag, owners release the cars, and away they roar, trailing a cloud of exhaust.

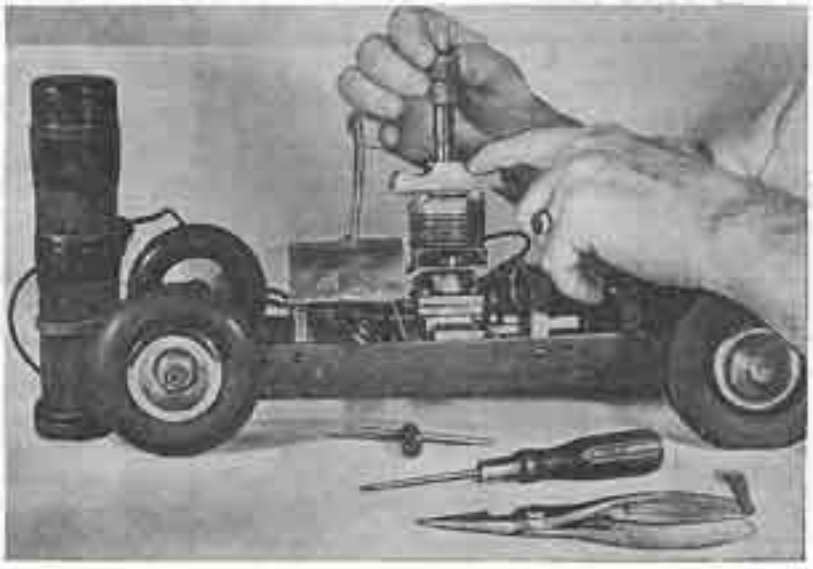
Photographs of the screaming models are difficult to obtain because of their high speeds. Films exposed for 1/1000 second are blurred. For the same reason no one can observe all the models in a race. A judge is appointed for each car. He follows that car until the race is over. Then judges and flagman compare observations to determine the winner.

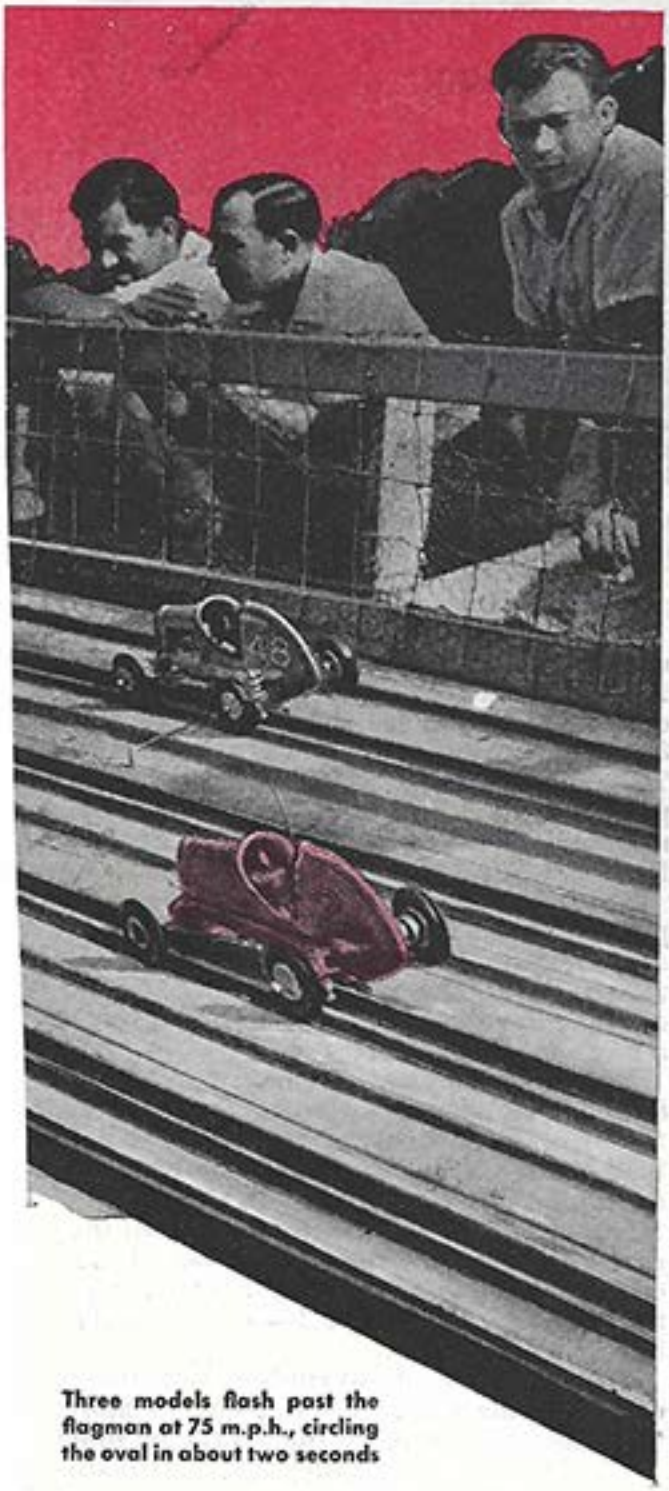
If you see an excited crowd around a miniature track this summer, don't stop to watch the races. Keep moving unless you want to spend most of your spare time pursuing an exciting hobby. Owners say the sport is highly contagious.



Pit repairs hold all of the anxiety of big-time races. Below, streamliner sacrifices style for high speed

Tiny power plant requires frequent checking to develop highest speed



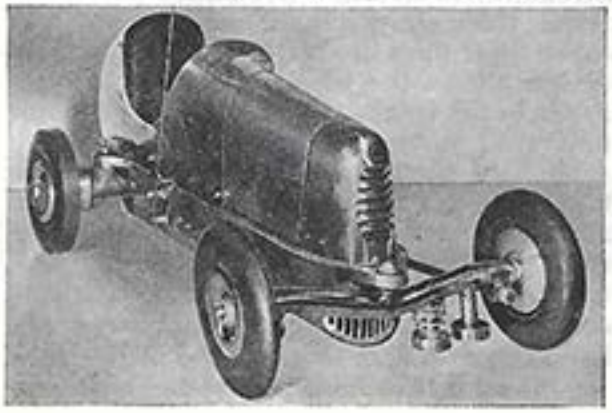


Three models flash past the flagman at 75 m.p.h., circling the oval in about two seconds

Owner gives his model final tune-up before the race

↑ An impatient car is fastened securely to the rail

↓ Note ball bearing locking studs on the front axle



record. But the cable allows only one car to circle the track at a time. Instead of racing, it's car vs. stop watch.

For that reason enthusiasts are acclaiming rail racing as a better sport. "The future of the hobby definitely lies with the rail track," says Robert Mulhall, director-at-large of the national association.

Rail cars race on an elliptical track that is divided into four lanes. A flanged steel rail flanks each lane. Ball-bearing studs on front and rear axles lock the pygmies to these flanges. Friction against the rails reduces speeds to around 75 miles per hour.