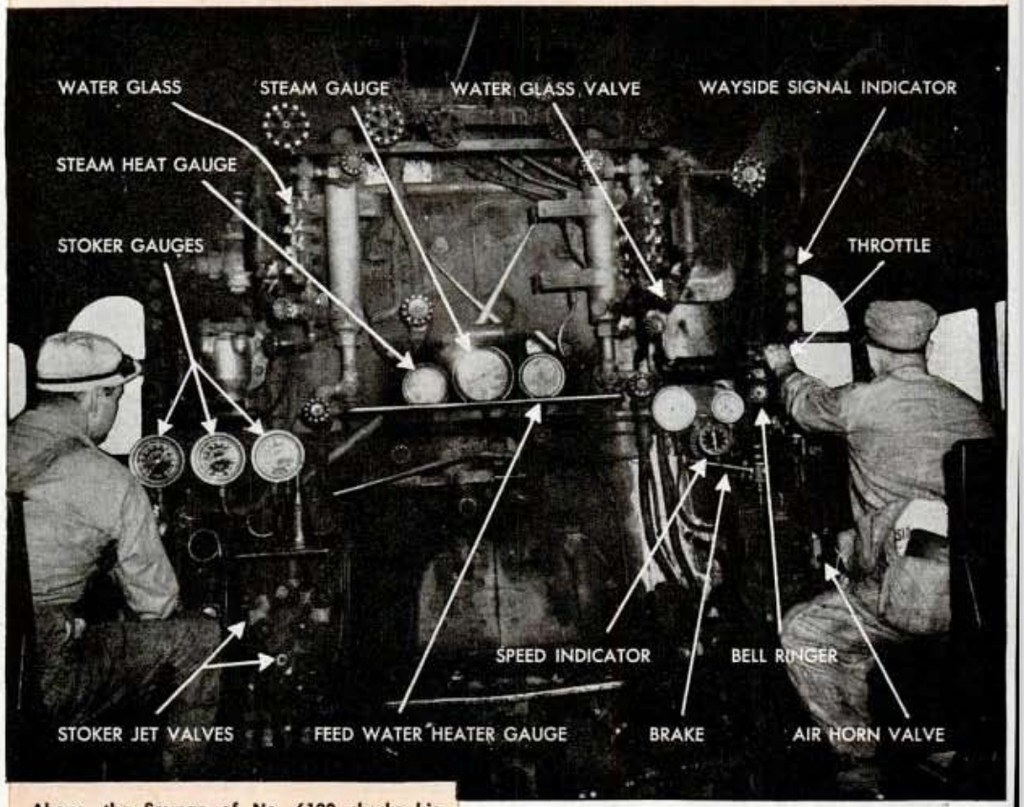
RIDING *the* GARGANTUA



Above, the fireman of No. 6100 checks his gauges as the engineer pulls throttle to start train. Below, lubricating a cross head pin on the engine. There are 350 points for the grease gun

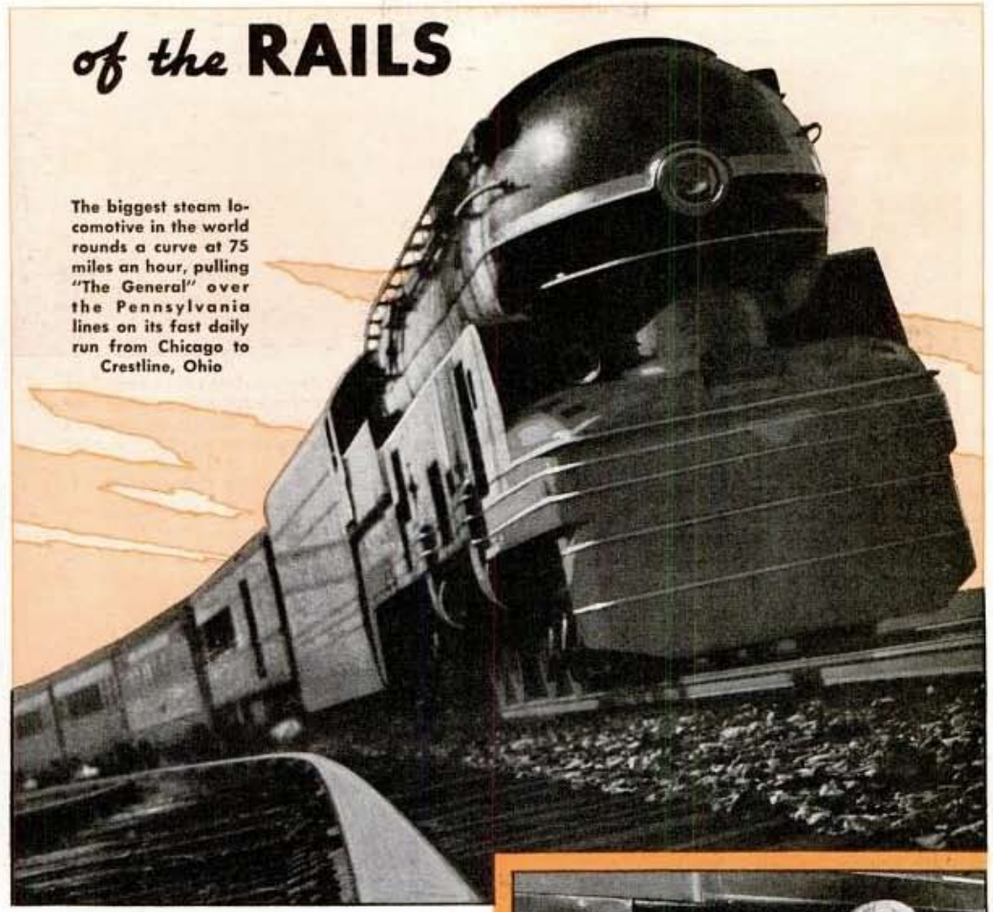
By Roderick M. Grant

VASTER than a Hollywood producer's dream, there is nothing on rails so colossal as No. 6100. She is the "Queen Mary" of locomotives, the largest steam-breathing passenger engine ever built, the only one of her kind. Stack her on end against a 14-story building and her out-thrust, striped chin will jut into the sky past the roof garden.

You can take it from any engineer who has opened her throttle, she is also the fastest. Nobody knows just how fast. You don't let out a million-pound locomotive to the limit, as you might tramp the accelerator of your car to the floor to see what it will do. But unofficially she owns the world speed record that has officially belonged for 36 years to another Pennsylvania Railroad engine, which, pulling the

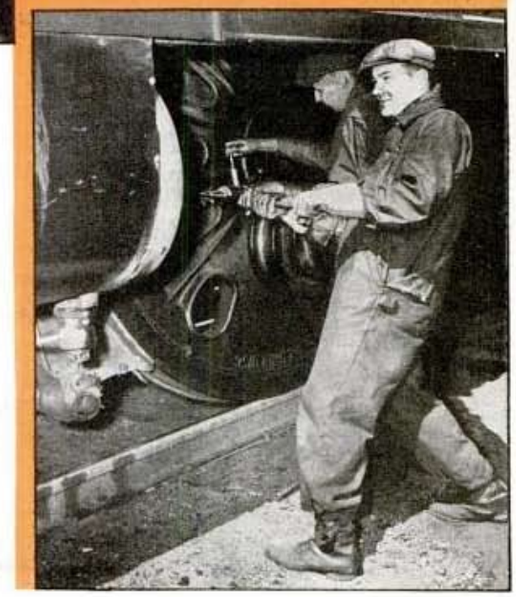
of the RAILS

The biggest steam locomotive in the world rounds a curve at 75 miles an hour, pulling "The General" over the Pennsylvania lines on its fast daily run from Chicago to Crestline, Ohio

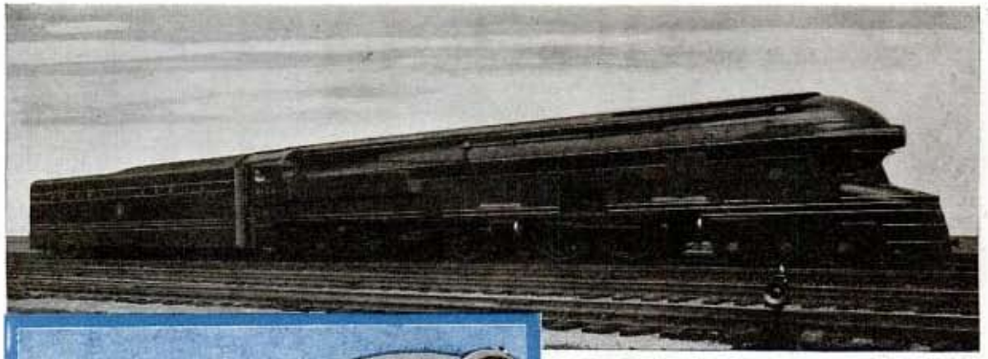


father of today's Broadway Limited, on June 12, 1905, was clocked by telegraph at 127.2 miles an hour for three miles.

One day Charlie Wappes, assistant road foreman of the Fort Wayne division, who rode No. 6100 on her test runs and taught most of the engineers how to handle her, noticed that the speedometer was bang up against the 110-mile mark, the limit of the gauge. He pulled out his watch, started clocking at Wanatah, Ind. Two minutes and 50 seconds later they passed the next station, Hanna, 6.3 miles on. That's 133.4 miles an hour. Back of the big engine were 12 cars, heavy equipment. There was no deliberate attempt to write up a new speed record. As



Greasing the rods at the engine's private pit



This broadside view shows the tremendous length of the "torpedo" engine; it has four cylinders and eight drive wheels, stretches 140 feet 2½ inches from coupler to coupler

An inspector climbs inside to look over the feed water heater

Dispatcher in Chicago tower throws switch to clear No. 6100

Charlie Wappes said afterward, "It's pretty hard to hold her back. She'd do 150 if we let her."

You have to see No. 6100 to believe her bulk. You have to ride her to sense the easy power. Climbing up the ladder into the cab you notice that she towers within inches of the ceiling of Chicago's Union Station.

It's one minute until train time. The steam pressure gauge shows 300 pounds. Fireman F. A. Cartwright twists the stoker valve and there is a hiss of steam from 14 jets beneath the firebox door, each jet a tiny gale picking up the crushed coal as it falls from the lip of the stoker screw and blowing it to a particular spot in a firebox big enough to bed down an army tank.

Engineer I. G. Kilpatrick gets the highball from the conductor. Brakes are off. In a few seconds the signal tower clears the station block, three dots gleam vertical on the board and Kilpatrick, without another backward glance at his 14 cars, grasps the throttle. Steam leaps into four cylinders, eight seven-foot drive wheels respond and No. 6100 crawls out of the cavernous station on one of the only two terminal

This powerful stoker screw delivers coal to firebox

"Coasting" at a 100-mile speed that blurs telegraph poles, the engineer has time—between blasts of horn and watching signals—to admire a herd of cattle

tracks straight enough to carry her. The rest of the tracks, easy rolling for any normal 95-foot locomotive, curve too sharply into the yards for the 140-foot, 2½ inch length of the Pennsylvania's big engine.

The train clatters through the maze of switches and crossovers, effortlessly gathers speed for the seven-mile run to suburban Englewood. There is a minute's pause there, and with the observation car out of sight around the curve at that station, two short hisses from the signal whistle give the highball. Wheels are rolling again toward Gary, to the rhythmic chuff-chuff of No. 6100's four cylinders. Really the equivalent of two "Atlantic type" locomotives, she is a double engine with four cylinders instead of two, with 6-4-4-6 wheel arrangement—six pilot wheels, eight drivers, six-wheel trailer truck and 16 wheels under the tender, which is as big as a four-room house and carries 25,000 gallons of water, 26 tons of coal.

Why the double engine, and why this Gargantua on rails? Well, the Pennsylvania wanted an outstanding coal-burner that would pull heavy passenger trains uncomplainingly for long runs on better than mile-a-minute schedules. With conventional engines, long trains mean double-heading or splitting into two sections, requiring extra crews, extra lounge and diner. So they built No. 6100 at the Altoona, Pa., shops, giving her two extra cylinders to increase the tractive effort; and she has pulled a 2,000-ton passenger train of 22 cars.

You're roaring around a curve this side of Gary—and I mean roaring—when you

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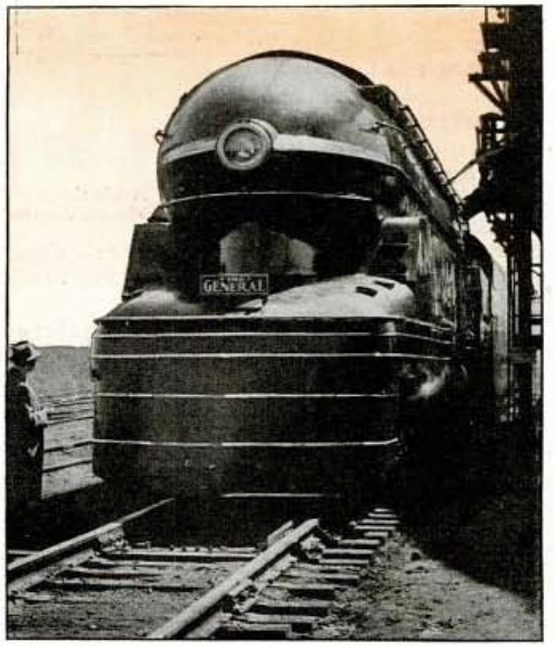

The tender takes on 26 tons of coal and 25,000 gallons of water for 280-mile trip

Riding the Gargantua of the Rails

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see a big truck ambling across the track a quarter of a mile ahead. Well, it's a big truck when you see it on the highway, but somehow it seems puny in front of this 530-ton monster, which feels very safe and stable. No. 6100 rides like a Pullman, runs like Whirlaway.

Beyond Gary the train rumbles into the straightaway that makes the Chicago to Fort Wayne division the fastest stretch of rails in the land—so fast that the first Burlington Zephyr came here to try out its speed. Engineer Kilpatrick pulls the throttle back a couple of notches, adjusts the cutoff with the reversing gear to shorten the valve travel—rather like shifting your car into overdrive—and settles back on his cushions. In six minutes No. 6100 steps up from 40 miles an hour to 85. Kilpatrick hasn't a lot to do. He watches the gauges, adjusts the valve of the boiler feed pump as the water drops in the glass, keeps an alert eye on the block signals and Fireman Cartwright's raised hand, accompanied by a shout "Clear board," as each clear signal shows ahead. But most of the time Kilpatrick is pressing the brass key that lets loose the warning blast of the horn at highway crossings. Once or twice the fireman opens the butterfly doors of the firebox and you avert your eyes from the inferno, yet somehow he can peer in and see that the fire bed is even. So accurately are those stoker jets adjusted that not one shovelful need be hand-fired.

Midway to Fort Wayne Kilpatrick retards the throttle and slows the train down to a crawling 45 miles an hour. The fireman steps back to the tender, and at a signal from Kilpatrick jerks a lever lowering the water scoop into the 2,400-foot pan between the rails. In a moment it's up again, and the gauge shows 6,000 gallons picked up. No. 6100 has the appetite of a growing boy. She'll consume 24 tons of coal, evaporate 36,000 gallons of water on her daily 280-mile run to Crestline, O. It takes a pound of coal to turn six pounds of water into steam.

After the drink, No. 6100 steps out again. The needle is at 85 miles when Engineer Kilpatrick reaches up and moves the throttle one tiny notch, then another. Steadily

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the needle creeps around to 90, 95, then rests at 102 miles an hour. Yet here in the cab, 75 feet back of the pilot and unable to see the track unless you peer out from the engineer's or fireman's seat, you have no impression of terrific speed.

"She's a wonderful engine," says Kilpatrick, turning around to grin at you.

But that wasn't the way they talked at first. When No. 6100 first came out from the east, the crews were a bit shy about riding her. Charlie Wappes, shouting in your ear, says "It was like changing over to a Cadillac after you've driven and tinkered and taken apart and put together a Model T for years. But now they've found out how smoothly she rides and handles, and they like it."

The big engine is mechanically lubricated while running, and at terminals pressure guns shoot grease into her joints at 350 points. But men are creatures of habit, and you'll still see an engineer wandering around her with a three-foot oil can looking for some place to use it.

A curve is an event on this line. You see one ahead out of Valparaiso, but you take it without a lurch at 95. The last 19 miles into Fort Wayne you coast along around 100, the throttle only partly open. Two miles from the division point Kilpatrick eases the throttle and applies the air. Five, ten seconds elapse and then you feel the train begin to pull back, as the air is applied to the car brakes. All the way to the station the train is kept stretched out, braking against the pull of its engine; then, just before the full stop, train brakes are released and locomotive brakes alone applied, letting the cars close up the slack. Thus the starting load is lightened as the engine, taking up the slack, gets one car after another under way.

The home stretch is a two hour, 131-mile sprint to Crestline. And Crestline is home, for there a special stall has been built for the big engine which can get into no other engine-house. Nor is there any turntable west of Harrisburg long enough to take it. A special Y was built at Crestline to turn it around, and at Chicago No. 6100 has a new big pit of its own for greasing, and for cleaning the fire. The engine has been assigned for life to the Fort Wayne division, where she can negotiate the slight curves and long straightaways

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with their heavy, 131-pound rails at high speed.

No. 6100, like the rest of us, gets one day off each week. On that day at Crestline they give her a light going-over, and blow the mud left by treated water from her boiler. As for heavy servicing, she'll go twice as far as the "K4" engines that pull the other trains of the fleet; she is docketed for a general overhaul at 150,000 miles, but they don't believe it will be necessary before she rounds the 225,000-mile point.

The big engine has had a strange life. Since she settled down to business for the Pennsylvania she has traveled about 40,000 miles. But before that she probably rolled up 50,000 miles without getting anywhere. The prize exhibit of the American Railroads for two years at New York's world fair, her wheels spun continuously on the treadmill there while Pennsylvania engineers impatiently cooled their heels waiting to put their big investment to work.

It was at the fair that an onlooker turned to a Pennsylvania official and inquired: "What's it made of?"

The thing was so unbelievably big he thought it was a papier-mache mockup.

DECEMBER, 1941