

ENGINEERING

Auto-Rail Bus Travels Roads And Rails with Equal Ease

WOULD you be surprised if the railway locomotive hopped the tracks at the station some hot afternoon, sped down Main Street and stopped by the corner drug store to deliver a dozen crates of lemon soda? Sunstroke? Not at all—

An American counterpart of the combination automobile and rail car developed abroad promises to aid the railroads in meeting competition of non-rail vehicles. Manufactured by the Evans Products Company, Detroit, and tentatively known as the auto-railer, it is now being tested by a number of railroads in the United States as a possible solution for some of their problems.

Permitting operation on both highways and rails, the auto-railer attachment can be installed on any standard make of bus. Flanged pilot wheels of steel held in position by compressed air keep the rubber tires on the rails. By use of levers, the operator of the vehicle can convert it from rail car to bus and back again at will, in a moment.

Rubber tires make the operation silent and easy riding in either capacity. Pick-up or quick stop on the rails with rubber tires is superior to steel on steel, according to engineers.

Store door pick-up and delivery in outlying districts could be effected without rehandling of the load. This would mean

lower freight rates, through exploitation of the expensive railroad right of way and avoidance of handling costs.

Since long before the depression the railroads have increasingly felt the competition of bus companies and automobile hauling agencies. Railroad executives and stockholders complain that the competition is unfair because the railroads must expend millions yearly for upkeep of rails, signal towers, and other equipment while the bus companies use the public highways for nothing. Furthermore, they are forced to maintain rates and schedules, even if unprofitable, in contrast to the ability of the bus companies to arrange their own rates and schedules.

The diverting of a large portion of heavy bus and truck traffic from the intercity highways would reduce congestion and lessen the high yearly total of fatalities from motor accidents, it is claimed.

Passenger rates might be lowered, engineers say, because the amount of dead weight per passenger pulled by the railroads would be reduced if the light auto-rail car came into use. At the present time a train pulls about one and one-fourth tons of dead weight for every passenger. The light auto-bus would reduce this weight to the neighborhood of 350 pounds.

A somewhat similar vehicle used in

Austria is 73 feet long, streamlined, and has a top speed of 93 miles an hour. French and English and German railway engineers are experimenting with similar types.

First use of the auto-rail car in America would probably be in reviving dying and now unprofitable railroad-branch lines, rather than on main lines.

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MEDICINE

Epileptics Seem Cured After Brain Operation

APPARENT cures of epileptic patients by surgical removal of the affected part of the brain in 25 cases were reported to the Second Neurological Congress, London, by Dr. Wilder Penfield, American physician who is professor of neuro-surgery at McGill University, Montreal.

Whether the cures are complete and lasting can only be ascertained after the subjects eventually die, Dr. Penfield pointed out, because a recurrence is always a possibility.

Some of the cases, however, have been without convulsions for six years.

In 75 operations for this affliction only two patients have died as the result of the operation, Dr. Penfield said.

Brain surgery is not suitable for all types of epilepsy, the Montreal physician indicated, but works well in cases due to focal atrophy and brain scars.

Brain scars may be acquired at birth or by injuries such as local meningitis and may precede the onset of epilepsy from one to 15 years.

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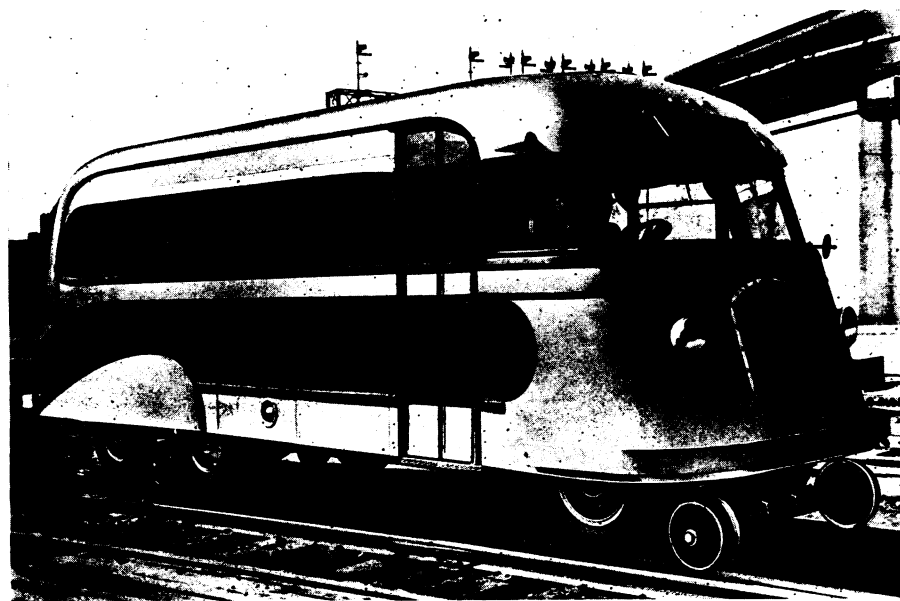
ENTOMOLOGY

Giant Toads Combat Hawaiian Insects

GIANT toads with even bigger voices are being raised by scores of thousands to clean up the insect pests of Hawaiian sugar plantations and other cultivated fields. The same toad species some years ago effected a spectacular rescue of Puerto Rican plantations from the destructive white grub plague, and the ancestors of the present Hawaiian toad armies were brought to these Pacific islands from their home in the West Indies.

The giant toad, named *Bufo marinus* by zoologists, has a body six inches long and a voice that fills the sky at night. However, he sings only when he can get his hindlegs into water, so that people who do not care for his serenadings easily keep their premises quiet by putting 15-inch fences around their garden pools.

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RIDES RAILS AND ROADS

Hybrid vehicle that may solve problems now perplexing railroads.