

ENGINEERING

# Build Railroad Cars Like Automobiles, is Suggestion

**S**TREAMLINED railway passenger cars that would become obsolete and be replaced as rapidly as automobiles were suggested by William B. Stout, automobile and airplane designer, as both a depression remedy and as a technical advance in railroad rolling stock construction.

Mr. Stout, who explained that he is carrying the viewpoint of the automobile and airplane engineer into the rail transportation field, has given expression to his advanced ideas in the construction of the railplane. This is a light-weight, streamlined, 50-passenger car powered to cruise at 60 miles per hour by two standard motor-bus gasoline engines. Technical advance, according to Mr. Stout, should make the railplane obsolete in from three to five years so that it would have to be replaced by more efficient equipment.

In addition to employment given by such rapid replacement construction, the light weight cars would operate in only one-, two- or three-car trains to give more frequent service and to increase employment of train crews. The light weight and streamlines of the car make its operation much more economical than that of present standard steam equipment. For example, the gasoline consumption of the railplane at 60 miles per hour is only a gallon every six miles.

Success of the railplane idea, both for providing faster, more frequent and more comfortable transportation and for increasing employment, depends upon the use of the car in such quantity that mass production is possible. Mr. Stout told the Washington branch of the Society of Automotive Engineers that cost of building only 100 cars at the present time would be about \$30,000 per car. He estimated that if thousands of cars were built at the same time this figure would be fractioned.

The railplane is now being examined and tested by railroad engineers and officials. It weighs 26,000 pounds complete, is 60 feet long and has a top speed of 90 miles per hour.

"Both ends of the car are rounded off and retractable steps reduce wind drag," Mr. Stout stated. "Sidewise as

well as endwise streamlining has been embodied into the design to take care of cross-winds when the car is in operation.

"A standard power plant now in production was used in order to keep costs down. To be accessible and to be kept away from the body so that passengers would get no vibrations, the entire power plant mechanism was mounted below the car on the forward truck, the engines being located outside the truck beyond the wheels.

"Body framework is of welded chrome molybdenum steel tubing, similar to airplane fuselage framework practice. Neither bolts nor rivets are used. Covering is a dural skin which takes only a small proportion of structural stresses.

"Windows in the car are sealed, air conditioning apparatus being provided. Air passed through the radiators heat the car. Safety glass is used in all windows. Rubberized hair is used for body insulation, while in the trucks and engine mountings rubber cushioning members further reduce transmission and vibration noise."

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PHILOSOPHY

## New Book is First of Non-Aristotelian Library

**T**HE IDEA that the whole of a living thing's activity, that the responses of the organism as a whole on the emotional as well as the intellectual side should be evaluated, is given expression in a new book by Alfred Korzybski titled "Science and Sanity." (International Non-Aristotelian Library Publishing Co., Lancaster, Pa. \$7.)

It is the first volume of a proposed Non-Aristotelian Library. Eleven other volumes are announced as being in preparation, and no less than fifty-two titles are suggested for publication in the future which "will embrace all known doctrines and human interests."

The seriousness of the project is attested by the present volume which displays a wide range of erudition, and by the opinions of a number of our lead-

ing scientists which are quoted in the book and reproduced in extenso on the advertising cover. The theme of the book is the assertion that mankind has adopted hitherto the Aristotelian system of expression which makes use of elementalistic terms in describing our conscious reactions. The central fault of the Aristotelian system is the use of the "is of identity." The result is an animalistic mentality, an unsanity, which can be corrected only by a change to a non-Aristotelian system. This latter system is based on "fundamental negative premises; namely, the complete denial of identity," and calls for a new linguistic expression of non-elementalistic structure.

To illustrate the mode of building up such a language through successive orders of conscious abstracting, the author makes use of a diagram, designated as the "structural differential," in which he attempts by means of a simple model to portray the relations of an event to its objectification in consciousness and to the name or label attached to it. The event, an apple for instance, as a mass of matter has an infinite number of characteristics dependent on the dynamic activity of its constituent parts, the "mad dance of electrons." In consciousness, by a first order of abstraction, the event becomes an object with a limited or finite number of characteristics through which it is recognized, and in man we give this object a name making use of still fewer of its characteristics. These relations are exhibited in the model and convey to the eye the lesson that the name is not identical with the object, nor the object with the event. The author believes that by means of such a model proper semantic reactions may be developed in the young as well as in adults and a greater sanity be introduced into the language and thoughts of mankind.

The book is difficult reading. But whether or not one grasps fully the author's meaning his presentation is stimulating and thought-provoking. At times the difficulties are increased unnecessarily, especially on the physiological side, by a naive acceptance of questionable theories. Dr. Wilder D. Bancroft's idea of a dependence of mental states on the colloidal condition of nervous matter is treated as a demonstrated fact and made the basis for generalizations which to the physiologist seem to be unwarranted and without significance.

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