

Arthur Chevrolet Develops New

Super-Safety Aeroplane Motor

Arthur Chevrolet, internationally known designer and manufacturer of automobile motors, racing cars and "Frontenac" cylinder heads during the past thirty years, has just perfected a new aeroplane motor which men of authority predict will revolutionize established practices in the aviation field.

Wins First Place in

Cleveland Air Races

Proof of his motor's performance was recently demonstrated when a Travel Air low-winged monoplane equipped with the new motor (called the "Chevolair") flew from Wichita, Kansas, to Cleveland where it entered in the National Air Races September the second. In a field with motors of well known makes, the "Chevolair" won first place in its class in one race, and third place in the only other event in which it was entered. Twenty-five others were entered in this race. It evoked marked interest among veterans in aviation circles there.

Meet Government Requirements

The "Chevolair" has also completed tests at Washington under supervision of the United States Department of Commerce -- tests required for a manufacturer's certificate. Plans for production in a new plant at Indianapolis are now under way.

The outstanding advantage of Chevrolet's new motor is the one hundred per cent greater assurance of safety in flying claimed for it. Most forced landings, it is said, have been due to faulty valves, clogged oil or gasoline lines, defective ignition and similar troubles. The new motor reduces such troubles by fifty per cent due to its dual construction originated by Chevrolet.

Dual Construction Doubles

Plane's Safety

Chevrolet's own explanation of this dual construction shows its practicability. He said, "It might be said that the laws of nature which gave all animals duplicate members of the body were followed in the design of this motor. A man has two eyes, two arms, two legs, two ears and so on, with the result that if one member is lost, the other can take its place. So it is with this motor. Failure of one oil feed control, one carburetor, one cam shaft, one gasoline line, one set of valves and so on, will not reduce the dependability of the motor, and, above all, will not occasion power plant stops and dangerous forced landings."

The motor has been built so as to remove all possible chance of adjustments coming loose. It is so constructed that after it has been assembled no adjustments are required. In addition, the motor embodies an emergency oil flow control that traps the oil in the motor in the event of leaks in the oil lines enabling the pilot to make a safe landing.

Inverted, In-line Design

Before Chevrolet designed his motor, he sought the ideas of the country's leading plane manufacturers. As a result, his motor is of air-cooled inverted, in-line design to reduce head resistance one-third (as compared with ordinary radial motors) and to increase the pilot's field of vision. Besides, it is said to develop greater horsepower and speed in proportion to its weight.

The ordinary head width of the radial motor of 40 inches is reduced to 12 on this in-line motor. The over-all width is only 21 inches. The height is only 29 inches, and the weight only 325 pounds for the D-4 (four cylinder) model. This model has a manufacturer's rating of 120 horsepower at 2,400 revolutions per minute. Normal revolutions are 2,200 and maximum 3,000.

It is designed to have five times the life of ordinary aeroplane motors. The crankshaft is made in one piece of chrome nickel-molybdenum steel. The crankcase, cylinder head and pistons are made of aluminum alloy. The cylinder bases are steel, anchored to main bearing bolts.

Embodies 69 Patents

One important patent has been granted by the United States Patent Office, and application is being made for 68 others. In addition to the 4-cylinder and 6-cylinder motors already perfected, production later on is expected to include 8-cylinder and 12-cylinder models.

In addition to Arthur Chevrolet as President, the officers are all capable, well-known men: They are:

Frederick E. Schortemeier, vice-president, former Indiana secretary of state.

Gordon S. Griffin, vice-president, formerly connected with the Washington Bank & Trust Company and the Meyer Kiser Bank, both of Indianapolis.

Byron P. Prunk, vice-president, formerly with Pearsons Taft Company of Chicago.

Otto A. Kuehrmann, secretary-treasurer, who formerly was connected with Griffith Brothers of Indianapolis.

Alex Robinson, director, a partner with J. C. Willson Company, financial house of Louisville, Ky., and members of the New York Stock Exchange.

Major Craigie Krayenbuhl, a director, vice-president of the Commonwealth Life Insurance Company of Louisville, Ky.

Thomas Graham, a director, partner of E. W. Hays & Company, financial house of Louisville, Ky.

Joseph S. Heintzelman, a director, merchandise manager of L. S. Ayres & Co., Indianapolis department store.

Lawrence Olsen, director, formerly president of the American Die Casting Company, who is the developer of the Olsen method of spinning babbitt bearings, now used in the automotive and aviation industries.

S. H. Diegel, a director, who is a capitalist living at Elwood, Ind.