

PORTLAND, OREGON, SUNDAY MORNING, FEBRUARY 27, 1921.

Portland Is Aircraft Education Center

DISCIPLES OF ICARUS ARE TRAINED HERE

Guiding of Planes in Air Least of Many Things Those Who Aspire to Become Pilots Must Become Proficient In.

By Frank A. Clarvoe

What one of us has not paused to observe mother birds, or in some cases, perhaps, the daddies, instructing the young ones in the gentle art of flying, and what one of us has watched the scene without envy? On the other hand, what one of us has ever stopped by the side of a murmuring river to observe the mother fish teaching their young to swim? Those of us who have done so have not watched the scene unmoved, because, forsooth, birds have to be taught to fly but fish seem to be hatched swimming.

By the usual processes of evolution, we reach human beings, who have to be taught both to fly and to swim. As the swimming activities of the human species depend for their interest solely upon the person or persons doing the swimming, few people, if any, pause very long to follow the movements of a swimming school. But with flying we have a different state of affairs. Let a student take off with his or her instructor, let the crowd on the ground know that a novice is in the air, and observe the training of novices, the open mouths, and listen to the varied assortment of comment. The crowd watches with mixed emotions. As in watching birds, one admires the nerve of the flyer and wonders how it would feel to fall.

PORTLAND FLYING CENTER
Portland is a center for instructing the young and the old in the art of flying by mechanical means. Since the day Icarus, swooping too near the sun, went into a nosedive and lit in the Aegean sea, successful flying has never been accomplished by attachments to the shoulder blades. Chief among Portland educators in aerial craftsmanship is the Dudrey Aircraft Corporation, whose school of aeronautics has made rapid strides in teaching young men how to fly and in finishing pilots for commercial work and mail flying. The offices and shops of the school are at 105 North Eleventh street, while the aerodrome is at Broomfield, in Eastmoreland, otherwise known as the Municipal Flying Field.

Another school which is achieving some prominence is the P. R. & G. Aircraft company of Vancouver and Portland. This company has planned the work of flying as extensively as has the Dudrey company, but intends to enlarge its facilities in the near future. V. W. Dudrey is president of the Dudrey company and O. S. Lind is secretary, while members of the faculty include P. S. McClurg, chief instructor; F. W. Barker and E. E. Harding, flying instructors, and W. B. Randall, instructor in aeronautical mechanics. P. H. Green is instructor in theory. All instructors have had actual flying experience, some as many as 4000 hours in the air.

The aim of the school system in Portland is to train pilots for commercial work.

TRUCK MEN URGING SHIPPERS TO HURRY

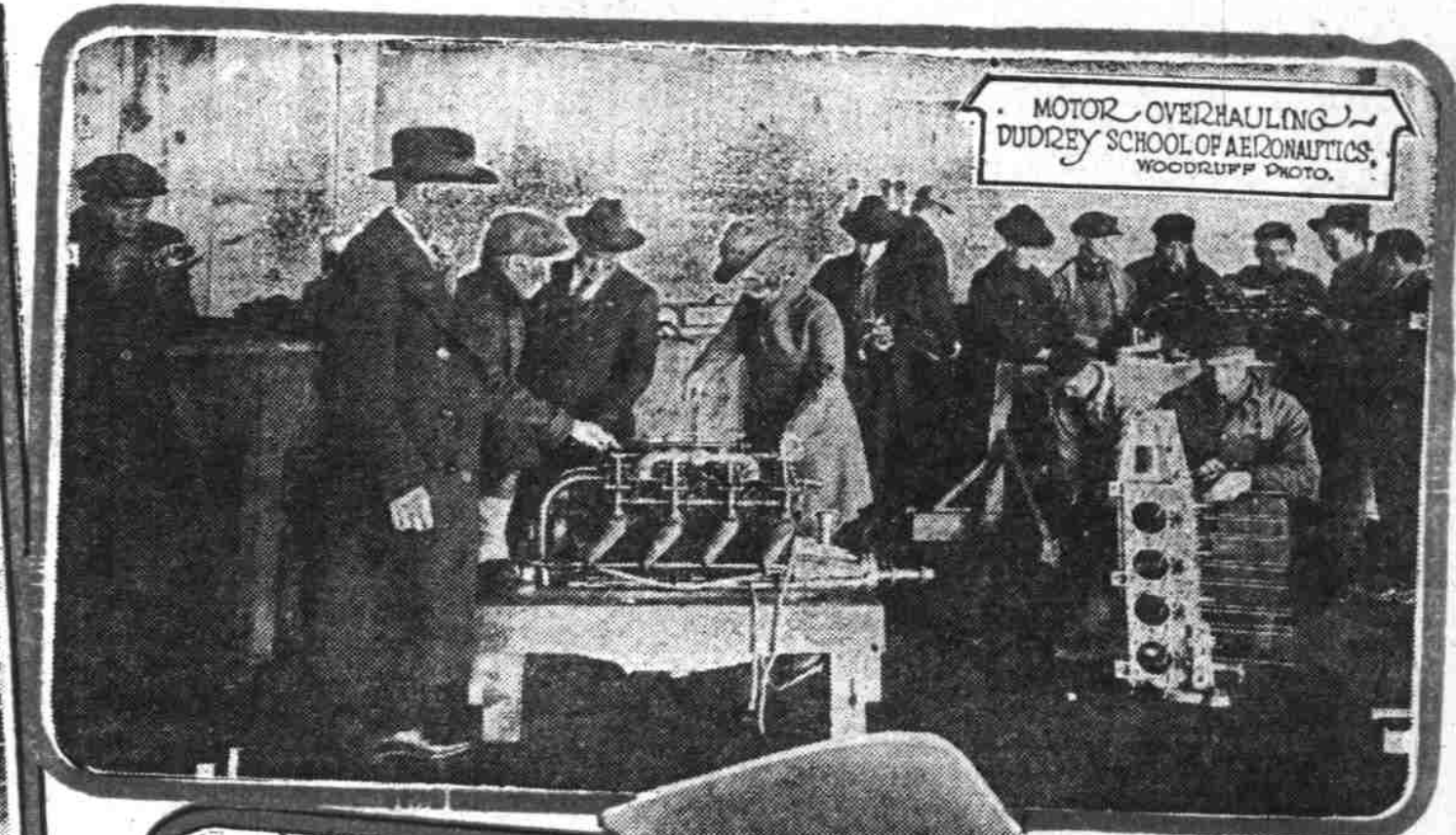
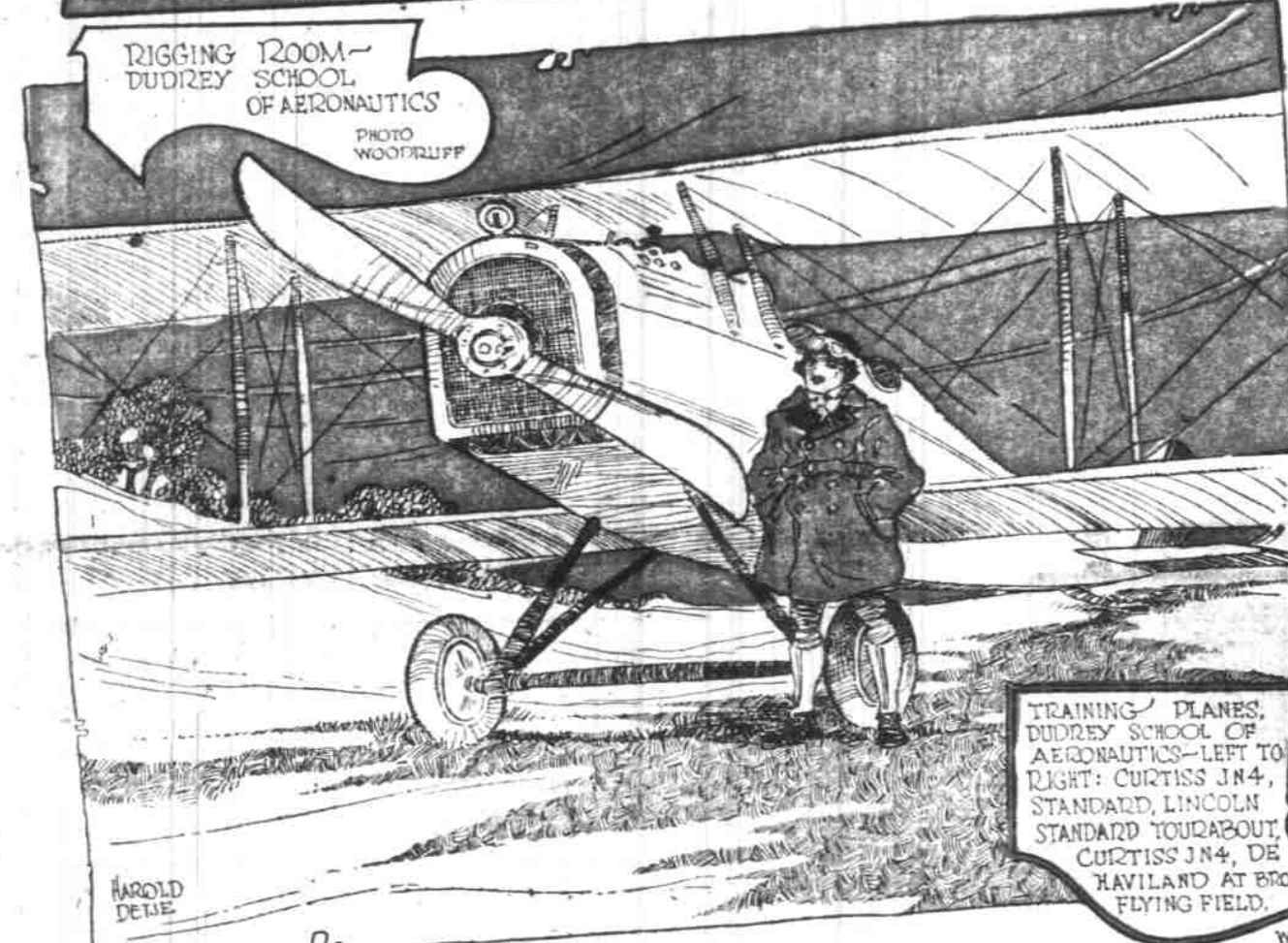
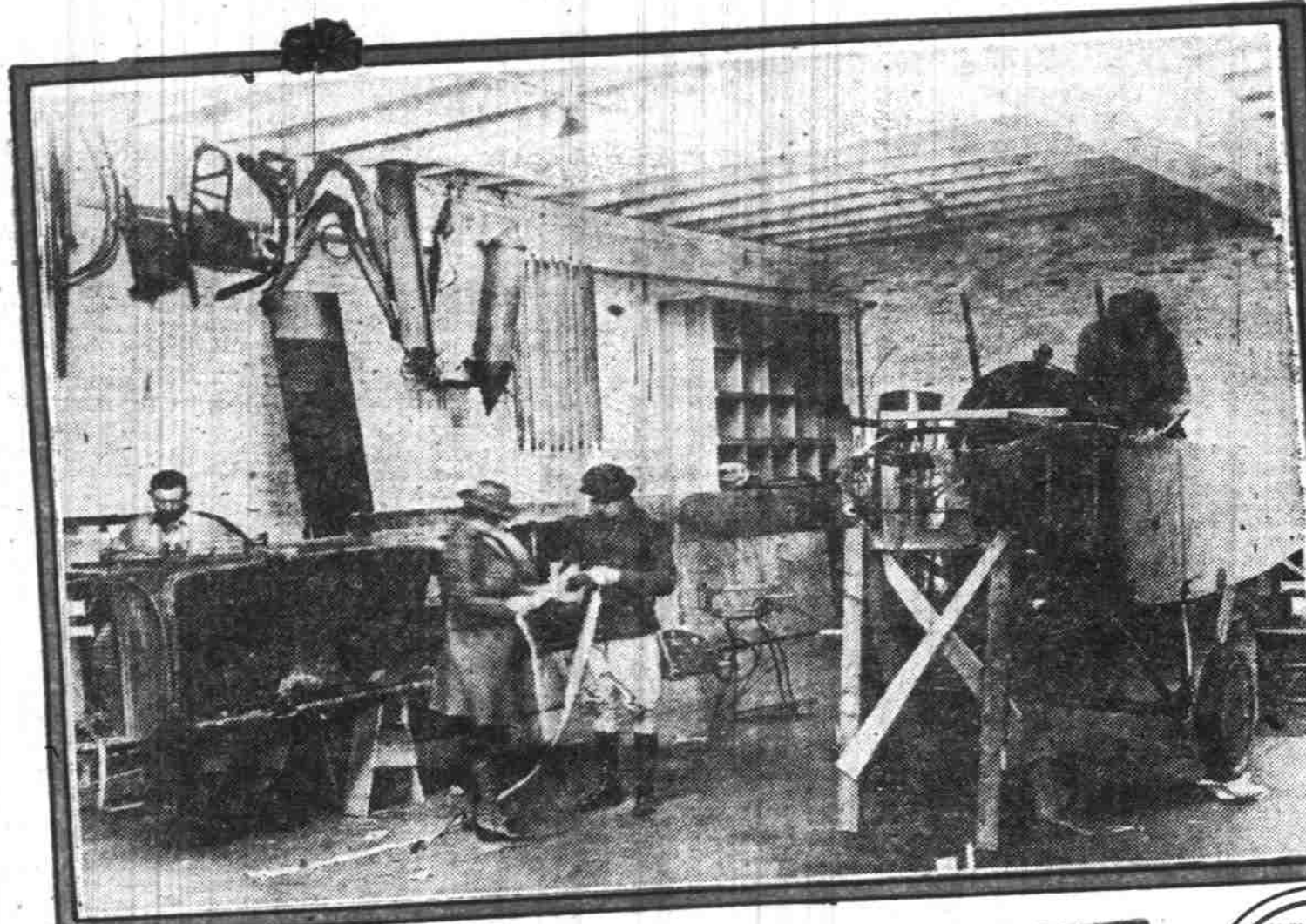
Contractors Are Warned Not to Wait Until There Is Shortage of Rail Facilities.

With a national road appropriation of nearly a million and a half dollars, and with the spring season just beginning to open, truck men are urging shippers to complete the tail end of their road material hauling before a shortage of freight cars may tie up hauling to a considerable extent.

Trucks are, of course, dependent upon the railroads to a considerable degree for material to be hauled, and unless contractors take advantage of the supply of freight cars at this time road work this summer may be delayed by lack of many pavement ingredients.

Heretofore one of the main reasons why contractors have not been able to get sufficient heavy duty truck equipment is that they have made no special effort to move materials when adequate railway transportation was available. But now for the first time in five years there is a surplus of railway cars and trucks in the United States available for carrying out the "ship now" movement.

According to a research made by the White company of Cleveland, builders of White trucks, it is estimated that for every mile of 18 foot concrete highway constructed there must be transported 205 five-ton truck loads of sand, 32 loads of stone and 69 of cement. So fully realizing the delay that will follow if the slack season is ignored as in the past highway engineers, banks, chambers of commerce are being urged to follow the lead of the state of Delaware who have for the last three years shipped all road material during the winter months.



RIGGING ROOM - DUDREY SCHOOL OF AERONAUTICS
PHOTO WOODRUFF

TRAINING PLANE - P. R. & G. AIRCRAFT CORPORATION
THIS PLANE IS AN AVRO.
PHOTO WOODRUFF

TRAINING PLANES, DUDREY SCHOOL OF AERONAUTICS - LEFT TO RIGHT: CURTISS JN-4, STANDARD LINCOLN STANDARD TOURABOUT CURTISS JN-4, DE HAVILLAND AT BROOMFIELD FLYING FIELD.
PHOTO WOODRUFF

Leaky Radiator Must Be Fixed Compounds Are Often Injurious

By Mike De Cicco

The average motorist does not know the extent of the damage a leaky radiator can do to the mechanism of his car, nor does he realize that when his car comes down the road steaming as if a hot water pipe in the flat had burst he is taking a long chance on running a perfectly good power plant. An overheated motor will cause the valves to warp and stick open, thus aiding in their ruin; it will cause cylinders to be scored, pistons to get out of true, and piston rings to gum up and stick. When the motor gets hot from lack of water or from poor circulation in motors using the water cooling system, the lubricating oil loses its viscosity, which is the real valuable quality the oil possesses. As soon as this viscosity or stickiness has been taken from the oil, the cylinders do not get their lubrication, walls are scored from the friction of the piston, loss of power is noticed, and a costly overhauling bill may be the result.

A leaking radiator is often caused by insecure fastening on the frame, or from faulty or one-sided spring suspension. The latter will cause the strain on the radiator to become unequalized, and when riding over rough roads quite frequently the jar will loosen portions of the honeycomb, tear the tubes loose, and damage other portions which are fastened with solder. Leaks often occur around the hose connection outlets or around the radiator brace.

To solder joints on the radiator, remove the radiator from the frame and move it to a position where the solder will flow into the parts where it is needed. To remove the radiator is a simple task. Drain out the water, remove the bolts fastening the radiator to the frame, and disconnect hose connections. In the soldering, use muriatic acid, in which some small pieces of zinc must be dropped to cut the strength of the acid. This may be obtained at any drugstore. Have some solder, a hot soldering iron, and the intention of keeping the hot solder from falling on your hands. Go to it.

The parts to be soldered must be scraped with a knife or sharp tool. Apply the acid to the broken place, then the solder. If the tubes are broken the task will be more difficult, and often it is best to take the radiator to a metal man who understands that sort of work. Water often leaks through the packing in the bushing or the water pump. This can sometimes be stopped by screwing up the bushing or renewing the packing. In the latter case, uncrew the bushing and repack with water pump packing, which comes in long strings about 1/4 to 3/4 inch thick. Wind this

around the shaft four or five times to such a depth that the bushing will easily start on the threads. Screwing up the pump grease cup every day aids in preserving the packing.

If the hose connections leak, replace with new parts by disconnecting the clamps. Shellacking the hose will aid in its preservation, as grease and oil are not permanent and is often dangerous, for when the circulation of the water in the radiator is obstructed the hot water cannot be replaced by new and cooler water. This happens with certain compound radiators, and the cooling system is often badly crippled. After all, the only way to fix a radiator is to fix it by repairing with new tubes or solder. It will be cheaper in the long run.

Douglas County Is Planning Road Work

Roseburg, Or., Feb. 25.—Considerable road work is being planned in Douglas county for the coming summer and the highway commission at a meeting held Monday announced that several new improvements in road conditions will be made in this section. Assistant State Highway Engineer J. C. McLeod, K. S. Hall and Ira A. Williams of the highway service visited here this week and made an inspection of the highway work being done.

MOTOR EXPERT IS INVENTOR OF NEW TYPE OF ENGINE

P. W. Kane of Centralia Said to Have Achieved Success After Years of Experiments.

Centralia, Feb. 26.—With what is said to be complete success marking the end of 15 years of experimental work, P. W. Kane, president of the Kane Pneumatic Shock Absorber company, has just completed a new gasoline engine of the rotary type. A test run is declared to have demonstrated the correctness of the principle of construction and operation.

The engine as it now stands is a true rotary, four cycle gasoline motor with the firing equivalent of a 12 cylinder engine. Eight hundred cubic inches capacity, 315 I. H. P. at 1000 R. P. M. and weighs 387 pounds. It has only seven moving parts and has neither cylinders, pistons, connecting rods or valves, and only two bearings of the Timken type.

HIGH PISTON SPEED
This motor secures a high piston speed

equivalent with very moderate rotation speed. At 1000 R. P. M. a piston speed equivalent of more than 3800 feet a minute is obtained. Kane, who is responsible for the new engine, was at one time in charge of the experimental shop

of the oldest automobile concern in the country and has had 25 years of experience in the automobile world.

(Continued on Page Six, Column Five)

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