AERONAUTICS

New Explorer To Replace Photographic Airplane

➤ A NEW "Explorer" to replace the notable photographic airplane of a decade ago is promised for the future. The original Explorer is to take a place in the Smithsonian Institution in Washington beside the Wright Brothers' Kittyhawk and Lindbergh's Spirit of St. Louis.

The plane to join the government group as important in aviation progress was constructed in the middle thirties because there was no plane at that time that met the exacting requirements imposed by the rapidly developing aerial survey industry. Its principal years of activity extended from 1938 through 1942. It is a product of Talbert Abrams and the Abrams Aerial Survey Corporation, Lansing, Mich.

Unobstructed visibility, high rate of climb, speed and stability are requirements in an aerial survey plane. The Explorer possessed these to a marked degree. Its glassed-in nose gave clear vision in all directions. It climbed at 1,500 feet a minute and had a speed of about 200 miles an hour.

This plane, with its pusher propellers and twin-boom tail, is powered by a 450-horsepower Wright Whirlwind engine and has a wing-span of 36 feet. Its place in the historical museum is due to its being the forerunner of a type of plane specifically designed for aerial mapping and survey work.

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ENGINEERING

Wall Blanket of Hot Air Features New Home Heating

➤ A BLANKET of warm air from the furnace spread over the walls of a room is the feature of a new home-heating system demonstrated at the exposition of the National Association of Home Builders in Chicago. It is a General Electric development, and said to be efficient and economical.

Special registers and grilles are used in this so-called Air-Wall system that direct the forced warm air upward in a fan-like pattern in front of the wall. A hidden feature is use of standard four-inch stove pipe, instead of the more expensive rectangular ducts usually installed to bring the hot air to the registers. This lessens the cost of ducts and installation as much as 50%, it is claimed.

Approximately 30% less air is circulated in the new system as compared with customary warm air systems. The air is supplied at somewhat higher temperatures for mixing with room air as it leaves the registers. Good circulation of air within the room is provided, and there is less tendency for the warm air to cling to the ceiling.

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PHOTOGRAPHIC SHIP—Beside the "Explorer" is shown its builder, Talbert Abrams, who examines a model of a proposed new "Explorer II". Shown also are various aerial cameras used aboard the photographic plane.

MEDICINE

Check Cancer by "Balance"

This new anti-cancer idea is that the development, prevention and cure of the disease depends on the balance or lack of it between various body chemicals.

➤ FIGHTING cancer through "balance" is the new idea discussed by experts gathered at Memphis, Tenn., for a national cancer conference sponsored jointly by the American Cancer Society and the National Cancer Institute.

The idea is that the development of cancer, its prevention and its cure all depend on the balance or lack of it between various chemical and other influences in the body. If these influences get out of balance, the body would be in a condition favorable to the development of cancer. If doctors can restore the balance, the cancer will be cured, or, as doctors prefer to put it, controlled.

The patient with a controlled cancer survives. How long he goes on surviving the cancer depends on how good the control is.

These new ideas were outlined in a report by Dr. J. Samuel Binkley, attending surgeon at the Los Angeles, Calif., Tumor Institute.

Vitamins, hormones, enzymes and other complex chemicals all play a part in tipping the scales for or against cancer, according to his theory on balance and cancer control. Surgery or X-ray and radium treatment, he suggested, probably start a process toward restoring the balance for health and against the cancer. This would explain why some patients with early curable cancer fail to survive five years after adequate treatment and why others with a borderline or clinically hopeless stage of cancer do sometimes survive after treatment. The treatment helps but does not by itself bring the cancer under control. It starts the process which the patient's body is then able to carry on.

It is possible, Dr. Binkley stated, that cancer cells may circulate in lymph vessels, linger in lymph nodes and propagate their kind for months and even years in a state of "balance," some cancer cells being destroyed as fast as new ones are formed.

If scientists will analyze five-year-survivals with a view to the "inherent aids other than surgery or radiation" they may, Dr. Binkley believes, "open the door to a method of preparing the body physiology or altering existing conditions of the patient toward a more favorable setting for a cure."

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