AERONAUTICS

Radical Chemical Bomber

Top secret project aimed at fueling bomber with such chemicals as boron or lithium instead of petroleum products is on drawing boards of two aircraft companies.

➤ A TOP SECRET "chemical bomber" that will burn rocket-type high-energy fuels instead of gasoline is on the drawing board of two major aircraft manufacturers.

The revolutionary aircraft will fly higher, faster and farther than any manned bomber now believed in the planning stage.

It will not be a modification of any existing airplane, but will be an entirely new design to take advantage of "exotic" rocket and jet fuels now being developed.

Although the words "chemical bomber" recently have appeared without elaboration, no details of the multi-million-dollar, hush-hush project have been revealed. Aeronautical and chemical engineers attending the 37th national meeting of the American Institute of Chemical Engineers in Baltimore were able to describe some of the details to SCIENCE SERVICE, although they refused to be quoted by name.

The chemical bomber would use the newest and best possible fuels, such as boron, lithium, hydrogen peroxide and fluorine compounds, instead of petroleum products, engineers said.

Competitors for producing the plane are North American Aviation, Inc., and Boeing Airplane Company. The most widely known plane produced by North American was the World War II B-25. A contract for the chemical bomber would put North American into the "truly big airplane class," one engineer said.

On the other hand, Boeing has long been a leader in large military and civilian aircraft and wants to retain that leadership. Both companies recently have been notified of military plane cutbacks dictated by defense budget cuts.

Engineers said the competition between the two companies to produce the best chemical bomber design is "sharp and unrelenting."

Although the Air Force is not committed to order production on either design, one engineer said "the bomber is very much alive, it is now 'hot'."

The time for the Air Force to choose between competing designs for the "chemical bomber is probably very near," an informed source believes.

Only a spectacular and unexpected breakthrough in the guided missile program can block the building of the bomber, engineers agree. They believe a guided intercontinental ballistic missile with exceptional reliability and comparatively low cost could cause the Air Force to change its chemical bomber plans.

Although the Air Force has "no comment" and refuses to admit the existence of the hush-hush project, the existence of plans for "the world's most revolutionary airplane" was confirmed by the aircraft manufacturers hoping to produce the bomber.

A spokesman for North American Aviation, Inc., said his company is working under an Air Force "design study contract" for a chemical bomber. A representative of Boeing Airplane Company said Boeing also is "very active in the design stage."

The chemical bomber is expected to carry a heavier pay-load than any plane or missile being planned.

The WS-110A is the second design requested by the Air Force, an aircraft industry official said. The WS-110 design originally requested proved too large and costly. It, too, was under study by both Boeing and North American.

Congressional budget cutting almost caused the Air Force to abandon its chemical bomber plans, industry personnel believe, but the value of such a plane outweighed budget consideration.

"WS" is the new Air Force designation for "weapons system," since modern military aircraft have departed radically from older conceptions of "airplane."

The top-secret chemical bomber is not a final Air Force goal in long-range manned aircraft, but only an intermediate step to an atomic-powered plane, the industry believes. Besides being a major deterrent to global war, the chemical bomber is expected to provide performance data and production experience necessary to the design of a nuclear bomber.

The WS-110A probably will feature a major change in propulsion power. Rather than operate entirely on new chemical fuels, some of which have not yet been perfected, the WS-110A is expected to call on "exotic" fuels only in military situations. It may use advanced gasolines and other petroleum products for routine flying.

Science News Letter, September 28, 1957

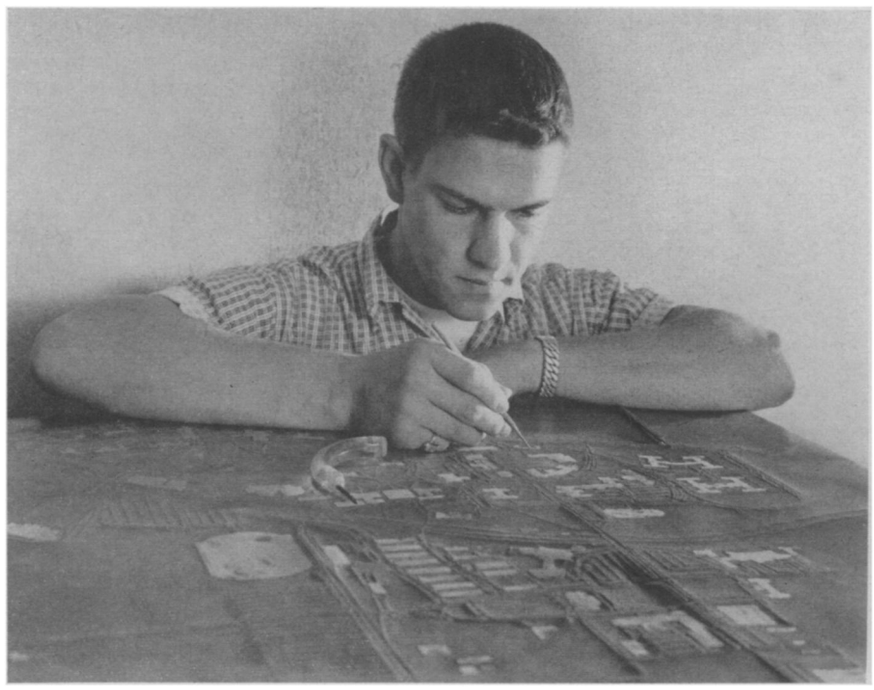
TECHNOLOGY

Rare Gas Mixture Gives Better Fluorescent Lamp

➤ A FLUORESCENT LAMP that produces two and one-half times as much light as standard fluorescent lamps has been developed by Westinghouse scientists, Bloomfield, N. J.

The new lamp uses a mixture of rare gases to get long cathode life.

Science News Letter, September 28, 1957



BRAILLE MAP — Finishing touches are applied to Michigan State University's unique braille map by Max Hilton, one of a group of students who developed the map under the direction of Prof. Carl S. Gerlach. Installed in the University's library room for the blind, the map reproduces more than 100 buildings and a large part of the 50 miles of sidewalks and 20 miles of roadways on the campus, all raised in copper. Sightless students have tested the map's design—dotted lines indicate walks, solid lines, roadways—and approved it. Anaconda Copper Co. donated the necessary sheet of electrodeposited copper, 32 by 42 inches and 0.005 of an inch thick.