

## ENGINEERING

# Plan Giant New Carrier

Navy will soon begin construction of a 65,000-ton aircraft carrier that is expected to be "capable of operating an airplane of well over 100,000 pounds."

## See Front Cover

► **WORLD'S LARGEST WARSHIP**, a 65,000-ton aircraft carrier, is scheduled for construction beginning within a few months, the Department of the Navy disclosed.

The super carrier will have a flush-deck design, without the familiar "island" superstructure above the large, flat flight deck. The Navy said that such a modern carrier was first proposed by the late Adm. Marc A. Mitscher, who won fame as the commander of carrier forces in the Pacific in World War II.

Keel for the vessel will be laid late this year or early in 1949 at the Newport News Shipbuilding and Dry Dock Corporation yards, Newport News, Va. Cost is estimated at \$124,000,000. It would "normally" require four years to build, it was stated, but the ship could be completed sooner with high priority.

Officials emphasized that the new giant carrier is a "normal development." It will be 1,030 feet long—actually 1,090 feet at its greatest length, including hull and flight deck. Present largest carriers are the Midway class, about 980 feet in length and listed as having a 45,000-ton displacement.

As yet unnamed, the planned new carrier is designated as the CVA-58.

This newest and largest carrier is expected to be "capable of operating an airplane of well over 100,000 pounds." Weight of the wartime B-29 bombers was listed as 120,000 pounds.

With larger planes, the ship will be protected by aircraft of much greater range than is now possible, it was emphasized.

Requirements for a carrier to operate such planes were listed as: deck strength for impacts as high as 500,000 pounds; stability for high topside weights; increased flight deck area; room for more supplies, fuel and munitions, plus additional personnel; greater armor and armament; and higher speed than previous carriers.

Speed of the CVA-58 is planned to be about 33 knots.

Bridges for commanding the ship will be below the flight deck and have telescopic facilities. Although World War II carriers had the island with flag and ship bridges above the flight deck in a structure on the starboard side of the ship, the new carrier will be the Navy's third experience with the flush-deck construction.

The historic U. S. S. Langley, the first carrier which was commissioned in 1922, had a flush-deck. The U. S. S. Ranger was

designed in 1934 to have a flush deck, but an island was added for navigational and fire-control purposes.

In addition to providing more space for plane operations, the flush deck will make the ship less easily detected by an enemy, it was indicated.

Four catapults for launching planes are

## BIOCHEMISTRY

# Body Converts Poison Gas

► **POISONOUS** carbon monoxide, popularly known as garage gas, can be converted into harmless carbon dioxide in the living body. Evidence for this, obtained in part from experiments with radioactive carbon from the atomic pile, was reported by Dr. Wallace O. Fenn of the University of Rochester at the dedication of the Detroit Institute of Cancer Research Laboratories.

Certain bacteria have been known to live on the energy obtained from the burning of carbon monoxide to carbon dioxide in their bodies. But, as Dr. Fenn put it, "it is news that we ourselves may to some extent share these metabolic potentialities with the bacteria."

On the practical side, he doubts whether the reaction would ever do us any good. The amount of burning is too small, he said, to be of any practical importance in, for example, cases of carbon monoxide poisoning. There is always the possibility, however, that these findings, which are contrary to previous scientific belief, may contribute to the solution of some other problem.

Dr. Fenn's report is, as he pointed out, an "I told you so" sequel to a scientific paper he published 16 years ago. In that paper he gave evidence that carbon monoxide was burned to carbon dioxide in certain frog tissues. Other scientists were frankly skeptical. Recent attempts in California to confirm the finding with experiments on man using radioactive carbon were unsuccessful.

"Now," Dr. Fenn reported, "thanks chiefly to the work of one of our graduate students, Prof. Robert C. Clark of Abilene Christian College in Texas, I am able to report that frogs and mice confined in a closed space containing carbon monoxide gradually use up small but measurable quantities of this gas. And further that isolated tissues (muscle kept alive outside the animal's body) exposed to 80% carbon monoxide containing the radioactive carbon

included in plans for the CVA-58. In addition to the two catapults at the bow, as on existing carriers, there are to be another pair, one on each side.

The size of the new ship, which will have a waterline beam of 130 feet and a maximum fixed width of 190 feet above the waterline, will make it another of a group of the Navy's largest ships that can not pass through the Panama Canal.

Design studies for the new carrier have been under way since October, 1945, the Navy revealed. Present plans were accepted after some 78 different designs had been made.

The picture on the cover of this week's SCIENCE NEWS LETTER is an artist's conception of the carrier.

Science News Letter, October 16, 1948

14 produce carbon dioxide containing approximately the amount of radioactive carbon that was predicted from the earlier experiments.

"It seems definite therefore that carbon monoxide is burned to carbon dioxide in living tissues in small amounts."

Since carbon monoxide is, so far as known, never produced in the normal chemical processes of living cells, the tissues apparently never "knew" they could burn the gas until the experimenter tried the test. And, contrary to what might be expected, muscles do not increase their rate of burning of the gas after "practice." After 17 days and in half a dozen individual frogs living in atmospheres containing sublethal concentrations of carbon monoxide, the muscles had "completely forgotten how to burn the carbon monoxide," Dr. Fenn reported.

These experiments which revealed the muscle forgetfulness were conducted in his laboratory by Dr. Tulio Velasquez of Peru who was hoping to gain new knowledge of muscle chemistry in relation to exposure to high altitudes.

Science News Letter, October 16, 1948

## WILDLIFE

## "Cost of Living" Raise Proposed for the Ducks

► A "COST OF LIVING" pay increase for ducks is being urged.

It would be in the form of a 20% boost in the cost to hunters of killing ducks. The National Resources Council of America, meeting in New York, went on record as favoring a jump from one to three dollars in the price of duck stamps. Some members of the conservation group urged an even greater fee increase.

Proceeds from the sale of the stamps are used to pay the costs of saving and increasing duck populations.

Science News Letter, October 16, 1948