

ican country some ten years ago. Since then he has further developed forecasting methods based on the solar constant values and applied them to sections of the United States.

Dr. Abbot has not yet actually made weather forecasts but he is hopeful

that meteorologists will begin to make experimental forecasts using the facts that he has discovered. Mr. Clayton is now forecasting on the basis of the solar constant and has a commercial service with many paying clients.

Science News Letter, February 14, 1931

AERONAUTICS

Congress Considers Measures For Trans-Oceanic Airship Lines

Favorable Action on Merchant Marine Bill Would Hasten Mail and Passenger Service Across Atlantic and Pacific

BIG airships are occupying attention in Congress this session.

One proposition under consideration, is that of a trans-oceanic mail and passenger service which would deliver letters from the United States to Europe in two and one-half or three days from our eastern coast and to China in five or six days from the west coast.

The measure is the McNary-Parker Airship Merchant Marine Bill. It would legalize enormous airships as common carriers and would authorize the Postmaster General to make mail-carrying contracts at rates not to exceed \$20 per mile.

Hearings on this bill before the House Interstate and Foreign Commerce Committee have been concluded for this session.

Airship terminals in America, Europe, Hawaii and the Orient would be built by companies established by business men prominent in the Goodyear Tire and Rubber Company and they would be used interchangeably by dirigibles of the different nations.

The first trans-oceanic project will probably be over the Pacific to Honolulu, with one round trip made weekly. Later this service would be extended to Manila and Japan. Honolulu would be reached in 36 hours instead of six or seven days, and Manila in six days instead of three weeks. The proposed airships would carry about 20,000 pounds of mail each. The sponsors of the Airship Merchant Marine measure declare that one airship making one round trip weekly, could carry 75 per cent. of all first-class mail to the Orient.

But it will be a long time before the trans-oceanic airships carry any large

proportion of overseas passengers, even when as many as four Zeppelins are built for this service. Only about 8 per cent. of first-class passengers now traveling abroad could be accommodated in four 80-passenger ships, it has been estimated.

Another proposition, on which the two houses of Congress have not yet agreed, is that of providing for a big metal-clad airship for the Army. Tentative plans call for a \$4,500,000 metal-clad ship, 554 feet long and 120 feet in diameter, and capable of running at a speed of 100 miles per hour.

PLANT PATHOLOGY

Destructive Plant Disease Causes "Fever" in Leaves

ABNORMAL temperatures in sick plants, similar to fever in germ-afflicted animals, have been observed in the leaves of plants attacked by root rot, by Dr. Walter N. Ezekiel and Dr. J. J. Taubenhaus, Texas plant pathologists. They reported their finding before the fourth annual conference on root-rot investigations held at College Station, Texas. Their observations, made with the aid of both mercury thermometers and electrical temperature-measuring devices, showed that the leaves of afflicted plants were about three degrees warmer than those of healthy plants.

The disease that causes this "fever" symptom in plants is one of the most serious menaces to plant life now extant in this country, especially in the

Such a ship could be expected to transport a 40,000 pound military load from Washington to Panama in 28 hours; replacement airplanes could be carried from Florida to Panama, and similar military operations performed. The Detroit Aircraft Corporation is anxious to build the ship.

Interesting in connection with the transporting by air of mail across the Atlantic was the Postoffice Department's advertisement for bids for such airplane service in November, 1930. Subsequently the advertisement was withdrawn, but it will be reissued sometime this year. The Postoffice Department has been informed that there are some companies anxious to bid on it.

The route specified was to Bermuda, the Azores, and thence across the ocean to France, and of once per week frequency. Maximum rates to be paid were \$2 per mile for the specified load of not exceeding 300 pounds, and \$1 per pound per thousand miles or pro rata thereof for greater or less mileage for mails in excess of the specified load.

The Goodyear Company is now building two enormous dirigibles for the Navy at the huge airship dock in Akron, Ohio. One ship, the "Akron," will probably be delivered in June of this year, and the other at the end of 1932.

Science News Letter, February 14, 1931

Southwest. There it has been especially harmful to cotton, though it attacks several hundreds of other species, including ornamental plants as well as agricultural crops. Its yearly damage in the state of Texas alone is estimated at \$100,000,000.

Root rot is caused by a bacterium that is appropriately named *Phymatotrichum omnivorum*, for it does eat nearly everything. It lurks in the soil, so that once a field is infected it is next to impossible to eradicate it. Experiments have shown that it cannot stand acid soils, and it may eventually be possible to combat it by raising acid-tolerant crop plants and making the soil too acid for the bacteria yet not too acid for the crop.

Science News Letter, February 14, 1931