

RADIO-AERONAUTICS

Redraft Radio Channels

➤ RADIO CHANNELS for use all over the world, for communication between planes in the air and control stations on the ground, present a number one problem for the representatives of 51 nations meeting in Montreal as members of the International Civil Aviation Organization.

The rapid growth of international air travel is responsible for the present situation. It has increased the necessity for reliable communication between aircraft and towers, and produced a serious scarcity of radiowave lengths available for such communication. The question now is how best to redraft the world pattern of frequency allotments to fit into the 149 radio channels in the high frequency bands available for the exclusive use of civil aviation on a worldwide basis.

Technical experts of the ICAO, at this meeting, have already begun a careful study of a proposed allotment plan, the work of the International Telecommunications Union, a special agency of United Nations responsible for allocation of all radio channels. The function of ICAO is advisory to the United Nations group, but the two are working closely together to get the greatest possible service from the frequencies available.

With only 149 frequencies available, careful planning is essential. During daylight hours a number of transmitting stations can operate on the same frequency without interference provided they are not too near each other. At night, however, radio signals travel greater distances and stations on the same frequency channel are likely to interfere with each other even when widely separated.

Limited radio spectrum space and rapidly developing civil aviation make planning

difficult. Careful coordination is necessary to insure that the international air services of ICAO's 51 member nations make the best use of what is available. Communication procedures, adopted by the ICAO nearly a year ago, were reviewed at the meeting. It is estimated that improvements already resulting from the adoption of the procedures enable three circuits to handle the traffic that formerly required four.

Science News Letter, January 29, 1949

ENGINEERING

Harbor Maintenance Found Costly but Essential

➤ SOME \$48,000,000 of taxpayers' money has been spent annually in the past seven years in American harbor and channel maintenance, the American Society of Civil Engineers was told in New York by Joseph M. Caldwell of the Army Beach Erosion Board. The work, however, is essential to keep the country prosperous.

Expenditures during the past seven years amount to about one-third as much as during the preceding century. They offer a challenge to civil engineers to save substantial amounts by effecting improvements in techniques, he stated. Most American harbors were deepened by man by dredging and tend to refill with sediments to normally-existing depths. Maintenance is largely dredging.

Mr. Caldwell urged the need of studies to determine means of lessening the rates of shoaling in harbors and navigation channels, and also of means to reduce the costs of dredging by increasing dredging efficiency.

Science News Letter, January 29, 1949

On This Week's Cover

➤ BABY BUZZARDS are odd-looking creatures. They are hatched out naked, but are soon covered with a thick coating of white down, as shown in the picture on this week's cover of the SCIENCE NEWS LETTER taken by George A. Smith of Quarryville, Pa.

As they begin to grow black feathers in place of their babyhood suits of white, the buzzards take on a mottled appearance of black and white. When full grown the turkey buzzard's head and neck are naked, and are red in color. Its plumage is glossy black, edged with grayish brown.

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