AERONAUTICS

Racon Routes in Alaska

Radar beacon airways operated from seven stations will open the Great Circle route in bad weather from America to the Far East.

➤ RADAR BEACON airways in Alaska and the Aleutians, which the U. S. Army revealed recently will be established in the near future, will open up for use in bad weather the Great Circle, or short route, from America to the Far East.

Seven such stations are to be erected. The equipment to be used is the war-developed radar navigational beacon, known as "racon" for short, by means of which planes in the air determine their position by radar signals from ground stations.

The stations will be erected at widely distributed points, extending from southern Alaskan airports to Point Barrow on the Arctic and Nome on the Bering. One will be established on Adak in the Aleutians. This distribution will help exploratory flying in Polar regions, and also local traveling in Alaska itself. This is important; much of Alaska today depends upon dog-sleds and aircraft for transportation.

War-developed racon was first used experimentally late in 1942, but later played an important part in all theaters of combat. Developments have continued since the war and radar beacons are now used on the North Atlantic air route to Europe. This Alaskan installation is the first effort to provide radar coverage over established continental air routes, and will provide training to pilots for other radar airways to be established in continental United States.

Racon is an electronic beacon placed ashore at selected ground positions to serve both surface and air ships. When radar signals from transmitters aboard ships are received by the beacon, its transmitter is triggered and gives out automatically an answering signal in code. The code is its station identification. A navigator is able to fix his position in relation to the beacon by means of a simultaneous plot of both range and bearing of the beacon from the ship on the scope of his radar.

Racon airways can be used only by aircraft equipped with airborne radar units. The beacon signal can be received clearly up to 150 miles. The ideal distance planned for the forthcoming radar airways will be about 100 miles between installations of beacons. Racon can be used as a low approach aid and the radar beacon provides the pilot with exact headings to fly any distance from the touch-down point.

Science News Letter, March 29, 1947

PHYSICS

Fluxmeter Guarded U. S. Harbors From Enemy Craft

➤ A DEVICE known as the fluxmeter, which was connected to underwater cables, has been revealed as the guardian of U. S. harbors from enemy craft during the war.

The fluxmeter measures changes in a magnetic field, and in World War II it warned of ships or even small motorboats crossing the cables at the entrance of a harbor.

Iron and other materials in the craft passing over the cables changed the earth's magnetic field enough to be detected by the fluxmeter. The small voltages from the cable as metal objects passed through the harbor entrance were registered on the fluxmeter.

Thus, even small enemy craft, hidden from sight and with silenced motors, could be detected from shore stations. When unidentified ships or boats were detected, harbor forts were alerted and PT boats sent to investigate.

Science News Letter, March 29, 1947

PHYSICS

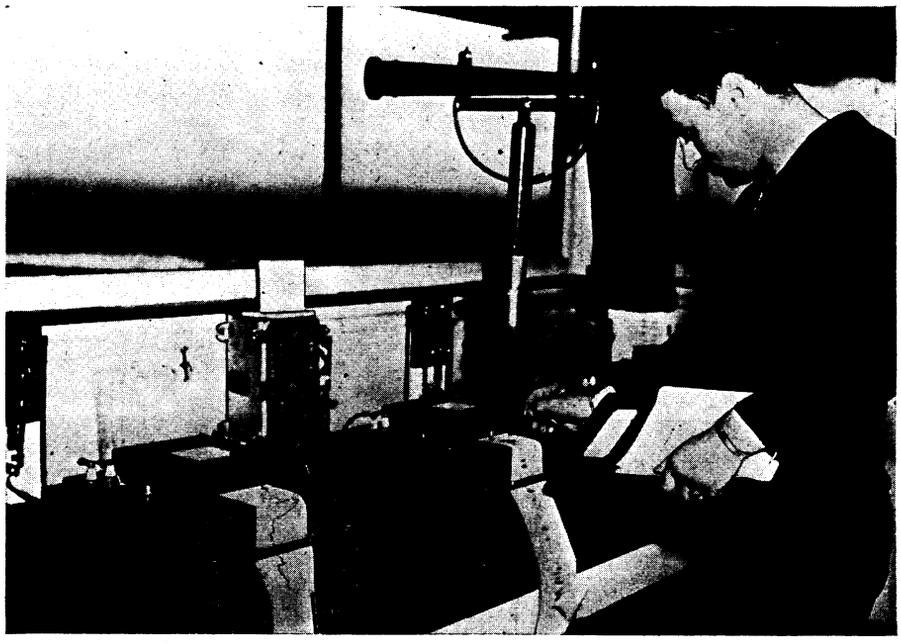
Lighting System Lessens Anger Among Night Drivers

➤ HAVE YOU EVER been heated up to the cussing-point, while driving at night with your lights dimmed, by having an approaching motorist flicker his lights at you? Darn fool didn't know the dimmer was on already!

To mitigate this cause of ill feeling among night drivers, a Washington inventor, Thomas M. Johnston, has devised a lighting system that adds a third lamp, directly in front of the radiator. This lamp is "off" when the main headlights are bright, "on" when they are dimmed. Thus if you see a car coming at you with three lamps all in a row, you will know that the dimmer is on, and there's no cause to flicker your lights at him.

The device is covered by newly-issued U. S. patent 2,417,501.

Science News Letter, March 29, 1947



HARBOR "WATCHDOG"—The fluxmeter, developed by General Electric, detected all vessels in critical waters during the war and gave a warning.