

Radio News

IN a certain cabaret near the home of an Acting County Judge of Texas, U.S.A. there was an outdoor loudspeaker which caused the judge considerable annoyance. He complained that it was disturbing him and his children, who were ill. However, his complaints fell on deaf ears, and nothing was done about it. Nothing daunted, the judge picked up his rifle and holed the loudspeaker with three good shots. The loudspeaker collapsed and never moaned again. The judge, however, has been well rewarded. Not only has he achieved silence, but he has received congratulations from all over Texas. One message read: "Congratulations on your heroism. We think a long-suffering public should give you a hearty vote of thanks. Come to us and duplicate your noble deed."

FOG has long been recognised by aviators all over the world as their most dangerous enemy. The neon light, first produced by the French physicist, Georges Claude, in 1910, by passing an electric current through a glass tube filled with neon gas, is of especial value in guiding flyers through city fogs to invisible airports. It is one of several recent inventions which are helping prevent accidents in fog. Another is the radio beacon. It provides a bath or beam of radio signals which an airplane pilot can follow by the intensity with which they are received. Experimental altimeters have been designed to tell flyers their height above the ground by the time required for sound waves or radio waves to be reflected back from the earth to the airplane. At sea, the radio compass protects vessels from crashes and allows them to determine their position in a blinding fog. It indicates the direction of a radio signal, thus warning of the approach of other vessels moving through the fog, and giving the direction of points on land. A new invention in England enables the captain of a fog-bound boat to detect faint sounds of distant fog sirens as he edges toward the shore. The device picks up the feeble sounds, amplifies them, and also converts them into light signals which appear as small light spots on a screen.

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Charles Dickens

Special Programme at 1YA

CHARLES DICKENS was born on February 7, 1812—118 years ago—and the anniversary of his birth is to be celebrated at 1YA by the presentation of a special programme to be given by members of the Auckland Dickens Fellowship. This programme will consist of a lecture by Mr. A. B. Chapell, president of the Auckland Dickens Fellowship, and readings by members of excerpts from the writings of Dickens.



CHARLES DICKENS'S BIRTHDAY.

This drawing, showing the novelist surrounded by the creatures of his imagination, was drawn by Harry Furniss for the Gadshill edition of "The Uncommercial Traveller," and is here reproduced by permission of Messrs. Chapman and Hall.

The programme to be presented will be a treat to admirers and lovers of Dickens, and their name is legion. Dickens was a master delineator of character. The glory of his writings is the great throng of outstanding personalities. He took, as it were, a wide canvas and crowded it with hundreds of figures of humour and humanity. Many of these characters will metaphorically step out of the loud speakers on Friday, February 7, when the broadcast from 1YA is being received.

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Measuring Distances

Radio Methods

ALTHOUGH many attempts have been made to devise a simple method of ascertaining the exact distance (as distinct from the bearing) of a ship or aeroplane from a given spot by wireless, the problem is by no means as easy as might be imagined.

Of course, directional methods can be used to find the ship's bearing relative to a known wireless beacon or transmitter. Then, by repeating the same operation on a second beacon station, it is possible to ascertain one's precise distance or location by a method of triangulation.

Then there are systems in which a transmitting station sends out two signals simultaneously, one being a sound signal and the other a wireless signal. Sound waves travel through the air at a velocity of approximately 330 metres a second, whilst for all practical purposes we can regard the wireless signals as arriving instantaneously.

If, therefore, the operator on the ship or aeroplane notes the interval which elapses between the receipt of the wireless signal and the subsequent arrival of the sound signal, and then multiplies this time in seconds by 330 (the velocity of sound), he will get a very fair approximation of his actual distance in metres from the beacon station.

This method is, of course, only applicable over comparatively short distances, though it has distinct possibilities when navigating near the coast in foggy weather, or for preventing collisions between ships at sea under similar conditions.

A MORE ingenious suggestion has recently been made to solve the "distance" problem by utilising the well-known fact that true wireless radiation does not set in for a distance of approximately a quarter of a wavelength from the transmitting aerial.

It is known that for ordinary or true radiation the signal or field strength diminishes with distance according to a straight-line law. In the case of pseudo-radiation (i.e., within a distance of a quarter of the wavelength from the transmitter) this law does not hold good. Accordingly a distinction can be made between two such signals received simultaneously from the same transmitter, and in this way a measure of the actual distance of the transmitter can be obtained.

For instance, suppose the transmitting beacon sends out the letter "a" on a wavelength of 20,000 metres, interlaced with the letter "n" on 1000 metres. Adjustments are so made that at a radius of 3 kilometres both signals are received at equal strength.

Then, as a ship approaches the transmitter, the operator will first hear the shorter wavelength (the letter "n") at greater strength. As the ship draws nearer the letter "n" weakens, until at the critical distance of 3 kilometres both signals merge into a continuous dash. At still closer distances the long-wave signal "a" predominates. This allows the ship's operator at any time to ascertain within reasonable limits his relative distance from the warning station.