



Application of Wireless to Forestry and Aviation

Useful for reporting results of Aerial patrols and speeding up communication with out-lying districts.

By CARLISLE SHANNON

WITH the opening of so many large and powerful radio broadcasting stations throughout the country, it is quite natural that a general interest is being taken in radio by the public at large, resulting in the present stupendous boom in the radio industry.

Radio broadcasting has placed within the reach of thousands of people, a highly valuable service, which, to many, has been hitherto inaccessible. The world's greatest living singers and musicians are brought to your home nightly. Bedtime stories for the kiddies, church services, baseball scores and even plays are also entered in the list of radio entertainment. But aside from its entertaining qualities, radio has an educational field as well. Various government stations scattered throughout the United States broadcast information highly valuable to farmers, ranchers, business men and people in all walks of life. The government observatory weather forecasts and standard time signals, market crop conditions, stock market reports, storm warnings, talks on farming and gardening and on civic improvement, items of special interest to all classes of people and the latest news of the world are all sent out daily through the invisible ether.

Possibilities for Forestry

That radio has wonderful possibilities in Canada cannot be denied. It provides a rapid and reliable means of communication between widely separated cities and towns, and in isolated places brightens many otherwise dull hours. In conjunction with aviation, radio has already proven its value in the maintenance of forests. Radio equipped planes patrolling the forest areas are able in a few minutes to give warning of an outbreak, and by means of charts, may give the exact location of the fire to a receiving station on the ground. This has resulted in the checking of many fires before much serious damage was done. Another application of radio to forestry is that it provides constant and almost instantaneous communication between a lumber camp and a remote central station, where otherwise only the slowest communication would be possible. This will prove of inestimable value in case of accident, shortage of supplies, etc., and makes reports on the progress of the work easily available.

The Direction-Finder

The radio direction finder has been a great help to ships at sea and aeroplanes which have lost their way. When a ship's master wants to know his position, he simply calls up a direction finding station, which, working with another similarly equipped station, is able in a few minutes to give the exact location of the vessel, even though it be out of sight. These direction finding or "gonio" stations, as they are called, are used in guiding

the passenger planes which fly between France and England.

Unfortunately there are at present but few good broadcasting stations in Canada. However, there are many large stations in the United States which are close enough or have sufficient range to be heard plainly here.

Advice to Beginners

A few words of advice to the would-be radio enthusiast may not be amiss here. The first two questions which the uninitiated usually ask are, "What do I need to hear these broadcasts?" and "How much will it cost to install a set?" The answers to these questions differ widely with existing conditions. Let us suppose you are located within fifteen miles of a powerful broadcasting station. In this case the apparatus required will be fairly simple and inexpensive. But if you want to hear the broadcasts from distant cities or fill a room with the signals, the apparatus becomes more complex and expensive.

It might be well to mention here that a government license is necessary for the operation of a receiving set. This may be obtained at any of the post offices in the larger cities or on application to the Deputy Minister of Marine at Ottawa. A fee of one dollar a year is charged for this license. For receiving there is no restriction on nationality but for transmitting, the applicant must be a British subject.

With many of the departmental, hardware and music stores entering the radio supply field, many people are misled in buying a set. This is due simply to the ignorance of the clerk, many of whom know nothing about radio. The writer has heard a salesman telling a prospective customer that a simple crystal set would receive the concerts from a station nearly 600 miles away. This is, of course, out of the question. It may happen on certain "freak" occasions, but cannot be expected to occur regularly.

Before buying a receiving outfit, the prospective purchaser would do well to look into the situation carefully. If you are located more than 15 miles from a broadcasting station it is useless to invest in one of the simple crystal sets. Under good conditions the signals might be heard at greater distances but could not be relied upon to come through regularly. To cover greater distances a "valve" set is required. This type of set employs vacuum tubes in place of the crystal and is capable of getting signals over a much greater range than the crystal set. By the addition of more valves to the set, music and speech may be amplified enough to operate a loud speaker, so that the whole family may enjoy it.

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