

desires to reproduce a long-distance station while the local station is operating must take full advantage of the developments in the art in relation to selectivity and filtering of unwanted signals. The listener most likely to produce interference to the long-distance enthusiast is usually equipped with a receiving set which is incapable of cutting out the neighbouring station while it is in operation, and is not likely, therefore, to invade the field of the long-distance listener during the local hours of service.

In this connection it was interesting to learn that in the early days of broadcasting a considerable demand existed in the larger cities of the United States for the observance of silent nights by the local stations. With the progress of the broadcasting art this demand has now practically ceased to exist, and listeners are largely unanimous in desiring

that the local station shall give, as far as possible, a continuous service. They have outgrown the desire to chase long-distance stations with their variability and greater susceptibility to interference from static and electric light and power sources. In fact, there is in many cases little temptation to seek after distant stations under the same administration, as it not infrequently happens that the same programme is being simultaneously broadcast from all stations. It is admitted that the above arguments, while discouraging to long-distance reception, assume that everything possible should be done to create local programmes of a satisfying nature.

#### Dominion Practice Approved.

It will interest New Zealand listeners to know that British manufacturers are more seriously applying themselves towards the production of

neutralised sets embodying radio-frequency as well as audio-frequency amplification and having a minimum of controls.

The subject of the New Zealand regulations in relation to the prohibition of the worst forms of "interfering" sets came up for frank and free discussion. When the nature of the New Zealand restrictions was fully explained and understood, I was gratified to find an almost unanimous approval of the attitude taken by the Department in this connection. I learned that many of those with whom the subject was discussed had strongly advocated a similar procedure in the early days of British broadcasting, but, due to a variety of influences that happily do not obtain in New Zealand, their ideas, although partially realised for a time, had subsequently to be abandoned. I am satisfied that we have been proceeding on sound lines in endeavouring to keep the ether as clear as practicable of unnecessary interference from "transmitting receiving sets," and that the benefits of such action will be considerable.

A great deal of useful work has been done by the Canadian Radio Administration in detecting causes of interference to broadcast reception arising from electric light and power lines and machinery connected thereto. Properly-equipped testing-vans locate these sources of trouble, power companies and private individuals co-operating in the employment of approved remedial measures. Bulletins have also been prepared by this progressive Radio Department dealing with the various cases met with in practice.

It was the general opinion in all places visited that the elusive "howling valve" does not lend itself to equally satisfactory treatment along similar lines. The remedy undoubtedly lies in prevention rather than cure.

#### Quality of Broadcast Reception.

THOSE who are chiefly interested in high-grade reproduction of broadcast programmes are inclined to the view that the principal weaknesses of broadcasting to-day lies in the use of unsuitable receivers employing amplifying units of too limited a capacity, and badly-designed loudspeakers. The better class of manufacturers has of late been paying great attention to these features, which they claim to have satisfactorily met, with, however, a resultant high development cost and comparatively higher sales cost. It needs to be emphasised that satisfactory quality of reproduction is obtainable only by the use of properly-designed receiving sets, amplifiers, and loudspeakers. The broadcast transmitter itself has made wonderful strides during the last few years. A well-designed transmitter properly manipulated leaves little to be desired in its ability to modulate with complete faithfulness the "carrier wave." The improvement most urgently required is in the design of the complete receiver and reproducer, and in the appreciation by the public of the fact that, while results of a kind can be obtained with the simplest of apparatus, only well-designed receivers will reproduce with a high degree of faithfulness, and with results satisfying to a musical ear, the complex sound-

waves emitted from a well-designed broadcasting transmitter.

#### Absorption, Distortion and Fading

THERE is no doubt that the conditions governing reception are much more favourable in New Zealand than in more densely-settled communities, where, in certain regions, considerable absorption and distortion are experienced. These effects are due to interference from tall buildings which have a definite relation to broadcast frequencies. There is also the advantage that in New Zealand there are comparatively fewer sources of electrical disturbances, which in some locations are a serious hindrance to broadcast reception.

THE peculiar fading effects experienced when listening to remote broadcasting stations at night were discussed with specialists who have devoted much time and thought to the problem. At the present state of the art there is no practicable remedy for such evils in cases where they arise from variations in the upper atmosphere. The available means of determining definitely whether such causes are atmospheric or instrumental were inquired into, and valuable suggestions obtained. In addition, literature was supplied dealing with the the most recent investigations into this perplexing phenomenon.

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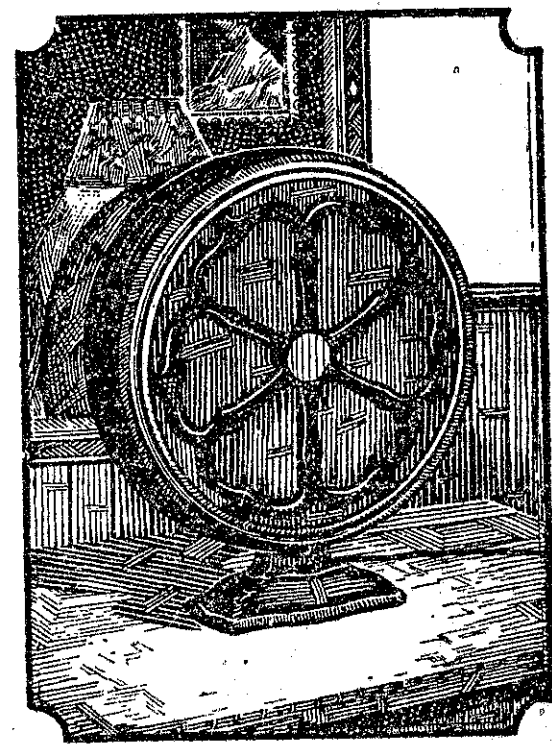
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