

Dr. Rodgers gave his opinion on the proposition. Commenting on the four coils he said that in his opinion one of larger size would be better, adding, "By the use of underground and underwater antennae, static is reduced, and this is the most effective means yet found. I believe it is only a question of time before someone will devise some form of earth antenna that will further reduce or eliminate atmospheric disturbances. Best results with any form of these collectors are only attained when buried deep, at least to the depth of 'water earth.'"

"As it is a well-known fact that intensity of signals remains almost constant even when antennas are lowered far below the surface of the earth, and, conversely, 'atmospheric static' reduces rapidly; if a form of antenna could be devised which would take advantage of this, static would be greatly reduced. Shielding the receiver and certain parts of the leads might help to solve the problem."

Dr. Rodgers has been quoted fully because his ideas are somewhat contrary to the accepted theory that radio signals decrease rapidly as they descend the earth. The problem is interesting and deserves some thoughtful consideration and experiment.

The ground antenna, although receiving less power than that collected by an aerial, has a number of compensating advantages. They are strongly di-

rectional, receiving most power when they lie in the direction of the station or stations to be received. Also, they do not develop the usual trouble during local thunderstorms.

Dimensions of a Rodgers Antenna.

THE length of wire to be used as an underground antenna depends on the wave-length of the station to be received. Thus, for the longer wave-lengths, longer wires should be used than for the shorter wave-lengths. The wire should be heavily insulated, and where possible encased in a lead conduit. In earth of the average range of moisture, 75 feet long may be expected to give satisfactory reception from 150 metres to 500 metres. Wire such as used for the ordinary aerial, stranded or solid, is suitable. Of necessity it should be used only where a good amplification system is in use.

Other Methods.

A HIGH resistance of 100,000 ohms or more, connected between the antenna and the ground terminals of the receiver will bypass a greater proportion of static than signal because the signal frequency is the frequency at which the receiver circuit is resonant. This scheme gives the effect of reducing the static, although reducing the signals at the same time.

Considerable improvement may sometimes be effected by loosening the coup-

ling between the aerial coil and the rest of the circuit and tuning the aerial circuit. The loosening of the coupling reduces the amount of energy both signal and static entering the secondary circuit; but the tuning of the aerial circuit improves the strength of the signal in that circuit.

A crystal detector may be included in the aerial circuit in parallel with the aerial coil. In this case the peak crashes are considerably reduced, but signal strength will also be reduced.

The use of the loop and indoor aerial will improve the ratio of signal strength to static, but as the set itself has to be more sensitive static is often brought up to where it would have been otherwise. Still, if one has a good set the indoor aerial will effect a very considerable improvement.

A long low outdoor aerial, especially if the set has a coarse aerial tuning arrangement, is preferable to the usual type.

Auckland Notes

(By "Listener.")

IN rendering special service to the community 1YA was again to the fore this week. Presbyterians throughout the Dominion were interested in the deliberations of their General Assembly, which this year met in Auckland, and it was a happy thought which led to the abandonment of the usual silent night on Monday, and the relaying of the special service in connection with home and foreign missions which the Assembly had arranged in the Town Hall. By this means the whole of New Zealand was able to hear several fine addresses, and a splendid rendering of the anthem, "Send Out Thy Light," by the combined choirs of several local churches.

"Le Cloches de Corneville" selections, as presented by Madame Ainsley's party on Tuesday night, must have brought back pleasant memories of olden day light operas and past favourites to the many who enjoyed the tuneful melodies from the ever popular opening to the finale.

IT is a recognised impossibility to satisfy the whole of an adult radio audience with any programme, or even with any series of programmes, and one is bound to hear a grumble of discontent from some person whose own individual tastes are not, in his opinion, sufficiently catered for. Such is not the case, however, among juvenile listeners, for in connection with the usual children's hours, one hears nothing but the most favourable comment. "Cinderella" and her keen assistants seem to have the peculiar charm of maintaining undiminished interest over the air, and arousing in their young listeners that same spirit of enthusiasm which they themselves radiate. The children's hours at 1YA are undoubtedly bright spots.

THE St. Andrew's quartet evenings are always enjoyable, and last Thursday's was quite up to the high standard of the talent body of vocalists who are the backbone of the musical services in our oldest Presbyterian Church. On the same evening listeners were also glad to welcome back to the microphone Mr. Drayton Venables, who, in the days

of the old 1YA, and during the first year of the present station, was often heard in popular baritone numbers. Mr. Venables, who is now teaching in Whangarei, was the first programme organiser and director of our present station.

THE Auckland Comedy Players scored the greatest success of their radio careers on Wednesday, when they presented Wilde's "The Importance of Being Earnest," a delightful comedy eminently suited, by the nature of its dialogue, for broadcast presentation. The occasion was a triumph for Mr. Montague and his associates. The comedy went with a sparkle for fully two and a quarter hours, and left listeners thoroughly satisfied with a refreshing evening's entertainment. All of the characters were well sustained, and despite the absence of that applause which means so much to the actor, seemed keyed up to the fullest interpretation of every line of a piece in which witty sallies came hot-foot in succession. Further comedies such as this will be eagerly awaited.

DISTANT reception has been very poor here of late, but Tuesday last was an exception. Seldom in the depths of winter has 2YA come in with better volume and clarity than it did quite early on that night.

THERE has been much newspaper copy made of a nebulous suggestion that another high-power broadcasting station may be established in Auckland. One is inclined to parody the late Mr. Asquith's famous "Wait and see," by offering the suggestion, "Wait and hear," with an indication that the waiting may be long, and the hearing not all that the preliminary puffing has been.

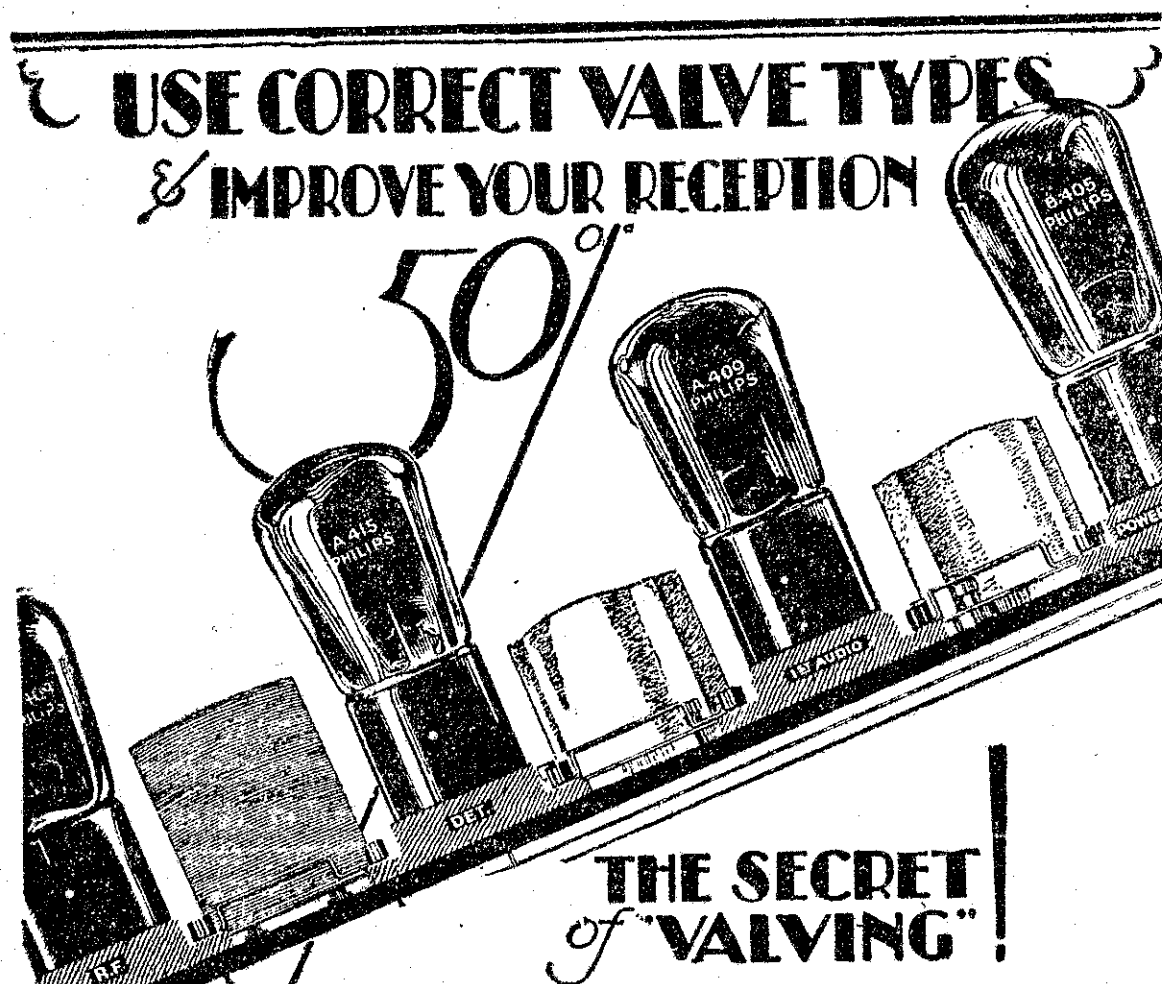
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The reason why one receiver often outperforms many others of similar design is that in the one, the question of valves has been studied and each socket is filled with a tube that is suited for its job.

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