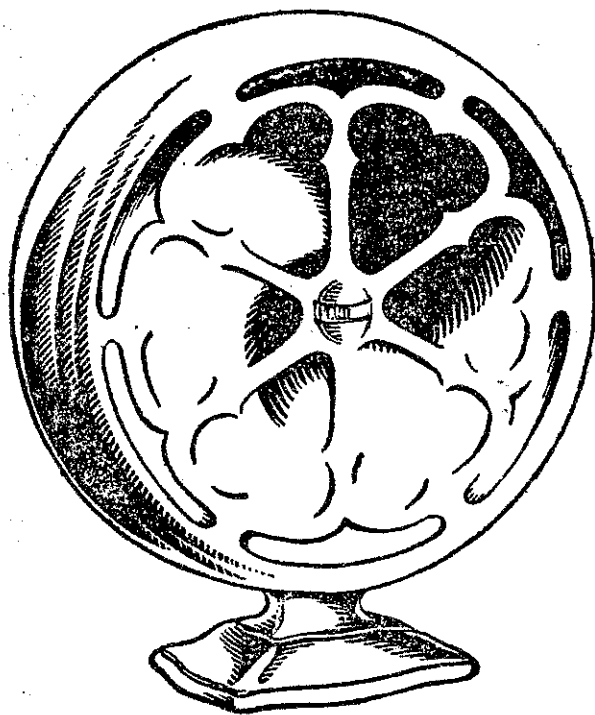


SIR JOHN RUSSELL ON THE AIR

AN unexpected treat was given listeners—particularly country listeners—by both 3YA and 2YA seizing the opportunity of Sir John Russell, Director of the Rockhamsted Experimental Station, England, being in New Zealand, and asking him to speak. On Thursday night from 3YA he spoke on the "Relationship of Science to Farming," and again on Friday night from 2YA he elaborated on this subject. The ability of Sir John to speak from 2YA was due to the storm delaying his vessel, the Rotorua, one day, and thus detaining him for a further few hours in Wellington. The opportunity was immediately seized to approach him to speak to the farming community from 2YA. His address was a particularly bright and interesting one, and emphasised the beneficial results accruing to agriculture from scientific investigation.

A VOLTMETER is almost essential to an owner of a battery set. Faulty batteries more often than any other factor within the set cause faulty reception, and a listener who is not accustomed to his set may be put to great expense to locate the trouble.

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MODEL "E" SPEAKER.

A new method of cone suspension, found in no other speaker, makes certain the faithful reproduction of the entire range of musical tones. In attractive colour combinations and with 9ft. of flexible cord. Hear it at your dealers.

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Uses of Valves

READERS of the "Record" will be familiar with the fundamental principles of the valve. It will be interesting to mention a few of its many applications.

First, within the set itself, there is:

(a) Radio-frequency amplifier valves which amplify the impulses collected by the antenna.

(b) A detector valve, which changes these impulses so that they are audible if applied to earphones or to loud-speaker and if they are loud enough.

(c) Audio-frequency amplifier valves. These amplify or make louder the detected signals.

(d) Power amplifier. This is always the last valve in the circuit. It is often not included in the smaller sets. The function is to relieve the audio-frequency valves and so purify reception.

The essential of a set is a detector; after this valves are added before as radio-frequencies and after as audio-frequencies. Finally a power valve may be added.

Secondly, there are valves to rectify the alternating current of the house supply, to give a steady, direct current.

Thirdly, valves may be used as a measuring device. By a suitable connection, the valve amplifies weak currents and, knowing the amplification factor of the valve, the current can be measured. Then again by "hooking up the apparatus backwards," it can be made to measure higher voltages.

A specially-designed valve, one designed to carry more plate current than our valves, has been used to regulate the voltage of direct-current generators.

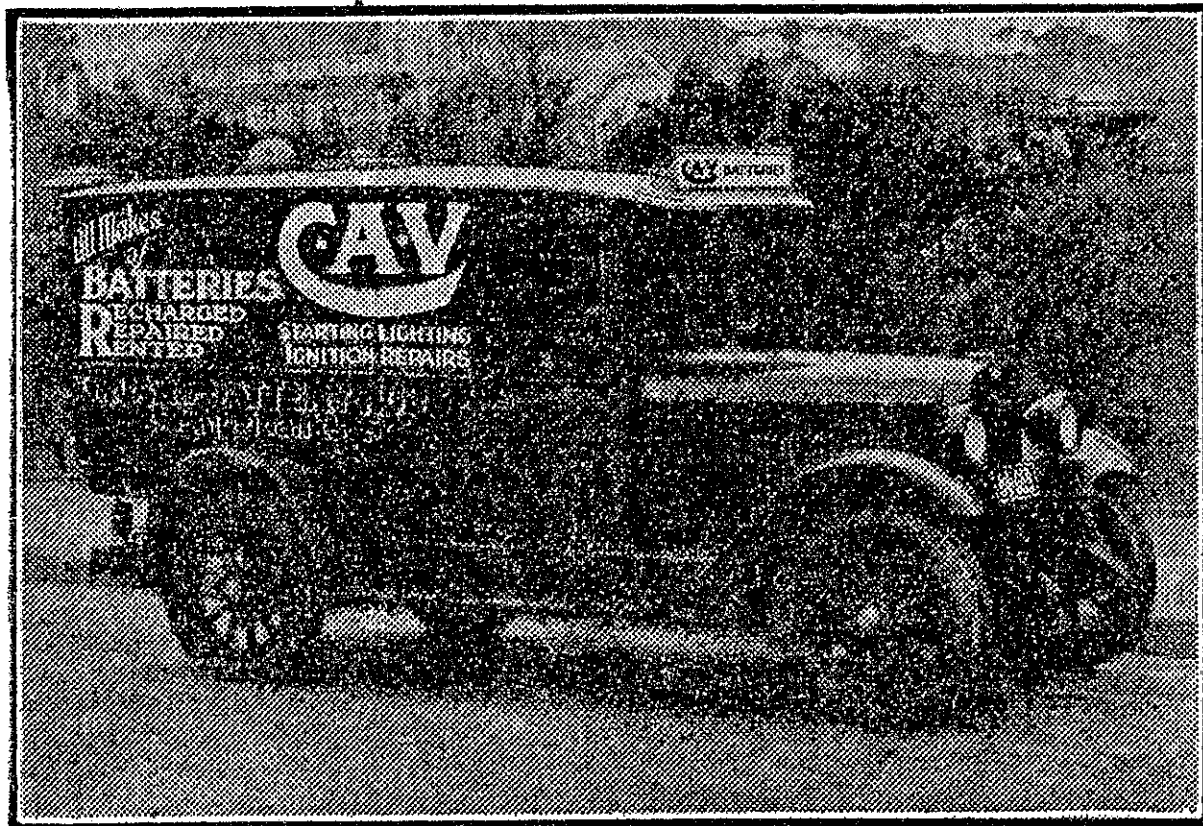
There are certain other applications of the valve which are very interesting on account of the fact that they permit measurements of extremely small distances and weights. Used as such, the name ultra-micrometer is given to these arrangements.

By a special arrangement of apparatus, it has been possible to measure a weight as small as one thirty-thousandth of an ounce, and a distance between two plates of one three-millionth of an inch.

In addition to these briefly surveyed, there are multi-grid valves, which have many applications, valves connected with photo-electric cells, e.g., neons, and oscillators, speech amplifiers, modulators, and regulators in broadcasting stations.

TRANS-TASMAN FLIGHT

"How long will the Trans-Pacific fliers be in the air?" is the question asked by the Electric Lamp House, 27 Manners Street, Wellington, and generous prizes, with a total value of £100, is offered for the correct, or nearest correct, computation. Points that have a bearing on the time are: The total distance to be flown, average rate of machine, weather conditions. It is not expected that any competitor will give the exactly correct time, and the competition is thus arranged to permit everyone having an equal chance, based on their arithmetical computation. Entry forms may be obtained from the Electric Lamp House with every 2s. purchase made, and a series of articles of use to every radio listener are offered at special post-paid prices, competitive with similar lines offered elsewhere.



Battery Service Car maintained by a progressive Wellington dealer.

CRYSTAL CONTROL AT 2YA'S POPULAR HUMORIST KFI

NEW ERA HERALDED

THE latest American mail brings news that KFI has now installed crystal control, similar to that which 2YA carried out some time previously. KFI is quite proud of its pioneering, and the occasion is referred to as follows:—

"Marking the dawn of a new era in radio broadcasting, KFI officially when on the air on Saturday night with their new Western Electric crystal-controlled double oscillator and modulator unit. Until this time this type of equipment, the product of the best brains of the Western Electric and Bell Telephone Company laboratories, has been entirely confined to experimental stations.

"The advent of the new unit marks the doom of the old style equipment," says Mr. Anthony, owner of the powerful Los Angeles station. "Before KFI installed the huge crystal control panel, its modulation was about thirty per cent. This has been increased to 80 per cent. without any additional power, which means that distant listeners who formerly heard KFI's carrier wave will now be able to bring in voice and music without difficulty. Undoubtedly, before long KFI's example will be followed by smaller stations on the Pacific Coast, and this will greatly reduce the present interference problem."

A POPULAR performer who has been making his mark at 2YA recently is Mr. G. Titchener. His humorous monologues and songs have betrayed the hand and the stagecraft of the old performer, so that it comes as no surprise to learn that Mr. Titchener has had quite an extensive and distinguished career on the legitimate stage. As a boy he became prominent as a soprano singer, and first joined the Moore and Burgess Minstrels, with whom he performed in London and throughout the provinces. Subsequently he made a tour of South Africa with the J. Griffiths Musical Comedy Company. After this, his voice having broken, he took up comedy work with Keith Prowse's concert parties. Subsequently he left for New Zealand with Maude Fane and Edgar Warwick's Company, called "The Court Cards," whose performances are remembered with affection. Later he toured Australia, Tasmania and the Far East on two occasions, returning to Australia to join Edward Branscombe's Dandies, and with them toured New Zealand again. This was in 1914, and since then he has made various tours throughout Australia. He is now settled in New Zealand, but the lure of stage work cannot be resisted, and he finds a welcome ally in the microphone, and by this means is reaching a vast audience nightly. His very extensive repertoire and breezy manner make his items very acceptable to listeners.

N.Z. RADIO LISTENERS GUIDE.

Indispensable to all listeners. Hints for operation, full lists of stations (Long and short wave), and glossary of terms. Price 2/6 at dealers, or 2/9 posted from Radio Record, P.O. Box 1032, Wellington.

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