

## Christchurch Olympia Questions and Answers

(Continued from page 3.)

### Thursday's Entertainments.

A **SPLENDID** vocal and instrumental programme will be presented on Thursday evening. An orchestra of ten under Mr. Harold Beck will be a feature of the entertainment, playing selections of a very bright nature and accompanying the vocalists. Madame Gower Burns will be singing, also Miss Frances Hamerton, Miss Belle Renaut, Mr. L. C. Quane, Mr. Ernest Rogers, Mr. Russell Sumner, Mr. Fred A. Bullock, and Mr. T. D. Williams.

### Dance Music on Friday.

THE Bailey-Marston Dance Orchestra has been engaged for Friday evening, and will set the tune for a very merry evening. Mr. Charles Lawrence, the well-known entertainer, is contributing to the vocal programme. There will be humour at the piano by Miss Lily Kinsella, tenor songs by Mr. C. R. Williamson and Mr. W. J. Trevern, a humorous pianologue by Mr. Noel Newton, jazz songs at the piano by the Joyous Duo, with ukulele accompaniment, and the Cathedral Male Quartet will be heard in part songs.

### Grand Finale on Saturday.

THERE will be a rare entertainment on Saturday evening for the conclusion of the Exhibition. An orchestra of fifteen, under Mr. Harold Beck, will be contributing, and a specially bright programme has been arranged. The orchestral selections will include "Bells Across the Meadows," with chime solo by Mr. Debenham, and "Ole Smith," a medley with solo for bells, xylophone and marimba. There will also be a cornet duet, "The Two Imps," by Messrs. R. Ohlson and F. Chapman, with orchestral accompaniment. Other instrumentalists engaged for the evening are Miss Elaine Moody's Hawaiians, Theo and Frances Gunther, who will play concertina duets, and Mr. J. W. Barsby, who will play "The Ragtime Bass Player." There will be songs at the piano by the Melody Maids. Mr. Jock Lockhart will dispense much humour. Miss Mavis Ritchie and Mr. Cyril Collins will act a sketch, "A Restaurant Episode." Further humour may be expected from Mr. Geo. Titchener. The singers for the evening will include the Valencia Quartet—Mrs. Lucy O'Brien, Miss Mary Taylor, Mr. T. G. Rogers, and Mr. E. J. Johnson—whose items will be solo as well as concerted: Miss Nellie Lowe (who will sing "Danny Boy"), Mr. Robert Allison (singing "Border Ballad"), and Mr. Fred Hale (singer of popular jazz songs).

### WANTED AND FOR SALE.

For column of casual advertisements see page 32.

### Receiver Neutralisation.

W. N.M. (Westport) asks the following questions:—

1. How can I neutralise my factory-built receiver?

A.: If adjustments to the neutralising condensers do not affect a cure on the lower portion of the dial readings, try reducing the plate voltage on the radio frequency stages. Sometimes an additional 1 mfd. fixed condenser inserted across the B+ radio-frequency connection and the A- connection (at the receiver end of the battery cable) will stabilise a set sufficiently. For detailed method see "Listeners' Guide."

2. What causes transformers to burn out?

A.: A break in the primary winding of an audio transformer can be put down to various causes. For instance, excess plate current sometimes produced by using insufficient grid-bias may cause the trouble. A more common cause is the electrolytic decomposition of the fine wire due to dampness and also corrosion after the use of unsuitable soldering flux.

3. Is it absolutely necessary to have 135 volts on the plate of a 112-power valve, and also is 4½ volts grid bias sufficient?

A.: No, it is not absolutely necessary, although you will not be able to obtain anything like the maximum undistorted volume when using less voltage. Also 4½ volts grid bias is insufficient except when using low plate voltages. With 135 volts on the plate, a bias of -9 volts on the grid would be required.

4. Can distortion be eliminated when fading occurs?

A.: No. It is impossible to regulate either fading or distortion arising from this cause.

### Battery Charging.

T. L. (Kaiwarra) has a battery charger of the vibrating type, and asks if it is adaptable for use with the B battery described previously in the "Radio Record" of "Megohm."

A.: According to the slip enclosed, the charger will charge the five blocks connected in parallel at a slightly lower rate. This is not a great disadvantage. A 60-watt lamp will give approximately a 100 m.a. charge, which would be quite suitable. There would be no advantage gained by cutting down the blocks below 24 volts each by a 60-watt lamp and follow instructions.

### Short-wave Adaption.

I HAVE a four-valve receiver, using wet A and B batteries (writes W.D.A., Tarata), and I would like to know whether an efficient short-wave set could be obtained without altering the wiring of the receiver in any way.

A.: A short wave adapter would be quite suitable, and a description of how to build this unit can be found in the 1929 "Radio Listeners' Guide," but omit the bypass condenser between P of the valve and A+.

### Charging B Batteries.

J. I.C. (Fiji) sends a sketch of an arrangement for charging B batteries from the 230 volt. D.C. supply, and wishes to know if it is quite suitable.

A.: Providing one or two details not mentioned in your letter are in order, the arrangement is quite suitable. Make sure that the positive of the supply connects to the positive of the battery. Also it is presumed that the B batteries to be charged are accumulators, and not the commercial dry cells.

### Battery Charging from a Windmill.

THE charging of A batteries has always been a source of trouble to country listeners. "Is it possible," asks S.S. (Hawke's Bay), "to use a windmill for this purpose?"

A.: The idea is quite feasible provided that a suitable relay, which will regulate the charging rate, can be purchased or constructed. When the windmill comes to rest an automatic device will be necessary to break the circuit, otherwise the accumulator will discharge through the generator. The apparatus would have to be suitably geared to maintain the correct speed of the dynamo. This would necessitate more than an amateur mechanical or electrical knowledge.

### Moving Coil v. Linen Diaphragm.

WHICH is the better for sensitivity and the ability to handle volume, asks A.S. (Khandallah), the moving coil speaker described by "Pentode" or the linen diaphragm and its adaptations by "Megohm?" I am using a three-valve regenerative receiver.

A.: A moving coil speaker has to be used with a powerful amplifier to realise its full superiority, though such speakers have been used very successfully with smaller sets. Under these circumstances it would be better to utilize the linen or silk diaphragm speaker.

2. Where can I obtain the casting for the M.C. speaker and what is the approximate cost?

A.: Precision Engineering Co. £3 10s.

3. What size baffle would be required to reproduce down to 30 cycles?

A.: At least two feet square.

4. Is a baffle required with the linen diaphragm?—No.

## Auckland Exhibition

(Concluded from page 5.)

graphy, and this is easily explained by the much increased distances over which it is possible to transmit when using short wave-lengths. The exhibition had much to offer in short-wave radio equipment, both for transmission and reception.

In particular the excellent display by the New Zealand Association of Amateur Radio Transmitters was worthy of mention. On this stand quite a number of short-wave transmitters, including some portables, were exhibited. These amateur-built sets were a revelation in neatness, compactness, and efficiency, and their constructors have every reason to be proud of their handiwork.

A notable feature of this stall was the capable gratuitous service provided by the amateurs in charge for patrons of the exhibition. There was an early rush by hundreds to send radio greetings to their friends throughout the Dominion, and on the opening night the little transmitter was tapping out these messages far into the night before the big task of covering the traffic was completed. In this manner the

## Children Entertained

### Exhibition Features

THE Auckland Radio Exhibition catered for all, even the children. The younger ones who went along were delighted to see in person all the aunts and the uncles of Radioland. The children's sessions were conducted from the temporary studio at the Town Hall, and as the session opened at 6 o'clock each night, large crowds of young ones and their parents would gather round to hear the aunt or uncle in charge talking to his vast radio audience. On the final night a great treat was in store for all the younger generation. They were entertained by a party comprising all the aunts and the uncles of 1YA. Mirthful stories, jests, musical items all went over the air, and for an hour excitement ran high. It was certainly a very entertaining turn, and those children who were present will ever remember their first introduction to all these aunts and uncles of Radioland.

Friday afternoon was set aside for a children's party, when some 500 youngsters assembled in the concert chamber to be right royally entertained. With this very large party, keeping things moving was not the easiest task, but throughout the whole proceedings there was not one dull moment. To the delight of all those young ones present a bag of sweets and ice creams were handed out by their benevolent hosts and hostesses.

For the elder children lectures were arranged, and Mr. W. M. Dawson, A.M.E.R.E., M.I.W.T., and Mr. C. H. Taylor, B.Sc., M.I.R.E., spoke on radio topics. Mr. Dawson dealt particularly with the story of radio and how it was exemplified in the Auckland Exhibition. He told the boys of the Technical College what to look for and what was the significance of each piece of apparatus. For those who were unable to attend, this and Mr. Taylor's lecture was broadcast. Mr. Taylor concentrated mainly on the growth of electrical science and its connection with radio.

Thus from all aspects the younger generation will remember with pleasure this, Auckland's first Radio Olympia.

surprising total of over 500 messages were sent during the exhibition.

Interesting side-lines included an experimental television transmitter and an apparatus which functioned uncannily in response to a flash from an electric torch upon a photo-electric cell.

### Conclusion.

ON November 2 one of the most interesting and comprehensive radio exhibitions ever held in New Zealand concluded. As we go to press it is impossible to estimate the total number of people that visited this exhibition but as a conservative estimate 6000 is quite reasonable.

With the recent similar exhibitions held at Wellington and Dunedin for the first time, the present radio year in New Zealand has proved an epoch-making one, and the phenomenal success of all three make it certain that these functions will in future be of annual occurrence.

# WHY?

Kingsford Smith uses Burgess Batteries. Commander Byrd uses Burgess. More Burgess Batteries are sold in New Zealand than any other make. Why?

# BURGESS RADIO BATTERIES