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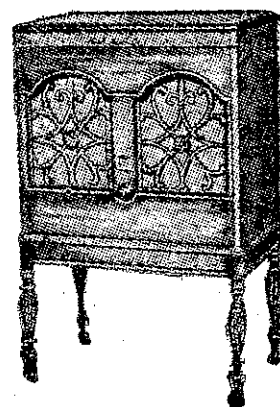
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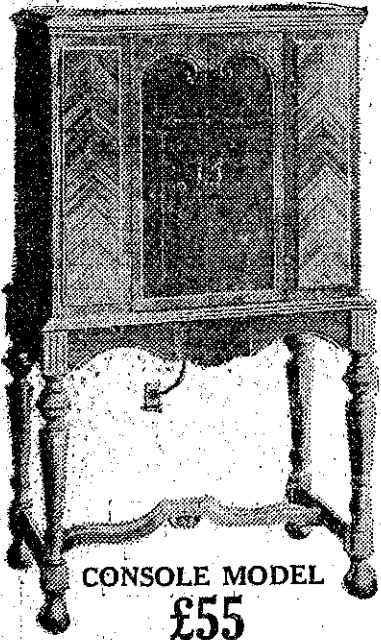
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News from Here and There

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ACCORDING to Dr. Stetson, of the Ohio Wesleyan University, 1930 should be a good year for the radio lover, because better reception is probable with the decreasing number of spots on the sun. As the year waxes, the number of spots is expected to wane, resulting in a corresponding increase in radio-signal strength in the broadcast zone. Reception last year followed the fifteenth month cycle observed in the sunspot numbers with a marked depreciation during the autumn maximum, when, under normal conditions, radio reception should have been improving with the decreasing hours of sunshine. With the development of radio scientists have been afforded a valuable aid with which to study solar radiation and other phenomena. Apparatus has been devised for the automatic registering of radio-signal strength at all times of the year, so that the connection between the clarity and strength of the signals and the condition of the sun, can be more accurately determined.

SIXTY-EIGHT THOUSAND extra licenses were taken out in England during January, and the B.B.C. attributes this chiefly to the efforts to attract new listeners during Radio Week. Altogether there are 3,017,023 licenses in force in Great Britain.

PREDICTIONS, similar to weather forecasts, which would acquaint listeners of coming static and of the type of reception to expect within a certain period are about to be included as a regular feature of American broadcast programmes. A proposal that reports of daily magnetic disturbances be transmitted on short waves along with the weather forecast and seismic activities is to be made at a Stockholm meeting of a section of the International Geodetic and Geophysical Society. These magnetic storms rage as fiercely as windstorms, but do not make their presence known physically. Research workers have decided that fairly accurate forecasts can be made of such storms, accompanied by predictions of the kind of radio reception to be expected.

A WIRELESS flying squad policing the whole of England is likely to become a reality in the near future. Conferences on the subject have been held between the Home Office and Scotland Yard, and have been attended by chief constables from various parts of the country. The scheme is understood to be a reply to the growing activities of car bandits.

THE Anglo-Japanese beam wireless link is now completed by the opening of the Japanese Wireless Telegraphy Company's station at Yokkaichi, permitting messages to be sent from Japan to England. The service in the reverse direction was opened last year by Imperial and International Communications Ltd. The transmitting and receiving stations in England are at Dorchester and Somerton respectively.

TO test the amount of absorption of electromagnetic waves in the earth's upper atmosphere, Dr. Hoyt Taylor, president of the American Institute of Radio Engineers, proposes to transmit short-wave signals to the moon. His intention is to measure the strength of the "echo," judging that this should be heard 2.8sec. after transmission, as the waves, travelling at 186,000 miles per sec., must cover 500,000 miles.

PHOTO-ELECTRIC cells, or "electric eyes," which have been adapted to perform many and varied duties in the manufacturing world, have now been set to work as official welcomers, and may also be used as watchmen or policemen. Visitors to the Museum of Peaceful Arts in New York are greeted by the words, "Will you please register?" as they step from the elevator, although no one is in sight. The words come out from a loudspeaker and are contained on a record which starts when anyone passes through a beam of light watched by the eye. At night the record may be changed to a warning to "Throw up your hands," or some other threat to prowlers. The apparatus consists of a photo-electric cell, a light source directed on it and the speaker. When the light to the cell is interrupted by a person passing through it, the cell starts a motor which in turn operates the record.

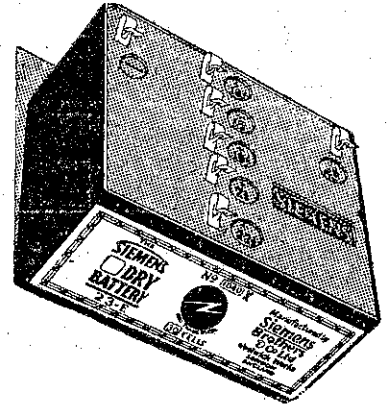
MORE than 100 years before the Christian era a form of talking pictures with motion originated in China and has continued popular to the present day. This is the shadow play which gives the illusion of moving pictures, while the talkie effect is supplied by persons who read the parts of the drama.

THE application of ultra-short radio waves for purposes of communication has been accomplished successfully by a German scientist. These wavelengths, perceptible only by their production of heat, extend in length from a few decimeters down to one-thousandth of a millimeter, reaching thus into the sphere of invisible light rays. A detector sufficiently sensitive to react to such rays was found in a selenium cell with an alloy of tellurium sulphide. A transmitting tube of only 100 watts was used for telephone and radio messages.

ELECTRIC power companies in the United States are contemplating a standardised 60-cycle A.C. supply, the increase in mains-operated wireless sets having drawn attention to the subject. One of the first of the companies to consider this change, which now furnishes power in northern New York State, is understood not only to contemplate the generation of sixty-cycle current to replace the twenty-five-cycle current now used, but also the sharing with its customers of the expense of converting their equipment where necessary. It is estimated that at present only 10 per cent. of American homes wired for electricity have mains radio sets.

BIRDS roosting on the antenna of radio station WFI, Philadelphia, have caused trouble to the control operators. A few birds perched on the wires cause an appreciable change in frequency, and a flock means serious trouble. To keep the birds away, the operators lighted upon the plan of discharging blank cartridges, and during the sending of evening programmes it often is necessary to station a man on the roof to discharge a gun at regular intervals to force the birds to vacate.

TO insure perfect tonal volume in broadcasting, American stations are now installing in their studios instruments known as galvanometer electrical sound indicators to warn artists against "blasting" into the microphone. The sound volume galvanometer has always been a part of standard equipment of a speech input panel, to guide the operator in regulating sound volume. By placing these indicators near the microphone, it is thought that artists while broadcasting could co-operate with the control operator in maintaining the proper sound level.



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Radio---the Eyes and Ears of Aircraft

By *Flight-Lieutenant*
A. Nevill

(Headquarters Staff, Air Defence)



MARCONI was transmitting his first feeble signals by radio when the Wright brothers soared in the sky—just twenty-five years ago. Today these two great inventions have been linked together to give man his swiftest form of communication. The intensive application of radio to commercial aviation is, however, a comparatively new thing, and the marvellous development of this branch of radio owes a great deal to the experiments carried out on military aircraft prior to the war, and the impetus given to wireless in aircraft during the war period.

As early as the South African War two crude Marconi sets were sent out for use from balloons, but it was considered unsafe to use them owing to the possibility of fire from sparks in the induction coils. Experiments were continually carried out, as a result of which at the outbreak of the Great War some 16 seaplanes had been fitted with transmitting apparatus. Although military 'planes were not even fitted with receiving set, military aircraft fitted with wireless were first used for artillery observation at the battle of the Aisne, but the great objection to their use was their weight and clumsiness. In the two-seater aeroplanes the sets took up the whole of the cockpit rightfully allotted to the observer, so the pilot had to fly and work the wireless above.

In 1915, however, the compact Stirling set appeared, which weighed little over 20lb. Technical improvements were continually effected to enable an increased number of aeroplanes to work along a given front without jamming the signals; to such an extent that at the battle of Arras in 1917 there was one machine in the air to every 400 yards of front, each machine being capable of transmitting without interference.

This was only possible by rigid attention to detail. In particular, by making full use of the range of wavelengths provided by the Stirling transmitter and by the variation in tone effected by the use of the clapper-break.

The great drawback to wireless signalling from aircraft is its susceptibility to jamming, either intentionally by the enemy or by messages sent out from friendly aircraft working near. With the device known as the "clapper-break" it was possible to vary pitch or tone, on the same wavelength which enabled the number of 'planes operating on the same point, to be enormously increased.

THE wireless engineer has been faced with many difficulties peculiar to aircraft. The vibration and noise make it difficult in an aeroplane to hear anything but the engine; the risk of fire, the imperfect protection of the instruments from splashes of oil and the rush of air—all these things complicated the problem.

Again, the matter of shielding the electrical devices on the aeroplane has presented many difficulties. Each spark plug in the engine is a miniature radio transmitting station. The ignition wires, magneto, low-tension wires and their associated parts form an antennae system giving rise to highly damped waves over a wide range of wavelengths.

Imagine a sensitive receiver situated ten feet away from sixteen to seventy-two strong spark transmitters feeding into an antennae radiating on all wave lengths, trying to pick up feeble signals from a station over 100 miles away!

On a well-shielded 'plane practically no interference is noticeable, and a 400-watt short-wave telephone transmitter can be received for 200 miles or more. If no shielding has been installed reception is only possible for about twenty to thirty miles.

SINCE the War the possibilities of radio as an aid to flight have been actively developed, and radio is now being utilised in many directions. Direction-finding stations for grading aircraft along fixed airways during fog and low visibility are being erected in increasing numbers throughout Europe and the United States.

Rotating radio beacons, for furnishing navigational aid to independent flyers are receiving attention. Wireless stations at aerodromes broadcast periodic weather forecasts. On many air routes two-way telephonic communication between ground and the aeroplane has been successfully established. Radio has also been adapted to provide a method of field localising, whereby a pilot can locate a radio station within 100 feet; and radio methods have been successfully tried out in connection with altimeter (height finding) devices.

IT may be interesting to describe briefly the development of directional wireless, which has conferred untold benefits on aerial navigation, particularly in the case of navigation over water and areas of low visibility.

It is impossible to exaggerate the solitude and helplessness of an aeroplane flying in dense fog. Deprived of all landmarks, under incessant strain at the controls, the pilot can only continue flying by instruments, and it is only by radio means that he can be certain of keeping to a given course and locating his landing field.

Several systems are in use; in Europe radio direction-finding stations are maintained by the Governments at the various airports, and each aeroplane carries a transmitting and receiving set. Upon request by radio, two or more direction-finding stations will determine the direction of travel of radio waves from the aeroplane, and by plotting the bearings of the plane from each station the position of the aeroplane can be determined and wireless.

Positions found in this manner are accurate to within three miles at 150 miles range.

Another method, which has the advantage of greater secrecy, is for the aeroplane itself to be fitted with direction-finding apparatus. In this method the directional properties of the loop aerial are utilised. The directional property of the loop depends on the difference in phase of the currents set up which vary with the angle the 'plane of the loop makes with the incoming waves. The method of direction-finding commonly used on ground stations is known as the Belloni-Tosi method.

Instead of employing a small rotatable loop aerial for reception of signals and indication of

direction, two large fixed loop aerials, at right-angles are used and the resulting currents are arranged to produce a magnetic field in an instrument known as a radiogoniometer. A search coil finds the 'plane of the magnetic field in this instrument and indicates on a dial the required direction.

FINALLY, we have the rotating radio beacon.

This is a radio transmitting station with a rotating directive antenna, causing a beam of radio waves to sweep constantly around. A special signal indicates when the beam sweeps through the north. A pilot listening for this beacon's signal can determine his direction by the time elapsing between the north signal and the instant the beam is heard with maximum intensity.

THE possibilities of radio in flying have been illustrated in some spectacular trans-oceanic flights. The Southern Cross on its remarkable trip from California to Australia was in touch with the world throughout the trip by means of high frequency (short wave) radio. Any practical scheme of trans-oceanic air service would seem to require directional radio aid.

Exploration by air is another instance where radio must be used. An exploring party takes unnecessary risks if it neglects directional radio aids. This was recognised by Commander Byrd in his recent Antarctic explorations.

The principal and the most insistent use of radio will, however, come with development of regular commercial airways; the reliability and safety of which will depend largely on the radio service.



Wing Commander Grant Dalton,
Director of Air Services.

Auckland Notes

OUR Auckland correspondent writes:

The three-act play, "The romantic Young Lady," which listeners are expecting to hear from 1YA on the evening of May 16, had to be abandoned owing to copyright restrictions. The play, which was being produced by Mrs. Zoe Bartley-Baxter, was to have occupied the whole of the evening session. In its place the same producer put on another play, "The Transit of Venus."

Another substitution on the 1YA programme the same week was the band on May 14. Owing to a misunderstanding the Salvation Army Congress Hall Band played instead of the Auckland Artillery Band, which changed dates with the former to play on May 21.

A GOOD crowd of bargain-seekers assembled in Auckland last week when an auction was held to clear the stock of a radio dealer who was giving up business. In spite of the good attendance, and the fact that most of the sets offered were in perfect order, complete with valves, of well-known makes, most of the prices were certainly of the bargain order. Two five-valve full cabinet models of a very well-known make realised six pounds each, while other five-valve sets made from £2/10/- to £3/15/-. Other prices were in proportion. The auctioneer, who admitted that so far as radio went he was a tyro, raised a hearty laugh by misreading his sales list, and offering in all seriousness a twenty-five-valve set. Another set he said was fully guaranteed to get America and Japan, in fact

it would do everything except act as an interpreter.

THE second of the series of special half-hourly recitals which was to have been given from 1YA on June 13, has had to be postponed. Miss Chalker, pianiste, can not perform on that date, and Signor Torzillo, harpist, recently fell and injured himself when about to take his place in the Civic Theatre orchestra.

IT is reported that about 14,000 listeners' licenses have been renewed so far in the Auckland Province, which is a good deal better than at the same time last year. The total number of licensed listeners in the province on March 31 last was approximately 17,000, so that there is still a leeway of about 3000 to be made up.

MISS J. LAIRD is a new soprano to be heard from 1YA on June 3. Although new to local listeners, Miss Laird is no stranger to the microphone, as she was formerly a member of the B.B.C. choir. On June 5 the Minus Fives, a well-known 1YA combination, will give a minstrel show, and for June 10 a programme has been arranged by Mr. Leo Whittaker, a leading Auckland music teacher.

Jones: I want you to see my new card-table.

Smith: All right. Give me the address of the place you got it from.

Jones: What for?

Smith: If they've got the same thing it won't cost me so much to look at it there.

On the Other Side

2YA Comes in Well

IN a lengthy letter, Mr. Homer G. Gosney, of Redondo Beach, California, describes the reception he enjoys of 2YA. The reception of the Wellington station is now so good, especially when compared with the Australians, that he is under the impression that 3LO and the rest have reduced their power, "so that their broadcast is almost insignificant."

"Three years ago," he says, "I held 4QG two hours and forty minutes. At this time I considered it the best reception I had heard from any of the trans-Pacific stations. However, your broadcast of this morning climaxed anything in this line I ever picked up from the South Sea country. It was simply immense, I assure you."

"Have no anxiety regarding your broadcast being heard along the Pacific Coast. Candidly, you are so far ahead of 3LO, 2BL, 2FC, 2GB, 5CL, and 4QG that their broadcast is almost insignificant since their reduction in power."

"Furthermore, 2YA can be depended upon (weather permitting) as a sure bet any time after 1 a.m., PCT, 8.30 p.m. your time. A local Los Angeles station, KMPC, 422.3 metres, completely heterodynes your carrier before 1 a.m. PCT."

In offering to forward a copy of a magazine, "Radio Delights" call book, Mr. Gosney remarks:

"In it you will find much interest to any broadcaster, inasmuch as it is a mine of information. Moreover, it will tend to give you some idea of the num-

ber of stations throughout the States in general. I assure you, frankly, you cannot realise what station interference really is until you have met with the interference we encounter here in the States. Stations along the Atlantic Coast (3000 miles distance) are seldom heard here on the Pacific Coast."

British Rugby Team's Tour

THE first match of the British Rugby team's tour is taking place at Wanganui this week—on Wednesday, May 21—and is being broadcast. In all, the Broadcasting Company will broadcast ten of the games to be played during the tour. These matches will include the four Tests and the four provincial matches to be played at the four centres, also the Maori match in Wellington. The Taranaki match, on Saturday, May 24, is to be broadcast by 2YB, New Plymouth.

Thanks to the Broadcasting Company, the British team is already well known to the New Zealand public. 2YA broadcast the arrival of the team, and the official welcome, while on Thursday evening, when the members of the team visited 2YA Studio, and were introduced to radio listeners, 3YA carried out a successful rebroadcast. This was one of the most enjoyable topical broadcasts heard on the air for a long time. Mr. Dean, who introduced each player, was in particularly good form, and was an excellent host. The various speakers created a good impression.

A dear old soul had returned from her first visit to London, and was being asked for her impressions.

"And what did you think of the Horse Guards?" was one question. "Did you see them?"

"Aye, I saw 'em all right," the old lady replied, "and I think it's a wicked waste of good soldiers—why, the dear horses stood so quiet, they didn't need guarding!"

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	List Price	Sale Price											
	£	s.	d.	£	s.	d.							
Watmel 2-Valve British-made in oak cabinet, complete ..	10	0	0	7	15	0	Federal 6-valve, in mahogany cabinet, complete ..	40	0	0	22	10	0
Astor 2-valve in metal cabinet, complete, including speaker ..	10	10	0	7	0	0	Crosley 6-valve Bandbox model, in metal cabinet, complete ..	31	0	0	24	10	0
Airmaster All-electric 3-valve, complete ..	26	0	0	21	0	0	Akradyne 6-valve in mahogany cabinet, complete ..	35	0	0	20	0	0
Airzone portable 4-valve with self-contained aerial, batteries, speaker, etc. ..	27	10	0	20	0	0	Amrad 7-valve in mahogany cabinet, complete ..	40	0	0	25	0	0
Loftin-White 5-valve, less cabinet, complete ..	30	0	0	17	10	0	Branston 7-valve, Super Hetrodyne, in cabinet, complete ..	45	0	0	22	10	0
Amrad All-electric 5-valve, in mahogany cabinet, complete ..	50	0	0	27	10	0	Kolster 7-valve, in mahogany cabinet, built-in speaker, complete ..	47	10	0	29	10	0
Trav-ler 5-valve portable complete ..	27	10	0	19	0	0	Fada 8-valve model 480A, in walnut cabinet, complete ..	115	0	0	50	0	0
Selectra 6-valve screen-grid, complete ..	47	10	0	34	10	0	Victoreen, 8-valve Super Hetrodyne, less cabinet ..	50	0	0	20	0	0
Crosley 6-valve model 6/60, in mahogany cabinet, complete ..	34	10	0	22	0	0	Crosley Showbox, 8-valve, All-electric, complete ..	45	0	0	32	0	0
							Crosley Gembox, 7-valve, All-electric, complete ..	40	0	0	28	0	0

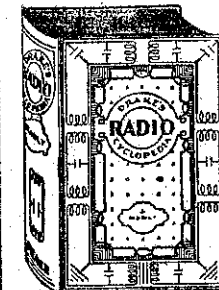
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In a World of Weird Wireless

Radio off the Beaten Track

THE ever-widening fields in which the principle of radio in its primary sense is applied are amazing. Its adaptation in the scientific and industrial worlds alone is enormous. The following enlightening article (by D'Orsay Bell, M.A., published by "Wireless World") reveals just a few of the astonishing and varied uses to which this marvel of science is applied.



O, it is not a misprint for "Wired," as you thought it was. Weird Wireless, as opposed to the ordinary forms of radio (wireless telegraphy, wired wireless, television and so on) about which the readers of radio journals know most that is worth knowing, is that large branch of radio about which they know nothing. Do I realise what I am saying? I do. Am I not giving utterance to an unwarrantable and gratuitous piece of impertinence? I am not.

I have never, for instance, come across any animated correspondence on the subject of Paint and Varnish Radio. And yet paint and varnish radio is a very important—an increasingly important—subject. The research laboratories of P. and V. manufacturing concerns are studying by radio technique, the effects which heat and cold, oxidation and so on, produce on the latest products. Particularly useful here is what might be called an "ultra" edition of the Ultramicro-meter. If two circuits, each kept oscillating by a valve, are almost but not quite in tune and are carefully coupled together, the very least change in tune in the one will produce a great change in current in the other.

In the Thoma variation of the ultra-micro-meter, a slight increase in the thickness of a paint film alters the capacity of a condenser, brings out infinitesimal change of tune in one circuit, and gives such a magnified result in the other circuit that the change in the thickness of the film can be recorded and studied very easily.

Radio Robots.

IT is said that this new "tool" is enabling the research people to investigate the why and wherefore of important actions going on in their paints, the very existence of which was unknown till now. But this is only one way in which wireless technique is being used in the paint industry. There is a most attractive superhuman gadget which analyses the colours of paints (and writes down the results) quite automatically and five times as accurately as can be done by the human eye.

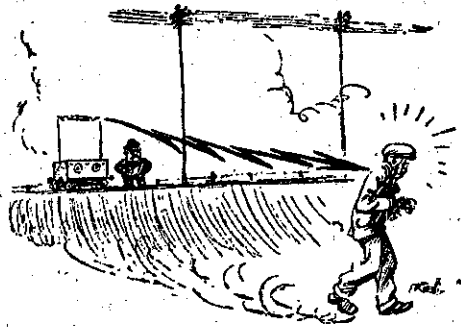
This machine flashes a beam of light (red, for instance) backwards and forwards between the sample under test and a standard colour. If the red beam is reflected more by the standard than by the sample, the result—thanks to the help of a photo-electric cell such as is used in photo-telegraphy and television—is a pulsating current. This, after passing through valve-amplifiers, sets a little motor buzzing round and altering things so that the red beam now divides its attention between the sample and a second standard colour: if this does not correspond exactly to the sample, the motor keeps on buzzing round and tries a third standard, and so it goes on till a standard is encountered which gives an exactly equal reflection.

When this happens, there is no pulsating current to drive the motor, which comes to rest with a feeling of duty well done. The machine makes a note of that particular standard, switches on a test beam of another colour, and the whole process goes on all over again. The complete colour analysis takes only a few minutes, which is far quicker than can be done by human beings.

Out in the Great Open Spaces.

LET us leave the stuffy laboratory and get into the vast open spaces of America, Canada and Australia. Here, screen heroes in khaki shirts and shorts are busily using short-wave valve generators to explore for oil and minerals. Various methods are used, but one favourite plan is to compare the velocity of sound waves through the ground with that of short radio waves. The latter keep their velocity constant, while the sound waves vary theirs according to the nature of the soil; the presence of oil, in particular, has a marked effect. The method usually employed involves the use of direction-finding loop aerials—plus the usual valve amplifiers.

In fact, practically the whole resources of modern wireless are being concentrated on the unwarrantable spying-out of these harmless and carefully-concealed minerals, oils, and so



Sacking the Foreman.

on. It is pleasant to be able to relate that occasionally the victims get a bit of their own back; it is reported from Wiesbaden that listeners in have been worried by a strange kind of interference, rather like atmospheric, but more regular, and this has now been found to come from the radio-active mineral springs under the town. Perhaps that will teach people to let well—and spring—alone.

Fresh Developments.

EVERY day seems to bring fresh developments which clamour for notice. Piezo-electric quartz, that high-brow laboratory phenomenon which was so promptly seized on to keep radio transmitters to their proper wavelength, is now being used to register variations of pressure in water mains; so is the effect of capacity change on a heterodyne note, one plate of a condenser being forced in toward its second plate by an increasing pressure.

The photo-electric cell—direct descendant of Elster and Geitel's "academic" experiment where light falling on to a spark-gap stopped the spark—is now used for about as many purposes as an Austin Seven. Apart from its jobs in picture telegraphy and television, it counts the traffic passing through the big tunnel joining

New York to New Jersey; it judges the winning horse in a race; it sorts and counts mass-produced goods; it is used in chemical works to decide when enough alkali—for instance—has been added to complete a reaction (some of you may remember the titration tests at school, when the critical last drop suddenly wiped away every trace of colour from a whole big flask-full of coloured liquid; the photo-electric cell watches for this, and when it happens, turns off the tap).

It, as well as its brother the selenium cell, is used as a burglar alarm; another burglar alarm, by the way, is one in which the action—or the mere presence—of the burglar upsets the tuning of the grid circuit of an oscillating valve, and causes an anode current change which works a relay. The condenser-microphone, which some engineers swear by for broadcasting, is now being used by doctors to give them a record of their patient's heart-beats. Thanks to the valve amplifier, the tiny resistance-changes in the human body, due to emotion of various kinds, can now be recorded—and this procedure, it is said, is going to be very valuable in studying the effects of drugs and in investigating nervous fatigue.

Noises in gear boxes, ball-bearing and other machinery, and noises indicating insulation trouble and the consequent danger of breakdown in big transformers, are being tracked down by microphone and valve amplifier; the ordinary, normal running noises being filtered out by electrical filters such as are used in wireless, so that the trouble-noises can be distinguished.

FLAWS in steel axles are now being looked for by rotating the axle rapidly and exploring with an instrument rather like the magnet arrangement of a telephone receiver—the disturbances induced in the telephone windings by the presence of a flaw rapidly passing by are detected after amplification in the usual valve amplifier. A similar process is applied to steel wire ropes—but here the rope remains still, and the magnetic flux rotates. Think of the accidents which may arise from flaws in axles and wire ropes, and you see how beneficial to man are these new applications of radio technique.

At least one company exists in America for testing railway lines for flaws and other defects in the rails; it provides a specially equipped railway truck which runs over the track at about five miles an hour. Two brushes, a little distance apart, continually conduct direct cur-

(Continued on page 28.)



Upsetting the Grid-Circuit.

"Old Time" Night.

ARE you aware that London music halls are not conducted now as in the manner presented in Tuesday evening's programme? One was led to believe it was an old time concert by the presence of the chairman. Failing to hear the old time songs one refers to the "Radio Record" and discovers that it is supposed to be a modern programme as produced in a London music hall. But why London when the artists make reference to the Wellington Zoo and New Zealand in their songs? I'm sure such poor entertainment would not be tolerated in London to-day.—"Londoner" (Northland).

The Mushiness Theory.

TWO readers pounce on my theory of the mushiness of 2YA. E. W. Anglesey says there are no other sets within 5 miles which would interfere with his set. The set I refer to in my first letter is no nearer than 6½ miles, and it works just as a small transmitter set. It is this retransmission coming in a little out of step with the station that accounts for the smudgy appearance of the music. Now we know that the power of 2YA is approximately ten times that of the other YA stations. That accounts for the retransmission of the other stations, not being heard. Now we know that two stations jamming has a tendency to cause wavelength to alter slightly, hence the necessary retuning. E.W. will get



an instance of what I mean if he tries tuning two sets in series with one aerial. I grant that E.W. may have had five years' experience, but in that time perhaps he has not done the experimenting I have in the last seven years. I had one of the first sets in one of the pioneer centres of radio.

Fading, he says, is due to earth and air wave, but I have my own theory of fading, and if he can prove that this is the cause, then I give in. Fading has something to do with current surge at the station, which can be controlled by the engineers in charge. But leave alone fading, that does not cause the mushiness referred to, as fading was known before this other curse came into existence. Now, as far as T. T. Dalefield is concerned, I may state that it is not necessary for the owners of these broadcast sets to sit beside them and twiddle the dials to have the wavelength altered. As I have stated before, the re-radiation of the set causes this on its own account.

Now, T.T., is it not possible for these interfering sets to be sold from Auckland to the Bluff, and taking the distances of these two towns from 2YA it is that reason why we have not heard of others farther north and south complaining, and you cannot have had much experience of re-radiation or you would not have condemned my theory as you did, for I did not say the operators of these sets were to blame for the swing of the wavelength, but the set itself. That is what necessitates the alteration of tuning so often. Think awhile, T.T., for while you sit writing to condemn 2YA's transmissions you could be doing yourself and others a good turn by getting after it. You may have the means to get about, but I have not or I would no doubt have turned my theory to the actual long before this.—Pioneer (Waipawa).

Sporting Results.

IT is a noticeable fact that sporting results from Christchurch are not broadcast from 2YA at seven o'clock on Saturdays. Dunedin results are sent out, and this city is much further south than Christchurch. Could arrangements not be made to have Christchurch football results put over the radio at the above time, as I am sure there are plenty of listeners who are interested enough in Canterbury football to appreciate reception of results from there. Trusting that listeners will have the privilege of the above request.—A.K. (Greymouth), c/o Kennedy Bros. (Greymouth).

Transmission of 2YA.

WHY the recent mushiness in night reception from 2YA? Until recently this station was always pleasant to listen to. There is now

not a station in New Zealand we can with pleasure listen to. 1YA is clear, but fades badly; 2YA mushy; 3YA even worse. We are in a splendid position, getting Australian and American stations regularly, but one does rely more or less on one's local station. I am not alone by any means in my complaint.—G.F. (Featherston).

WHAT is the matter with 2YA? I have two super-electric sets in the house that are capable of receiving 1YA, 3YA, 4YA, and the Australians very clear with good volume, but when I tune in 2YA the station is very mushy. I think there is nothing wrong with the sets as they are both new.—J. E. Kirkus (Kilbirnie).

Community Singing.

I NOTICE that 1YA will this year again broadcast daily the community singing which has been so very popular to both backblocks and city listeners. Why has 2YA not kept time with the less-powered station 1YA? 2YA is certainly putting over some fine programmes, especially those we get on a Saturday night. More of Mr. Will Bishop I am sure would be appreciated. Many must have a good laugh when they hear programmes like these, particularly those who are not fortunate enough to be able to attend the actual performance. I hope others will take up the subject of the community sing-song so we might have a bright hour each day during the winter.—Anxious (Wellington).

YA's Transmissions.

I HAVE noticed several letters in the "Radio Record" referring to the mushiness and fading of all the YA stations.

I quite agree with these writers. "Fed-up" complains of power interference in Hamilton, which I am sure any Hamilton listener must say is correct. Then comes Mr. Swain's letter referring to transmission from YA stations was no surprise to any Walkato listener, as 1YA has been "rotten." I note Mr. Swain has had over 80 sta-

tions, and I have 50 to my log, so this proves our sets are quite O.K.

The fault is the YA stations, so why not relay stations as proposed, as I am sure listeners would rather have good nights than seven bad.—Listener No. 64,456 (Hamilton).

ANNIE LAURIE (Wanganui East) writes supporting the broadcasting of jazz music, arguing that as we live in a modern age we must be modern in outlook. He complains of mushiness from very many stations.

Yet Another Theory.

I HAVE been interested in letters appearing in your paper re the distortion from 2YA. Many has been the time I have been shooting in hilly country and have noticed that when I am at the bottom of a hill and someone else shooting at the top, some are heard very loudly and others are puffs. Although a perfectly still day there will be a current of air coming up each side of the hill, first taking the sound away and then forward. This, in my opinion, is the cause of the distortion and the fading from 2YA, as it is on top of a hill. Let me give another illustration. All who are familiar with Cook Strait will know of the Terawhiti rip and the Jackson's Head rip, which are two currents sweeping up either side of a coast and meeting, with a choppy sea resulting; this also must happen with air currents. There would be three in the case of 2YA, one from each side of the hill and the transmission. I think myself that a transmitter should be located in perfectly flat country.

My log shows that there are between twenty and thirty stations in New Zealand, and none of them can be classed top-notch. The Canadian Government build a railway into a large tract of country they want opened; the settlers soon come. So why doesn't the Broadcasting Company build a (Continued on next page.)

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Our Mailbag

(Continued from previous page.)

50,000-watt station in a suitable place and instead of the 50,000-odd listeners I venture to say there would soon be 250,000, as such a station would be heard all over the country, with no fading, static or distortion. I do not intend casting reflections on any of the station staff's capabilities, as I think they are doing their utmost with the equipment at their disposal. A very high-powered station will have to come, sooner or later, so why not now before chaos exists with numerous stations like U.S.A. I am the owner of a very powerful receiver, and through static, etc., have had only one programme in the past eight weeks. Speaking for myself only, I would not mind a £5 license fee.—Constant Listener 2.

An Unexpected Meeting

THE wireless is once again responsible for an unexpected meeting of old friends. When the British Rugby football team was in the studio of 2YA on Thursday evening, making its introduction to New Zealand listeners over the air, one particular listener pricked up her ears when it was announced that Mr. Black of Oxford University, and incidentally South Africa, would be the next to speak. This listener was Mrs. J. Davies, wife of the director of 2YA. She immediately rang the studio to know whether Mr. Black was Brian Black. This proved to be the case, and it then transpired that Mr. Black was a former pupil of Mrs. Davies. Needless to say, Mr. Black was greatly thrilled at the unexpected news, and a meeting was speedily arranged.

Radio-equipped Coastal Vessels

Recent A.W.A. Installations

THE application of wireless telephony to marine communication is being effectively utilised by Amalgamated Wireless. Three of the company's coastal radio stations are now installed with telephony transmitters, while A.W.A. have also installed telephony equipment on five of the Australian coastal cargo boats, the equipment being in charge of the master of the vessel. By means of this equipment the masters are able to speak with one another from vessel to vessel, and with such coastal radio stations as are equipped with telephony apparatus.

Some seventeen trawlers operating off the N.S.W. coast have also been equipped with telephony apparatus by A.W.A. and the masters are thus able to effect telephony communication with each other, and with the coastal radio stations.

Dinner Music

THE presentation of gramophone records of music suitable for the dinner-time sessions is no easy matter. "Switch" has been looking into the lists of records available for such a purpose, and confesses that the selection of suitable items is a most difficult undertaking. However, the dinner music sessions from 2YA, Wellington, are well nigh ideal. By the way, the writer listens-in habitually to the twenty minutes' "meditation music" put on every Sunday night by 2FC, Sydney, prior to that station signing off. The programme director makes a good selection, but "Switch" does not envy him his task.

Thieves Caught by Radio

Ingenious Detections

A FIRM of cigarette manufacturers in London has successfully employed microphones in the detection of theft. The firm had been suffering severe losses of stock totalling hundreds of pounds, and being unable to trace the leakage, enlisted the aid of a well-known English radio manufacturing company. An engineer, in the guise of a telephone inspector, concealed three microphones at strategic points, and connected them to a sensitive amplifier under the roof.

Here one night the detectives put on headphones and settled down for a long vigil. At first they heard only the mysterious creakings and whisperings which one seems to hear in every building at dead of night. Then close on 12 o'clock the sound of footsteps and rustling paper came to their ears. By switching to each microphone in turn, the detectives were able to locate the origin of the sound. They crept down stairs and two of the watchers confronted the man as he came out from the back door with hundreds of cigarettes under his arm.

A Driverless Motor-car

AN amazing demonstration of the "electric eye" or light sensitive photo-electric cell, was given recently when H. P. Davis, Vice-President of the Westinghouse Company, from his office in Pennsylvania directed the movements of an unattended automobile in New York. As Mr. Davis told the car to "go ahead" it moved forward. Similarly, upon orders from the distant operator, the car stopped and moved backwards. The lights were even turned on by the distant voice.

This was the first time in history that an automobile in one city was

From all Angles

MR. T. J. PARKER has been appointed to the board of Amalgamated Wireless, Ltd., to fill the vacancy caused by the death of Mr. W. T. Appleton. Mr. Parker is a grandson of the founder of the famous Australian shipping firm of Huddart, Parker, Ltd. He was born in Melbourne in 1888, and educated at the Church of England Grammar School, Melbourne, and at Dresden (Saxony) and Charterhouse (England). Mr. Parker entered the business of Huddart, Parker in 1906, starting as an office boy, and went through all departments of the shipping business, including the wharf offices and the position of seagoing purser. At various times he had charge of the company's branch offices at Ballarat, Dunedin, Auckland, and Melbourne. At the present time he is a director and the Sydney manager of Huddart, Parker, Ltd.

THE perfunctory manner in which some of the smaller New Zealand stations give their call letters is the subject of a letter received from "Anti-Careless" (Masterton). He writes: "I suggest that the announcers should say the word 'station' before the call letters, as it affords one notice that the call letters are to be given. At present they gabble out the call letters as though they are ashamed of them, or in a desperate hurry. There are exceptions, but extremely few."

controlled and moved at will by the voice of a person in a distant city. It was made possible by a photo-electric cell which was placed on the trunk in the rear of the car. A telephone connection was then established to Mr. Davis's office, and when he spoke the sound impulses set up were transferred into light waves. These were picked up by the "electric eye" which in turn operated certain relays and gave the automobile its backward and forward movements.

By the courtesy of the Y.M.C.A., we are able to publish the accompanying photograph of the Optimists' Club, who were responsible for the delightful entertainment mentioned in our last issue, broadcast from 2YA last week during the children's session. Readers will learn with interest that it is the practice of the club to meet every Thursday for luncheon, music and mutual good cheer.



The New Zealand Radio Record

—AND—

Electric Home Journal

(Incorporating the "Canterbury Radio Journal.")

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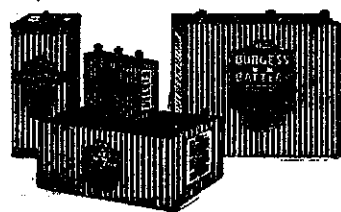
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WELLINGTON, FRIDAY, MAY 23, 1930.

MUSIC AND MECHANICS.

IF the cabled report of his utterances is correct and not affected by the absence of important qualifications, then we imagine Sir Thomas Beecham, the famous orchestral conductor, has rather allowed his temperamental enthusiasm to run riot with his judgment in his attack upon mechanised music in the form of radio and gramophone. Sir Thomas is reported as having prophesied that broadcasting will fall to an insignificant position so far as music is concerned. Holding that both the radio and gramophone were "mere parasites on the musical body," he declared that in the art of making music they had never given a farthing's worth of help, and that music left to mechanical reproduction would simply die.

IT would seem that the worthy conductor, on this statement of the case, is a victim of mental confusion as to the inspiration of music and the reproduction of it. To the layman it seems obvious that the gramophone and radio are the servants of music. They are not creative instruments; they are recording and diffusing instruments, and by the miraculous perfection to which modern ingenuity has lifted them, they enable music, once created by the inspired genius of the composer and interpreted at the master hands of performer and conductor, to be spread over the community in a way never hitherto possible. By thus diffusing music in this form throughout the world, a service of outstanding importance and value has been rendered to the populace at large. Time was when the cultured and wealthy, living in world centres, alone had the opportunity of hearing and enjoying music of that standard dear to Sir Thomas Beecham's soul. The point may be conceded that the reproduction does not quite equal the original; that some of its subtlety and soulfulness is lost. Nevertheless the reproduction is vastly worth while, and the world will not forgo its gain in spite of temperamental fulminations of the kind made.



**BURGESS
RADIO
BATTERIES**

FROM a further passage, it would seem that the real gravamen of Sir Thomas's complaint lies in the charge that the B.B.C. is not apparently "encouraging" music in the way desired by the distinguished conductor. It is alleged that recent concerts conducted by the B.B.C. were failures in that most of the occupied seats were filled with "poor relations and housemaids"; further, that the corporation simply squanders money in a muddling, blundering way, without a policy for the future, musically. In explanation of this charge, it may be recalled that, when broadcasting first became popular, the effect was to place in serious difficulties chamber music. To save the day, the much maligned B.B.C. itself came forward and guaranteed costs of production of such concerts throughout the season. This policy saved the cause of music, and enabled music-lovers to enjoy at first hand the renditions they desired. It would seem now that Sir Thomas desires the B.B.C. to devote some of its funds, not only to the reproduction of existing music, but to inspire the creation of new music by possibly special prizes. The B.B.C. may conceive that to be outside its charter. It may hold that the very efficiency of gramophone and radio reproduction secures to successful composers infinitely vaster monetary rewards for their creations than the old-time methods; that in that sense "mechanised music" is definitely providing the market for new music, and so providing the inspirational urge. In our mind there is no doubt that that view is right. The creator of music has to-day a better market and greater protection than before. For the interpretation of that music it is true that mechanisation seeks absolutely the best. There are therefore richer rewards for the perfect interpreter, but also a narrower field for the average and mediocre. While regretting the personal disability imposed by that situation, the general public is not in the least likely to regret the tremendously increased acquaintance that it has secured through gramophone and radio with world masterpieces.

1YA Church Committee A Delightful Rendition

THE first meeting of the new 1YA Church Service was held on May 12, there being present: Rev. H. M. Smythe (Anglican Church); Rev. W. D. Morrison-Sutherland (Presbyterian Church); Rev. Lionel B. Fletcher (Congregational Church); Rev. W. Walker (Methodist Church); Mr. D. Donaldson (Church of Christ); Mr. L. C. Barnes (Station Director at 1YA).

Mr. Barnes, who was re-elected chairman for the ensuing year, extended a cordial welcome to the Rev. W. Walker, a new member to the committee.

Off the Air

2YA Rests Unofficially

STATION 2YA, Wellington, suffered a breakdown on Tuesday afternoon, May 13, and was off the air until 9.40 p.m. Transmission was then resumed.

The cause of the trouble was a fault which developed in a condenser. Contrary to the usual opinion, a condenser has not an indefinite length of life. It is liable to suffer from fatigue and will eventually break down. While the manufacturers take the utmost pains to select the best of materials, there is always the liability of weak spots, which will develop in due course. This is apparently what happened in the case of 2YA. It is no easy matter to remove and replace some portions of a transmitting plant, particularly as those portions which are not expected to crack up are placed in the least accessible positions.

WHEN Miss Edith Harry performed at 3YA during her recent tour she sang two songs composed in Christchurch, and one of the composers, Mrs. R. A. Horne ("Rozada Lawrence") was present to hear her song, "Achal by the Sea," presented by Miss Harry. The visiting artiste gave a delightful rendition of this very charming song. Another number by Miss Harry was "Ave Maria," to music composed by Mr. R. A. Horne, who has many compositions to his credit. Miss Harry also sang a number of songs composed by herself, so 3YA listeners had the pleasure of hearing a most interesting recital.

It is worthy of note that the words of "Achal by the Sea" were written by a New Zealander, Miss Coralie Stanley.

Charming Ditties

A GREAT many little listeners will know the delightful works of A. A. Milne: "Winnie-the-Pooh," "When We Were Very Young," "The House at Pooh Corner," etc. For some time past, "Aunt Pat" of 3YA has devoted special time to the adventures of Christopher Robin's friends (Pooh, Piglet, Eeyore and all), and "Chuckie" has sung the songs which illustrate the stories. The latest song book to make its appearance is "The Hums of Pooh," and "Chuckie" has once more made a name for himself in singing these charming ditties at his session on Friday evenings.

Radio Listeners' Guide, 1930 Edition.
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P.O. Box 1032, Wellington.

W.E.A. Lectures

The IYA Series

COMMENCING on Thursday, June 5, the first of a series of six fortnightly lectures on "Life and Labour in the 19th Century" will be given at IYA by Mr. N. M. Richmond, director of the Workers' Educational Association. A second series will follow, the subject being "Problems of Labour and Capital."

Wellington Amateur Radio Society

Annual Meeting

THE annual general meeting of the Amateur Radio Society of Wellington was held on Tuesday evening, May 13, at the Cambridge Terrace Congregational schoolroom. Mr. Byron Brown, president, occupied the chair. An apology for unavoidable absence was received from Mr. I. M. Levy.

The annual balance-sheet showed a substantial credit, the revenue being derived from donations and subscriptions.

The election of office-bearers for the ensuing year resulted as follows:—President, Mr. I. M. Levy; active vice-presidents, Messrs. Byron Brown and J. H. Owen; honorary secretary, Mr. J. K. Hooker; hon. treasurer, Mr. W. J. Roche; committee, Mrs. Penman, Messrs. J. G. Greenhill, H. W. Faulkner, and F. W. Dawson; technical adviser, Mr. Preston B. Billing; hon. auditor, Mr. O. G. Kember.

Various criticism of the broadcasting service was voiced. Some offered the opinion that the price of the radio licenses in New Zealand were high. It was pointed out that while in New Zealand a listener's license cost 30/- per year, the fee in England was only 10/- per year, and in Australia 25/- per year. No license fee was charged in the United States and France.

There were some differences of opinion regarding the standard of music broadcast in New Zealand. While most of those who spoke regretted that so much jazz music was put on the air, it was pointed out that the public demanded a certain amount of such music.

Mr. Preston Billing gave an interesting address on one of the latest types of American screen-grid A.C. sets. The set embodied three stages of screen-grid radio amplification, a screen-grid detector, and the push-pull system of amplification. Even without aerial or earth the set afforded striking evidence of its remarkable sensitivity and tonal qualities. Mr. Billing explained the method of amplification by means of blackboard diagrams. He was accorded an enthusiastic vote of thanks on the conclusion of his demonstration.

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P.O. Box 1032, Wellington.

Available This Week.

Another Cast from Wanganui

IT has been the pleasure of listeners to hear several concerts relayed from Wanganui, so the announcement that another is scheduled for Thursday, May 29, will be read with the greatest satisfaction. Wanganui musical talent is of a very high standard.

The concert to be broadcast will be given by the well-known Queen Alexandra's Band, under Captain Geo. Buckley, in association with leading vocal and instrumental talent.

Mrs. Owen Warnock, who will sing "Nightingales of June," has a fine soprano voice and is a favourite on the concert platform. Mrs. S. Wills (contralto) is also well known. Miss Zeldia Watts, who will give a humorous sketch, is a juvenile performer with a long list of wins at various Competitions. Mr. S. Wilbraham (tenor) will sing "Serenata Toselli."

The Bridges Trio, who have performed at 2YA, and are well known to listeners, will play "The Jolly Robbers." The trio consists of piano, violin and xylophone. Mr. Claude Tucker, flautist, a most accomplished artist, has been engaged for the evening. He will play "The Brook" and "Pampillon."

A musical novelty will be contributed by Stodart's Dance Orchestra. Master Jack Buckley (aged 14) will play, by special request, "O for the Wings of a Dove." Master Buckley is a fine cornetist. His father is an ex-Australasian champion.

A special novelty number will be the rendition of "Mighty Lak' a Rose," to be played by Bandsmen A. Ramsey ('cello and flugel horn), R. Davis (violin and trombone), and Master Buckley (piano and cornet). The accompanist for the evening will be Mr. Horatio Nelson, L.T.C.L.

A Peep Behind the Scenes

BY installing a small but complete sound film plant at the Chilton House School, Island Bay, Wellington, on Wednesday last, Mr. McCutcheon, chief engineer, Western Electric Co., entertained and interested about 150 residents of the district. The films were virtually a peep behind the scenes, for they portrayed in a novel manner many of the principles of sound, and incidentally of radio, that were the basis of the talkies.

Basing the operation of the talkies on a cartoon, "How Mute Found His Voice," those gathered were shown by sound and sight how the idea of the sound track was worked up in the Western laboratories. "Talkie," a personified strip of sound film, took "Mute"—his silent prototype—by a questionable way into the laboratory, where he was shown by Dr. Western the way "Talkie" had found his voice. There were the two plants—one well known to radio and the other the recording camera plant.

Part of the former is to be found in every radio home—the amplifier, the microphone is similar to that used in the studios, but the photo-electric cell, although of radio origin, is, not yet fully known to all and sundry. The moving cartoons showed how the two impressions are made, both on separate film, and how the two are printed out on the final positive. The picture was interpolated by a song from "Talkie," and Dr. Western took his silent friend along the track taken by the voice. Mute finally found his voice, and with "Talkie" joined in a rousing farewell.

The cartoon was a base for the following film, "Some of the Characteristics of Sound." Much as might be written on the subject of frequencies, frequency ranges, tone, pitch, and amplitude, it remains for a film such as this to make things quite clear. An oscillator, and four instruments, served to show how characteristics of tone

depend on the number and strength of the overtones. Beside the flat and colourless note of the oscillator, 'cello, flute, violin, piano, and voice stood out in pleasant contrast.

A note of 50 cycles—how often does the reader of everyday radio literature hear this phrase? Yet it means little to him other than a deep note; but in this film the oscillator was tuned from 50 to 6000 cycles, and as the whine left the screen, we who were present knew something more of sound than we had before.

To see the sound waves slowed up to visible speed was another feature of this unusual film, and those fortunate enough to be present undoubtedly knew something more of sound than they had done before. At one stage certain frequencies were cut off from the recording microphone, and one was transplanted in the radio of a few years ago, which unhappily still obtains in some of the poorer instruments.

In "Scenes Behind the Scenes" at Hollywood and the other film cities of the States, we were shown how the talkie industry has been meant a literal recreation of the industry of moving picture production. Everywhere there are large sound-proof studios, several acres in extent. Judging from the huge doors, the places are veritable prisons in their magnitude. And this is necessary to keep extraneous noises from the microphones.

Apparently dozens are required to produce, photograph, and sound record a modern film. The photographers are housed in glass cases to prevent the sound of the motors being picked up by the microphone. The days are certainly gone when the director shouted his comments at the artists and the camera men danced round, turning the handle that recorded the moving picture. This is the electrical age when this mighty force can do almost all things but create.

The evening at Chilton House concluded with supper and dancing, provided by the talkie amplifier and a gramophone.

An Invaluable Work

1930 "Guide" This Week

THIS news will be welcomed by all who have known our previous "Guides," and those who are wanting a book, couched in simple terms, to tell them all they want to know about the broad principles of radio. From all booksellers and radio dealers, then, the 1930 "Guide" will be available toward the end of this week. Last year's "Guide" proved exceedingly popular, and the whole of the first edition of several thousand was sold in less than two months. A second edition appeared, and now our stocks are running fairly low.

We have no hesitation in saying that this year's edition is an improvement on anything pertaining to radio that has yet appeared in New Zealand. It is essentially modern, and the latest views that have reached us from America and England have been incorporated. In this respect, it will interest readers to know that, in view of the new facts coming to light, a section was rewritten, and the publication of the "Guide" delayed for a few days. Then there are the call-signs—and these are up to date. No fuller or more complete list has to our knowledge been published in the Southern Hemisphere. It gives all the particulars everyone wants to know about the stations on the air. Stations that are not likely to be heard in New Zealand have been omitted. Our list of the American stations has been compiled very carefully. The d.x. columns have been carefully combed, and all information that has recently come over the air concerning the tactics of these stations has been incorporated.

Wishing to have a complete list of Australian stations, we compiled a good list from all the existing New Zealand and Australian publications, and sent this to press. The day the section was to be printed, a new list came from Australia, advising us that many important changes would operate this month, and considering that accuracy was better than speed, we scrapped the existing list, held up the printer while the new one substituted.

These examples are only typical of the topicality of the "Guide." In every section everything new that is worth incorporation is there. In only very few cases is anything touched upon that has appeared in the "Radio Record" or previous "Guides." Where reiteration was deemed advisable to lead up to the new matter, it was treated from a different angle and very much condensed.

There are nearly 100 illustrations, photodiagrams and photographs—probably not more than a dozen have appeared before.

The size of the "Guide" has been only slightly enlarged—a matter of eight pages—this excluding the introductory matter. The reader gets 160 pages of illustrated reading matter for his 2/6.

Remember—obtain your copy early from your dealer or news agent—the orders are heavier than ever before and the stocks will soon be depleted.

"THIS is it," said my friend, jabbing a forefinger in the direction of an impressive affair which might well have been an escritoire with hand-warmers.

For years Leo had dabbled about anodynes (I think that's the word) and whistling valves, though why one should go to the expense of paying pounds to hear a valve which could whistle was beyond me. It still is, for that matter.

Leo Power was the most aggressive set owner I ever met. I mean, he wouldn't tune in stations g-r-a-d-u-a-l-l-y; he liked them to blow in upon him as suddenly as they blew out. The doctors afterwards discovered the poor fellow suffered from chronic dialitis, but that seems like burying a chap before he was born. . . .

"It's an impressive gadget, isn't it?" he asked. Long and spindle-shaped legs, inlaid panels and a profusion of dials gave one a hazy recollection of having seen something like it at the pictures, until suddenly I remembered. At the same time as recollection dawned I noticed Power's neat little all-electric farther along the same wall.

"But what's the idea of introducing the Wurlitzer into the home, Leo? You're not thinking of taking one of those Yankee correspondence courses in the thing, are you? Why not the electric?"

"Well, you see, the man in the flat downstairs can't get this battery six-valver to function, and when he heard I owned a similar one in Christchurch he asked me to—"

"Yes, but where are the pedals?" I replied.

"Pedals?"

"Yes, that's a yellitzer. Now, isn't it, Leo?"

FOR years he and I had waged argument long and wordy around the respective virtues of radio and gramophone, so it was not with surprise that he grunted something inaudible as he shot his cuffs and commenced five-finger exercises with the tuning knobs.

Just then another friend came along the beach (Power's flat almost flanked the water's edge), so I called him in to hear, or as it turned out, see and hear things. Nor was he disappointed. Sitting back comfortably in our chairs, our eardrums were nearly split in two by a most agonising "Ow-oo-ow-ow . . ." which seemed to leap from the inlaid thingummy which trembled and yowled beneath the fingers of its operator.

"What ever's that?" inquired the man in the other armchair.

"That? Oh, that's nothing, m'boy. I'm just warning her up. Sydney'll roar in very soon. Why, the one I had in Christchurch. . . ."

The subsequent reminiscence devoured nearly fifteen minutes, punctuated by unearthly grunts and noises. Undoubtedly (we surmised) 2YA was taking the squeal out of the pig, since nothing short of a "mike" in the middle of a bacon factory would (or could) capture such aural agony.

Suddenly: "Love, here is my heart . . ." At least, that I feel sure, was the singer's intention. Instead, we two listeners heard, "Love, here is my glog-glog, glog, whoo-ee, whoo-ee, ooo-ooo," rising to a shrill scream. Leo was plunging wildly at the dials of the infernal machine in front of him—twiddling, coaxing, but to no purpose. In fact, the demons in the box doubled and redoubled the volume of their outcries.

"Try the pedals, Leo," I ventured. "What pedals?" he snarled above the shrieks of a myriad djins who sounded

as though they were tearing the set to pieces.

"On the yellitzer," I shouted bank. "And what about the stops, too?"

But the jeer was lost in the whirl of valve anguish, and our laughter at Power's frantic searching for the stations which were there—and yet were not.

WE two watchers were in a state of semi-collapse when at length the operator left the set, to hurl himself at us. We were helpless with after-effects of sustained mirth—too weak to flinch even at the jabs which found their marks.

Next day he handed, or rather lifted, the set to the man-in-the-flat-downstairs—inlaid panels, dials, wires, connections, plugs, valves, howls and all. In the evening we went across to hear

Tynwald Day Manx Items at 2YA

THE sacred day of the people of the Isle of Man, Tynwald Day, which falls on July 5, will be commemorated by a special programme at 2YA. Manx songs will be sung and a talk will be given by Mr. T. E. Corkhill, President of the Manx Society.

his all-electric. Whether he was more familiar with his own set, or whether the owner of the battery six had overhauled HIS, then found he had some parts to spare after reassembling, I am not prepared to swear, but there is no question that we DID hear something we could recognise as a tune.

Within the following week my conscience (it may have been sheer stubborn bias) toyed and argued with the prospect of a radio set in the house. No, I said to myself, you're not "sold" on the subject—better leave it alone, for a while, anyway.

On Friday afternoon I bought a new gramophone record, partly to stifle my conviction, perhaps in defiance of true judgment. I was walking through the city when I met Power, who immediately acquainted me with the news of a new all-electric, etcetera. You probably recollect the aged story concerning the last straw and a camel? Well, I bought one (I mean a radio set) that night, and I must confess that with both radio and gramophone my conscience is now placidly scanning the musical situation.

One thing more. If at any time you feel jaded, and want to see "the greatest show on earth," drop me a line. I'll have Leo Power delivered with that battery six, right to your door. Perhaps, though, it's owner has found in the meantime where those spare parts belong.—R.B.S.

The Silenced Speaker A Radio Tragedy

(By A.B.R.)

IT all arose out of the family's weakness for home-shifting. I've never discovered the real reason for this—whether our ancestors were gipsies—or rent-dodgers. Still, the fact remains, along with the horrifying tragedy of my beloved red and blue loudspeaker cord.

I always suspected a soft spot in my heart for that cord. Now—to my undying sorrow—I know it. Never in the history of radio has there been such a wonderful cord. I always feel that it was someone's supreme effort—someone who left his life's work to gladden the heart of someone as unworthy as myself.

Well, to return to the fatal shift, I was boarding in town at the time, and the first inkling I had of the family's sinister intention was when the pater rang me up—"Yes, we're shifting to-morrow. Could you possibly come home to dismantle the wireless?" No, it was impossible—they had to manage the best they could.

The next I heard from the family was another 'phone ring, requesting that I should visit our new home to re-install the radio. Well—this time I thought I'd better go. It appeared as though they'd managed to dismantle the set well enough without me, and it was possible that they would somehow be able to fix it up again. That would never do—as the acknowledged expert of the family I was sensitive of my accomplishments with valves and plugs and things.

I arrived home one afternoon, whistling cheerily at the thought of spending a few hours with my beloved wireless. Little did I know of the dark shadow of tragedy that was hovering over me.

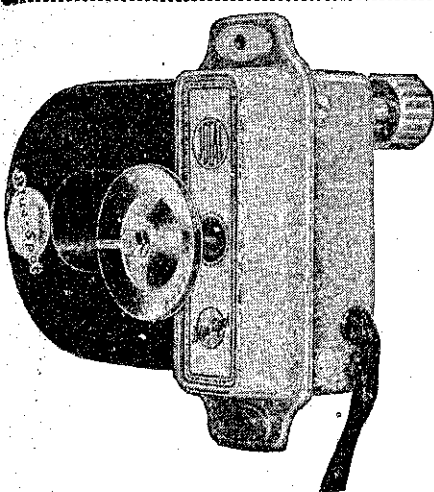
The aerial and earth were soon installed, and I approached the set to make the necessary connections to the batteries. "I say, son," remarked the dad, "I didn't like to open the cabinet and interfere with the set when I was packing up, so I just cut the battery cables free. I hope it will be all right," he concluded anxiously.

This was unexpected, but after all no appreciable harm had been done, and I was inwardly pleased to know that dad was so scared of a simple det. 2 audio that he wouldn't touch a terminal of it. "Yes, dad, that'll be all right. I'm glad you didn't touch the set. You might have blown the valves out." He was properly impressed, and very pleased he'd done the right thing.

WHISLING gaily, I proceeded to work. After removing the cabinet lid, I propped the set on its panel, the better to disconnect the severed ends of the battery cables.

Suddenly the room seemed to grow cold and dark. My whistle died away on a dirge-like note, strongly reminiscent of a Scottish lament. The room was whirling about me, and my horrified eyes were fixed with a dazed stare on the terminal strip on the baseboard.

There, gazing reproachfully at me from amongst the severed ends of a mass of battery cables was a suspiciously familiar red and blue cord ending in two shining tips. My suspicions rapidly grew to a certainty; and like King Henry I, I haven't smiled since.



An extract of tests on Cone Units carried out by "Wireless World," England's leading technical Radio Journal.

BLUE SPOT TYPE 60K.

This unit is remarkable for the wide range of frequencies covered and is not excelled for reproduction in the upper register. A considerable output is given at 50 cycles, and as regards sensitivity the Blue Spot is included in the best three. The general performance is comparable to that of a moving coil.

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Specialists.**

BROWNING-DRAKE COILS, 22/6 pair. Made to match your condensers and valve if desired.

Experienced in the art of overhauling and repairing of Radio Receivers.

A list of stations received is supplied with every set and repair sent out.

**DON'T HIT IT WITH AN AXE—
SEND IT TO US.**

Large Stocks of British Accessories Carried.

A Speed Indicator

HOW many know when their gramophone motor is going at the right speed? And yet this is one of the few tasks that remain to the gramophone enthusiast to do. A motor that revolves too slow or too fast, not only spoils the tone, but especially in the latter case ruins the records. On previous occasions the writer has emphasised this point. The speed indicators on most machines are not entirely reliable. Although they may have been correct when the instrument left the manufacturer the regulator soon loses its true significance and some type of indicator is needed to keep the machine up to scratch.

Some commercial makes are obtainable though many listeners will not wish to go to this expense. The simplest method of determining speed is by the stroboscope—a disc of alternating bars or lines. This disc is placed on the gramophone turntable over a record. The machine is set playing

phenomenon is due to the fact that the wheels turned through the angle between the spokes in the interval between the taking of each successive picture. (Intermittent viewing.)

If the wheels turn through two or three (or any other whole number) times the angle between the spokes, the same effect is produced. Should the wheel turn, in the time between the taking of two consecutive pictures, through an angle slightly greater than that between the spokes, they will appear to move round slowly in the direction of rotation, and in the opposite direction if the angle turned through be less than that between the spokes.

The method of arriving at the number of bars in the indicator is

In $1/2f$, seconds the lines has moved through.

$$R \times 360 \text{ degrees}$$

$$60 \times 2f.$$

Therefore, the full 360 degrees of the disc must be split into $60 \times 2f$. $\div R$ spaces.

$$= 120f. \div R \text{ sectors or lines which in a circle are equal in our example } = 120 \times 50 \div 78 = 77.$$

But any multiple of this number can be taken, so by doubling the number of lines and filling in between each alternate pair, the lines can be converted into bars. For those with a great deal of patience and draughtsman's ability making a stroboscope is not a particularly difficult task. For others it is not so simple.

Choosing a Record By 'Phone

AN enterprising Sunderland (England) gramophone dealer has introduced a useful innovation which enables a customer to buy gramophone records without the trouble of visiting the shop. By putting through a telephone call to the dealer he can be switched over to a special booth containing an extension telephone. Here an attendant plays a selection of records over to him and those approved are delivered at once by a messenger.

Is It Sealed?
The Fate of Grand Opera

WIRELESS and sound pictures particularly have come upon us so rapidly that it is difficult to realise just what the outcome will be as far as the musical and operatic world is concerned. Already there has been a rapid decline in the number of "shows" that formerly were almost a weekly feature in every large New Zealand city. Already most of the opera houses and the theatres designed for the legitimate stage have installed talkie plants.

A wave of depression has swept the ranks of the play-producers, and literally hundreds in this part of the world are seeking new avenues to sell their talent. Out here the only chance appears to be the broadcasting stations, which alone tend to benefit from the change.

In sound picture producing countries a new demand has been created, and in time if the present trend is maintained the only outlet for dramatic talent will be here and in the newly-created radio drama. Music talent will, of course, gravitate to the recording studio—for it seems that it will require more than radio and talkie to displace this. If anything, these strengthen the position of the gramophone recorder.

A PROPOS of this, an interesting article appeared in the London "Times." It appeared in the form of a leader, and was the outcome of an article elsewhere in the same edition headed "Economic and Artistic Difficulties of Opera in Italy." "It appears," comments Mr. Herman Klein in the "Gramophone," "that the well-known journal, the 'Corriere della Sera,' had sent round a questionnaire to the composers, conductors, critics, singers, impresarios, and music publishers." (Concluded on next page.)



A group of performers frequently heard from 2YA—the Rag-a-Jazz Revellers. The personnel is as follows:—E. O. Stokes, piano; J. Anderson, violin; D. Jauncey, C. Minifie (absent), saxophone; F. Ormrod, trumpet; R. Innes, banjo; C. Thomas, drums, effects, xylophone. —Schaif, photo.

and the speed adjusted until when viewed under electric light the bar or lines appear stationary. The light must be provided by alternating current (the usual) and the number of bars determined by the frequency.

In the "Listeners' Guide" there is a stroboscope—just ready to be cut out and pasted on cardboard to perform its useful mission. It is designed for the usual 50-cycle alternating current. For those interested the writer follows out the principle involved.

WHEN a regular body, such as a wheel, is in rotation, it will appear to be stationary if it be intermittently illuminated, the instants of illumination being such that the wheel turns through an angle equal to that between two consecutive spokes between successive illuminations. The same effect would, of course, be produced if the wheel were viewed intermittently.

An example of this effect, familiar to most of us, is furnished by the kinematograph. Sometimes, in the film of a moving car, or other vehicle, the wheel appear not to rotate. This

best shown by an example. Suppose the frequency of the mains is 50, the usual for New Zealand, and the speed of the machine is 78, now generally regarded as standard. According to the nature of alternating current the light will be dimmed 100 times a second as in a complete cycle the current passes the zero lines twice on the upward swing and once on the downward.

If the number of lines on the disc were such that it turned through the angle between two consecutive lines in $1/100$ th of a second the disc would appear stationary. The same would take place if any complete number of the bars were traversed in one interval of full illumination—in our case $1/100$ th of a second or for any frequency $1/2f$, where f is the frequency of the mains in seconds.

Now where R = revs. per minute of the gramophone disc (78), N = the number of lines on the disc, and $R = R/60$ revs per second.

$$= R \times 360 \text{ degrees a second.}$$

Designed for
RADIO - GRAMOPHONE WORK

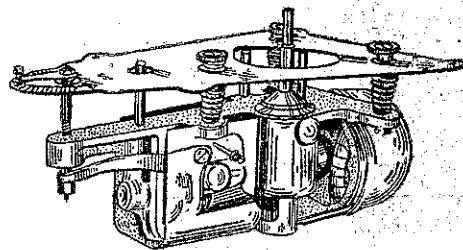
THE DIEHL Electric Gramophone motor is of the single phase, squirrel cage, induction type, which knows no equal in a radio gramophone. It is simply yet ruggedly constructed, and quiet and dependable in operation.

There are no cut outs, automatic switches or armature windings, with commutator or brushes, which cause radio interference by sparking, in the Diehl.

The ideal motor for using in conjunction with your radio set and pick-up is

The "DIEHL"
ELECTRIC GRAMOPHONE MOTOR

"A Singer Sewing Machine Product."



The above illustration shows the excellence of the Diehl. All the steel parts are heavily nickel plated to prevent rust, and by cutting a triangular hole in the mounting board, placing the mounting plate in position and fastening four screws, the Diehl is installed and ready for long and consistent service.

Price £9/15/-

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Fate of Grand Opera

(Concluded from previous page.)

fishers, asking what they thought about operatic affairs generally; and the answers had in the main afforded rather unpleasant reading. The three great opera houses of Milan, Rome, and Naples were in the same boat as the 24 other first-class opera houses in Italy; for 'all these theatres, although in the past they have never made great profits, are now run at a loss.'

"The causes of this common deficit were said to be various; yet the explanation was practically the same in every case. Expenses were largely in excess of income, thanks to the high fees that had nowadays to be paid to artists, the heavy cost of mounting new operas which did not attract the public, the costliness of the mise en scene generally, and the Government taxes on entertainments, and the counter-attractions like the cinema, the wireless, etc.

"The remedies proposed were, like the grievances, 'various.' But as 'The Times' leader pointed out, 'Genius is not to be commanded,' and composers like Verdi and Puccini, who can fulfil their own artistic aspirations while proving that they merit the big expenditure, are not forthcoming very often either in Italy or in any other country.

"The composers of to-day have 'little or no sense of responsibility toward their audiences'; yet they claim their right of a hearing where there is really no right in the matter."

The remainder of this sensible article was devoted to an appeal for further subscribers in support of Sir Thomas Beecham's Imperial League of Opera; nor is it to be denied that the two branches of the subject—opera abroad and at home—have enough in common, despite their different conditions, for us to be able to profit by the mistakes of others. Financial difficulties are being encountered at the great operatic establishments of Berlin, Vienna, and even Paris. The only country that escapes entirely, because it can afford to spend what it pleases, is wealthy America.

Children's Sessions

FROM IYA.

TUESDAY.—Uncle Dave to the fore again, with more of his interesting stories, Cousin Rita singing, and Cousin Dorothy reciting.

WEDNESDAY.—Uncle Tom will begin the Children's Session with his usual happy chorus, and Cousin Jean will contribute piano solos.

stories and send birthday greetings.

SUNDAY.—Children's Song Service, conducted by Uncle Leo and assisted by Beresford Street Sunday School.

At 2YA.

MONDAY, MAY 26.—Uncle Jeff is bringing the Kelburn Boy Scouts

A 3YA Alphabet

A for the Aunts, so clever and bright,
B for the Birthdays, called every night.
C for our Cousins, so winning and fair,
D Ditties Delightful, sent on the air.
E Earnest Endeavours to please every one,
F stands for our Fairies, their work never done.
G for the Gifts they have carried unseen;
H Happy Homes where these fairies have been.
I the Industry shown by our family band,
J the Jest and Jokes as they come to hand.
K Kindness oft shown, for which grateful we are.
L Little Listeners-in, near and far.
M for our Microphone, best of its kind;
N for Nice Notices, dear to our mind.
O stands for those Others, now gone from the station:
P is "Aunt Pat," who is voted a jolly relation.
Q is the Question that we love to ask you;
R is the Riddle that has to be answered.
S for our Stories, grave, fairy, or true;
T for our Time, with more we could do!
U Uncles Unequalled, none like them before;
V our Visitors, and we'd welcome more.
W their Wonder at all that they meet;
X for eXcellent eXtras we give as a treat.
Y all You Youngsters, so ready with laugh;
Z our great Zeal. We do nothing by half!

—G. Colborne-Veel.

THURSDAY.—Puzzles, stories and jokes from Peter Pan. Pat will sing and Dick will play the piano.

FRIDAY.—The Happy Hour to be spent with Nod and Aunt Jean, while Cousin Catherine will provide piano solos.

SATURDAY.—The pupils of Miss Sale are providing this evening's programme, so an interesting hour is assured. Cinderella will tell

with him to-night. There will be much laughter, fun, music, stories and puzzles.

TUESDAY.—To-night the 2YA Children's Chorus will be here with Uncle Jim, and a charming little programme has also been arranged by the pupils of Miss May Walters.

THURSDAY.—Uncle George is bringing with him a band of performers, who are pupils of Ethel Mackay. Cousins Marjorie, Freda and Dolores will also be here.

FRIDAY.—Our Story Book Lady and Big Brother Jack have arranged to bring the pupils of Miss Maisie Deck with them to-night. There will be violoncello and violin solos, duets and songs.

SATURDAY.—Our Revellers, with Uncle Toby conducting the session, are providing the programme for to-night. There will be bands, instrumental duets, songs by Cousins and stories for all.

SUNDAY.—To-night the Children's Choir from St. Mark's Anglican Choir will be here under the direction of Mr. Small. Uncle George will conduct the session.

FROM 3YA.

MONDAY.—Here comes Scatterjoy with her Garland of Girls to make this Bedtime hour a time of delight to all the little ones. You will hear more about the doings of Binky the Bantam the Monday night mascot.

WEDNESDAY.—Wednesday brings Uncle John, with his bright and breezy voice. Cousins Victor, Molly and Gwyneth, coming along with songs and recitations to help.

THURSDAY.—Ladybird has flown home again, so we will all have a happy hour listening to her songs, and hearing Uncle Frank's stories.

FRIDAY.—This is the night "Chuckie" sings you the "Hums of Pooh" while Aunt Pat tells you the story of Pooh, Piglet, Eeyore, Kanga, Tigger, and all Christopher Robin's friends.

SATURDAY.—To-night Miss Gilder is bringing along some of her pupils, and we are having a little talk on Hockey and Football for the boys, and the girls, too!

SUNDAY.—Children's Song Service, conducted by Rev. J. F. Coursey, assisted by some scholars from the St. John's Sunday School.

Music and Dramatic Committee

AT the monthly meeting of the IYA Musical, and Dramatic Committee there were present: Mr. T. T. Garland, Auckland Savage Club; Mr. C. B. Plummer, Auckland Choral Society; Mr. John Tait, Society of Musicians; Mr. J. F. Montague, Auckland Comedy Players; Mr. L. E. Lambert, Bohemian Orchestra; Mr. E. Blair, Workers' Educational Association; Mr. V. Trask, Aethian Club; Miss R. Walker, University Students' Association; Mr. L. C. Barnes, Station Director at IYA; Mr. O. M. Pritchard, Programme Organiser at IYA.

In the unavoidable absence of the chair, Mr. McCallum, Mr. Lambert presided.

A report from the sub-committee set up in connection with the inauguration of a song-writing competition was presented. It was decided to forward it to the company, with a strong recommendation that it be carried out, in order to foster local composers.

Many valuable suggestions came forward with regard to future lectures and programmes, and these, it was stated, would be carried into effect as early as possible. A discussion took place with regard to the proposed Music Week to be held in August, and it was decided that every help possible be given to make this week a success.

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CAR

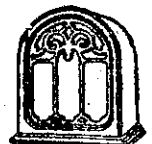
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M. GASTON DOUMERGUE, the French President, whose amateur wireless activities were mentioned in a recent issue, has recently permitted a Parisian journalist to inspect his collection of receivers. According to the journalist's report, the Presidential apartment in the Elysee contains four receivers de grand luxe, including a short-wave set with the latest in frame aerials. The President conducts his experiments alone when his entourage have departed in the evening. Recently M. Doumergue startled the Foreign Minister with the announcement: "I have taken Moscow and Stamboul!" and some explanation was necessary before M. Briand realised that no new international complication had arisen.

RADIO station WEBR, of Buffalo, uses a steam-heated radio aerial to prevent the forming of ice and sleet on the antenna and mast during winter storms. Hot steam at high pressure is piped into the interior of the mast, a huge metal pole on the roof of a ten-story warehouse. The mast thus is kept warm enough so that ice cannot form and earth the circuit.

A WIRELESS exchange of after-dinner speeches delivered in Paris and Amsterdam respectively was a feature of banquets held recently in these cities by Esperanto enthusiasts. Just before the conclusion of the festivities the two banqueting halls were linked together by wireless through the medium of the two local broadcast stations, the two presidents being able to converse before their respective audiences.

ACCORDING to a recent report from Paris, wireless receivers are being used with beneficial results in the deaf mutes' asylum at Bouveret, in the

RADIO has never met with much success in India, and now comes the not unexpected news that the Indian Broadcasting Company has found it necessary to cease operations. Commercial interests behind the scenes have tried to carry on, despite tremendous difficulties and heavy losses, but all in vain. This is all the more unfortunate, as broadcasting in India was doing considerably more than its bit to consolidate England's position in a country teeming with a people embracing numerous and widely differing creeds.

Valais Canton, Switzerland. In the course of a recent experiment, forty inmates wearing headphones heard a concert for the first time in their lives. Tests are now being conducted in educating children by means of headphones, a microphone and amplifier being installed on the teacher's desk.

FUTURE of Indian Broadcasting: More Powerful Wavelengths Needed.—Headline in a daily contemporary.
Or, possibly, longer kilowatts?

THE question whether high power broadcasting stations should be located near national frontiers is being anxiously discussed by the French radio Press apropos the rumour that Germany's latest 60 kw. station is to be erected at Stuttgart. The fear seems to be that the station will flood Alsace-Lorraine with propaganda.

A NEW "focal point" of the American National Broadcasting Company's coast-to-coast network has been established in the New Amsterdam

Theatre Building, Broadway, New York. The entire New Amsterdam Roof has been transformed into a single studio, which contains, among other innovations, a 6-ton sound-proof curtain of steel and glass, permitting an audience of 600 persons to witness a broadcast performance without the risk of any extraneous noises reaching the microphone. The audience is provided with a battery of loudspeakers. In the studio itself are no fewer than twenty-two microphone points.

THE installation of a wireless set in the Argyle Congregational Church, Bath, has aroused widespread interest among churches in different parts of the country. The receiver at Bath is tuned-in daily to the Daventry morning religious service, and passers-by are invited to "Come in and Listen."

A GIGANTIC radio receiver, more than ten feet high and six feet wide, has been placed outside a building in Cleveland, Ohio, where it is used to broadcast speeches and luncheon programmes to the public. The cabinet is built to scale with one of ordinary

size, and the receiving equipment is a magnified duplication of a standard chassis, the only difference being that in the large cabinet are special amplifiers and speakers to furnish the tremendous volume required.

A NEW inducement to listening in Denmark is afforded by a guessing competition instituted by several broadcasting stations which transmit restaurant music. Listeners who can guess the titles of a given number of orchestral selections win a free dinner ticket.

THE United States Patent Office in Washington is reported to be "swamped" with applications for radio patents. More than 2000 applications are awaiting consideration.

MICROPHONES that record the sound for talking films pick up and often magnify or distort the most insignificant noise, and as a result every article of furniture and every piece of clothing or jewellery must be carefully inspected before use in the production. Beads worn by actresses in sound films must be ar-

ranged so that they do not strike together and rustle or click, soles and heels of shoes must be covered with felt, and the squeaks must even be taken out of noisy chairs or other furniture used on the sets.

IN Germany there were 3,066,682 registered wireless listeners on a census taken on January 1. This represents an increase of 431,115 during the last twelve months.

THIEVES in London are employing their own broadcasting set to frustrate the radio-signal system of Scotland Yard. Recently when the police attempted to broadcast to squad cars the news of a jewellery store robbery, it was found that the squads could not pick up the signals because some secret

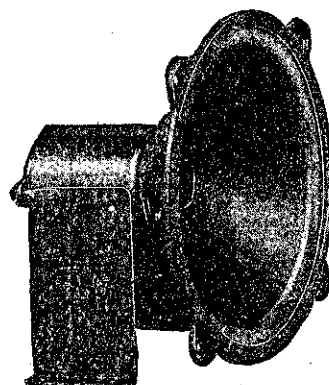
station, using the same wavelength, began oscillating and jamming the police messages. Efforts to locate the offending transmitters have proved unavailing, because it only operates while the police are broadcasting information of crimes.

EVEN the tiny tots are discovering the value of short waves, to judge from an innovation at the Radio Experimental Station, Paris. This station now transmits a children's hour on 31.65 metres. It is intended specially for the benefit of children in the colonies.

FRENCH wireless manufacturers have made the alarming discovery that, in the matter of aerial output, France is 30th on the list of broadcasting countries. French listeners number approximately only 500,000.

AUSTRIA being a chess-playing nation, tremendous enthusiasm was aroused among listeners by the recent tournament staged by the Vienna and Linz broadcasting stations. Six games were played simultaneously, the players being seated in the studios at Vienna and Linz respectively. Listeners, who were provided with chessboard plans, were able to follow the course of the games from announcements at the microphone.

A Scientific Achievement



Jensen Nu-Core
DYNAMICS
Concert 10in. type

This year Hammarlund Manufacturing Co. have approved of JENSEN DYNAMICS for use with their famous BAND-PASS HI-Q 30, so we secured Jensen Agency. NOTE.—The Jensen 6-Volt Dynamic operates at full power from the A.C. Main in conjunction with a "Well-Mayde" or similar 1/2-amp. charger. Cost of Dynamic "Well-Mayde" Charger. £9/12/6.

JENSEN SUPERIORITY:

1. Special Core and Winding (6-volt Speaker takes only 4 amp.)
2. Concert Size, 10in. at 7in. price.
3. A.C. models fitted with Westinghouse (British) Rectifiers.

For others, See our List.

Prices: 10in. £6/17/6, for a.c. mains £10

JOHNS LTD.
CHANCERY STREET, AUCKLAND.

Identification Wanted

ON May 12—a station broadcasting a boxing match.—Approx. wave-length 250 metres (1200 kilocycles). Time received 8.30 p.m. Station disappeared when I tuned in again at 9.15 p.m. There seemed to be a drone or purr accompanying transmission. Signal strength R5—C. Acute fading.—“Sonora” (Wellington).

I HAVE often heard two men talking just below 2YB, New Plymouth. They hold an ordinary conversation, discussing their progress in sending and receiving morse, etc. They then go on to morse. I used to hear them frequently after 10 p.m., and most of the evening on Sunday. I have not heard any call sign from them. “Oh, well, I must get off to bed now,” is the nearest I have had. Has any DX member identified this pair? I have derived much pleasure from the programmes of 2ZR, Wanganui. He is very handy from 10.30 a.m. till 3 p.m. I get him at R8 here.

Re mushiness on 2YA. I have seven radio friends round here. They all experience the same trouble. I have also heard new sets being demonstrated by dealers here, and the mushiness is just as pronounced in them. Now, is it the set? My thanks to S. Ellis, Okato, for his letter describing earth and aerial system. I am adopting it, and will report in due course.—“Amazon” (Palmerston North.)

COULD you identify the following station for me? I have heard it faintly several times now, but have never been able to get its call letters. The following are the particulars:—Frequency, 830 kilocycles; metres, 361. Also, can you tell me the reason for this? I find it fairly hard to tune in to 2BL, Sydney, as there seems to be a dead spot.—“Not Too Sure” (Motueka.) [This is probably a dead spot. Try placing a midjet variable condenser in series with the aerial.—Ed.]

About 10.30 p.m. Friday, May 9, two stations on about 240 metres (1250 k.c.), one an American with a call —, the last letter like X. The other kept going off the air for two or three seconds. The announcer's voice sounded English—call sounded like “CJMW testing.” Two others, one like an Australian on 325 metres (920 kilo.) and the other either Japanese or Chinese, on 333 metres (900 kilo.) heard after 1YA closed down.—“M.B.S.” (Palmerston North.)

THE D.X. CLUB

Views and News.

Stations Identified

THE station “Sonora” heard on a wave-length round about 2YB, New Plymouth, was probably 2ZH, Napier, 238 metres, 15 watts. Wednesday, 6.30—10.30; Sunday, 2.30—4.30, and 7.0—9.30.—“Amazon” (Palmerston North.)

IN the “Radio Record” of 16/5/30 “Incubu” (Waitaka) asks about a station which was broadcasting on Friday, May 2. This was 4ZO, Dunedin, and ZL4ZM, operated by Chas. Begg and Co., Dunedin. These stations were transmitting on relay from the Otago Radio Exhibition.—(Unsigned.)

DX Topics

An Error Acknowledged.

I AM indebted to Mr. Rodgers for his correction of my report concerning station KPO, California, on 23.35 metres. Until reading his report I had not noticed the error. On referring to my log I find that station received was KGO.—M.W. (Wellington).

KFOX on Special Programme.

DID any DX reader pick up KFOX, Longbeach, California, on Thursday, May 15, at 9.30 p.m., when they were on the air with a special Australian and New Zealand programme. Wave-length was 239.9 metres (1250 k.c.). Items heard were “Throwing Kisses at Me” and “My Mother's Arms.” Strength was R6 on ‘phones using a two-valve all-wave set.

On Wednesday, May 14, at 10 p.m. I picked up three Japs, and they all had what was evidently an English lesson on, interspersed with Japanese talk, “I, she he, it, you your yours,” was heard. 2ZE, Eketahuna was testing on the same day at 5 p.m. on 1210 kc. (246 metres, approx.), at R 7-8. Reception here is improving,

but static is bad. Short-wave reception is not worth bothering about.—H.F.A. (Masterton.)

A Freak Reception.

I WONDER if any other listener noticed the unusual wireless conditions this afternoon (May 14). Usually the only stations I hear in daylight are 2YA and 1YA. To-day about 4 p.m., which is now about one hour before sunset, I tuned in to 3YA, and to my surprise it was as loud as Wellington. Thereupon I tried 4YA, and found

To DX Club Members

OWING to the heavy demands made on our space, and to the increasing amount of correspondence received from DX enthusiasts, we have found it necessary to request the following courtesies:

(1) Address letters to: The Editor, DX Club, Box 1032, Wellington. Nom de plumes may be used, but all letters to be signed. Write in ink, and on one side of the paper only.

(2) Be brief, but do not omit interesting or essential details. (At present almost every letter has to be re-written and condensed.)

(3) When stating the wave-length of a station, if possible give the corresponding frequency. This may be calculated from the formula:

$$200,000$$

$$K = \frac{M}{\text{metres}}$$

where M = wavelength in metres, and K the frequency in kilocycles.

(4) When inquiring about the identity of stations, give the following particulars: Date and time of reception, approx. wave-length and frequency (see Rule 3), and items heard (not more than three). If unable to state wavelength, give dial readings and proximity to well-known stations.

it almost as loud. As I had never picked up these two so early in the afternoon before, I tried the Australians, and found 2BL and 3LO quite audible, also 2FC, 4QG, and (I think) 2GB, just audible. My set is a four-valve S.G. set, home-built. My B batteries are almost exhausted, which makes these freak conditions more surprising.—J.B. (Hokiangia.)

[The reception of the principal southern stations in broad daylight is quite an ordinary performance, for a set such as yours.—Ed.]

Distance Tests

Interesting Revelations

MR. T. C. BRYANT, the operator in charge of the wireless on the s.s. Cumberland, has forwarded to 3YA a report covering several nights when he listened-in to the New Zealand stations. He used a two-valve set. Mr. Bryant's letter reads as follows:—

“While testing my instruments for distant signals on all wave lengths, the broadcasting programme from 3YA was heard at midnight on March 20, 1930 (ship's time and date) very distinctly, clearly and quite loudly. The signals were strength 8 (British Post Office standard) and our approximate distance from Wellington was 2000 miles.

“The following night at about the same ship time, 3YA station was again heard, and at almost the same strength, but the fading was greater, and the atmospherics louder. Our approximate distance was then 2300 miles. No other YA stations were heard. On the next night, March 22, at the same time (ship's time and date), 3YA was again heard at about strength 6, atmospherics bad but fading only slight. Our approximate distance from Wellington was then 2600 miles. Items heard was the relay of a church service, presumably from Christchurch. No other YA stations were received, but one or two distant American (Californian) broadcast stations were weak.

“On March 24, at about 11 p.m. (ship's time and date), broadcasting was heard from assumed New Zealand YA stations (on 3YA tuning). The signals were weak, the maximum strength being 4. Atmospherics were also bad, and fading was very bad. At times the signals disappeared altogether, the carrier wave only being heard as a whistle when reaction was increased. One item heard was a “musical switch” played by a band, our distance being nearly 3000 miles, i.e., almost in the same longitude as Pitcairn Island.

“On March 25 (same time) nothing was heard on 3YA tuning, except for a carrier wave whistle when reaction was increased, but on another tuning an American broadcasting station, WGAM, came in strength 4. Atmospherics bad, but fading slight.”

A Noble Sacrifice

A CHARMING radio story which has captured the imagination of English newspapers was recorded recently. A Gloucester girl betrothed to a wealthy young business man had the choice of rich furs or jewels as a present. She declined the gift, said she would be happy if every blind man, woman, and child in Gloucestershire could be provided with a wireless set.

This was revealed when a young man walked into the National Institute for the Blind and asked the cost of providing the sets and maintaining them for ever. The staggered officials worked out the cost and told him it would be £10,000. “Very well, they will have it,” he said. He declined to give his name. “It isn't my gift,” he said, “but a present from my future wife,” and handed over a cheque.

3 BIG RADIO SNIPS at Waterworths' Sale

1 Only “PAGE” Model 12 (6 valves), all-electric set. Usually £45. NOW Only £32/10/0

1 only “PRIESS” 8-Valve Set, originally £45.— NOW Only £25

“PRIESS” 9-valve, new, popular set. Splendid on distance-getting. Usually £47. NOW Only £27/10/0

The “PRIESS” Sets are converted from indoor-aerial to outdoor aerials.—SEE OUR OTHER BIG RADIO BARGAINS.

Waterworths

Wellington, Christchurch,
Auckland.

SOME good entertainment was provided listeners on Thursday evening of last week when the British footballers were introduced from the studio of 2YA, Wellington, by Dr. G. J. Adams, president of the N.Z.R.U., and Mr. S. S. Dean, chairman of the N.Z.R.U. Mr. Dean's facetious remarks when inducing each of the visitors to face the microphone were rivalled by the amusing speeches of the various players. The "dark blues" proved themselves a merry band, and their happy little speeches made a big appeal to listeners.

AT the Wellington Radio Society's annual meeting comparison was made with the New Zealand system of charging an annual license fee of 30/- with that of America where no charge is made. The person or persons who made the comparison are apparently unaware of the state of affairs which obtain in America, where broadcast listening is being polluted with advertising until complaints have become nation-wide. A warning note was recently sounded by Dr. Lee de Forest,

population of the Dominion, yet there are only twice as many broadcast stations supported by listeners' licenses. There are also about six times more licensees in Australia. If listeners in Australia were asked to pay in just proportion to their numbers, and the number of stations they support as

and thus could keep the public posted in this, the first event of its kind, yet promoted in this corner of the globe.

WHEN the A.C. screen-grid valve first made its appearance some doubt was expressed as to its efficiency in comparison with the battery-operated screen-grid valve. These doubts were soon dispelled, and Mr. Preston Billing demonstrated very convincingly at the recent meeting of the Wellington Radio Society that the A.C. screen-grid valve is phenomenally sensitive.

LISTENERS have been commenting on the appearance of a new announcer at 3YA, Christchurch. The gentleman with the resonant voice and excellent articulation now officiating at 3YA was until recently the announcer at 4YA, Dunedin.

SOME of the minor Melbourne and Sydney stations are about to broadcast still pictures of general interest, weather maps, and printed items of news and information. A company is about to market receiving equipment in Australia, which is to be sold at about "the same price as the medium-priced" broadcast receiving sets to which they have to be attached. At the receiving end a sensi-

tised paper revolves on a cylinder similar to that at the transmitting end, and a pencil of light prints the picture on the paper. The stations will suspend ordinary broadcasting at stated hours of the day and night, and will transmit the pictures on their ordinary wavelength. No report has been seen by the writer as to the success or otherwise of the scheme under Australian conditions.

THE writer happened to be at sea recently, and he availed himself of an opportunity of listening-in to 2YA, Wellington, at a range of upwards of 100 miles during the dead of night. Without any radio frequency amplification, and using only a detector and two stages of audio, 2YA came in with good loudspeaker volume. The writer learnt that 2YA has such a punch that the receiving aerials on some of the New Zealand steamers have to be fitted with a wave-trap to keep the music off the 600-metre mark where the morse signals operate.

SOME of the old hands were yarning of the "stone age" of broadcasting in Wellington the other evening, when a laughable episode was recalled. The operator of a small station which used to disturb the ether was accidentally locked in by the custodian of the building so that he could not descend from the roof on which the studio was installed. He telephoned a friend from the studio, and when the latter got to the building the operator threw his bunch of keys to him below. This enabled the friend to gain access to the building, and he was thus able to release the operator.

THE past week has been marked by an abnormal degree of "fading" by the Australian and Japanese stations. As the evenings have progressed the fluctuations in volume of those stations has become more pronounced. Whether the abnormal weather had something to do with this peculiarity can only be conjectured.

Reduced Volume from Australian Stations.

FOR the guidance of those who wish to check their reception of the Australian stations, "Switch" prepares weekly a table showing the average relative strengths with which he has obtained reception at 11.30 p.m. during the past week:—

2BL, Sydney	10	2GB, Sydney	5
2FC, Sydney	9	3UZ, Melbourne	4
4QG, Brisbane	7	3AR, Melbourne	4
2UE, Sydney	6½	5CL, Adelaide	2
3LO, Melbourne	6	2KY, Sydney	1½
3DB, Melbourne	5		

The above figures are the points assessed, with 10 as the maximum.

the famous radio inventor, in a public statement that advertising through the medium of broadcasting was threatening "to kill the goose which laid the golden egg."

COMPARISON was made at the annual meeting of the Wellington Radio Society between the license fee of 10/- in England and 30/- in New Zealand. Only one lacking a sense of proportion could urge such a comparison. In England any broadcast station has a population of some millions within audible area, while in New Zealand four stations are serving a population of less than a million and a half. "Switch" submits that criticism which is not savoured with plain, common sense does an immense amount of harm to any society or club from which it emanates.

"SWITCH" has been asked by many listeners whether it was really Rear-Admiral Byrd's much-travelled fox-terrier "Igloo" who actually barked in the studio of 2YA, Wellington, on the occasion of the farewell address of the great explorer. The writer has made careful inquiry, and has ascertained definitely that it was "Igloo" who barked his farewell to New Zealand. The hand-clapping made "Igloo" thoroughly excited, and he barked his loudest.

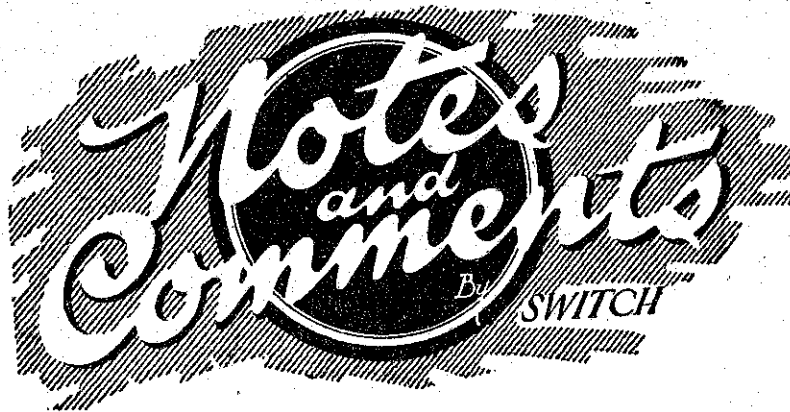
ANOTHER foolish comparison made at the Wellington Radio Society's meeting was that comparing the average license fee of £1 in Australia with the 30/- license fee in New Zealand. Australia has over four times the

compared with New Zealand, the Commonwealth license fee would average about 10/-. The fact is that it costs as much to broadcast a programme to entertain one thousand listeners as it does for ten thousand.

BROADCAST stations are just as likely to be subject to accidents as railway trains, motor-cars, steamers, electric power stations or tramcars. Our good old friend 2YA, Wellington, was silenced last week through the breakdown of two high-class imported condensers. These accidents are beyond human power, but the silence of 2YA was compensated for by putting the station on the air on the following Wednesday—usually observed as a silent day.

ON Thursday evening of last week the famed short-wave radio-phone station VK2MB, Sydney, which maintains the public telephone service between Australia and England, was off the air. It would seem that the station transmitter had experienced a breakdown.

IF the proposed yacht race across the Tasman Sea by the Melbourne yacht Oimara and the Sydney yacht Wanderer eventuates, one or both craft will, no doubt, be fitted with a short-wave transmitter. Reports of the positions of the yachts and the weather being experienced would be morsed from the vessels, and our good friends the amateur transmitters may probably arrange to keep in touch with the yachts throughout the race, by working in shifts. They could pass the latest news along to our "YA" stations.



Sovereign's Birthday, 1930!

CHEAP RAILWAY FARES

Holiday excursion fares will be in operation—from and to all stations in New Zealand—from May 30 to June 3. Tickets will be available for return until June 14.

Book your Holiday Trip Now at any Railway Booking Office or Agency.

Feature Peeps at Future Programmes

SUNDAY

FROM THE CHURCHES

From 1YA.

AT 1YA the church service will be relayed from the Beresford Street Congregational Church, the preacher being the Rev. Lionel B. Fletcher, and the organist Mr. William Gemmell. Following this, a concert from the Town Hall by the Auckland Municipal Band, under the conductorship of Mr. Christopher Smith, will also be relayed by 1YA.

From 2YA.

THE evening service to be relayed on Sunday evening will be from St. Thomas's Anglican Church, Wellington

South. The preacher will be the Rev. C. V. Rooke, and the choir-master and organist Mr. W. Gatheridge. At 8.15 p.m. (approximately) the recital of the Port Nicholson Silver Band will be relayed from the Grand Opera House.

From 3YA.

THE preacher at St. Andrew's Presbyterian Church, when the service will be broadcast by 3YA, will be the Rev. A. Brian Kilroy, M.A. The studio concert which will follow will introduce to 3YA listeners a very popular Wellington singer, Miss Jeanette Briggs, soprano. Other vocalists for the evening will be Mrs. S. M. Williamson (contralto) and Mr. Sydney Andrews (tenor). Violin solos will be played by Miss Irene Morris and selections by the Christchurch Broadcasting Trio.

From 4YA.

STATION 4YA will be relaying the service in the Salvation Army Citadel. Captain Chandler will be the preacher. The relay of 3YA's after-church concert will follow.

MONDAY

Broadcast by 2YA.

THIS afternoon, at 3.40, Miss E. M. Hoyle will continue her series of talks on "Home Crafts." At 7.40 p.m. Mr. H. C. South will give his fortnightly review of "Books—Grave and Gay." For the evening programme 2YA listeners will have an opportunity of hearing the Singing Circle of the Pioneer Club in groups of glees, trios and solo numbers. The glees will include "Shepherd's Dance," "A Lake and a Fairy Boat," "Go Lovely Rose," Tosti's "Barcarolle," "Chine Mandarin," "Celtic Lullaby," "Happy Birds," Mendelssohn's "Passage Bird's Farewell" and Denza "Nocturne." The trio numbers will be "Where my Caravan

has Rested" and "The Spider and the Fly." Solos will be sung by Miss Ella Fair, and Mesdames P. Ramsey, E. Carrington, A. S. Mitchell and P. J. Townley. Miss Nora Gray will play pianoforte solos.

A feature of 2YA's programme will be the items by Miss Helen Gardner, who will recite "The Rose and the Wind" and "Coals of Fire." Miss Gardner has recently returned from a trip to England, where she performed for the B.B.C., and her items will be looked forward to with keen interest.

The Singing Circle will have the support of the 2YA Orchestra, under Signor A. P. Truda. The overture "Fidelio" (by Beethoven), Moszkowski's "Caprice," Black's arrangement of "The Volga Boatman," Tschalkowski's "Sleep Dear Heart," O'Connor Morris's arrangement of the "Londonderry Air," "Don Juan's Serenade" and Drigo's "La Echo" will be played.

From 3YA.

TO-NIGHT the Woolston Band will present a bright programme. Augmenting that excellent combination will be mezzo-soprano solos by Mrs. Sen. Jowett, contralto solos by Miss Nellie Lowe, and baritone songs by Mr. K. M. Fountain. Miss Mavis Kinsella will recite "The Lesson of the Watermill" and "Mr. Brown has his Hair Cut."

From 4YA.

THE MERRY WIDOW

"THE Merry Widow" will be presented in radio form by The Majors—Miss Freda Elmes, Miss G. Burt, Mr. W. Harrison and Mr. L. M. Cachemaille. This production will occupy all the first half and part of the second. Instrumental music will be provided by the Studio Quintette, the numbers comprising two valses by Waldteufel ("Je t'aime" and "Chantilly"), a selection from "The Beggar's Opera" and the overture to "The Cabaret Girl." Miss Ethel Wallace will play as a violin solo, "Hindoo Lament." The bass solo, "Brian of Glenaar" will be sung by Mr. Cachemaille.

TUESDAY

1YA Will Broadcast.

A NIGHT of operatic music with popular vocalists will be the attraction to-night. Miss Lola Solomon, soprano, will sing solos from "Don Giovanni" and "Una Voce Poco Fa," from "Il Barbiere di Siviglia." Mrs. Pearl Owen, mezzo-contralto, purposes to sing three lighter numbers from musical comedies, and Mr. Albert Gibbons Taylor will present, among other fine numbers, "The Vulcan's Song" from "Philemon and Baucis." The Orchestral Octet will play "The Caliph of Bagdad," "Romance and Two Dances" from "The Conqueror," and other numbers. Another interesting item is the cornet solo, "Roberto tu che adoro," by Mr. W. Shepley, while Mr. Towsey will play



MISS MAVIS KINSELLA.

who will recite during the programme to be presented from 3YA by the Woolston Band.
—Photo, Stefano Webb.

two pianoforte solos by MacDowell. Included in the programme will be another interesting topical talk by Mr. A. B. Chappell, M.A.

Broadcast by 2YA.

MISS FLORA CORMACK will speak on "Some Secrets of a Woman's Charm in Clothes" at 3.40 this afternoon, while a representative of the Department of Agriculture will talk to farmers at 7.40 p.m.

The evening's concert will be of a popular nature. The Salon Orchestra, under Mr. M. T. Dixon, will play "The Voice of the Bells," Burmester's "Wiegand" and Drigo's "Valse des Alouettes." Messrs. W. Haydock, S. Chapman and M. T. Dixon will play Sitt's "Trio" and a selection from "Manon Lescaut." Vocal items will be given by Miss Nora Greene, Mr. Wm. Renshaw and Mrs. D. Benson. The humorous side of the programme will be in the capable hands of Mr. Will

Christchurch Competitions

THE annual competitions conducted by the Christchurch Competitions Society are now in full swing, and everything indicates that they will, as usual, be very successful. A broadcast will be made of the first Demonstration Concert, on Thursday, May 29. This relay has been arranged for by the 3YA Musical and Dramatic Committee.

The adjudicators for the Festival are: Music, Mr. James Brash (of Sydney); elocution, Mr. Clement May (Dunedin); dancing, Mr. Alex. Sutherland (Invercargill).

Yates, who will repeat, by request, "The Sporting Announcer's Nightmare" and "A Railway Tangle."

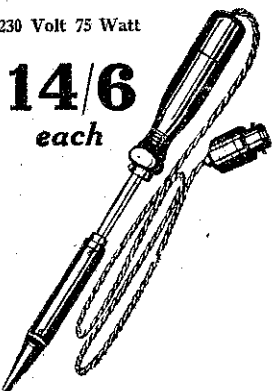
The Programme from m4YA.

THE always interesting subject of Tourist Resorts will be the theme of a talk by Mr. R. W. Marshall at 7.40 p.m.

A programme of music will be rendered by the Highland Pipe Band.

230 Volt 75 Watt

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each



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Save time and trouble by using one of these Irons.

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::

CHRISTCHURCH.

This portion of the evening's concert will appeal to all lovers of Scottish music. The supporting programme will be contributed by Miss L. de Clifford (soprano), Mr. R. A. Mitchell (tenor), Mr. J. A. Paterson (humorous Scottish songs), Mr. D. B. Dall (elocutionist) and the Versatile Three (a saxophone and piano novelty combination).

WEDNESDAY

1YA's Features.

COMMUNITY singing at the Auckland Town Hall from 12.30 to 1.30 p.m. will be broadcast by 1YA. At 7.40 p.m. Madame Mabel Milne will continue her talks on Health and Diet. The main portion of the studio programme will be given by the Auckland Artillery Band, under the direction of Mr. Wynne Smith. Mr. Lambert Harvey, one of Auckland's leading tenors, will appear on the programme. Listeners are to have the opportunity of hearing for the first time a new combination—the Salon Trio. They are going to be good.

Mrs. Freda Evans, who made such a success as Lady Mary in the recent performance of the "Rebel Maid," will be the soprano soloist; Miss Jean Clarkson will officiate at the piano, and the violinist will be Miss Helen Gray. This delightful combination will appear in instrumental solos and songs with violin and 'cello obligato. The programme will conclude with a lecture-recital of the latest gramophone recordings.

To be Heard From 3YA.

MISS D. M. RABEY, who will make her first radio appearance at 3YA this evening, is the first prize singer of Madame Otley's pupils. She has a beautiful voice. One of her songs will be Sanderson's "Nightingale of June." Another singer new to radio will be Mrs. Ernest Empson. She will sing an operatic number, also "Songs my Mother Taught Me" and "A Summer night." Mr. Noel Newson, a clever young pianist, will play. Mr. Geo. Fawcett, tenor, rarely heard at 3YA, and Mr. C. L. Richards, a popular baritone, are to sing. The Studio Octet will supply an instrumental programme.

From 4YA.

THE afternoon talk to women listeners will be on "Worry." At 7.15 Mr. D. Tannock, Superintendent of Reserves, will speak on "Trees for Farm Timber." Both talks are under the auspices of the 4YA Primary Productions Committee.

4YA's programme will open with a relay from the Empire Theatre, selections on the Christie Organ. The Dunedin roll of artists has been augmented by the addition of Miss D. Youd, recently arrived from Auckland. Miss Youd was one of the leading soprano singers in the Queen City and her first radio performance at 4YA will be listened to with interest. Her solos will be "The Great Awakening" and "Pierrot at the Dance." In company with Mr. D. Wrathall she will be heard in the duets "The Voyagers" and "A Paradise for Two." Mr. Wrathall will sing the negro melody, "Water Boy," descriptive of thirsty road workers calling for the boy who carries water. Another of his songs will be Ireland's "Sea Fever." Bass solos will be sung by Mr. Norman Lemon, "Mary," "Nightfall at Sea" and "Mandalay."

Elocutionary items will be given by Mr. C. E. Moller. An instrumental quintet, under Mr. F. V. Drake, will play four of Cadman's beautiful Am-

erican Indian songs and Coleridge Taylor's "Hiawatha Suite."

THURSDAY

On the Air in Auckland.

AT 1YA, 2YA and 3YA the afternoon talk to ladies will be on "The Arrangement of Kitchen Equipment." This is one of the lecturettes prepared by the Home Science Extension Department of the Otago University.

Mr. Ivan Perrin will make his first appearance at 1YA this evening. He is a very clever novelty pianist and has played extensively in Australia and New Zealand. His performance at 1YA is sure to be welcomed by listeners. Mr. Frank Campbell, tenor, will



MR. JAMES SIMSON,

Tenor, who, with Mr. B. C. Bellhouse (baritone), will provide the male vocal numbers from 4YA on Friday next.

—Photo, Stefano Webb.

be heard in some very fine ballads, and Mr. Elton Black and Miss Alice Benetto, who have made themselves very popular among 1YA listeners, will appear in a "Pierrot Phantasy," in two parts. The Orchestral Octet, under the direction of Mr. Eric Waters, will supply instrumental items for the programme, which will conclude with dance music at 11 p.m.

2YA Broadcasts.

THE talk on "Music Appreciation" to be given this evening from 2YA, at 7.40, by Mr. L. D. Webster will be the first of a series of talks on this subject. Mr. Webster is purposely avoiding technical phrases, his object being to make his subject easily followed by "the man in the street."

2YA will relay a concert from Wanganui.

3YA on the Air.

AT 7.30 p.m. Mr. J. Brown will speak on "Boys' and Girls' Agricultural Clubs in North Canterbury"—a talk under the auspices of the 3YA Primary Productions Committee.

The station this evening will relay the first Demonstration Concert to be given by the prize winners at the Competitions conducted by the Christchurch Competitions Society.

FRIDAY

Features from 1YA.

ON Friday evening Madame Mary Towsey (soprano), Miss Aimee

Clapham (contralto) and Mr. John Bree (baritone) will be the vocalists. Of particular interest among their numbers will be Schubert's very fine song, "The Young Nun," which is sure to receive excellent interpretation by Madame Towsey. Mr. J. F. Montague will recite Shakespeare's "Clarence's Dream," a humorous number, "The Thinnest Girl," and Stevenson's "Christmas at Sea." Mr. S. C. Lewis, clarinetist, will also be heard, and the members of the Studio Trio will supply instrumental trios and solos. Special gramophone recordings will be introduced.

From 2YA.

"TOURIST and Holiday Resorts" will be the title of a lecturette to be given by Mr. A. E. Wilson this evening at 7.40. At 8 o'clock a programme featuring the Philharmonic Quartette in vocal gems from "The Arcadians" will be presented. It might be of interest to listeners to know that all the members of this combination were in the cast of the recent performance of this work at the Grand Opera House and a finished performance should result.

Miss Dorothy Millar, a young elocutionist, making her first appearance before the microphone, will recite Drinkwater's famous poem, "The Ballad of Dreaming John," and two poems by A. A. Milne, viz., "Vespers" and "Forgiveness." Miss Edith Rait, a talented young pianist, will play Chaminade's "Automne" and a number not previously broadcast, viz., Percy Grainger's "Sentimentals." The 2YA Orchestra, under Signor A. P. Truda, will play Haydn Wood's "Mayday Overture," Rimsky-Korsakov's "Sneegoutschka" (The Snow Maiden), a selection from "The Arcadians," "Four Dances from 'The Rebel Maid,'" and a valse, "Lente Deux Souvenirs." During the course of the programme a sound film feature will be relayed from the Majestic Theatre.

Christchurch Features.

WITH THE OLD FOLKS

NUMEROUS old favourites will be sung at 3YA—"Silver Threads Among the Gold," "Danny Boy," "A May Morning," "The Land of Dreams," "Mother Machree," "It is Only a Tiny Garden," "Song of the Bow," "When the Heart is Young," "The Parting Kiss" are among the quartets and solos. Another of the songs will be "Lullaby," composed by Mrs. Alice Forrester, of Christchurch. The vocalists will be Miss Lucy Fullwood, Miss Mary Taylor, Mr. T. G. Rogers and Mr. E. J. Johnson. Humorous items will be contributed by Mr. H. Instone, and there will be an orchestral programme by the Studio Octet, under Mr. Harold Beck.

4YA Broadcast.

AT 4YA, Miss Valda McCurdy (soprano), Miss Irene Horniblow (contralto), Mr. James Simpson (tenor) and Mr. B. C. Bellhouse (baritone) will be the singers. Elocutionary numbers will be given by Mr. C. Russell-Smith. The instrumental portion of the programme will be provided by Mr. P. J. Palmer ('cellist), Mr. Max Scherek (pianist) and the 4YA Trio.

SATURDAY—14 Cas. etc.

SATURDAY

From 1YA.

THE concert to be given in the Town Hall by the Auckland Municipal Band, under the conductorship of Mr. Christopher Smith, will be relayed. The

evening's broadcast will conclude with dance music.

On the Air from 2YA.

A FURTHER W.E.A. lecturette will be given from 2YA to-night at 7.40. The speaker on this occasion will be Professor T. A. Hunter, of Victoria University College, who has taken for his subject "Training the Emotions of Children."

An excellent vaudeville programme has been arranged for the concert session. The vocal portion of the programme will be contributed to by the Melodie Four and Mrs. Kathleen Crompton. Two of the vocal items are being repeated in answer to written requests, viz., "Asleep in the Deep," a bass solo, and "Mosquitoes," a quartet number. Mr. Will Bishop, the popular entertainer at the piano, will also contribute several items. The novelty instrumental portion of the programme will be furnished by Mrs. Mildred Kenny's Guitar Trio. The Salon Orchestra, under Mr. M. T. Dixon, will also entertain.

3YA Broadcasts.

FROM 11 o'clock, 3YA will broadcast, at intervals, the results of the races at Riccarton.

A good vaudeville programme has been arranged for 3YA in the evening. In addition to Mr. Sydney Armstrong (singing "Duna," "Rose of My Life" and "Loch Lomond and You"), violin solos by Miss Irene Morris and selections by the Broadcasting Trio, the variety artists will include Mr. John Campbell, contributing concertina and ocarino solos. The Chatterboxes, in half an hour of mirth and melody and humorous sketches, are also scheduled on the programme.

The programme will be relayed to 4YA.

He: What would you like for your birthday—some cigarettes or a ruby as real as the ruby of your lips?

She: I'll take the cigs.

* * *

"What good deed did you perform to-day?" said the lady to a smart little Boy Scout.

Said the young hero: Mother had only enough castor oil for one dose, so I let my sister take it.



MISS NELLIE LOWE.

Contralto, who will present vocal numbers from 3YA on May 26.

—Photo, Stefano Webb.

Full Programmes for Next

[Copyright.—These programmes are copyright, but individual daily programmes may be published on day of performance.]

Sunday, May, 25

1YA, AUCKLAND (900 KILOCYCLES)—SUNDAY, MAY 25.

- 3.0 : Afternoon session—Selected studio items, including Literary Selection by the Announcer.
4.30: Close down.
6.0 : Children's session, conducted by Uncle Leo.
6.55: Relay of Evening Church Services from the Beresford Street Congregational Church. Preacher: Rev. L. B. Fletcher; Organist and choir-master: Mr. William Gemmell.
8.30: (approx.) Relay of concert from the Town Hall by the Auckland Municipal Band, under the conductorship of Mr. Christopher Smith. God Save the King.

2YA, WELLINGTON (720 KILOCYCLES)—SUNDAY, MAY 25.

- 3.0 : Chimes. Selected studio items.
4.30: Close down.
6.0 : Children's session, conducted by Uncle George, assisted by Taranaki Street Methodist Church Children's Choir, under the Rev. Richards.
7.0 : Relay of Evening Service of St. Thomas's Anglican Church, Wellington South. Preacher: Rev. C. V. Rooke, M.A.; Organist and choir-master: Mr. W. Gatheridge.
8.15: (approx.) Relay of the Band Recital of the Port Nicholson Silver Band, from the Grand Opera House. God Save the King.

3YA, CHRISTCHURCH (980 KILOCYCLES)—SUNDAY, MAY 25.

- 3.0 : Afternoon Session Gramophone Recital.
4.30: Close down.
5.30: Children's Song Service by children of Presbyterian Sunday Schools.
6.15: Chimes from the Studio.
6.30: Relay of evening service from St. Andrew's Presbyterian Church, opposite the Public Hospital. Preacher: Rev. A. Brian Kilroy, M.A. Organist: Mr. R. E. Lake. Choirmaster: Mr. J. Maclean.
7.45: Intermission. Specially selected musical recordings.
8.15 (approx.): Orchestral—New Queen's Light Orchestra, "Petite Suite de Concert" 1. La Caprice de Nannette (Coleridge-Taylor) (02588)
8.19: Soprano—Miss Jeanette Briggs, "Rejoice Greatly" (Messiah) (Handel)
8.23: Violin—Miss Irene Morris, "Air" (Pergolesi).
8.26: Contralto—Mrs. S. M. Williamson, "God Who Madest Earth and Heaven" (Sanderson).
8.30: Instrumental—Christchurch Broadcasting Trio, from trio "Moderato" (Bremner), "Minuetto" (Bremner).
8.40: Tenor—Mr. Sydney Andrews, "The Angel of Mons" (Stewart).
8.44: Orchestral—New Queen's Hall Light Orchestra, "Petite Suite de Concert"; 2. "Demande et Response" (Coleridge-Taylor) (Col. 02588).
8.48: Soprano—Miss Jeanette Briggs, (a) "Villanelle" (Del Acqua); (b) "Lullaby" (Keel).
8.54: Violin—Miss Irene Morris, "Andalusia" (Granados).
8.58: Contralto—Mrs. S. M. Williamson, (a) "Hold Thou My Hand" (Briggs); (b) "O Glad Awakening" (Harris).
9.4 : Weather report and announcements.
9.6 : Instrumental—Christchurch Broadcasting Trio, "Presto" (Lalo).
9.12: Orchestral—New Queen's Light Orchestra, "Petite Suite de Concert" (Coleridge-Taylor), 3. "Un Sonnet d'Amour"; 4. "La Tarantelle Fretillante" (Col. 02589).
God Save the King.

4YA, DUNEDIN (650 KILOCYCLES)—SUNDAY, MAY 25.

- 3.0 : Chimes. Selected gramophone items.
4.30: Close down.
5.30: Children's Song Service, conducted by Big Brother Bill, and assisted by the Trinity Church Methodist Sunday School.
6.15: Close down.
7.0 : Relay of Evening Church Service from Salvation Army Citadel, Dowlings Street, Dunedin. Preacher: Captain Chandler; Conductor of Band: Mr. S. W. Millard.
8.15: Relay of 3YA Christchurch, concert programme.
9.30: God Save the King.

Monday, May 26

1YA, AUCKLAND (900 KILOCYCLES)—MONDAY, MAY 26.

SILENT DAY.

2YA, WELLINGTON (720 KILOCYCLES)—MONDAY, MAY 26.

- 3.0 : Chimes. Selected Gramophone Items.
3.30 and 4.30: Sporting results.
3.40: Lecturette—Miss E. M. Hoyle, "Dennison Home Craft."
4.55: Close down.
5.0 : Children's Session, conducted by Uncle Jeff.
6.0 : Dinner Music Session, "Columbia" Hour.
Selection—Court Symphony Orchestra, "The Windmill Man" (02901).
J. H. Squire Celeste Octet—"Scene De Ballet" (De Beriot, arrgd. Sear)
Halle Orchestra—"Hungarian Dance No. 5 in H Minor" (Brahms).
6.13: Tacet.
6.15: Plaza Theatre Orchestra, "The Three Bears" Phantasy (Coates).
J. H. Squire Celeste Octet, "A Vision of Christmastide" (Harrison).
6.27: Tacet.
6.30: Regimental Band of H.M. Grenadier Guards, "La Benediction des Poignards" (Meyerbeer) (02931).
Bournemouth Municipal Orchestra, "Echoes of the Valley" (Gennin).
J. H. Squire Celeste Octet, "Second Movement from Symphonie Pathetique" (Tchaikowsky—arranged Roberston) (02937).
Halle Orchestra, "Hungarian Dance No. 6 in D" (Brahms) (01677).
6.43: Tacet.
6.45: Bournemouth Municipal Orchestra, "The Merry Brothers" (Gennin).
Regimental Band of H.M. Grenadier Guards, "Lo, Here the Gentle Lark" (Bishop) (arrgd. Godfrey) (02931).
Herman Finck's Orchestra, "Christmas Memories" (arrgd. Finck).
6.57: Tacet.
7.0 : News session, market reports, and sports results.
7.40: Lecturette—Mr. H. C. South, "Books—Grave and Gay."
A programme featuring the singing circle of the Wellington Pioneer Club, and the 2YA Orchestra.
8.0 : Chimes.
8.1 : Overture—2YA Orchestra (Conductor Signor A. P. Truda) "Fidelio" (Beethoven).
8.11: Glees—Pioneer Club Singing Circle—(a) "Shepherd's Dance" (German); (b) "A Lake and a Fairy Boat" (Dunhill); (c) "Go Lovely Rose" (Markham Lee).
8.18: Pianoforte solo—Miss Nora Gray—"First Movement of Sonata Op. 78" (Beethoven).
8.23: Soprano—Miss Ella Fair, (a) "The Look" (Rasbach); (b) "At Rest" (Nevin).
8.28: Instrumental—2YA Orchestra—"Caprice" (Moskowski).
8.34: Contralto—Mrs. P. Ramsay, "A Soft Day" (Stanford).
8.38: Vocal Trio—Messdames P. Ramsay, P. J. Townley, Miss Nora Gray, "Where My Caravan Has Rested" (Loehr); (b) "The Spider and the Fly" (Ives).
8.44: Record—Cello—Cedric Sharpe, "Air Pergolesi" (arrgd. Sharpe).
8.47: Soprano—Mrs. Carrington, "Love's a Merchant" (Molly Carew).
8.50: Glees—The Pioneer Club Singing Circle, (a) "Barcarolle" (Tosti); (b) "China Mandarin" (Bantock).
8.55: Instrumental—2YA Orchestra, (a) "Song of the Volga Boatman" (arrgd. Lake), (b) "Sleep Dear Heart" (Tchaikowsky).
9.3 : Weather Report and Announcements.
9.5 : Glees—The Pioneer Club Singing Circle, (a) "Celtic Lullaby" (trdtl.); (b) "Happy Birds" (Holst).
9.10: Mezzo-soprano—Mrs. A. S. Mitchell, "Invocation to the Nile" (Bantock).
9.14: Instrumental—2YA Orchestra, (a) "Londonderry Air" (O'Connor Morris); (b) "Don Juan's Serenade" (Tchaikowsky).
9.22: Elocution—Miss Helen Gardiner, (a) "The Rose and the Wind" (Anon); (b) "Coals of Fire" (A. P. Herbert).
9.30: Record—Organ—Dr. Albert Schweitzer, (a) "Fugue"; (b) "Finale" (Sonata No. 6) (Mendelssohn) (H.M.V. C1538).
9.38: Mezzo-Contralto—Mrs. P. J. Townley, "Song of the Little Folk" (Coates).
9.42: Record—Violin—Mischa Elman, (a) "Caprice in E Flat Major" (Wieniawski, arrgd. Kreisler); (b) "Vocalise" (Rachmaninoff, arrgd. Press) (H.M.V. DA1083).
9.48: Glees—Pioneer Club Singing Circle—(a) "Passage Bird's Farewell" (Mendelssohn); (b) "Nocturne" (Denza).
9.53: Instrumental—2YA Orchestra, "Li Echo" (Drigo).
10.0 : God Save the King.

3YA, CHRISTCHURCH (980 KILOCYCLES)—MONDAY, MAY 26.

- 3.0 : Afternoon session, gramophone recital.
4.25: Sports results.
4.30: Close down.
5.0 : Children's hour, "Scatterjoy."
6.0 : Dinner session, "Columbia" hour.
Selection—H.M. Grenadier Guards, "Merrie England" (German).
Instrumental—Bournemouth Municipal Orchestra, "Idylle Bretonne."
6.12: Tacet.

Week-all Stations-to June 1

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- 6.15: Waltz—Jacque Jacobs Ensemble, "L'Estudiantina" (Waldteufel).
Instrumental—Plaza Theatre Orchestra, (a) "A La Gavotte" (Finck);
(b) "Minuet" (Finck) (01439).
6.27: Tacet.
6.30: Instrumental—Ketelbey's Concert Orchestra, "The Sacred Hour."
Instrumental—Sandler's Orchestra, "Someday, Somewhere" (Rapee).
Instrumental—Bournemouth Municipal Orchestra, "Fluttering Birds."
6.43: Tacet.
6.45: Quartet—Musical Art Quartet, (a) "Mighty Lak a Rose" (Nevin); (b)
"To a Wild Rose" (McDowell) (01506).
Instrumental—Sandler's Orchestra, "Sonny Boy" (de Sylva) (01521).
March—H.M. Grenadier Guards, "Dunedin" (Alford) (01535).
6.57: Tacet.
7.0: News session.
8.0: Chimes.
Band programme by the Woolston Band (Conductor, Mr. R. J. Estall),
and assisted by 3YA Artists.
8.1: March—Band, "Flying Squadron" (Smith).
Intermezzo—Band, "Malinda's Fairy Bower" (Ord Hume).
8.11: Mezzo-soprano—Mrs. Sen Jowett, (a) "Beneath the Willows"
(Coombes); (b) "For Ever and a Day" (Mack).
8.15: Accordion—Chas. Magnate, "My Florence" (Regal G20405).
8.19: Baritone—Mr. K. M. Fountain, "The Temple Bells, Kashmiri Song."
8.25: Selection—Band, "Melodious Gems" (Rimmer).
8.35: Contralto—Miss Nellie Lowe, (a) "When You Come Back" (Tate);
(b) "Angus Macdonald" (Rockel).
8.39: Organ—Quentin McLean, "I Kiss Your Hand Madame" (Erwin).

- 8.43: Recitation—Miss Mavis Kinsella, "The Lesson of the Water Mill."
8.46: Waltz—Band, "Pagan Love Song" (Brown).
8.51: Male quartet—Goodrich Silvertown Quartet, "Under the Clover Moon"
(Healy); "Who's Blue Now?" (Caesar) (Col. 01192).
8.57: Novelty—Continental Novelty Quartet, "On Board" (Regal G20432).
9.2: Weather report and announcements.
9.4: Selection—Debroy Somers Band, "The Singing Fool" (arr. Connelly).
9.10: Mezzo-soprano—Mrs. Sen Jowett, (a) "In Springtime" (Newton); (b)
"At Parting" (Rogers).
9.16: Humorous variation—Band, "Keel Row" (Scottish, arr. Rimmer).
9.21: Baritone—Mr. K. M. Fountain, "All That I Ask" (Coleman).
Organ—Quentin McLean, "Flower of Love" (Mendoza) (Col. 01572).
9.25: Contralto—Miss Nellie Lowe, (a) "In the Chimney Corner" (Cowan);
(b) "The Little Cotton Gown" (Hill).
9.31: Foxtrot—Band, "Hot Roasted Peanuts" (Tobins).
9.36: Humorous recitation—Miss Mavis Kinsella, "Mr. Brown has his Hair
Cut" (MS.).
9.41: Novelty—Continental Novelty Quintet, "Sunlight" (Regal G20432).
9.46: Male quartet—Shannon Quartet, "The Sidewalks of New York."
9.52: Serenade march—The Band, (a) "La Paloma" (Yradier); (b)
"Middy" (Alford).
God Save the King.

4YA, DUNEDIN (650 KILOCYCLES).—MONDAY, MAY 26.

- 8.1: Chimes. Selected gramophone items.
4.25: Sporting results.
4.30: Close down.
5.0: Children's hour, conducted by Uncle Allan.
6.0: Dinner music, "H.M.V." Hour.
Orchestral—New Light Symphony Orchestra, "Merry Wives of
Windsor" (Nicolai) (C1260).
Waltz—Marek Weber's Orchestra, "Moonlight on the Alster" (Fetras).
6.12: Tacet.
6.15: Intermezzo—New Light Symphony Orchestra, "Hearts and Flowers."
Waltz—Marek Weber's Orchestra, "Wine, Women and Song." (Weber).
Wurlitzer Organ—Reginald Foort, "By the Blue Hawaiian Waters."
6.26: Tacet.
6.30: Orchestral—New Light Symphony Orchestra, "The Glow Worm Idyll."
Orchestral—Victor Salon Orchestra, "Indian Love Call" (Rose Marie).
Orchestral—Victor Salon Orchestra, "The World is Waiting for the
Sunrise" (Lockhart) (EA 186).
Orchestral—De Groot and His Orchestra, "When Summer is Gone."
6.43: Tacet.
6.45: Orchestral—De Groot's Orchestra, "The Merry Widow" (Lehar).
Wurlitzer Organ Solos—Reginald Foort (a) "Leave Me Alone"; (b)
"Songs My Mother Taught Me" (Dvorak) (C1459).
6.57: Tacet.
7.0: News Session.
7.40: Talk—Under auspices of W.E.A.
8.0: Chimes.
Selection—Finck's Orchestra, "The Merry Widow" (Lehar) (Col. 934).
8.9: Presentation—The Majors Quartette—"The Merry Widow." Sonia—
Miss Freda Ilmes; Natalie—Miss G. Burt; Vicomte Camille—Mr.
W. Harrison; Prince Danilo Nisch—Mr. L. M. Cachemaille.
Act 1.—Chorus, Opening Chorus; Symphony, Piano, "Ball Music";
Duet, Natalie and Camille, "A Dutiful Wife"; Symphony, Piano,
"Ball Music"; Solo, Danilo, "Maxims"; Chorus, All, "Finale Act 1."
8.30: Valse—The Quintette, "Je t'aime" (Waldteufel).
8.36: Continuation of presentation of Opera.
Act 2.—Chorus, Opening Chorus; Solo and Chorus, Sonia, "Villa";
Duet, Sonia and Danilo, "The Cavalier" and "Maxims"; Romance
Camille and Natalie, "Love in My Heart"; Solo and Chorus, All,
"Finale Act 2".
8.50: Valse—The Quintette, "Chantilly" (Waldteufel).
9.0: Weather Report.
9.2: Piano Symphony—"The Merry Widow."
Act 3.—Chorus, All, "The Girls at Maxims"; Dance and Chorus, All,
"Butterflies"; Solo, Nisch, "Quite Parisian"; Chorus, All, "Reminis-
cence"; Valse duet, Sonia and Danilo, "I Love You So"; Chorus,
"Finale to Opera."
9.20: Selection—The Quintette, "The Beggars' Opera" (Austin).
9.26: Male Choir—Salisbury Singers, "Round About a Wood" (Morley).
9.34: Violin—Miss Ethel Wallace, "Hindoo Lament" (Barns).
9.40: Overture—The Quintette, "The Cabaret Girl" (Kern).
9.50: Bass—Mr. L. M. Cachemaille, "Brian of Glenaar" (Graham).
9.54: Orchestral—Plaza Theatre Orchestra, "The Belle of New York"
10.0: God Save the King.

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RADIO DIVISION

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WELLINGTON

Tuesday, May 27

1YA, AUCKLAND (900 KILOCYCLES)—TUESDAY, MAY 27.

3 p.m.: Afternoon session. Selected studio items, including literary selection by the announcer.

4.30: Close down.

5.0: Children's session, conducted by Uncle Dave.

6.0: Dinner Session, "H.M.V." Hour:

Orchestral—Marek Weber and orchestra, "Beggar Student."

Orchestral—Philadelphia Symphony Orchestra, "Carmen Entr'acte, Act 4" (Bizet). E531.

Piano—Wilhelm Backhaus, "Bohemian Dance" (Smetana).

6.13: Tacet.

6.15: Band—Greatest's Band, "Semiramide" (Rossini). C1420.

Orchestral—Philadelphia Symphony Orchestra, "Soldiers Changing the Guard" (Bizet). D1618.

Orchestral—Marek Weber and Orchestra, "Rustle of Spring" (Sliding).

6.28: Tacet.

6.30: Orchestral—New Symphony Orchestra, "Nell Gwynn Dances, Nos. 1 and 2" (Edward German). B2987.

Orchestral—Philadelphia Symphony Orchestra, "Carmen," March of the Smugglers. (Bizet). D1618.

Piano—Wilhelm Backhaus, "Caprice Espagnole" (Moszkowski).

6.44: Tacet.

6.45: Orchestral—Marek Weber and Orchestra, "My Darling Waltz."

Band—National Military Band, "Flying Dutchman Overture."

Orchestral—Philadelphia Symphony Orchestra, "Carmen Entr'acte, Act 1" (Bizet). E531.

6.58: Tacet.

7.0: News and market reports.

8.0: Chimes.

Overture—Bournemouth Municipal Orchestra, "Don Giovanni."

8.9: Soprano—Miss Lola Solomon, (a) "Batti Batti" ("Don Giovanni" (Mozart); (b) "Vedrai Cario" ("Don Giovanni") (Mozart).

8.16: Cornet solo—Mr. W. Shepley, "Roberto Tu Che Adoro" (Robert le Diable). (Meyerbeer).

8.21: Bass baritone—Mr. A. Gibbons Taylor, "Se il Rigor" (La Ebreja, (Halevy)).

8.25: Selection—1YA Orchestral Octet, under the direction of Eric Waters: "The Caliph of Bagdad" (Boieldieu).

8.34: Mezzo-contralto—Mrs. Pearl Owen, (a) "Here's to Love" (Sunshine Girl), (Rubens); (b) "Bird of Blue" (A Southern Maid), (Fraser-Simson).

8.41: Mandolin—Circolo Mandolinistico, "Stephanie Gavotte" (Czibulka).

8.45: Talk—Mr. A. B. Chappell, M.A., "Topical Talk."

9.0: Evening weather forecast and announcements.

9.2: Selection—1YA Orchestral Octet, under the direction of Eric Waters: Selection from "La Traviata" (Verdi-Tavan).

9.12: Soprano—Miss Lola Solomon, "Una Voce Poco Fa" (Il Barbiere di Siviglia), (Rossini).

9.16: Piano—Mr. Cyril Towsey, (a) "To a Water Lily" (MacDowell); (b) "Shadow Dance" (MacDowell).

9.26: Bass Baritone—Mr. A. Gibbons Taylor, (a) "The Vulcan's Song" (Philemon and Baucis), (Gounod); (b) "Within These Sacred Bowers" (Magic Flute), (Mozart).

9.33: Orchestral—1YA Orchestral Octet, under the direction of Eric Waters: "Romance and Two Dances" from "The Conqueror" (German).

9.41: Mezzo-contralto—Mrs. Pearl Owen, "Love Will Find a Way (Maid of the Mountains), (Fraser-Simson).

9.45: Cello—W. H. Squire, "Humoresque" (Dunkler-Squire). Col. 04192.

9.49: Selection—1YA Orchestral Octet, under the direction of Eric Waters: selection from musical comedy "Half Past Eight" (Rodgers).

10.0: "God Save the King."

2YA, WELLINGTON (720 KILOCYCLES)—TUESDAY, MAY 27.

3.0: Chimes. Selected Studio Items.

3.30 and 4.30: Sporting results.

3.40: Lecturette—Miss Flora Cormack, "Some Secrets of a Woman's Charm in Clothes."

4.55: Close down.

5.0: Children's Session, conducted by Uncle Jim.

6.0: Dinner Music Session, "Columbia" Hour.

Instrumental—Ketelbey's Concert Orchestra, "In a Persian Market."

Violin—Efreim Zimbalist, "Liebeslied Old Vienna Waltz" (Kreisler).

6.12: Tacet.

6.15: Moreau—Plaza Theatre Orchestra, "The Busy Bee" (Bendix).

Dance—Plaza Theatre Orchestra, "My Lady Dainty" (Hesse).

Octet—J. H. Squire's Celeste Octet, "La Serenata" (Braga) (9116).

Kinema Organ—G. T. Pattman, "Firefly" (Nicholls) (01348).

6.27: Tacet.

6.30: Orchestral—Paul Whiteman and His Orchestra, "Song of India."

Waltz—New Concert Orchestra, "Hydropaten" (Gungl) (02672).

Violin—Efreim Zimbalist, "Zapateado" (Sarasate) (04221).

6.42: Tacet.

6.45: Waltz—New Concert Orchestra, "Jolly Fellows" (Bruder) (02672).

Octet—J. H. Squire's Celeste Octet, "Serenade" (Titi) (9116).

Orchestral—Paul Whiteman and His Orchestra, "Liebestraum"

6.56: Tacet.

7.0: News session, market reports and sports results.

7.40: Lecturette—Representative Department of Agriculture, "For the Man on the Land."

8.0: Chimes.

Overture—2YA Salon Orchestra (Conductor, Mr. M. T. Dixon), "Voice of the Bells" (Thurban).

8.9: Contralto—Miss Nora Greene, (a) "What the Chimney Sang" (Griswald); (b) "My Ain Folk" (Special request) (Laura Lemon).

8.13: Tenor—Mr. William Renshaw, (a) "The English Rose" (German); (b) "Yes, Let Me Like a Soldier Fall" (from "Maritana").

8.21: Instrumental Trios—Messrs. W. Haydock, S. Chapman and M. T. Dixon, (a) "Trio" (Sitt); (b) "Manon Lescaut" (Puccini).

8.31: Popular Songs—Mrs. D. Benson, (a) "If You're in Love You'll Waltz" (Tierney); (b) "You're Always in My Arms" (from "Rio Rita").

8.38: Humour—Mr. Will Yates, "The Sporting Announcer's Nightmare"

8.44: Instrumental—2YA Salon Orchestra, "Wiegenlied" (Burmester).

8.52: Contralto with violin obligato—Miss Nora Greene and Mr. W. Haydock, "La Serenata" (Braga).

8.56: Weather report and announcements.

8.58: Instrumental—2YA Salon Orchestra, "Request Item."

9.6: Tenor—Mr. William Renshaw, "There is a Flower that Bloometh."

9.10: Humour—Mr. Will Yates, "A Railway Tangle" (Burdett).

9.17: Soprano—Mrs. D. Benson, "In the Garden of To-morrow" (Betten).

9.21: Waltz—2YA Salon Orchestra, "Valse des Alouettes" (Drigo).

9.30: Dance programme, "Brunswick"—

Foxtrot—"Moaning For You," Lloyd Huntley and His Isle O'Blues Orchestra (Goulding Dougherty) (4703).

Foxtrot—Roger Wolfe Kahn and His Orchestra, "Without a Song."

Foxtrot—Colonial Club Orchestra, "It's You I Love"

Foxtrot—Colonial Club Orchestra, "Why?" (Davis-Coots-Swanstrom).

9.45: Foxtrot—Lloyd Huntley and His Isle O'Blues Orchestra, "Alone in the Rain" (Goulding Dougherty) (4703).

Duet—Billy Murray and Walter Scanlan, "Shut the Door."

Foxtrot—The A. & P. Gypsies, "South Sea Rose" (Gilbert-Baer).

Foxtrot—Roger Wolfe Kahn and His Orchestra, "Great Day."

Foxtrot—The A. & P. Gypsies, "Only the Girl" (Ruby Jerome).

9.57: Waltz—Hal Kemp and His Orchestra, "Romance."

Foxtrot—Herman Waldman and His Orchestra, "Marbles" (Canicas).

Foxtrot—Hal Kemp and His Orchestra, "Navy Blues" (Turk-Ahlert).

Foxtrot—Benny Meroff and His Orchestra, "The Talk of the Town."

Foxtrot—Colonial Club Orchestra, "March of the Old Guard."

10.12: Vocal—Frances Williams, "Bigger and Better Than Ever."

Foxtrot—Colonial Club Orchestra, "Sweetheart We Need Each Other."

Foxtrot—Herman Waldman and His Orchestra, "Waiting."

Foxtrot—Ben Bernie and His Orchestra, "What is this Thing Called Love?" (Porter) (4707).

10.24: Waltz—Regent Club Orchestra, "You're Always in My Arms."

Foxtrot—Ray Miller and His Orchestra, "Funny Dear, What Love Can Do" (Bennett-Little-Straight) (4675).

Foxtrot—Benny Meroff and His Orchestra, "Happy Days are Here Again" (Ager-Yellen) (4709).

Foxtrot—Ray Miller and His Orchestra, "Finesse" (Maltin Doll).

10.36: Duet—Billy Murray and Walter Scanlan, "Sergeant Flagg and Sergeant Quirt" (Klein-Moll) (4611).

Foxtrot—Colonial Club Orchestra, "Charming" (Grey-Stothart).

Ben Bernie and His Orchestra, "She's Such a Comfort to Me."

10.48: Waltz—Lloyd Huntley and His Isle of Blues Orchestra, "Molly."

Foxtrot—Ray Miller and His Orchestra, "My Victory."

Foxtrot—Al Goodman and His Orchestra, "M-a-r-y" (Gordon-Rich).

Foxtrot—Ray Miller and His Orchestra, "Blue Butterfly."

Foxtrot—Al Goodman and His Orchestra, "Lonesome Little Doll."

11.0: Close down.

3YA, CHRISTCHURCH (980 KILOCYCLES)—TUESDAY, MAY 27.

SILENT DAY.

4YA, DUNEDIN, 650 KILOCYCLES, TUESDAY, MAY 27.

3 p.m.: Chimes. Selected gramophone items.

4.25: Sporting results.

4.30: Close down.

5.0: Children's hour, conducted by Uncle Pete.

6.0: Dinner music. "H.M.V." hour.

Instrumental—Royal Opera Orchestra, "Praeludium" (Jarnefeldt).

Cello—Pablo Casals, "Melody in F" (Rubinstein), DA833.

Waltz—Royal Opera Orchestra, "Eugin Onegin" (Tchaikowsky).

Balalaika Orchestra, "Shining Moon" (Russian folk song), EA48.

6.12: Tacet.

6.15: Suite—Paul Whiteman's Orchestra, "Suite of Serenades" (Herbert).

(1) Spanish, (2) Chinese, (3) Cuban, (4) Oriental. EB26.

Waltz—Philadelphia Symphony Orchestra, "Tales from the Vienna Woods" (Strauss), ED2.

6.27: Tacet.

6.30: Instrumental—Royal Opera Orchestra, "Berceuse" (Jarnefeldt).

Cello—Pablo Casals, "Traumerel" (Schumann), DA833.

Male quartet—The Rounders, "Chlo-e" (Kahn), EA402.

Instrumental—San Francisco Symphony Orchestra, (a) "Serenade"

(Volkmann); (b) "Flight of the Bumble Bee" (Rimsky-Korsakov).

6.42: Tacet.

- 6.45: Instrumental—Chicago Symphony Orchestra, (a) "Valse Triste" (Sibelius); (b) "Funeral March of a Marionette" (Gounod).
 March—San Francisco Symphony Orchestra, "Marriage Militaire" (Schubert), ED9.
- 6.57: Tacet.
- 7.0: News session.
- 8.0: Chimes. Programme of music to be rendered by Dunedin Highland Pipe Band.
 March—The Band, "Glendarnel Highlanders" (traditional).
 Waltz—The Band, "Plob Mhor" (traditional).
 March—The Band, "92nd Gordon Highlanders" (traditional).
- 8.12: Tenor—Mr. R. A. Mitchell, (a) "Break, Break, Break" (MacFarren); (b) "Dolorosa" (Phillips).
- 8.18: Recitals—Mr. D. E. Dall, (a) "Misunderstood" (Carter); (b) "The Queen's Look" (Lehmann).
- 8.25: Saxophone and piano novelty—Versatile Three, "Piggly Wiggle."
- 8.28: Soprano—Miss L. de Clifford, "Shepherd's Gay" (Sanderson).
- 8.31: March—The Band, "Hills of Glenorchy" (traditional).
 Air—The Band, "Bonnie Woods of Craiglea" (traditional).
 Air—The Band, "Lord Panmuers" (traditional).
- 8.43: Vocal—Mr. James A. Paterson, "Sergeant Jock McPhee" (MacFarlane).
- 8.48: Saxophone—Mr. J. McCaw, "Valse Romance" (Bishop).
- 8.52: Shanties—John Goss and Cathedral Male Quartet, "Fire Down Below," "Hallabaloo Belay," "Haul Away, Joe," "Drunken Sailor" (arr. Terry), H.M.V. B2420.
- 8.56: Piano novelty—Mr. Moore Wilson, "Melody from Rhapsody in Blue" (Gershwin).
- 9.0: Weather report.
- 9.2: Marches—The Band, (a) "Lochiel's Welcome to Glasgow" (traditional); (b) "John Bain McKenzie" (traditional).
- 9.14: Tenor—Mr. R. A. Mitchell, "Serenade" (Schubert).
- 9.17: Recital—Mr. D. E. Dall, "The Devil's Speech from 'Man and Superman'" (Shaw).
- 9.22: Saxophone novelty—The Versatile Three, "Saxofriends" (Smith).
- 9.27: Soprano—Miss L. de Clifford, (a) "Happy Summer" (Kahn); (b) "O My Garden Full of Roses" (Clark).
- 9.33: Quartet—Pipe Band, "Wae's Me for Prince Charlie" (traditional).
- 9.43: Vocal items—Mr. James A. Paterson, (a) "I'm Looking for a Bonnie Lass to Love Me" (Lauder); (b) "Hielen Jazz" (Fyfe).
- 9.49: Saxophone—Mr. T. Law, "Break of Day" (Hume).
- 9.53: March—The Band, "A Man's a Man for a' That" (Burns).
 Slow air—The Band, "Scots Wha Hae" (Burns).
 March—The Band, "Happy We Been All Together" (traditional).
- 10.3: God Save the King.

- 8.45: Soprano, piano and violin trio—The Salon Trio, piano, "Ballade in G. Minor" (Chopin).
 Salon Trio, "Vocal with violin obbligato," "Gaily Chant the Summer Birds" (De Finna).
 Violin—"Mazurka" (Miyanaeski).
- 8.58: Evening weather forecast and announcements.
- 9.0: Trombone—Mr. W. Wheaton, "Firefly" (Moss).
- 9.8: Tenor—Mr. Lambert Harvey, "Under the Lanterns" (Sanderson).
- 9.12: Haka—Auckland Artillery Band, "Scene in Maoriland."
- 9.22: Soprano, piano, violin trio—The Salon Trio, vocal with violin obbligato, "Love Came Calling" (Zamecnik); violin, "Nobody Knows de Trouble I've Seen" (White).
 Violin with violin and cello obbligato, "Ako o te Rangī" (Kaihu).
- 9.32: March—Auckland Artillery Band, "Minor and Major" (arr. Ewart).
- 9.37: Lecture-recital—A Commentator, "Latest Gramophone Recordings."
- 10.7: God Save the King.

2YA, WELLINGTON (720 KILOCYCLES)—WEDNESDAY, MAY 28.

SILENT DAY.

3YA, CHRISTCHURCH (980 KILOCYCLES)—WEDNESDAY, MAY 28.

- 3.0: Afternoon session, gramophone recital.
- 4.25: Sports results.
- 4.30: Close down.
- 5.0: Children's hour, "Uncle John."
- 6.0: Dinner session, "Parlophone" hour.
 Selection—Edith Lorand Orchestra, "La Boheme" (Puccini) (E10558).
 Waltz—Edith Lorand Orchestra, "La Serenade" (Metra) (E10522).
 Violin—Tossey Spiwakowsky, "Turkish March" (Beethoven) (A2561).
- 6.12: Tacet.
- 6.15: Waltz—Edith Lorand Orchestra, "Venetian Barcarolle" (Leoncavallo).
 Trio—Dajos Bela Trio, (a) "Traumerl" (Schumann); (b) "Chant D'Automne" (Tschalkowsky) (E10573).
 'Cello—Gregor Piatorsky, "The Swan" (Saint-Saens) (A2628).
- 6.28: Tacet.
- 6.30: Edith Lorand Orchestra, "Minuet" (Boccherini); (A4108); "Toreador and Andalous" (Rubinstein) (A4108).
 Waltzes—Royal Music Makers, (a) "Kiss Me Again" (Herbert); (b) "Ah Sweet Mystery of Life" (Herbert) (A2722).
- 6.44: Tacet.
- 6.45: Suite—Paris Opera Comique Orchestra, "Ballet Egyptien" (Luigini).
- 6.57: Tacet.
- 8.0: Chimes.
 Operatic and miscellaneous programme.
- 8.1: Overture—La Scala Orchestra, "The Daughter of the Regiment."
- 8.9: Soprano—Miss D. M. Rabey, (a) "June Music" (Trent); (b) "Bird Songs at Eventide" (Coates).
- 8.15: Instrumental—Studio Instrumental Octet (Conductor, Mr. Harold Beck), Three Dances from "Tom Jones." 1—Marris Dance; 2—Gavotte; 3—Jig (German).
- 8.25: Tenor—Mr. G. M. Fawcett, "Shepherd's Song" (Elgar).
- 8.29: Piano—Mr. Noel Newson, "L'Alouette" (Glinka-Balakirew).
- 8.34: Mezzo-soprano—Mrs. Ernest Empson, "Deh! Vieni Non Tardar" (Mozart) from "Nozze di Figaro."
- 8.37: 'Cello—Cedric Sharpe, (a) "Air" (Pergolesi); (b) "Twilight" (Friml) (H.M.V. B3045).
- 8.43: Baritone—Mr. C. L. Richards, (a) "Droop Not Young Lover" (Handel); (b) "The Windmill" (Nelson).
- 8.50: Instrumental—Studio Instrumental Octet, (a) "Largo" (Handel); (b) "Pavane" (Saint-Saens).
- 8.59: Chorus—Light Opera Company, "Gems from Rose Marie."
- 9.3: Weather report and announcements.
- 9.4: Organ—Jesse Crawford, "Serenade" from "The Student Prince."
- 9.7: Soprano—Miss D. M. Rabey, "Nightingale of June" (Sanderson).
- 9.11: Instrumental—Studio Instrumental Octet, "Cavatina" (Raff); Valse (from the Fairy Play "The Blue Bird") (O'Neill).
- 9.19: Male quartet—The Rounders, "Deep Night" (Henderson).
- 9.23: Piano—Mr. Noel Newson, "Theme Varie" (Paderewski).
- 9.30: Mezzo-soprano—Mrs. Ernest Empson, (a) "Songs My Mother Taught Me" (Dvorak); (b) "A Summer Night" (Goring Thomas).
- 9.36: Instrumental—Studio Instrumental Octet, "Reminiscences of Grieg."
- 9.43: Tenor—Mr. G. M. Fawcett, (a) "Serenade" from "Pagliacci" (Leoncavallo); (b) "Where'er You Walk" (Handel).
- 9.49: 'Cello—Lauri Kennedy, "Old Scotch Air" (arr. Kennedy).
- 9.52: Baritone—Mr. C. L. Richards, "From Oberon in Fairyland" (Slatér).
- 9.56: Male quartet—The Rounders, "Singin' in the Rain" (Brown).
- 9.59: Instrumental—Studio Instrumental Octet, "Interludes from 'The Beggar's Opera'" (Austin).
 God Save the King.

4YA, DUNEDIN (650 KILOCYCLES)—WEDNESDAY, MAY 28.

Wednesday, May 28

1YA, AUCKLAND, 900 KILOCYCLES, WEDNESDAY, MAY 28.

- 12.30 a.m.: Relay of community singing from Auckland Town Hall.
- 1.30 p.m.: Close down.
- 3.0: Afternoon session, selected studio items, including literary selection by the Announcer.
- 4.30: Close down.
- 5.0: Children's session, conducted by Uncle Tom.
- 6.0: Dinner session, "Columbia" hour.
 Band of the Garde Republicaine of France, "The Two Pigeons."
 (1) Entrance of Tziganes, (2) Scene and March of the Two Pigeons (Messenger); (3) Hungarian Dance, (4) Theme and Variations (02924/5).
- 6.14: Tacet.
- 6.15: Orchestral—Modern Dance Players, "Over the Waves" (Rosas).
 Orchestral—Modern Dance Players, "Amoretten Tanze" (Gungl).
 Piano—Gil Dech, "Le Let D'Eau" (Smith), 01719.
 Band—B.B.C. Wireless Military Band, "Fourpence Halfpenny Waltz" (arr. Cecil J. Sharp), 01710.
 Trio—Stellar Instrumental Trio, "The Maiden's Prayer."
- 6.28: Tacet.
- 6.30: Band—H.M. Grenadier Guards, "Fantasia on 17th Century Music, A.D., 1664" (arr. Major George Miller), 02890.
 Saxophone—Rudy Wiedoeft, "Melody" (Dawes), 01180.
 Orchestral—Continental Novelty Orchestra, "Los Claveles de Sevilla."
- 6.43: Tacet.
- 6.45: Orchestral—Continental Novelty Orchestra, "Las Lagartheranas."
 Instrumental—Squire Celeste Octet, "Come Into the Garden, Maud."
 Instrumental—Squire Celeste Octet, "Killarney" (Balfe, arr. Sear).
 Organ—Terence Casey, "I'm Lonely" (Coates), 01501.
 Band—B.B.C. Wireless Military Band, "Lilli Buriere" (arr. Cecil J. Sharp), 01710.
- 6.59: Tacet.
- 7.0: News and market reports.
- 7.40: Talk—Madame Mabel Milne, "Health and Diet."
- 8.0: Chimes.
 March—Auckland Artillery Band, under the direction of Mr. Wynne Smith, "Honest Toil" (Rimmer).
 Overture—Auckland Artillery Band, under the direction of Mr. Wynne Smith, "Poet and Peasant" (Suppe).
- 8.18: Tenor—Mr. Lambert Harvey, (a) "My Queen" (Blumenthal); (b) "Like Stars Above" (Squire).
- 8.25: Cornet quartet—Messrs. Smith and Webb, "Tit Larks" (Ord Hume).
 Suite—Auckland Artillery Band, "Bohemian Suite" (Ord Hume).

- 3.0: Chimes. Selected Gramophone Items.
- 3.15: Talk—Home Science Extension Department of Otago University, under the auspices of 4YA Primary Productions Committee, "Worry."
- 4.25: Sporting results.
- 4.30: Close down.
- 5.1: Children's Hour, conducted by Big Brother Bill.
- 6.0: Dinner music, "Parlophone" Hour.

- Waltz—Dajos Bela Orchestra, (a) "Sulamith" (Hansen-Milde); (b) "Mignonette" (Nicholls) (E10571).
Instrumental—Dajos Bela Orchestra, "Eldgaffeln" (Landen).
- 6.12: Tacet.
- 6.15: Instrumental—Frank Westfield's Orchestra, "Classica" (arrgd. Tilsley).
Organ—Sigmund Krumgold, "Indian Love Call" (Friml) (A2339).
Waltz—Dajos Bela Orchestra, "You, Only You" (Arnold) (E10592).
- 6.27: Tacet.
- 6.30: Selection—Raie Da Costa Ensemble, "Funny Face" (Gershwin).
Waltz—Dajos Bela Orchestra, "The Sphinx" (Poppy) (E10592).
- 6.42: Tacet.
- 6.45: Instrumental—Orchestra Mascotte, (a) "The Flowers' Dream" (trans-lateur); (b) "Whispering of the Flowers" (Von Blon) (A2559).
Organ—Sigmund Krumgold, "Gypsy Love Song" (Herbert) (A2339).
Instrumental—Dajos Bela Orchestra, "Electric Girl" (Helmburgh-Holmes) (A4009).
- 6.58: Tacet.
- 7.0: News session.
- 7.15: Talk—Mr. D. Tannock, Superintendent of Reserves, under auspices of 4YA Primary Productions Committee. "Trees for Farm Timber."
- 8.0: Chimes.
Relay of Christie Organ from Empire Theatre.
- 8.15: Bass—Mr. Norman Lennon, (a) "Mary" (Richardson); (b) "Nightfall at Sea" (Phillips).
- 8.21: Piano—Mrs. C. Drake, "Sonata Op. 31 No. 3 1st and 2nd Movements (Beethoven).
- 8.26: Vocal duet—Miss D. Youd and Mr. D. Wrathall, "The Voyagers" (Sanderson).
- 8.30: Instrumental—Quintette, conducted by Mr. F. V. Drake, four American Indian songs (Cadman), 1. From the Land of the Sky-blue Water; 2. The White Dawn is Stealing; 3. Far Off I Hear a Lover's Flute; 4. The Moon Drops Low.
- 8.40: Soprano—Miss D. Youd, (a) "The Great Awakening" (Kramer); (b) "Pierrot at the Dance" (Drummond).
- 8.46: Recital—Mr. C. E. Moller, "The Home Mechanic" (Thomas).
- 8.50: Instrumental—The Quintette, (a) "Abenlied" (Schumann); (b) "Traumerei" (Schumann).
- 8.56: Baritone—Mr. D. Wrathall, "Water Boy" (arrgd. Robinson); (b) "Sea Fever" (Ireland).
- 9.1: Weather report.
- 9.3: Cello—Mr. F. V. Drake, (a) "Cradle Song" (Schubert); (b) "Le Cygne" (Saint-Saens).
- 9.9: Bass—Mr. Norman Lennon, "Mandalay" (Speaks).
- 9.16: Recitals—Mr. C. E. Moller, (a) "Pacific Coast" (Smith); (b) "Isaccstein at the Ringside" (Hayman).
- 9.23: Vocal duet—Miss D. Youd and Mr. D. Wrathall, "A Paradise for Two" (from "Maid of the Mountains") (Late).
- 9.26: Suite—The Quintette, "Hiawatha Suite" (Coleridge-Taylor), 1. The Woiing; 2. The Marriage Feast; 3. Bird Scene and Conjurer's Dance; 4. Departure; 5. Reunion.
- 9.35: Programme of Dance Music, "Brunswick."
Foxtrot—Tom Clines and His Music, "Miss Wonderful" (Bryan-Ward).
Foxtrot—Roger Wolf Kahn and His Orchestra, "Cooking Breakfast for the One I Love" (Rose-Tobias) (4699).
Foxtrot—Tom Clines and His Music, "Somebody Mighty Like You" (Bryan-Ward) (4576).
Foxtrot—Herbert Gordon and His Hotel Ten Eyck Whispering Orchestra, "You Can't Believe My Eyes" (Bryan-Meyer) (4585).
Foxtrot—Abe Lyman and His California Orchestra, "The Rogue Song" (Grey-Stohart) (4696).
Waltz—Isam Jones' Orchestra, "Your Smiles, Your Tears" (Caesar-Romberg) (4710).
- 10.0: Foxtrot—Jack Denny and His Mount Royal Hotel Orchestra, "A Night of Happiness" (Conrad-Mitchell-Gottler) (4698).
Foxtrot—Jack Denny and His Mount Royal Hotel Orchestra, "Beside an Open Fireplace" (Denniker-Osborne) (4697).
Foxtrot—Jack Denny and His Mount Royal Hotel Orchestra, "Hangin' on the Garden Gate" (Kahn-Florito) (4698).
Foxtrot—Jack Denny and His Mount Royal Hotel Orchestra, "Just Can't be Bothered With Me" (Kahn-Simons) (4697).
- 10.12: Vocal—Belle Baker, "I'm Walking With the Moonbeams" (Gordon-Rich-Abrahams) (4558).
Foxtrot—Roger Wolfe Kahn and His Orchestra, "When a Woman Loves a Man" (Rose-Rainger) (4699).
Foxtrot—Bob Haring and His Orchestra, "Do Ya' Love Me?" (Gillespie Wayne) (4672).
Waltz—Carter's Orchestra, "California Sunshine" (Ford-Earl) (4664).
- 10.25: Foxtrot—Bob Haring and His Orchestra, "Where You Are" (Dixon-Bloom) (4672).
Foxtrot—Ben Bernie and His Orchestra, "West Wind" (Robinson).
Foxtrot—The A. and P. Gypsies, "Gypsy Dream Rose" (Kendis-Samuels-Gusman) (4680).
Foxtrot—Colonial Club Orchestra, "Why Do You Suppose" (Hart-Rogers) (4554).
Foxtrot—Bob Haring and His Orchestra, "Under a Texas Moon" (Perkins) (4680).
- 10.39: Vocal—Dick Robertson, "Lady Luck" (Perkins) (4592).
Foxtrot—Colonial Club Orchestra, "My Man is on the Make" (Hart-Rogers) (4554).
Foxtrot—Ben Bernie and His Orchestra, "The One Girl" (Youmans).
Waltz—Carter's Orchestra, "Old Virginia Moon" (Crawford-Kahn).
Foxtrot—Abe Lyman and His California Orchestra, (Yellen-Ager); "Lucky Me Lovable You."
Foxtrot—Fred Hamm and His Orchestra, "We Love Us" (Sanders-Moore) (4689).
Foxtrot—Abe Lyman and His California Orchestra, "Love Ain't Nothin' But the Blues" (Goodwin-Alter) (4609).
- 11.0: God Save the King.

Thursday, May 29

1YA, AUCKLAND (900 KILOCYCLES)—THURSDAY, MAY 29.

- 3.0: Afternoon session—Selected studio items by Lewis Eady, Ltd.; Literary Selection by the Announcer.
- 3.15: Home Science—"The Arrangement of Kitchen Equipment." Talk prepared by Home Science Department, Otago University.
- 4.30: Close down.
- 5.0: Children's session, conducted by "Peter Pan."
- 6.0: Dinner session, "H.M.V." hour.
March—American Legion Band, "The Conqueror" (Teke).
Savoy Orpheans, "Lido Lady" (Rodgers) (C1310).
- 6.12: Tacet.
- 6.15: New Light Symphony Orchestra, "Rustic Wedding Symphony."
Victor Olof Sextet, "To a Water Lily" (Macdowell) (B2690).
New Light Symphony Orchestra, "Spanish Dance" (Moszkowski).
Wurlitzer organ—Reginald Foort, "Just Like Darby and Joan."
- 6.28: Tacet.
- 6.30: Jack Hylton's Orchestra, "The Selfish Giant" (Coates) (C1283).
Victor Olof Sextet, (a) "To a Wild Rose"; (b) "In Autumn."
Violin and wurlitzer organ—De Groot and Terence Casey, "Parted."
- 6.44: Tacet.
- 6.45: Victor Symphony Orchestra, "Dance of the Hours" (Ponchielli).
Wurlitzer organ—Reginald Foort, "Love Lies" (Kellard) (B2775).
March—American Legion Band, "Iowa Corn Song" (arr. Beeston).
- 6.58: Tacet.
- 7.0: News and market reports.
- 8.0: Chimes.
Overture—1YA Orchestral Octet, under the direction of Mr. Eric Waters, Overture from "Idomenia" (Mozart).
- 8.9: Tenor—Frank Campbell, "Country Folk" (Brahe).
- 8.12: Novelty pianoforte—Mr. Ivan Perrin, (a) "This is Heaven" (Akst); (b) "Mocking the Classics" (MS.).
- 8.20: Orchestral—1YA Orchestral Octet, (a) "Ilonka-Czardas" (Michels); (b) "Japanese Carnival" (Basque).
- 8.29: Novelty duo—Mr. Elton Black and Miss Alice Bennetto, "Pierrot Phantasy, Part 1."
- 8.41: Suite—1YA Orchestral Octet, Suite, "Jevington" (Loughborough). 1—Jevington Fields; 2—Jevington Down; 3—Jevington Jig.
- 8.51: Tenor—Mr. Frank Campbell, "I Hear a Thrush at Eve" (Cadman); "Drink to Me Only with Thine Eyes" (Quilter).
- 8.58: Evening weather forecast and announcements.
- 9.0: Waltz—1YA Orchestral Octet, "Irish Whispers" (Andliffe).
- 9.5: Novelty piano—Mr. Ivan Perrin, (a) "The Devil is Afraid of Music" (Robison); (b) "I've Got a Feeling I'm Falling" (Walker).
- 9.13: Novelty duo—Mr. Elton Black and Miss Alice Bennetto, "Pierrot Phantasy, Part 2."
- 9.25: Selection—1YA Orchestral Octet, "Musical Comedy—"On With the Dance" (Coward-Braham).
- 9.33: Programme of Dance Music, "Columbia."
Foxtrot—Milt Shaw's Orchestra, "Walking with Susie" (Gottler).
Foxtrot—Fred Rich's Orchestra, "Used to You" (de Sylva) (01565).
Foxtrot—Milt Shaw's Orchestra, "Breakaway" (Gottler) (01553).
Foxtrot—Fred Rich's Orchestra, "Why Can't You?" (de Sylva).
- 9.42: Hawaiian—Lizzie Alohioka and chorus, "Nani Kausi" (Alohioka).
Foxtrot—Debroy Somers Band, "The Egg Song" (Salisbury) (01523).
Foxtrot—Harry Reser's Syncopators, "I'm Wild About Horns on Automobiles" (Gaskill) (01543).
Foxtrot—Ted Wallace and his Campus Boys, "Jericho" (Meyers).
One-step—Debroy Somers Band, "Shinani Ki Da" (Carlton) (01523).
Waltz—The Cavaliers, "Lady Divine" (Shilkret).
- 10.0: Organ solo—Milton Charles, "Love's Old Sweet Song" (Molloy).
Foxtrot—Don Voorhee's Orchestra, "Ol' Man River" (Kern) (01406).
Foxtrot—Ted Wallace and his Campus Boys, "I've Got a Feeling I'm Falling" (Link) (01586).
Foxtrot—Don Voorhees' Orchestra, "Can't Help Lovin' Dat Man."
Foxtrot—Andy Sannella's All Star Trio, "Perfume of Roses."
- 10.15: Vocal duet—Layton and Johnstone, "Carolina Moon" (Davis) (01550).
Foxtrot—Ernie Golden's Orchestra, "She's Got Great Ideas" (Tobias).
Foxtrot—Piccadilly Players, "I Lift up my Finger and Say Tweet Tweet" (Sarony) (01595).
Waltz—Ernie Golden's Orchestra, "That's Her Now" (Ager) (01559).
Foxtrot—The Cavaliers, "Underneath the Russian Moon" (Gusman).
- 10.30: Organ solos—Milton Charles, (a) "From the Land of the Sky-Blue Water"; (b) "At Dawning" (Cadman) (01161).

- Foxtrot—Ray Starita and his Ambassadors Band, "Wake Up, Chill Un, Wake Up!" (Trent) (01595).
 Foxtrot—Hal Swan's Cafe Royal Band, "Me and the Man in the Moon" (Leslie) (Regal G20492).
 Foxtrot—Andy Sannella and his All-Star Trio, "I'll See You Thru." Waltz—Eddie Thomas' Collegians, "Billie" (Henderson) (01584).
 10.45: Hawaiian—Lizzie Alohika and chorus, "Liliu E" (Kaula) (01282).
 Tango—Anson Weeks Orchestra, "Senorita" (Weeks) (01584).
 Foxtrot—Paul Whiteman's Orchestra, "Get Out and Get Under the Moon" (Shay) (07001).
 Foxtrot—Corona Dance Band, "I Faw Down An' Go Boom."
 Foxtrot—Paul Whiteman's Orchestra, "Evening Star" (Turk).
 Waltz—The Cavaliers, "Bye and Bye Sweetheart" (Valentine).
 Reel—O'Leary's Irish Minstrels, "Turkey in the Straw."
 11.0 : God Save the King.
 The above programme will be subject to alteration to permit of the relay from Scott's Hall of the speeches to be given at the R.S.A. Welcome to Lord and Lady Bledisloe.

2YA, WELLINGTON (720 KILOCYCLES)—THURSDAY, MAY 29.

- 3.0 : Chimes. Selected studio items.
 3.15: Home Science Talk, prepared by Home Science Extension Department of Otago University—"The Arrangement of Kitchen Equipment."
 3.30 and 4.30: Sporting results.
 4.55: Close down.
 5.0 : Children's session.
 6.0 : Dinner session—"H.M.V." Hour.
 Instrumental—Reg. King's Orchestra, (a) "Garden in the Rain" (Gibbons) (B2903); "The Song I Love" (de Sylva).
 Waltz—International Concert Orchestra, "Gold and Silver" (Lehar).
 Instrumental—Victor Olof Sextet, "Cherry Ripe" (Schott) (B2697).
 6.12: Tacet.
 6.15: Waltz—International Concert Orchestra, "La Spagnola" (Di Chiara).
 Orchestral—Victor Concert Orchestra, "Romance" (Tchaikowsky).
 Violin—Isle Menges, "Salut D'Amour" (Elgar) (D1313).
 6.26: Tacet.
 6.30: Instrumental—Piccadilly Orchestra, "Friend o' Mine" (Sanderson); "None But the Weary Heart" (Tchaikowsky) (B2857).
 Orchestral—Victor Olof Sextet, "Minuet" (Boccherini) (B2697).
 6.42: Tacet.
 6.45: Instrumental—Jack Hylton's Orchestra, "Melodious Memories."
 Waltz—International Novelty Orchestra, "Emperor" (Strauss).
 6.57: Tacet.
 7.0 : News session, market reports and sports results.
 7.40: Lecturette—Mr. L. D. Webster, "A Talk on Music—Good, Bad, and Very Ordinary." (The first of a series.)
 8.0 : Chimes.
 Relay from Wanganui Opera House of Concert by Queen Alexandra's Own Band, under the conductorship of Captain G. L. Buckley.
 March of triumph, "Entry of the Gladiators" (Jules Fucik).
 8.5 : The band, overture—"Solenelle" (1812) (Tchaikowsky).
 8.15: Baritone—Mr. C. I. Spillane, "Prologue from Pagliacci" (Leoncavallo).
 8.21: Cornet solo, by request—"O for the Wings of a Dove" (Mendelssohn), by Master Jack Buckley, 14 years of age, with band accompaniment.
 8.25: Descriptive sketch—"The Mill in the Dale" (Cope).
 The band—Synopsis, (a) "Early Morn, Birds Singing, etc."; (b) "The Miller Goes to Work"; (c) "Opening of the Mill Sluice" (d) "The Mill Starts"; (e) "The Merry Millers; They Whistle and Sing from Morning to Night"; (f) "The Mill Ceases."
 8.30: Soprano—Mrs. Owen Warnock, "Nightingales of June" (Sanderson).
 8.36: Selection—The band, "Tristan and Isolde" (Wagner).
 8.46: Novelty Trio, "Mighty Lak' a Rose" (Nevin), arranged by Alpha Ramsey; R. Davis violin and trombone, A. Ramsey cello and flugel horn, and Master J. Buckley piano and cornet.
 8.57: Trombone solo—Bandsman G. Handley, "The Parachute" (Sutton).
 9.3 : Humorous sketch—Miss Zaida Watts, "A Lecture on Bottles."
 9.3 : Cornet solo—Mr. Gordon Bergerson, "Zelda" (Code).
 9.20: Contralto—Mrs. S. Wills, "O Lovely Night" (Landon Ronald).
 9.28: Selection—The Band, "Ballet Music from Hiawatha."
 9.37: Flute solos—Mr. Claude Tucker, (a) "The Brook" (Ritzger); (b) "Papillon" (Kohler).
 9.47: Instrumental trio—The Bridges Trio, "The Jolly Robbers" (Suppe).
 9.57: Tenor—Mr. S. Wilbraham, "Serenata Toselli."
 10.7 : Musical novelty—Stodart's Dance Orchestra, "Deep Night" (Langi).
 10.17: Selection—The Band, "The Merchant of Venice" (Rosse).
 10.20: March—The Band, "Ravenwood" (Rimmer).
 10.24: God Save the King.

3YA, CHRISTCHURCH (980 KILOCYCLES)—THURSDAY, MAY 29.

- 3.0 : Afternoon session—Gramophone Recital.
 3.15: Home science—"The Arrangement of Kitchen Equipment." Talk prepared by the Home Science Department Otago University.
 3.30: Gramophone recital.
 4.25: Sports results.
 4.30: Close down.
 5.0 : Children's hour, "Ladybird and Uncle Frank."
 6.0 : Dinner session—"H.M.V." Hour.
 Suite—London Symphony Orchestra, "Czar Sultan Suite."
 Waltz—International Concert Orchestra, "Waltz Dream" (Strauss).
 6.12: Tacet.

- 6.15: Suite—New Light Symphony Orchestra, "Peer Gynt Suite" (Grieg); (1) Ingrid's Lament, (2) Arabian Dance (01571).
 New Light Symphony Orchestra, "Prelude in G Minor" (Rachmaninoff).
 6.27: Tacet.
 6.30: Suite—New Light Symphony Orchestra, "Peer Gynt Suite" (Grieg); (1) Return of Peer Gynt, (2) Solveig's Song (01572).
 New Light Symphony Orchestra, "Prelude in C Sharp Minor."
 6.42: Tacet.
 6.45: Philadelphia Symphony Orchestra, "Danse Orientale" (Glazounov).
 Waltz—International Concert Orchestra, "Sari" (Kalman).
 March—Philadelphia Symphony Orchestra, "March of the Caucasian Chief" (Ippolitoff-Iwanoff) (E521).
 6.57: Tacet.
 7.0 : News session.
 7.30: Talk—Mr. J. Brown, Canterbury Education Board, "Boys' and Girls' Agricultural Clubs in North Canterbury," arranged by the 3YA Primary Productions Committee.
 8.0 : Chimes.
 Relay from The Civic Theatre of the First Demonstration Programme by the winner of the Musical, Elocutionary and Dancing Competition, being the Twentieth Annual Festival of the Christchurch Competitions Society (Incorporated). Musical Adjudicator, Mr. James Brash (of Sydney); Elocutionary Adjudicator, Mr. Clement May (of Wellington); Dancing Adjudicator, Mr. Alex. Sutherland (of Invercargill); Managing Secretary, Mr. T. F. Hall.
 God Save the King.

4YA, DUNEDIN (650 KILOCYCLES)—THURSDAY, MAY 29.

SILENT DAY.

Friday, May 30

1YA, AUCKLAND (900 KILOCYCLES)—FRIDAY, MAY 30.

- 3.0 : Afternoon session—Selected studio items, including Literary Selection by the Announcer.
 4.30: Close down.
 5.0 : Children's session, conducted by "Nod" and "Aunt Jean."
 6.0 : Dinner session, "Columbia" hour.
 Orchestral—Squire Celeste Octet, "Peter Pan Selection" (Crook).
 Cello—Gaspar Cassado, "Chanson Villageoise" (Popper) (03595).
 Orchestral—Columbia Orchestra, "Scarf Dance" (Chaminade).
 6.15: Orchestral—Debroy Somers Band, "The Desert Song" (Romberg).
 Cello—Gaspar Cassado, "Menuett" (Haydn, arr. Burmester-Moffat).
 Male choir—Sheffield Orpheus Male Choir, "Hymn Before Action."
 6.28: Tacet.
 6.30: Orchestral—Halle Orchestra, "Rosamunde Ballet Music" (Schubert).
 1—Andantino; 2—Allegro Moderato; 3—Andante Unpoco Assai.
 Instrumental—Paul Whiteman and his Orchestra, "Christmas Melodies" (Noel and Adele Fideles) (07511).
 6.43: Tacet.
 6.45: Orchestral—Columbia Symphony Orchestra, "The Flatterer."
 Zurich Tonhalle Orchestra, "Gavotte" from "Idomeneo" (Mozart).
 Paul Whiteman and his Orchestra, "Silent Night, Holy Night."
 Male choir—Sheffield Orpheus Male Choir, "The Long Day Closes."
 6.58: Tacet.
 7.0 : News and market reports.
 8.0 : Chimes.
 Overture—Berlin State Orchestra, "Capriccio Italien, Op. 45."
 8.8 : Mezzo-soprano—Madame Towsey, "The Young Nun" (Schubert).
 8.12: Instrumental trio—Studio Trio, "Suite of Pieces" (Dvorak).
 8.22: Baritone—Mr. John Bree, "Moonlight" (Schumann).
 8.25: Chorus—Royal Opera Chorus, "Spinning Chorus" from "The Flying Dutchman" (Wagner) (H.M.V. D1517).
 8.29: Violin solo—Miss Ina Bosworth, "Allegretto" (Boccherini).
 8.35: Contralto—Miss Aimee Clapham, "Hindoo Song" (Bemberg).
 8.39: Recital—Mr. J. F. Montague, "Clarence's Dream" (Richard III).
 8.47: Clarinet solo—Mr. S. C. Lewis, "La Militaire" (fantasia) (Raymond).
 8.51: Vocal duet—Madame M. Towsey and Mr. J. Bree, "When the Lilac Bloom Uncloses" (Schubert-Clutsam).
 8.55: Instrumental trio—Studio Trio, "Rondo Alla Russe" (Hummell).
 9.0 : Evening forecast and announcements.
 9.3 : Orchestral—Victor Concert Orchestra, "Amaryllis" (Ghys).
 9.7 : Contralto—Miss Aimee Clapham, (a) "Charming Chloe" (Burns); (b) "Four Ducks in a Pond" (Needham).
 9.11: Violin solo—Miss Ina Bosworth, "Liebesfreud" (Kreisler).
 9.16: Baritone—Mr. John Bree, "Devotion" (Schumann).
 9.20: Clarinet solo—Mr. S. C. Lewis, (a) "Lucia di Lammermoor" (Donizetti); (b) "Tannhauser" (Wagner).
 9.27: Orchestral—Victor Concert Orchestra, "Minuet in G" (Paderewski).
 9.31: Humour—J. F. Montague, (a) "The Thinnest Girl" (Newman and Charles) dramatic; (b) "Christmas at Sea" (Stevenson).
 9.41: Mezzo-soprano—Madame Mary Towsey, (a) "Pleading" (Elgar); (b) "The Tryst" (Sibelius).
 9.47: Instrumental trio—Studio Trio, "Promenade" from "Carnival."
 9.55: Vocal duet—Madame Mary Towsey and Miss Aimee Clapham, "Still as the Night" (Bohm).
 9.59: March—Philadelphia Symphony Orchestra, "Marche Slave."
 10.3 : God Save the King.

2YA, WELLINGTON (720 KILOCYCLES)—FRIDAY, MAY 30.

- 3.0 : Chimes. Selected studio items.
 3.30 and 4.30 Sporting results.
 4.55: Close down.
 5.0 : Children's session, conducted by Big Brother Jack.
 6.0 : Dinner session—"H.M.V." Hour.
 Royal Albert Hall Orchestra, "Carmen Prelude, Act 1" (Bizet) (E461).
 National Symphony Orchestra, "Sylvia Ballet Cortete de Bacchus."
 Organ—Reginald Foort, "Schon Rosmarin" (Kreisler) (B2664).
 6.12: Tacet.
 6.15: Marek Weber's Orchestra, "Vienna by Night" (Komzak) (C1507).
 Cello—Lauri Kennedy, "Hungarian Rhapsody" (Popper) (C1595).
 6.27: Tacet.
 6.30: —Selection—National Symphony Orchestra, "Bohemian Girl" (Balfe).
 Royal Albert Hall Orchestra, "Carmen Prelude, Act 2" (Bizet).
 Organ—Reginald Foort, "A Brown Bird Singing" (Haydn-Wood).
 6.42: Tacet.
 6.45: Royal Opera Orchestra, "Hungarian Dance No. 5" (Brahms) (C1415).
 Selection—H.M. Coldstream Guards, "H.M.S. Pinafore" (Sullivan).
 6.57: Tacet.
 7.0 : News session, market reports and sports results.
 7.40: Lecturette—Mr. A. E. Wilson, "Tourist and Holiday Resorts."
 A special programme featuring the Philharmonic Quartet in vocal gems from "The Arcadians," by Monckton and Talbot. This programme will be interrupted to permit of a relay of a sound film feature from the Majestic Theatre.
 8.0 : Chimes.
 Overture—2YA Orchestra, "May Day" (Wood).
 Soprano—Miss Ena Rapley, "The Pipes of Pan."
 Piano—Miss Edith Rait, (a) "Autonne" (Chaminade); (b) "Sentimentals" (Percy Grainger).
 Bass—Mr. A. Brady, "Sweet Simplicitas."
 Recital—Miss Dorothy Miller, "The Crowning of Dreaming John."
 Selection—2YA Orchestra, "Snegourstchka" (Korsakov).
 Trio—Messrs. Arthur Brady, Edwin Dennis and Miss Madge Freeman, "Truth is so Beautiful."
 Musical comedy selection—2YA Orchestra, "The Arcadians."
 Weather report and announcements.
 Quartet—Philharmonic, "The Joy of Life."
 Orchestral—2YA Orchestra, "Three Beautiful Dances from Nell Gwynn" (German).
 Duet—Miss Madge Freeman and Mr. Arthur Brady, "Somewhere."
 Recitals—Miss Dorothy Miller, (a) "Forgiven" (A. A. Milne); (b) "Vespers" (A. A. Milne).
 Record—Band of H.M. Coldstream Guards, "Selection of Leslie Stuart's Songs" (arrgd. Hume) (H.M.V. C1628).
 Contralto—Miss Madge Freeman, "Bring Me a Rose."
 Duet—Mr. Edwin Dennis and Miss Madge Freeman, "Half-past Two."
 Record—Jack Hylton's Orchestra, "Old Musical Comedy Gems."
 Baritone—Mr. Arthur Brady, "All Down Piccadilly."
 Valse—Lente, 2YA Orchestra, "Duex Souvenir" (Michiels).
 God Save the King.

3YA, CHRISTCHURCH (980 KILOCYCLES)—FRIDAY, MAY 30.

- 3.0 : Afternoon Session, Gramophone Recital.
 4.25: Sports results.
 4.30: Close down.
 5.0 : Children's Hour, "Peterkin."
 6.0 : Dinner Session, "H.M.V." Hour.
 Waltz—International Concert Orchestra, "Over the Waves" (Rosas).
 Orchestral—Paul Whiteman and His Concert Orchestra, "High Water" (Brennan-McCardy) (C1607).
 Hawaiian—Hilo Hawaiian Orchestra, "My Hula Love" (Keakakal).
 Orchestral—Zonophone Salon Orchestra, "Simple Aven" (Thome).
 6.13: Tacet.
 6.15: Orchestral—Paul Whiteman and His Orchestra, "Mississippi" suite (Grofe) (1574).
 Organ—Edward O'Henry, "Chant Sans Paroles" (Tschalkowsky).
 Orchestral—Zonophone Salon Orchestra, "Narcissus" (Nevin).
 6.29: Tacet.
 6.30: Waltz—International Concert Orchestra, "Danube Waves" (Ivanovivi) (Zonophone EF3).
 Hawaiian—Hilo Hawaiian Orchestra, "Kawaihau Waltz" (Kealakal).
 Orchestral—Paul Whiteman and His Concert Orchestra, "Caprice Futuristic" (Malneck) (C1607).
 Organ—Edward O'Henry, "Ca O'Est Madrid" (O'Henry) (B3094).
 6.44: Tacet.
 6.45: Orchestral—Hylton's Orchestra, "Good Old Songs" Selection.
 Orchestral—International Concert Orchestra, "Barcarolle" (Tales of Hoffman) (Offenbach) (B2377).
 6.59: Tacet.
 7.0 : News session.
 8.0 : Chimes.
 Popular and Miscellaneous Programme.
 Orchestral—Dajos Bela Orchestra, "Dancing Demoiselle" (Fall).
 8.5 : Quartet—Valencia Quartet, "Silver Threads Among the Gold" (trdfl).
 Soprano—Miss Lucy Fullwood, "A May Morning" (Denza).
 8.12: Instrumental—Studio Instrumental Octet (Conductor Mr. Harold Beck) "Artists Life" (Strauss).
 8.22: Tenor—Mr. T. G. Rogers, "The Land of Dream" (Idle).
 Contralto—Miss Mary Taylor, "Danny Boy" (Sanderson).

- 8.28: Humorous Recitations—Mr. H. Instone, (a) "Skipper Bill" (M.S.); "The Village Choir" (M.S.).
 8.34: Bass—Mr. E. J. Johnson, "Mother Machree" (Alcott and Ball).
 Quartet—Valencia Quartet, "The Parting Kiss" (Pinsuti).
 8.41: Instrumental—Studio Instrumental Octet, "Wildflower" (Youmans, arrgd. Grant).
 8.52: Soprano—Miss Lucy Fullwood, "It Is Only a Tiny Garden" (Wood).
 Cautionary Tale—Mr. H. Instone, "The Motor Boy" (Anon).
 8.58: Instrumental—Studio Instrumental Octet, "Serenade" (Pierne).
 9.3 : Weather Report and Announcements.
 9.5 : Duet, soprano and contralto—Valetta Duo, "Sing, Sing Bird on the Wing" (Nutting).
 Bass—Mr. E. J. Johnson, "Song of the Bow" (Aylward).
 9.12: Instrumental—Studio Instrumental Octet, "Eidelweiss Gavotte" (Tourbie).
 9.17: Contralto—Miss Mary Taylor, "Lullaby" (Alice Forrester) (Christ-church composer).
 Quartet—Valencia Quartet, "When the Heart is Young" (Buck).
 9.23: Instrumental—Studio Instrumental Octet, (a) "You Were Meant For Me" (Brown); (b) "Broadway Melody" (Brown).
 9.30: Dance music "Columbia."
 Foxtrot—Broadway Nitelites, "You're the Cream in My Coffee" (de Sylva, Brown and Henderson) (01663).
 Foxtrot—Denza Dance Band, "A Land in Spain" (Lewis and Lombardo) (0722).
 Foxtrot—Benson All Star Orchestra, "To Know You is to Love You" (de Sylva, Brown and Henderson) (01663).
 Foxtrot—The Piccadilly Players, "The Five O'Clock Girl" (Happy-Go-Lucky Bird) (Kalmar and Ruby) (01492).
 Vocal: Will Fyffe, "She Was the Belle of the Ball" (Will Fyffe).
 9.45: Foxtrot—The Piccadilly Players, "The Five O'Clock Girl" (Who Did? You Did) (Kalmar and Ruby) (01492).
 Foxtrot—Rhythmic Troubadours, vocal refrain, "Revolutionary Rhythm" (Davis, Coots and Spier) (G20600).
 Ipana Troubadours, "s Wonderful" (Gershwin) (01306).
 Ipana Troubadours, "Ill Get By" (as long as I have you) (Turk-Ahlert) (01647).
 Debroy Somers' Band, "Without You Sweetheart" (de Sylva).
 Foxtrot—Paul Specht and Orchestra, "Hittin' the Ceiling" (Gottler, Mitchell and Conrad) (01629).
 10.3 : Vocal—Charles Lawman and Novelty Accompaniment, "Oh! Sweetheart Where Are You To-night?" (Davis and Coots).
 Foxtrot—Rudy Vallee, "Outside" (Flynn) (Regal G20570).
 Foxtrot—Denza Dance Band, "One Summer Night" (Coslow and Spier).
 Foxtrot—Swain's Cafe Royal Band, "It Goes Like This, That Funny Melody" (Caesar-Friend) (Regal G20570).
 10.15: Waltz—Selvin's Orchestra, "Ramona" (Wayne-Gilbert) (01137).
 Foxtrot—Bernie's Orchestra, "I Want to Meander in the Meadow" (Woods-Tobias) (01692).
 Foxtrot—Midnight Revellers, "The Moonlight March" (Newman-Lombardo) (Regal G20522).
 Foxtrot—Bernie's Orchestra, "Where the Bab-Bab-Babbling Brook" (Nelson-Pease-O'Flynn) (01692).
 Foxtrot—Paul Specht and Orchestra, vocal refrain, "Sing a Little Love Song" (Gottler-Mitchell and Conrad) (01629).
 10.30: Vocal—Charles Lawman and Novelty Accompaniment, "When We Get Together in the Moonlight" (Rose, Ryan and Violinsky).
 Waltz—The Cavaliers, "Sleepy Valley" (Hanley-Sterling) (01638).
 Foxtrot—Lombardo's Royal Canadians, "You Made Me Love You" (Lombardo-Kippel) (01690).
 Foxtrot—Rhythmic Troubadours and vocal refrain, "When the Real Thing Comes Your Way" (Spier and Coslow) (Regal G20600).
 Foxtrot—Lombardo's Royal Canadians, "You Belong To Me, I Belong to You" (Lombardo-Newman) (01690).
 Foxtrot—Midnight Revellers, "Sweetheart's Holiday" (Robinson-Kahal) (Regal G20522).
 10.48: Waltz—The Cavaliers, "Recollections" (Rapee-Pollack) (01638).
 Waltz—Swain's Band, "Sleep Baby, Sleep" (Tucker and Schuster).
 Foxtrot—Selvin's Orchestra, "In My Bouquet of Memories" (Aest, Lewis and Young) (01137).
 Waltz—Swain's Band, "Heigh Ho! Everybody Heigh Ho!" (Harry Woods) (Regal G20575).
 11.0 : God Save the King.

4YA, DUNEDIN (650 KILOCYCLES)—FRIDAY, MAY 30.

- 3.0 : Chimes. Selected gramophone items.
 4.25: Sporting results.
 4.30: Close down.
 5.0 : Chimes. Children's hour, conducted by Aunt Sheila.
 6.0 : Dinner session—"Columbia" Hour:
 Orchestral—Halle Orchestra, "Capriccio Espagnole" (Rimsky Korsakov) (02912-3).
 6.18: Tacet.
 6.15: Orchestral—Menorah Symphony Orchestra, "Bar Kochba" Selection.
 Piano—Ignaz Friedman, "Minuetto from Suite" (J. Suk) (04346).
 Orchestral—New York Symphony Orchestra, "Entrance of the Little Fauns" (Pierce) (02907).
 6.28: Tacet.
 6.30: Band—B.B.C. Wireless Military Band, "Gathering Peascods—Folk Dance" (arrgd. Cecil J. Sharp) (01711).
 Violin—Yelly D'Aranyi, "Souvenir" (Drdla) (03644).

- Orchestral—Orchestra de la Societe des Concerts du Conservatoire, Paris, "Le Rouet D'Omphale" (Saint-Saens) (02926).
- 6.42: Tacet.
- 6.45: Band—B.B.C. Wireless Military Band, "Epping Forest Folk Dance" (arr. Cecil J. Sharp) (01711).
- Piano—Ignaz Friedman, "Berceuse" (Chopin) (04346).
- Orchestra—Berlin State Orchestra, "Wiener Blut" (Strauss) (04337).
- 6.58: Tacet.
- 7.0: News session.
- 8.0: Chimes. Overture—Victor Symphony Orchestra, "Dance of the Hours"
- 8.9: Baritone—Mr. B. C. Bellhouse, (a) "Mine Enemy" (Rudd), (b) "You Along o' Me" (Sanderson).
- 8.16: Instrumental—4YA Trio, "Andante from Trio in E Flat" (Schubert).
- 8.24: Soprano—Miss Valda McCurdy, (a) "Bird of Love Divine" (Wood), (b) "Little Lady of the Moon" (Coates).
- 8.30: Organ—Reg Goss Custard, "The Question" (Wolstenholme) (H.M.V.).
- 8.34: Recital—Mr. C. Russell-Smith, "The King's Picture" (Bestwick).
- 8.38: Cello—Mr. P. J. Palmer, "Sonata" (Eccles).
- 8.44: Tenor—Mr. James Simpson, "All Joy Be Thine" (Sanderson).
- 8.48: Orchestral—La Scala Orchestra, "Don Juan" (The Song of the Nightingale) (Napravnik) (H.M.V. D1488).
- 8.52: Contralto—Miss Irene Hornblow, (a) "Who Knows?" (Ball), (b) "Fairy Waters" (Wood).
- 8.59: Weather report.
- 9.1: Instrumental—4YA Trio, "Rondo" from "Trio in B Flat" (Schubert).
- 9.9: Baritone—Mr. B. C. Bellhouse, "Onaway, Awake, Beloved" (Cowan).
- 9.13: Orchestral—Victor Symphony Orchestra, "Kamennoi Ostrow."
- 9.17: Soprano—Miss Valda McCurdy, "April Moon" (Batten).
- 9.21: Piano—Mr. Max Scherek, "Rhapsody in B Minor" (Brahms).
- 9.29: Recitals—Mr. C. Russell Smith, (a) "The Old Schoolmaster" (Anon.), (b) "Hullo!"
- 9.35: Organ—Reg Goss Custard, "The Answer" (Wolstenholme) (H.M.V.).
- 9.39: Tenor—Mr. James Simpson, (a) "Serenata" (Toselli), (b) "Dear Love, Remember Me" (Marshall).
- 9.46: Instrumental—4YA Trio, (a) "Minuet from Septet" (Beethoven), (b) "Rondo in A Minor" (Mozart).
- 9.53: Contralto—Miss Irene Hornblow, "The Old Clay Road" (from the negro opera "Deep River" (Harling).
- 9.57: Orchestral—Detroit Symphony Orchestra, "Spanish Rhapsody."
- 10.1: God Save the King.

Saturday, May 31

1YA, AUCKLAND (900 KILOCYCLES)—SATURDAY, MAY 31.

- 2.45: Relay of description of Rugby Football Match from Eden Park; announcer, Mr. Gordon Hutter.
- 4.30 (approx.): Close down.
- 5.0: Children's session conducted by "Cinderella."
- 6.0: Dinner session—"H.M.V." Hour:
- Orchestral—Piccadilly Orchestra, (a) "My Beloved Gondolier" (Tibor), (b) "Souvenir de Capri" (Bece) (B2575).
- Instrumental—New Light Symphony Orchestra, "Just a Memory."
- Violin and kinema organ—Elsie Southgate, "I Hear You Calling Me."
- 6.12: Tacet.
- 6.15: Waltzes—Marek Weber's Orchestra, "Potpourri of Waltzes" (Robecht)
- Waltz—Hilo Hawaiian Orchestra, "Sweet Hawaiian Dream Girl."
- 6.26: Tacet.
- 6.30: Instrumental—New Light Symphony Orchestra, "Scene de Ballet Marionettes" (Glazounov) (B2754).
- Violin and kinema organ—Elsie Southgate, "Rose in the Bud" (Tate).
- Instrumental—New Light Symphony Orchestra, "Persiflage" (Francis)
- Instrumental—Jack Hylton's Orchestra, "When the White Elder-Tree Blooms Again" (Doelle) (C1616).
- 6.44: Tacet.
- 6.45: Instrumental—Salon Orchestra, "My Blue Heaven" (Whiting) (EB18)
- Waltz—Hilo Hawaiian Orchestra, "Sleepy Honolulu Town" (Earl).
- Instrumental—Jack Hylton's Orchestra, "I Kiss Your Hand, Madame."
- 6.56: Tacet.
- 7.0: News and market reports.
- 8.0: Chimes. Relay of concert from the Town Hall by the Auckland Municipal Band under the conductorship of Mr. Christopher Smith.
- 10.0: Programme of dance music—"Brunswick" Hour:
- Foxtrot—Red Nicholls and his Five Pennies, "I May Be Wrong."
- Foxtrot—Bob Haring and his Orchestra, "How Am I to Know."
- Foxtrot—Irving Mills and his Hotsy Totsy Gang, "Can't We Get Together" (Razaf) (4482).
- Foxtrot—Ben Bernie and his Hotel Roosevelt Orchestra, "Bottoms Up"
- 10.12: Vocal—Chester Gaylord, "Sing a Little Love Song" (Conrad-Gottler).
- Foxtrot—Colonial Club Orchestra, "When You're Counting the Stars Alone" (Russell-Rose) (4517).
- Foxtrot—Ray Miller and his Orchestra, "Moonlight and Roses."
- Foxtrot—Irving Mills and his Hotsy Totsy Gang, "Sweet Savannah Sue" (Razaf) (4482).
- Waltz—Carter's Orchestra, "On Miami Shore" (Le Baron) (4471).
- 10.27: Male duet—Billy Murray and Walter Scanlan, "The Whoopee Hat Brigade" (Siegel-Jaffe) (4513).
- Foxtrot—Earl Burnett and his Los Angeles Biltmore Hotel Orchestra, "If I Had a Talking Picture of You" (De Sylva) (4501).

- Foxtrot—Earl Burnett and his Los Angeles Biltmore Hotel Orchestra, "Doin' the Boom Boom" (Gottler) (4502).
- Foxtrot—Earl Burnett and his Los Angeles Biltmore Hotel Orchestra, "Sunnyside Up" (De Sylva) (4501).
- Foxtrot—Dan Russo and his Oriole Orchestra, "Because You said 'I Love You'" (Sanders) (4502).
- Waltz—Carter's Orchestra, "A Little Love, a Little Kiss" (Ross).
- 10.45: Male duet—Billy Murray and Walter Scanlan, "Last Night, Honey."
- Foxtrot—Red Nicholls and his Five Pennies, "The New Yorkers."
- Foxtrot—Colonial Club Orchestra, "The Boomerang" (Rose) (4517).
- Foxtrot—Ben Bernie and his Hotel Roosevelt Orchestra, "Bigger and Better Than Ever" (Friend) (4516).
- Waltz—Roy Fox and his Montmartre Orchestra, "I've Waited a Lifetime for You" (Goodwin) (4495).
- 11.0: God Save the King.

2YA, WELLINGTON (720 KILOCYCLES)—SATURDAY, MAY 31.

- 3.0: Chimes. Selected studio items.
- 3.30 and 4.30: Sporting results.
- 4.55: Close down.
- 5.0: Children's session, "Parlophone" hour.
- Fantasia—Edith Lorand Orchestra, "Johann Strauss Fantasia."
- Piano and orchestra—Raie da Costa and Orchestra, "When a Day is Done" (de Sylva) (A4041).
- 6.12: Tacet.
- 6.15: Hawaiian—David Kaili, "Honolulu March" (A2464).
- Cinema organ—Leslie Harbey, "Where the Shy Little Violets Grow."
- Waltz—Dajos Bela Orchestra, "The Grenadiers" (Waldteufel).
- Saxophone—Arnold Brillhart, "Fascination" (Bernie) (A2676).
- 6.28: Tacet.
- 6.30: Waltz—Dajos Bela Orchestra, "Polish Life" (Nedbal) (A4008)
- Piano and orchestra—Raie da Costa and Orchestra, "Sweetheart I'm Dreaming of You" (Carter) (A4041).
- Instrumental—Dajos Bela Orchestra, "Dancing Demoiselle" (Fall).
- 6.42: Tacet.
- 6.45: Selection—Edith Lorand Orchestra, "Dollar Princess" (Fall).
- Waltz—Dajos Bela Orchestra, "Casino Tanze" (Gungl) (A4081).
- 6.57: Tacet.
- 7.0: News session, market reports and sports results.
- 7.40: Lecturette—Professor T. A. Hunter, Victoria University College, "Training the Emotions of Children"; "A W.E.A. Lecturette."
- 8.0: Chimes.
- Overture—2YA Salon Orchestra (Conductor, Mr. M. T. Dixon), "Prince Methusalem" (Strauss).
- 8.9: Quartet—Melodie Four, "Old Folks Medley" (Sheridan).
- 8.13: Guitar orchestra, Mrs. Mildred Kenny's Guitar Orchestra, "My Hawaiian Hula Queen" (Clarke); (b) "Cuckoo" (Nausbaum).
- 8.20: Tenor—Mr. S. Duncan, "Bonnie Wee Thing" (Old Scotch Air).
- 8.24: Novelty selection—Salon Orchestra, "Episodes from the Cinema" (Ketelbey); (a) "Animal Cartoon"; (b) "The Storm."
- 8.32: Humour—Mr. Will Bishop will entertain at the piano.
- 8.42: Mezzo-soprano—Mrs. Kathleen Crompton, (a) "If You Would Leave Me" (McDermid); (b) "Coming Home" (Willeby).
- 8.47: Record—Accordion solo—Jerry O'Brien, "Little Judy Reel."
- 8.50: Baritone—Mr. R. S. Allwright, (a) "I Had a Garden" (Royce); (b) "That Hour With You" (Tate).
- 8.56: Instrumental—Salon Orchestra, "Request Item."
- 9.2: Weather report and announcements.
- 9.6: Quartet—Melodie Four, "Request Item."
- 9.10: Guitar Orchestra—Mrs. Mildred Kenny's Guitar Orchestra, (a) "Pin Painting the Clouds with Sunshine" (Burke); (b) "Blue Hawaii" (Baer, Caesar and Schuster).
- 9.17: Bass—Mr. W. W. Marshall, "Asleep in the Deep" (Petrie).
- 9.21: Selection—Salon Orchestra, "Villa" (Lehar).
- 9.27: Humour—Mr. Will Bishop will again entertain.
- 9.37: Mezzo-soprano—Mrs. Kathleen Crompton, "The Rosary" (Nevin).
- 9.41: Record—Saxophone—Chester H. Hazlett, (a) "To a Wild Rose" (McDowell); (b) "Valse Inspiration" (Hazlett) (Col. 01627).
- 9.47: Tenor—Mr. F. Bryant, (a) "Mary, Sweet and Brown" (Kilner); (b) "When the House is Asleep" (Hay).
- 9.52: Quartet—Melodie Four, "Mosquitoes" (Bliss).
- 9.56: Salon orchestra, "Dance Novelities."
- 10.6: Dance programme, "H.M.V." hour:
- Foxtrot—Connecticut Yankees, "Where Are You Dream Girl?" (Davis).
- Foxtrot—Ted Weem's Orchestra, "Here We Are" (Warren) (EA602).
- Foxtrot—Connecticut Yankees, "Pretending" (Porter) (EA605).
- Foxtrot—Ted Weem's Orchestra, "Piccolo Pete" (Baxter) (EA602).
- 10.12: Vocal duet—Gladys Rice and Franklyn Baur, "You're the Cream in My Coffee" (de Sylva) (EA616).
- Foxtrot—Gus Arnheim's Orchestra, "Now I'm in Love" (Shapiro).
- Foxtrot—Jack Hylton's Orchestra, "Ever So Goosey" (Butler).
- Foxtrot—Ted Weem's Orchestra, "Am I a Passing Fancy?" (Silver).
- Waltz—Connecticut Yankees, "Underneath the Russian Moon."
- Waltz—Hilo Hawaiian Orchestra, "Sparkling Waters of Walkiki."
- 10.30: Tenor—Morton Downey, "The World is Yours and Mine" (Green).
- Foxtrot—Ted Weem's Orchestra, "What a Day!" (Woods) (EA606).
- Foxtrot—Connecticut Yankees, "The One That I Love, Loves Me."
- Foxtrot—Jack Hylton's Orchestra, "The Toymakers' Dream" (Golden).
- 10.43: Vocal duet—Billy Murray and Walter Scanlan, "Oh, Baby, What a Night" (Brown) (EA613).

Foxtrot—Rudy Vallee and Connecticut Yankees, "I'll Be Reminded of You" (Heyman Smith) (BA664).

Foxtrot—Gus Arnheim's Orchestra, "This is Heaven" (Yellen).

Foxtrot—All Star Orchestra, "Waiting at the End of the Road."

Foxtrot—Gus Arnheim's Orchestra, "One Sweet Kiss" (Jolson).

Waltz—Gus Arnheim's Orchestra, "Sleepy Valley" (Sterling).

11.0 : Sports results.

11.10 : God Save the King.

3YA, CHRISTCHURCH (930 KILOCYCLES)—SATURDAY, MAY 31.

11.0 : Results of Winter Meeting of the Canterbury Park Trotting Club, Addington.

4.30 : Close down.

5.0 : Children's hour, "Aunt Pat."

6.0 : Dinner session—"Columbia" Hour.

Orchestral—Finck's Orchestra, "Gaiety Echoes" (Caryll-Monekton).

Orchestral—Sandler's Orchestra, "Las Lagarteranas."

Violin—Lipschultz, "La Golondrina" (Sorraddell) (Regal G20489).

6.13 : Tacet.

6.15 : Instrumental—Squire's Celeste Octet, "Everybody's Melodies."

Organ—John Hassel, "By the Waters of Minnetonka" (Lieurance).

Orchestral—Sandler's Orchestra, "Raphaellito" (Guerro and Foulkes).

6.28 : Tacet.

6.30 : Orchestral—Regal Kinema Orchestra, "Broadway Selection."

Violin—Lipschultz, "Estrellita" (Ludlow) (Regal G20489).

Orchestral—Romani and Italian Orchestra, "Old Comrades March."

6.43 : Tacet.

6.45 : Orchestral—Berlin State Orchestra, "Die Fledermaus" (Strauss).

Orchestral—Nullo Roman's Orchestra, "Canto Al Inverno."

Orchestral—Russian Novelty Orchestra, "Tesoro Mio" (Beccucci).

6.58 : Tacet.

7.0 : News session.

7.30 : Sports results.

8.0 : Chimes.

Vaudeville and dance programme.

8.1 : Overture—Percival Mackay's Band, "The Vagabond King" (Friml).

8.9 : Baritone—Mr. Sydney Armstrong, "Duna" (McGill).

8.13 : Violin—Miss I. Morris, "Romance" (Tours).

8.18 : Male Quintet—Singing Sophomores, "My Hoio Home" (Kahn).

8.21 : Concertina and ocarino—Mr. John Campbell, (a) "Il Bacio" (arrgd. Campbell); (b) "Saxophobia"; (c) "Killarney."

8.28 : Popular song—Charles Dawman, "When We Get Together in the Moonlight" (Violinsky) (Regal G20562).

8.31 : Instrumental—Christchurch Broadcasting Trio, Three Russian Dances, (a) "Prelude," (b) "Song of the Volga Boatmen," (c) "Russian Mazurka" (Rachmaninoff).

8.41 : Vaudeville entertainment—The Chatterboxes, "Mirth, Melody and Sketches" (arrgd. by Chatterboxes).

9.2 : Weather report and announcements.

9.4 : Organ—Frederick Curzon, "For Old Times Sake" (de Sylva).

9.8 : Baritone—Mr. Sydney Armstrong, (a) "Rose of My Life" (Fabian Rose); (b) "Loch Lomond and You" (Drummond).

9.14 : Instrumental—Christchurch Broadcasting Trio, (a) "Nocturne" (Widor); (b) "Pierrette" (Chaminade); (c) "Tarantelle."

9.24 : Male quintet—Singing Sophomores, "Chloe" (Song of the Swamp).

9.27 : Concertina and ocarino—Mr. John Campbell, (a) "Double Eagle March" (Campbell); (b) "Rag Medley" (Campbell); (c) "La Paloma" (Campbell).

9.35 : Vaudeville entertainment—The Chatterboxes, "Mirth, Melody and Humorous Sketches" (MS.).

9.46 : Violin—Miss Irene Morris, "Liebeslied" (Kreisler).

9.49 : Medley—Al Goodman and His Orchestra, "Hold Everything."

9.52 : Band of H.M. Grenadier Guards, "Regimental March Medley."

10.0 : Dance music until 11 p.m.—"H.M.V." Hour.

Foxtrot—Rhythmic Eight, "Don't Be Like That" (Gottler).

Foxtrot—Jack Hylton's Orchestra, "Sweetheart of all My Dreams."

Foxtrot—Arcadians Dance Orchestra, "Pokee-okee-oh" (Butler).

Foxtrot—Jack Hylton's Orchestra, "I Lift Up My Finger and Say Tweet Tweet" (Sarony) (EA540).

10.12 : Comedian—Eddie Cantor, "If I Give Up the Saxophone."

Foxtrot—George Olsen's Music, "I'm Bringing a Red, Red Rose."

Foxtrot—Nat Shilkret and His Music, "One for All, All for One."

Foxtrot—Heidt's Orchestra, "I'm Ka-razy for You" (Jolson).

Waltz—Arcadians Dance Orchestra, "Anita" (Pollack).

Waltz—Arcadians Dance Orchestra, "That Old-Time Organ Melody."

10.30 : Contralto—Lupe Velez, "Mi Amado" (Warren, Lewis and Young).

Foxtrot—George Olsen's Music, "Come West, Little Girl, Come West."

Foxtrot—Nat Shilkret's Orchestra, "I'm Thirsty for Kisses, Hungry for Love" (Davis) (EA528).

Foxtrot—Nat Shilkret's Orchestra, "Some Sweet Day" (Shilkret).

Foxtrot—Waring's Pennsylvanians, "My Mother's Eyes" (Gilbert).

10.45 : Comedian—Eddie Cantor, "Hello, Sunshine, Hello" (Murray-Tobias).

Foxtrot—"Kassels in the Air," "He, She and Me" (Newman).

Foxtrot—Park Central Orchestra, "Sally of My Dreams" (Kernell).

Waltz—Connecticut Yankees, "Coquette" (Berlin) (EA532).

Waltz—Shilkret's Orchestra, "Lady Divine" (Shilkret) (EA531).

11.0 : God Save the King.

4YA, DUNEDIN (650 KILOCYCLES)—SATURDAY, MAY 31.

3.0 : Chimes. Selected gramophone items.

4.25 : Sporting results.

4.30 : Close down.

5.0 : Chimes. Children's hour, conducted by Aunt Anita.

6.0 : Dinner music, "Columbia" hour.

Medley—H.M. Grenadier Guards Band, "Sir Harry Lauder Medley."

Waltz—Symphony Orchestra, "Doctrinen" (Strauss) (02529).

6.12 : Tacet.

6.15 : Piano solo—Gil Dech, "Wedding of the Painted Doll" (Freed).

Piano solo—Constance Mering, "So Dear" (Caesar) (01224).

Waltz medley—Eddie Thomas' Collegians (02904).

Saxophone—Rudy Wiedoeft, "Minuet" (Beethoven) (01176).

6.23 : Tacet.

6.30 : Mandoline Band—Circolo Mandolinistico, "La Traviata" Prelude, Acts 1 and 4 (Verdi) (02566).

Waltz—Symphony Orchestra, "When the Lemons Bloom" (Strauss).

6.43 : Tacet.

6.45 : Musical Art Quartet, "Mighty Lak' a Rose" (Nevin) (01508).

Saxophone—Rudy Wiedoeft, "Valse Mazanetta" (Wiedoeft) (01176).

Piano—Gil Dech, "I Kiss Your Hand Madame" (Erwin) (01549).

Eddie Thomas' Collegians, "Beautiful Ohio" (Earl) (02904).

6.57 : Tacet.

7.0 : News session.

8.0 : Chimes.

Relay of Vaudeville Programme from 3YA, Christchurch.

10.0 : (Approx.)—Programme of dance music, "H.M.V." hour.

Foxtrot with vocal refrain—Nat Shilkret's Orchestra, "Because I Know You're Mine" (Derickson) (EA515).

Foxtrot with vocal refrain—Jack Hylton's Orchestra, "I Kiss Your Hand Madame" (Erwin) (EA519).

10.9 : Banjo solo—Mario de Pietro, "Frivolous Joe" (de Pietro) (B2820).

Foxtrot with vocal refrain—Nat Shilkret's Orchestra, "I Want a Daddy to Cuddle Me" (Ebie) (EA515).

Foxtrot—Waring's Pennsylvanians, "That's How I Feel About You."

Waltz—Jean Goldkette's Orchestra, "Can You Blame Me" (Goodwin).

10.21 : Baritone—Noel Coward, "Lorelei" (Coward) (B2737).

Foxtrot—New Mayfair Dance Orchestra, "The Egg Song" (Salisbury).

Foxtrot—George Olsen and his Music, "In a Little Town Called Home Sweet Home" (Donaldson) (EA516).

Tango—Rio Grande Tango Band, "The Tile Trot" (Penso) (EA517).

10.33 : Comedian—Frank Crumit, "The Road to Vicksburg" (Crumit).

Foxtrot—Nat Shilkret's Orchestra, "Broadway Melody" (Freed).

Foxtrot with vocal refrain—Waring's Pennsylvanians, "My Castle in Spain" (Caesar) (EA523).

10.42 : Mandoline solo—Mario de Pietro, "Concert Mazurka" (Calace).

Foxtrot with vocal refrain—Nat Shilkret's Orchestra, "You Were Meant for Me" (Freed) (EA525).

Foxtrot—George Olsen's Music, "Makin' Whoopes!" (Kahn) (EA498).

10.51 : Comedian—Frank Crumit, "The King of Borneo" (Crumit) (EA524).

Foxtrot—George Olsen's Music, "Until You Get Somebody Else."

Waltz with vocal refrain—Rudy Vallee and his Connecticut Yankees, "Sweet Suzanne" (Leslie) (EA523).

11.0 : God Save the King.

Sunday, June 1

1YA, AUCKLAND (900 KILOCYCLES)—SUNDAY, JUNE 1.

3.0 : Afternoon session—Selected studio items, including Literary Selection by the Announcer.

4.30 : Close down.

6.0 : Children's session, conducted by Uncle Leo.

6.55 : Relay of Evening Service from Saint Mary's Cathedral. Preacher: Canon William Fancourt; Organist and choirmaster, Mr. Edgar Randall.

8.30 : (Approx.)—Suite—New Queen's Hall Light Orchestra, "Peer Gynt Suite." 1—Morning; 2—Death of Ase (Grieg) (Col. L1516).

Rass—Mr. D. Black, (a) "You Along O' Me" (Sanderson); (b) "All to Me" (Wilson).

Trio—The Studio Trio, "Trio in F Major." 1—Allegro; 2—Andante; 3—Presto (Reinecke).

Duet—Miss Beryl Smith and Mr. D. Black, "The Keys of Heaven."

Suite—New Queen's Hall Light Orchestra, "Peer Gynt Suite." "Anitra's Dance"; "Dance of the Imps" (Grieg) (Col. L1517).

Piano—Mr. Eric Waters, "The Island Spell" (Ireland).

Contralto—Miss Beryl Smith, (a) "That's All" (Brahe); (b) "June in Kentucky" (Ring).

Trio—The Studio Trio, (a) "Polonaise" (Gade); (b) "Valse Mignonne" (Palmgren).

Duet—Miss Beryl Smith and Mr. D. Black, "Come Sing to Me."

Piano—Mr. Eric Waters, "Merry Andrew" (Ireland).

Suite—New Queen's Hall Light Orchestra, "Peer Gynt." 1—Return of Peer Gynt; 2—Solveig's Song (Grieg) (Col. 02632).

9.30 : (Approx.)—God Save the King.

2YA, WELLINGTON (720 KILOCYCLES)—SUNDAY, JUNE 1.

3.0 : Chimes. Selected studio items.

4.30 : Close down.

6.0 : Children's Song Service, conducted by Uncle George, assisted by the children's choir from St. Mark's Anglican Church, under Mr. Small.

- 7.0 : Relay of Evening Service of Vivian Street Baptist Church. Preacher: Rev. F. E. Harry; Organist: Mr. Chas. Collins; Choirmaster: Mr. J. R. Samson.
 8.15: (Approx.)—Relay of the Band Recital of the Wellington Municipal Tramways Band from St. James Theatre.

3YA, CHRISTCHURCH (980 KILOCYCLES)—SUNDAY, JUNE 1.

- 3.0 : Afternoon Session, Gramophone Recital.
 4.30: Close down.
 5.30: Children's Song Service, by children of the Church of England Sunday Schools.
 6.15: Musical Recording from Studio.
 6.30: Relay of evening service from Holy Trinity Church of England, Avon-side. Preacher: Rev. G. W. Dent. Musical Director and Organist: Mr. Arthur Lilly, A.R.C.O.
 7.45: Intermission from Studio.
 Instrumental—Christchurch Broadcasting Trio, "Rondo from Trio in B Flat" (Schubert).
 'Cello—Mr. Harold Beck, (a) "Adagio Pastorale" (Handel); (b) "Minuet" (Mozart).
 Instrumental—Christchurch Broadcasting Trio, (a) "Barcarolle" (Tschalkowsky); (b) "Aberlied" (Schumann); (c) "Autumn and Winter" (Glazounoff).
 8.15 approx: Relay of programme from 4YA, Dunedin.
 God Save the King.

4YA, DUNEDIN (650 KILOCYCLES)—SUNDAY, JUNE 1.

- 3.0 : Chimes. Selected Gramophone Items.
 4.30: Close down.
 5.30: Children's Song Service, conducted by Big Brother Bill.
 6.15: Close down.
 6.30: Relay of Church Service from Knox Presbyterian Church. Preacher: Dr. Hunter. Choirmaster: Mr. C. Roy Spackman.
 7.45: Orchestral—Berlin State Orchestra, "Capriccio Italian Op. 45" (Tschalkowsky) (H.M.V. D1593).
 7.53: Tenor and Baritone—Caruso and Journet, "Crucifix" (Faure).
 7.57: Chorus and Orchestra, Berlin State Opera and Chorus, (a) "Parisfal is Led to the Hall"; (b) "Entrance of Knights" from "Parisfal" (Wagner) (H.M.V. D1541).
 8.5 : Baritone—Foster Richardson, "Why Do the Nations" (Messiah) (Handel) (H.M.V. A372).
 8.9 : Marches—National Military Band, (a) "American Patrol" (Meacham); (b) "Semper Fidelis" (Sousa) (Zonophone EE180).
 8.15: Studio Concert Programme, presented by the Kaikorai Band, under the direction of Mr. T. J. Kirk-Burnand.
 March—The Band, (a) "Simplicity" (Hume); (b) "The Church's One Foundation" (Anon).
 8.22: Mezzo-soprano—Miss Irene Heywood, "The Island Mermaid" (K. Fraser).
 8.26: Violin—Jascha Heifetz, "Zapateado" (Sarasate) (H.M.V. DB1048).
 8.30: Suite—The Band, 2nd Movements from "A Moonlight Suite" (Holst); (a) "Scherzo" (b) "March".
 8.39: Bass—Mr. W. G. Hilliker, "Nought Shall Warn Thee" (Weber).
 8.48: Male Choir—Lay Vicars of Westminster Abbey, "Stars of the Summer Night" (H.M.V. B2781).
 8.47: Selection—The Band, (a) "Teach Me, O Lord" (Arwood); (b) "Andante from Sonata No. 12" (Beethoven).
 8.55: Mezzo-soprano—Miss Irene Heywood, (a) "An Irish Lullaby" (Needham); (b) "O Thank Me Not" (Mallinson).
 9.2 : Weather report.
 9.4 : Violin—Jascha Heifetz, "Hebrew Melody" (Achron).
 9.8 : Selection—The Band, "Falstaff" (Verdi).
 9.19: Bass—Mr. W. G. Hilliker, (a) "Within These Sacred Bowers" (Mozart); (b) "Mate of Mine" (Elliott).
 9.25: Valse Carillon, The Band, "The Chorister" (Dodwell) (March). Carillon March—The Band, "The Contemptibles" (Stanley).
 9.33: God Save the King.

Australian News and Programmes

Thursday, May 22.

2FC, 9.30 p.m.: The Hurlstone Park Choral Society, the fifth entrant in the Radio Choral Competition, in vocal and instrumental selections.
 10.45 p.m.: The Garrick Players present "A Florentine Tragedy" (Oscar Wilde).

2BL, 9.30 p.m. and 10 p.m.: The Studio Orchestra present a selection of Scottish songs, with annotations by the conductor, E. J. Roberts.

3LO: The A.B.C. Dance Band present a dance programme. This is interspersed with vaudeville numbers.

3AR, 9.45 p.m.: Community singing from the Brighton Town Hall.

Friday, May 23.

2FC, 9.40 p.m. and 10.38 p.m.: The Harmonious Merry-makers will entertain. 11.38 p.m.: "The Retreat from Moscow," Tschalkowsky's "1812" Overture by the Collingwood Citizens' Band, relayed from 3LO, Melbourne.

2BL, 9.30 p.m.: The Australian National Orchestra, relayed from the Capitol Theatre, with studio items.

3LO, 9.30 p.m.: Famous composers—Rachmaninoff: A life-sketch, with selections from his compositions. 10.45 p.m.: Brass Band and variety concert, presented by Collingwood Citizens' Band and artists.

3AR, 9.45 p.m.: Special studio reproductions. Excerpts from "Tannhauser," followed by classical selections played by famous musicians of the present day.

Saturday, May 24.

2FC, 9.37 p.m.: "Sons of the Empire," a musical tableau introducing the national songs of Britain and her colonies.

2BL, 10 p.m.: Description of boxing contest from Sydney Stadium.

3LO, 9.57 p.m.: "A Story of Waterloo," by Sir Arthur Conan Doyle.

3AR, 9.50 p.m.: Transmission from Hotel Windsor of Empire Day speeches from Royal Empire Society dinner. Speakers will be his Excellency the Governor, Lord Somers; the Lieut.-Governor, Sir William Irvine; and General Sir Harry Chauvel. 11.15 p.m.: "The Pickwick Club," episode IV of a series adapted from "The Posthumous Papers of the Pickwick Club," by Charles Dickens.

Sunday, May 25.

3LO, 9.30 p.m.: Band and variety concert presented by the Malvern Tramways Band and assisting artists.

3AR: A special Beethoven programme arranged by Professor Bernard Heinze, introduced by a short commentary on the life of Beethoven and his influence on the music of to-day.

Monday, May 26.

3LO, 9.30 p.m.: "Ye Olde English County Fair," an atmospheric radio scene. 10 p.m.: "The Fall of a Star," the tragic story of Marie Antoniette, told by Captain Donald MacLean. 11 p.m.: "Three Green Bonnets," a musical sketch.

3AR, 9.45 p.m.: Brass Band and variety numbers. 10.27 p.m.: "A Dartmoor Escape," a comedy-drama.

Tuesday, May 27.

3LO, 9.30 p.m.: Gypsy melodies, a selection of well-known songs and compositions by famous masters. 11 p.m.: "The Rift in the Loom," a comedy presented by Catherine Neill Players. 11.30 p.m.: Light music and comedy.

3AR, 9.45 p.m.: "Memories," Australian reminiscences by "Two Old Pros." 10.30 p.m.: "The Evening Patrol," a play in one act.

Wednesday, May 28.

3LO, 9.30 p.m.: Australian composers. A recital of original music and poetry. 10.30 p.m.: "Ma Mie Rosette," a studio presentation of this famous romantic opera, with full choruses and the National Broadcast Orchestra.

3AR, 10.15 p.m.: Annual meeting of the Victoria Association of Braille Writers, at the Braille Hall, South Yarra.

"What the Public Wants"

Attitude of B.B.C.

WE commented recently upon the public statement of Sir John Reith, governing director of the British Broadcasting Corporation, that it was his considered view that to "give the public what it wants" would in the ultimate lead to a degeneration of public taste. The policy of the British Broadcasting Corporation, therefore, was to endeavour to improve the public taste by a considered programme of desirable works, rather than pander exactly to the popular clamour. In his famous "Children's Newspaper," the well-known journalist, Arthur Mee, writes on this point as follows:—

"We like Sir John Reith, and we like his B.B.C. We think we are going to like both of them even better, for Sir John has made a great discovery. He has discovered the mistake of giving the public what it wants. It will be a great day when the editors of newspapers with mighty circulations are as wise as Sir John Reith. To give the public what it wants is to keep the public satisfied with what it is. If we understand Sir John rightly, he is in favour of giving the public what it ought to want. If Sir John

will follow it he may satisfy his noblest dreams, for a head of the B.B.C. who would give the public what it ought to want would make himself perhaps the most powerful man in the world.

"Whether we like it or not, the B.B.C. has become the most powerful single instrument in the nation. Civilisation has waited a thousand years for such a power as this, and to-day Sir John Reith has it in his hand. There are things the public wants simply because it knows no better. There are millions who want silly things. There are those who would have us believe that the majestic poetry of Wordsworth or Keats, or of our own living William Watson, is nothing, and that the twaddle of Steins and Sitwells is the stuff to give us.

"There are publishers who publish unclean books, and publicists that will buy them. There are men with the muck rake everywhere. There are jazzers in music, quacks in art, and freaks and shams on every hand. They fill the papers and think themselves great people, and the public lends them its eyes and ears.

"We look forward with delight to the policy of the B.B.C. giving the public what is good for the public. It will help to make life sweeter. It will spread knowledge and the love of beautiful things. It will not scorn to be amusing and to entertain us; but it will draw the line where the line should be drawn, remembering that liberty is not licence, and that an English home is still a fair and pleasant place."

Gramophone Pick-Ups

A Guide to Convenience and Worth-While Results

By "CATHODE"

BEFORE going on to the matter of connecting the now-popular gramophone pick-up in circuit, it seems desirable to treat, at least briefly, the subject of pick-ups in general, and of their output. The reader will then be in a position to decide for himself the type of circuit best fitted to suit his own particular requirements.

The amount of amplification necessary to give the best results from a pick-up naturally depends upon a number of factors. The most important of these are:—

- (1) The design of the pick-up—that is, its voltage output under normal circumstances.
- (2) The type of needle to be employed.
- (3) The grid-swing necessary to properly load the power-valve employed.

These can be dealt with in turn. Of the numerous designs of pick-ups which have at various times been introduced, only two major types have survived. Of these, the single acting type illustrated in Fig. 1 usually has the greater output, but suffers from certain disadvantages. It will be seen that this pick-up derives its electrical output as a result of a vibrating reed varying the magnetic flux between two pole pieces, both located at one side of the reed (the reed is, of course, caused to vibrate by its mechanical connection with the needle which follows the record groove). The disadvantages are obvious. Firstly, serious amplitude distortion results from the fact that the flux varies as the square of the dis-

tance of the reed from the pole pieces; secondly, the major part of the flux necessarily passes through the reed, and is likely to cause saturation; thirdly, as the pull on the reed is in one direction only, a stiff and heavy reed and a powerful restoring force are necessary to ensure that the reed will not fall on to the pole pieces.

Advantages of Double-acting Movement.

THE double-acting, or differential, movement is, for the reasons outlined above, fast ousting its rival. Here the flux in the armature when at rest is zero, as the diagonal fluxes from the pairs of opposite pole-pieces cancel out. When the armature is displaced, the greater part of the flux concentrates in one path, thus inducing an E.M.F. in the coil C (Fig. 2), but a certain residue still flows in the reverse direction and tends to correct the amplitude distortion which the single-acting pick-up necessarily gives rise to as a result of the square-law principle mentioned previously. There is still a certain tendency for the armature to stick over on the pole-pieces, but this is so small that it is unnecessary to strengthen the reed to resist it. The necessary retorting force can be supplied by the rubber damping pads D.

This ability to reduce the size and strength of the reed is of importance in another direction. Frequency distortion, or the tendency to give undue prominence to certain parts of the musical scale, resolves itself largely into a question of resonance in the reed. Any vibrating system involving mass

and a restoring force will resonate at one fundamental frequency (and possibly at harmonics of this frequency), which is determined by the magnitude of the mass and of the restoring force. If the pick-up is to have good characteristics this major or fundamental resonance should lie outside the range of fundamental frequencies used in speech and music.

Frequency Adjustment.

SINCE the resonance cannot well be lowered to 30 cycles or less, it must be raised above 3500 cycles. Lessening the mass or increasing the restoring force both have the effect of increasing the resonant frequency; but too great

Igranic	0.55	0.25	0.6	0.05
Igranic (tone-arm model)	0.8	0.4	0.85	0.15
Loewe	0.15	0.05	0.05	0.05
Philips	2.7	1.5	1.0	0.05
Varley	0.3	0.35	0.05	0.05
Webster ...	1.5	0.75	0.6	0.5

Considering Voltage Output.

THE reader, in studying the table, should not fall into the common error of measuring the quality of a pick-up by its maximum voltage output. As a matter of fact, some of the best of the pick-ups whose characteristics are given have only a very small output of any frequency. What is important is that the voltage output shall be substantially the same

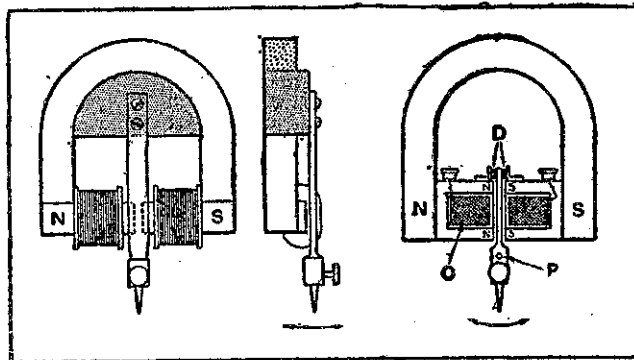


Fig. 1 (left).—Single-acting or unbalanced armature pick-up. Fig 2 (right).—Differential or balanced armature pick-up.

a restoring force is undesirable, tending as it does to heavy record wear and restricted output. Thus the usual and proper process of design is to reduce the mass of the reed to the lowest possible amount and then to add just sufficient restoring force in the form of rubber damping to raise the frequency to the desired figure and to maintain the reed centrally in the gap between the pole pieces. The rubber pads also, of course, absorb a certain amount of energy and thus reduce the effect of the inevitable minor resonances.

As already pointed out, it is desirable, before essaying to design or decide upon a suitable amplifying circuit, to have some idea of the voltage output which may be expected from the pick-up to be used. The more sensitive pick-ups usually develop a maximum voltage slightly less than one volt, but those who desire more precise information may find Table 1, covering a number of commercial pick-ups operating from a fairly deep-cut test record, of some use.

Table 1.

Make.	Volts (r.m.s.)			
	250 cycles	1000 cycles	2000 cycles	4000 cycles
Amplion ...	0.1	0.4	0.15	0.05
E.T.H.	0.85	0.4	0.55	0.8
Blue Spot ..	0.85	0.4	0.25	0.05
Brown No. 3	0.15	0.2	0.35	0.15
Brown No. 2	1.4	0.75	1.6	0.05
Burndy	0.1	0.05	0.05	0.1
Celestion ...	0.4	0.3	0.35	0.05
G.E.C.	0.35	0.25	0.85	0.05

at all frequencies in the audible range. A slight rise in output toward the extremities of the range is sometimes of advantage in counteracting the deficiencies in recording at these frequencies. The fact that the output is small is of no importance whatever, since, except where an existing amplifier providing only a small gain must be used, any deficiency in this respect is easily made up by increasing the gain of the amplifier.

The effect of the needle on the output must not be overlooked. A soft-tone needle having a relatively large amount of "whip" or spring will reduce the output appreciably. As a guide to the relative outputs to be expected from various types of needle, in Table 2 are the results of some measurements with H.M.V. needles.

Table 2.

Needle.	Relative output (per cent)
Tungstyle, extra loud	100
Tungstyle, loud	90
Tungstyle, soft	80
Steel, extra loud	85
Steel, loud	80
Steel, half-tone	75
Steel, soft	45

The Tungstyle needles appear to offer advantages, but their relatively high mass tends to lower the resonant frequency and bring it within the audible range. The steel "half-tone" needle is a good compromise: its weight is small, yet there is not enough "give" to reduce the output seriously.

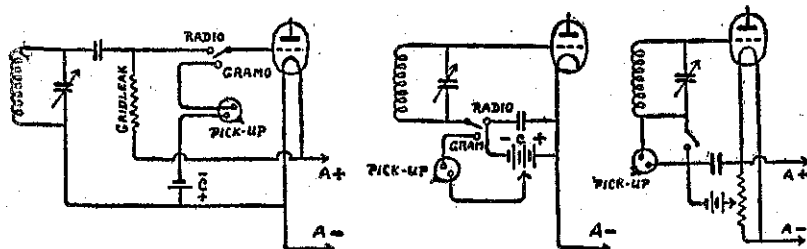
A New Valve ! A Better Valve ! and it's a RADIOTRON ! ! !

The new UX221 is a valve the need for which has long been felt.

It means a big saving on your "A" battery, consuming only .06 amperes. It will fit in the place of the 201A valve without any alterations—but that is not all. Fit one and notice the improvement in volume and tone.

THOS. BALLINGER & CO., Ltd.
58-62 VICTORIA STREET :: WELLINGTON

"Where the Quality Goods are Sold."



Figures 3, 4 and 5.

The method of designing such an amplifying circuit as will permit the pick-up to properly load the output valve or valves will no doubt be fairly obvious. Assume that a single output valve of the 171 or 171A type is used in the output stage. Such a valve will, at maximum plate volts, have a grid bias of approximately 40 volts, so that the grid swing will have a peak value of 80 volts, or a R.M.S. voltage of 56 volts (the R.M.S. or root mean square voltage is 0.707 of the peak voltage). Now our table will tell us the maximum B.M.S. voltage which the particular pick-up in use may be expected to develop. We will assume that in this case it happens to be 0.5 volts. Then $56 \div 0.5 = 112$, that is, an amplification of 112 must be provided, between the pick-up and the grid of the last valve. If a transformer is used preceding the last valve, this in itself will provide an amplification corresponding roughly to its ratio, say, 3.5 to 1. The amplification still required will be $112 \div 3.5 = 32$.

There are valves with an amplification factor as high as this, and if one of these were used to precede the transformer, the pick-up could be connected directly in its grid circuit. The writer would prefer, however, in such an instance, to use two stages of amplification preceding the power-valve, and to reduce the ample voltage which would then be available by means of a suitable volume-control. It is very comforting to have amplification in hand to cope with such eventualities as a very lightly recorded disc.

Adapting a Receiver for a Pick-up.

It will be appreciated that there is always a certain doubt as to whether a single amplifying valve preceding the power-valve is adequate, especially where the power-valve is of really adequate size. There are circumstances in which one is necessarily limited to an amplifier of this size, however (e.g., where a "detector and one audio" receiver is to do service as amplifier), and in such cases it is well to remember that the amplifying valve should be one having a high amplification factor, while the pick-up should be chosen from those having a comparatively high output.

Where a receiver of the "detector and two audio" type is available, a choice is available between a two-valve

amplifier and a three-valve amplifier. Assuming, of course, that the amplifier is also to do service as a radio receiver, it will be clear that to provide a three-valve amplifier will necessitate employing the detector valve as one of the amplifying valves. This may conveniently be done with either a grid detector or a plate-bend detector by switching in the pick-up at a convenient point, at the same time adjusting the bias applied to the grid so as to enable the valve to operate efficiently and without distortion as an amplifier.

Figure 3 shows a suitable circuit for the introduction of the pick-up into the grid circuit of a grid detector. All that is necessary is a switch (single-pole double-throw or equivalent or a plug and socket arrangement, whereby the grid may be changed over from its usual connection (to grid condenser and leak) to the pick-up. The circuit is completed to filament through a bias battery, which may consist of a single dry cell unless the detector valve has a lower impedance than usual. It should be noted that in this circuit, unlike the case where it is a plate-bend detector which is to be converted, the switch is at high oscillating potential.

Care must therefore be taken to avoid long wandering leads, while it is wise to choose a switch of small dimensions, a large mass of metal being undesirable. Any risk of impairing the performance of the set as a wireless receiver can be obviated by fitting the switch on a small block of ebonite, which can in turn be mounted on the baseboard in close proximity to the grid terminal. Convenience is sacrificed, but a panel switch is in this case likely to be a source of trouble, unless it can be wired with short leads.

An anode-bend detector is more readily and conveniently modified, since the switch and pick-up may be introduced at a point of low oscillating potential. A suitable circuit is shown at fig. 4. Here, with the switch in the "radio" position, the low-potential end of the tuned circuit is returned to filament direct through the full bias voltage, while for gramophone reproduction it is completed through the pick-up, and a lower voltage tapping. The presence of the tuned circuit in series with the pick-up will not, of course, have any effect, as the current generated by the pick-up is

of audible frequencies, and these will be unaffected by the tuned circuit.

Only a very simple alteration is necessary where the grid voltage on a plate-bend detector is controlled by a potentiometer. As can be seen from Fig. 5, all that is necessary in this case is to provide a switch by means of which the pick-up may be short-circuited when not in use. When potentiometer settings for the alternative methods of reproduction have been determined, it is convenient to mark appropriate positions of the control knob.

Omitting the Detector Stage.

It may be desired, in cases where a pick-up having a considerable output is employed, to avoid pressing the detector into service. Naturally, where the radio receiver to be employed as amplifier is of the detector and one audio type this is impossible, but where the receiver has two audio stages, these are usually adequate to give satisfactory results from the more sensitive pick-ups without having recourse to the detector for further amplification. The pick-up is inserted at some appropriate point in the grid circuit of the first audio valve. In the case of a stage of resistance-

A rather more difficult application is that shown in Fig. 8, where a closed double-circuit jack is again used, this time to connect a pick-up in the grid-circuit of a plate bend rectifier, at the same time automatically adjusting the bias to a proper value for amplification. Here, the lower spring (the shorter of the two connecting with the plug) is connected to the low potential side of the tuned circuit. The next spring up (a short one) is connected to a point on the bias battery suitable for plate bend rectification. The third spring up (another short one) is left unconnected, and the top spring might also be left unconnected were it not for the necessity of providing some form of volume control. As it is, it will be seen that it is connected to one terminal of a variable resistance which operates as a volume control, the other terminal being connected to the lower spring; lastly, and let it not be forgotten, the frame of the jack is connected to a low value of bias on the battery or other source of negative grid voltage.

Volume Control.

THE mention of volume control brings us rather aptly to a discussion of

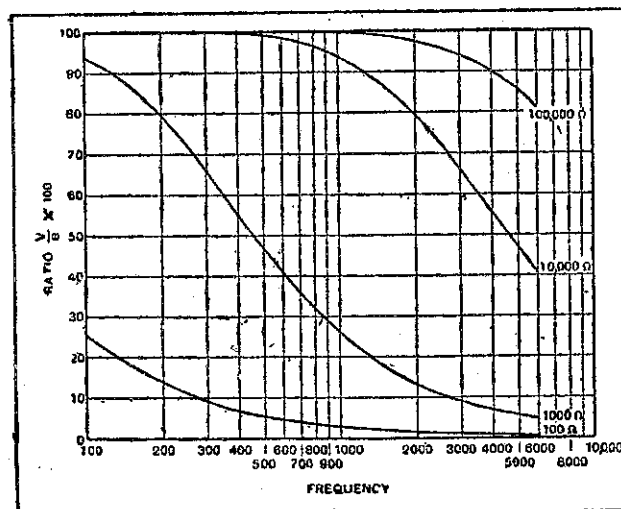


Fig. 10.—Calculated curves showing high frequency cut-off for various values of R in Fig. 9. It is assumed that the pick-up impedance is purely inductive and an inductance of 0.6 henry has been taken as a basis for calculation.

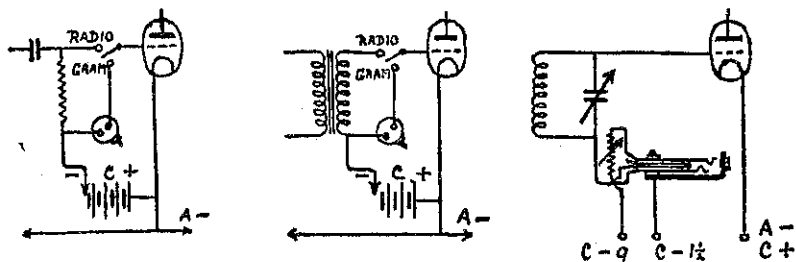
capacity amplification, a suitable arrangement would be that shown on Fig. 6, while for a transformer-coupled stage, the circuit of Fig. 7 would be suitable; there is no need to alter the bias of an audio stage when the pick-up is introduced as it is already adjusted for distortionless amplification.

It has been assumed, so far, that it is desired to leave the pick-up permanently connected in circuit. Where it is desirable to keep it available for other purposes (e.g., testing receivers) while being able to use it at will, a plug and jack arrangement is the most convenient. The pick-up is connected to the plug, and the jack permanently wired into circuit. Generally speaking, the reader will experience little difficulty in adapting the circuits already given to plug and jack operation. For example, a transformer-coupled first audio might have the connections from transformer to plate and B+ made through a closed double-circuit jack (the transformer being connected to the two outer springs). The insertion of the plug would then place the pick-up in series with the transformer primary and break the connections to plate and B+.

the two usual methods of accomplishing this very necessary function. It is well-nigh impossible to do without some form of volume control. In the circuit of Fig. 8 a variable resistance of high value was shunted directly across the pick-up; the method is illustrated more clearly in Fig. 9a. This arrangement, however, is open to certain objections. Where the pick-up in use is one inclined to shrillness—that is, one having a resonance peak at the higher frequencies—it is unobjectionable. In fact, it may be advantageous so long as there is not too much reduction of volume necessary.

In the case of a more normal pick-up where the high-frequency response is already rather feeble, a shunt resistance may well have the effect of wiping out the higher frequencies altogether. The effect of shunts of various resistances is shown graphically in Fig. 10. Remembering that we wish to preserve frequencies up to 5000 or 6000, the desirability of avoiding low shunt resistances is not hard to see.

For this reason, then, a potentiometer control of volume is to be preferred. This method of control is illustrated in Fig. 9b. There is still a shunt re-



Figures 6, 7 and 8.

sistance, of course, but it can be of a high value—say 100,000 or 200,000 ohms.—so as not to affect the response curve.

The circuits given have, of course, been shown in the form of battery-

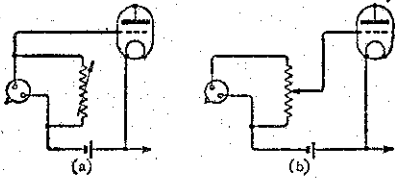


Diagram 9, left.
Diagram 9, right.

operated receiver circuits. It is not anticipated that readers will have any difficulty in applying them to a.c. receivers as the major connections are the same. It is proposed, however, in certain future a.c. designs, to incorporate special provision for the inclusion of a pick-up, and these designs will doubtless be of assistance to readers wishing to modify an existing a.c. receiver for gramophone reproduction.

SWITZERLAND develops so much more hydro-electric power than it needs that in the last year it was able to export over one billion kilo-watt-hours. We believe that many parts of Holland are supplied by electricity similarly imported from Germany, and very cheaply into the bargain. New Zealand, we are afraid, will be hard put to it to find a market when the supply exceeds the demand on account of her geographical position. That time, however, is not yet.

Reader's Suggestion

YOUR articles on wireless aereals were most interesting and instructive. Permit me to give my experience in making and erecting mine. The masts are made of oregon pine 3in. by 2in. Three lengths, each 25ft. long, are required, and can be used either rough or smooth. Before erection they require at least two good coats of paint. Two pieces, each 2ft. 6in. long, are cut from one of the 25ft. lengths. These are fastened between the two long lengths, with half-inch bolts and nails. One piece is placed at the end and the second piece about the middle of the long lengths. The end of the remaining long length has two bolt holes, drilled to correspond with similar holes through the top of the bottom section of the mast. The topmast, with pulley for aerial, back stay, and side stays attached, is now loosely bolted through one of the aforesaid holes in the lower mast, which is now ready for erecting.

Owing to its comparatively short length, viz., 25ft., the lower portion is easily erected. A board placed at one side of the hole, for the foot of the mast to rest against, will prevent it sticking into the earth, as the mast is raised. When this operation is completed, the hole can be filled with concrete. The topmast will have its lower end sticking up at an angle. By means of a strong thin line, or wire, previously attached, it is an easy matter to elevate the top half until a strain can be placed on it by means of the back stay. Just before it reaches the extreme vertical position, a ladder can be placed

against the lower section, and the line removed. A further haul on the back stay brings the lower bolt-hole in line, and with the insertion, and tightening up, of the bolts the job is done. All that remains now is to anchor the back and side stays, and haul up the aerial. The above idea is cheap, easy to carry out, and will stand any amount of wind. I have found three side stays ample, but more can be added if desired.

A Simple Lead Indicator

IT is often necessary to find out which is which of various battery leads, particularly when multiple cables and twin-flex wire is employed. If you have a voltmeter of the polarised type, that is to say, one which has to be connected a certain way round as regards positive and negative, this is a simple matter.

All you need do is to connect the voltmeter at the end of the leads from a battery and note whether a reading is obtained or whether the needle tries to kick back off the scale. If the needle indicates a reading, the positive lead is the one joined to the positive terminal of the meter; or if the needle kicks back, then the positive lead is the one joined to the negative terminal. The meter must not be used on voltages greater than the maximum reading on its scale.

It will be appreciated that this method of telling one lead from an-

Weird Wireless

(Concluded from page 3.)

rent to and from the bit of rail between them. Half-way between these main brushes is a trio of searching brushes connected in a kind of push-pull way to a transformer. The secondary of this transformer goes to a four-valve amplifier which works various relays, and when any kind of flaw upsets the symmetry of the current flowing in the rail, these relays do their work—they sound a warning buzzer, record the exact position on a travelling tape, and even go so far as to spray a blob of paint on to the offending bit of rail.

Having done all this, they send off a wireless message to H.Q., packing the foreman responsible of laying that bit of rail . . . and that is the only bit of exaggeration this article contains.

other is very useful in the case of loud-speaker and other extension leads. In this case, a small battery should be connected across two of the wires at one end, and the meter joined across various pairs of wires (if there are more than two leads) at the other end.

When the meter is connected to the same two as the battery, the needle will move, and according to whether it kicks back or gives a proper reading it will be possible to tell which of the two wires is joined to the positive of the battery. The meter is thus being used as a polarity indicator and enables you to differentiate between the various leads.

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Farrand Inductor Dynamic Speaker

A New type of Unit with many Outstanding Qualities.

Tone ?

True and lifelike—with full round bass—yet with no sacrifice of those subtle higher tones which are so important and which so many other speakers fail to reproduce satisfactorily.

Volume ?

Yes—decidedly yes—if you desire it, as you may judge for yourself.

Adaptability ?

Wonderful—sensitive enough to work beautifully from a one-valve amplifier, and yet has ability to handle the output from a large push-pull amplifier.

Any current supply required ?

None— isn't that splendid! No field to feed either by battery or rectifier from main supply.

Baffle ?

Yes—all good cone speakers use a baffle, but as the deep bass notes are there naturally in this speaker, the baffle may be of the simplest.

Hum ?

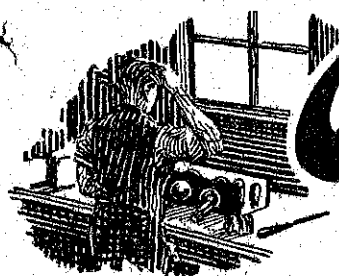
Whisper this—none!—from its very nature this speaker cannot add any.

Price ?

Ah! the price—a pleasant surprise awaits you on enquiry from

L. M. SILVER & Co. Ltd.,

ELECTRICAL ENGINEERS,
30-32 Lower Tory St., Wellington
Agents for New Zealand



Questions and Answers



"PUZZLED," Auckland, asks the following questions concerning the band-pass four:—

1. What is the size of the panel—24 x 7.

2. Concerning the coil formers. The list says 1ft. of same. Are the formers for each coil 4 inches long?

A.: The usual method in winding inductances is to wind on the number of turns for the smallest coil on to the total length of tubing, leaving about half-inch at one end. When this is wound, cut the former, leaving about half-inch clear from the end. Then wind the next sized coil, and finally the two coils for tickler and secondary. You will find by doing this that you have a little to spare.

3. Concerning the by-pass condensers. What is the value of the one on the left of the detector socket?—1 mfd.

4. The list of components prescribe two 2 mfd. and one 1 mfd., whereas the wiring diagram shows six, and the theoretical diagram five. How do you account for this?

A.: The total of by-pass condensers is five, but the grid condenser shown in the layout, slightly smaller than the by-pass condensers, give the appearance of six by-pass. There should be two 2 mfd. and three 1 mfd.

4. Regarding the coils. The diagram shows the coils marked C, D, E, F. Which are the ends of the secondary and tickler?

A.: The lower sketch shows this, though the lettering has been slightly obliterated. It should read: Top reaction, C; bottom reaction, D; top secondary, C; bottom secondary, F.

5. It was stated that all condensers might be ganged with a balancing condenser as shown. Where is it shown?

A.: In the theoretical diagram.

6. There are four condensers illustrated. Can they all be ganged, making single dial control?

A.: The three tuning condensers can be ganged, that is, the one in the screen and the two tandem, but the reaction must be separate. To gang the three condensers the layout must be separate, and will have to be altered slightly. The condensers in the shield must be turned round so that the shaft passes through the shield, to connect with the other two condensers, which are interchanged with the reaction condenser.

7. Re the fuse in screen-grid lead. Where is it placed?

A.: It is shown in the layout diagram in series with B+ "screening grid." Note the difference between the shaded lines as shown on the shield and the solid ones. The shaded portions represent large holes in the shield, covered with insulation, so that the wire passing through may not touch. The solid patches show connections.

8. I presume the rheostat controls the detector and screen grid valves?

A.: As shown, yes. However, the other three valves are shown without any control. A—must be brought to one side of the switch and the other side of the switch taken to the rheostat. To the other side of the rheostat must be connected all the leads to be controlled by it, presumably the screen grid valve and the detector. The audio valves should be connected to the side of the rheostat nearest the switch.

"SUPREME" (Waikato) has replaced a transformer and finds that there is a continual squeal which cannot be controlled.

A. Reverse the connections to the primary of the replaced transformer. Everything appears to be correct from your description except this.

"C.W.D." (Wellington) states that some time ago he asked if it were possible to construct a crystal set for receiving short-wave broadcasts. Our answer was in the negative. The correspondent has recently received a short-wave station on his set.

A.: This sometimes happens when the set is close to the transmitting station. It is very difficult to explain.

"A.E.A." (Avondale) states that he altered a set and found that it would go better with the four valves than when the last audio was switched into the circuit, but directly the rheostat was turned up the five came on with greater volume than before.

A.: This is due probably to the fact that when an amount of current passes through a resistance (the rheostat) the voltage drops. When more current is passed through the same resistance the voltage drops still more. As this current is passed to all the valves it probably explains the phenomenon.

"N.S." (Hastings) asks how he might neutralise a Fada.

A.: Find the neutralising condenser, in most models of this receiver they are like the regulator of a clock. Find out which one controls the valve nearest the detector. Stop filament current reaching this valve by isolating one of the prongs. This might be done by wrapping thin silk round it. Adjust the condenser until the signals are at minimum strength, then remove

the silk and repeat the process with the other valve.

"HOPEFUL" (Manuka) has a three-valve battery set and with a long aerial cannot receive the local private station. He asks if a series condenser in the aerial of .00025 would bring in these stations.

A.: Probably, for it seems as though the long aerial is raising the minimum wavelength the set can tune to. A series condenser has the same effect as reducing the length of the aerial.

2. Can I add another valve to the set. If so, what would be needed other than the valve?

A.: If the set is one radio detector and one audio, another valve can be added to the audio quite well. If, however, it is detector and two audio, there is not much hope. To add another audio stage you will require in addition to a valve, a full knowledge of what you are doing, and an extra transformer.

"T.M.L." (Kilbirnie) has built the tetrode crystal set and amplifier, but has not had success with it. The reaction coil does not work.

A.: The condenser between the primary and the secondary of the transformer should be connected on the aerial side of the crystal. If this is not fully effective, insert 4-megohm grid leak in series with the grid of the detector. It may be necessary to try a low frequency choke in series with the plate of the valve and the loudspeaker. The bottom of the tapped coil is earthed.

"H.G.T." (Wellington) drops a note stating that his first query was overlooked. He adds, "I was under the impression that enquiries of this sort were encouraged in your paper." He then details three questions concerning an aerial.

A.: In the first place we must justify ourselves for delaying reply. We specifically ask that all technical communication be addressed to the "Technical Editor." Both letters were addressed "The Editor," and the first lost its way because of this.

1. Although the aerial is 40ft. above the ground or grounded objects does not the lead-in lower its capacity to earth?

A.: Only rarely. The ideal aerial is about 50ft. vertical. It is the horizontal part that gives the trouble. If this is low, the capacity is unduly lowered.

2. If one pole is erected 50ft. and an aerial runs from it to a pole 20ft., would not the extra efficiency of the portion above the average height compensate for that below?

A.: To a certain extent. It will be better than an aerial 20ft. high, but it will not be as good as 40ft. both ends.

3. At the worst, would not the effect be equal to an aerial say 30ft. long varying in height from 50ft. to 37ft?

A.: This aerial would not be as good as the other.

"D.C." (North Auckland) asks if it is possible to make eliminators from D.C. mains.

A.: Yes, they are quite successful. One will be described in the "Radio Record" shortly.

"E.W.2" (Auckland) is assembling "Round-the-World" Two, and is not clear about the coils. He asks the number of turns on each coil and on the tickler.

A.: The first set of numbers refers to the secondary coils, which are tapped to eliminate the primary, the second set of numbers refers to the tickler coils, which are built up in exactly the same manner as the secondaries.

"L.C.B." (Nelson).—The set of valves is quite O.K.

"G.J.L." (Oamaru) finds that his set operates on the 40-90 metre band, but will oscillate in one place only on the 16-45 metre band.

A.: Increase the number of turns on the tickler for this particular band and try a series condenser of small value (midget) in series with the aerial to remove any dead spots.

"W.B.H." (Houipapa) thinks that his set is overloading as it does not give good tone. Distortion is very bad at night, though fairly good in the daytime.

A.: Your situation may be bad, but it seems that a great deal of trouble is being occasioned through the use of a power valve in what appears to be the second last socket. Where PM6 should not be used in other than the last stage, PM5 should be used in all other sockets, but PM6D used as detector. See that your grid bias voltages are correct, and that the grid circuit of either of the valve is not open.

"COURIER" (Wellington) asks if it is necessary to instal a lightning arrester in an all-electric set.

A.: Yes; there is not one in the circuit.

Radio Literature

Largest stocks south of the line for Amateurs and Broadcasters. "Handy's Handbook," 6th Edition, 5/3, posted. Extra supplies arriving shortly. Send order now. 7th Edition not available until October next. Write us.

TE ARO BOOK DEPOT,

62 Courtenay Place, WELLINGTON.

Would you like to be one of those who get about and SEE PLACES?

Qualified Radio Operators see the world under ideal conditions. Start learning to-day. For full particulars

JOHNSON'S WIRELESS SCHOOL
BRANDON STREET, WELLINGTON.

Short-wave News.

MR. MORRISON (Wellington) reports reception of HKT on Saturday, May 17, signing off at 4 p.m. HKT is located at Bogota, Columbia. They transmit daily on 48.5 metres from 12.30 p.m. to 5.30 p.m. New Zealand time.

Finger-prints by Short Waves.

THE Berlin and Buenos Aires police have recently exchanged finger-prints by means of a short-wave service between Nauen and LOK, Buenos Aires. Reception is described as satisfactory at both ends, the finger-prints being easily identifiable.

Short Waves from Rumania.

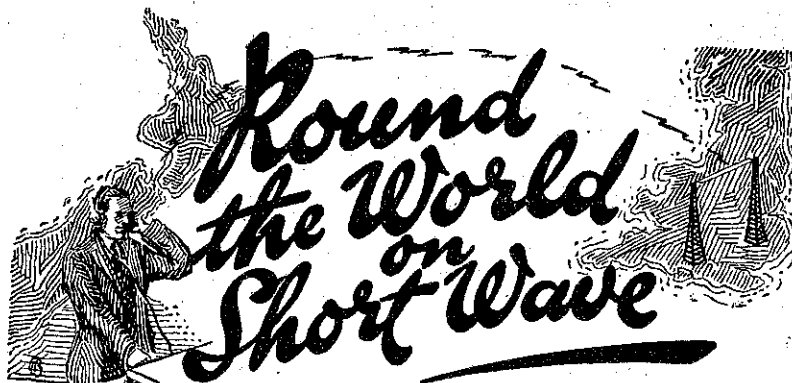
A NEW short-wave station is to be erected in Rumania for communication principally with Berlin, London, and Paris. Power and wavelength are at present uncertain.

Important Items from 5SW.

CHEIMS FORD regularly gives particulars of important items to be expected within the next 24 hours at 5.25 a.m., 10.35 a.m., and 10.55 p.m., New Zealand time.

WANTED AND FOR SALE.

For column of casual advertisements see page 31.



Log For Week.

Sunday, May 11.

5SW was R8 at 8 a.m., but too gushy to be readable. By 9.30 a.m. strength was less but more clear. Ambrose and his orchestra were heard from the Mayfair Hotel till 10.30 a.m., when 5SW closed down.

Zeesen at R8-9 were very mushy at 8 a.m. W2XAF were just audible at 11.45 a.m., reaching fair volume toward signing off time.

W2XAD at 11.45 a.m. were R2. They increased for a while, but were inaudible early in the afternoon. W6XN was gushy at R6 at 1 p.m., gaining in volume to R9 by 3 p.m.

W9XF was R8 at 5 p.m. RA97 with talk was R8 at 9.30 p.m. KIXR from 9.30 p.m. had a very strong gushy carrier wave, while music was only R6.

Monday, May 12.

ZEESEN at 6.45 a.m. was R8-9, being the only station heard in the morning. 2ME and GBX at 6.40 p.m. were R9 and R8 respectively with commercial duplex.

KIXR were on about 25.3 metres at 8 p.m. Strength R7, gushy with slow fades. They closed at 8.30 p.m. On about 32 metres at 10.25 p.m. music and talk was heard at R7 with very bad fading. Morse on top of it made speech impossible to read. They went off the air just after 10.30 p.m.

RA97 at 10.30 p.m. were R9 with severe static.

Tuesday, May 13.

THE 41.6 metres station was just audible at 6.15 a.m. VK2ME at 6.15 a.m. were only R3, increasing to R8 by 7.30 a.m. GBX were just audible at 6.15 a.m., also rising to R8 by 7.30 a.m. 5SW inaudible at 6 a.m. R7, but gushy, at 7.30 a.m. KIXR at 6.30 p.m. were R3-4, with talk, music being R5. They increased to A8 by 8.30 p.m., when they closed after giving details

Zeesen was heard till after 6.30 a.m., when they were R8-9. KIXR was very weak during the early evening, and inaudible at 10 p.m.

On about 26.7 metres at 6.45 p.m., a voice was heard, but too weak to be readable. 2ME and GBX at 6.45 p.m. were R9 and R3. On about 32 metres at 6.50 p.m. several "Hullo's" were heard at R7, but nothing else.

RA97 at 10 p.m. was R8. W9XF was tuned in at 10 p.m., when a special test programme was being transmitted for Japan. Strength was R3 with a slight slow fading. After some music a talk in Japanese was heard.

Thursday, May 15.

ON about 35.3 metres at 6.10 a.m. a woman's voice was heard calling "Hullo." Reception was too weak to hear more than odd words.

Zeesen was R7 at 6.30 a.m. and R8 at 7 a.m. Reception was spoiled by gushiness. GBX was R5 at 6.20 a.m. to R8 by 7 a.m., talking to 2ME, who was not audible here during that period. G5SW was only R1 at 6.30 a.m., and R4 at 7 a.m.

2ME at 6.30 p.m. was R9, while GBX was only R2. KIXR, on about 25.3 metres, was R7 with records till 8.30 p.m., when it signed off till 9.30 p.m. It was not heard again till after 10 p.m., when it was R5 with bad fading.

W9XF was on again with another special test for Japan on request of the Chicago World Fair Committee. Reception was excellent, except for slight static, at R8-9 at 10.15 p.m. RA9-7 was R8 at 10.30 p.m. Static was very bad.

Friday, May 16.

GBX was very weak, while 2ME was not audible at 5.45 a.m. The 41.6 metres station was just audible. Zeesen, from 6.30 a.m., was very gushy at R4. PCJ also was very poor, R4, with a lot of mush till after 6.30 a.m.,

Stations Heard During Week Ending May 17.

RA97, Siberia, 70 metres: Each evening.
W9XF, Chicago, 49.83 metres: Sun., Wed., Thurs., and Saturday.
W3XAL, New Jersey, 49.18 metres: Saturday.
W2XAF, Schenectady, 31.4 metres: Saturday and Sunday.
ZEESEN, Germany, 31.38 metres: Each morning.
PCJ, Holland, 31.28 metres: Friday and Saturday.
NRH, Costa Rica, 30.5 metres: Saturday.
VK2ME, Sydney, 28.5 metres: Daily.
GBX, England, 27.5 metres: Daily.
5SW, England, 25.53 metres: Each morning except Monday and Saturday.
KIXR, Manila, 25.3 metres (about): Each day except Friday.
W6XN, California, 23.35 metres: Sun., Tue., and Friday.
W2XAD, Schenectady, 19.56 metres: Sunday.

of their programme for the evening session to commence one hour later. Volume from 9.30 p.m. was R8-9.

W6XN were R4 at 6.40 p.m., with morse QRM. RA97 were R6 at 9.20 p.m., when what appeared to be a debate between a man and woman was heard.

Wednesday, May 14.

ON 41.6 metres (about), foreign talk at R2-3 was on at 6 a.m. 5SW: The carrier was just audible at 6 a.m. By 7 a.m. strength was R5 with slight gushiness. GBX, from R1 at 6.15 a.m. increased to R8 by 7 a.m. 2ME was not audible till about 7 a.m., and then they were very weak.

when strength improved to R8. 5SW was not audible till nearly 7 a.m., and then too gushy to be worth while.

W6XN at 6.45 p.m. was only R3 with more interference. 2ME was R7 at 8 p.m. GBX was very weak. RA97 was only R7 at 9.45 p.m. KIXR could not be found either before 8.30 p.m. or after 9.30 p.m.

Saturday, May 17.

THE 41.6 metres station was up to R4 by 6.30 a.m. PCJ was again very poor. Strength at its best was R7, but was too gushy to be readable except for a few odd words.

GBX was inaudible at 6 a.m., and up to R4 by 6.30 a.m. 2ME could not

V9

Head and shoulders above all others stands the Mullard P.M. series of radio valves. They are beyond comparison—gloriously isolated in a class of their own.

As a trade friend tells us, this is the way he puts it to his customers:—

"Here's the best Mullard valve for the job—if you know of a better, best buy it."

Because the best Mullard valve is always the best possible valve, his advice has doubled both his business and the number of his friends.

Bear it in mind when you're next buying radio valves.

The New Mullard A.C. Valves will fit any American Electric Set and improve the results

Mullard

THE MASTER VALVE

Advert.—The Mullard Wireless Service Co. Ltd., Mullard House, Denmark Street, London, W.C.2.

Obtainable from all good Radio Dealers in 2, 4 and 6 volt UX and English bases.

Sole New Zealand Selling Agents: SPEDDING, LTD., 2 Anzac Avenue, Auckland; Dominion Buildings, Wellington; 214 Madras Street, Christchurch; 42 Crawford Street, Dunedin.

be heard. Zeesen started at 6.35 a.m. at R8. They were gushy, but a little better than PCJ.

SW could not be heard up till 7.30 a.m. W2XAF when first tuned in at 2 p.m. were R8, with rapid fading. Dance music was heard later from the Rainbow Room of the New Kenmore Hotel, Albany, New York. PCJ were R3 at 2 p.m., increasing to R8-9 by 5 p.m. Reception was spoilt by mush.

On 33 metres at 2.15 p.m. duplex talk was heard at R4. NRH, Costa Rica, was R3 at 2.30 p.m., but were very rough. At 2.50 p.m. some foreign talk and English was heard, including the call NRH. This was followed by an orchestral item at R6. The station went off at 3 p.m. without any further announcement.

W9XF was R2-3 at 3.30 p.m., increasing to R7-8 by 5.27 p.m., when they signed off. W3XAL, from R3 at 3.30 p.m. to R6 at 4.30 p.m., were heard with their "Slumber Hour" music. Another station was heard between 9XF and 3XAL, but too weak to be readable.

GBX and 2ME, at 5.30 p.m., were both at good strength handling post office duplex telephony. KIXR was very weak and rough at 10 p.m. RA97 were R9 at 10 p.m. and R3 on their first harmonic.

Unidentified.

41.6 metres (about), Tuesday, Wednesday, Friday, and Saturday.

35.3 metres (about), Thursday.

33 metres (about), Saturday.

32 metres (about), Monday and Wednesday.

26.7 metres (about), Wednesday.

Reception during the week has been very poor with most stations, clarity being spoilt on many stations by mushiness.

Siam on Short-wave.

FOLLOWING is a report I received from Siam.—S. Conner (Wellington).

I have the honour to acknowledge with many thanks the receipt of your letter dated January 13, 1930, regarding our broadcast transmissions from HS2PJ. The information which you have given me thereon is quite valuable, as our pre-

FOR SALE OR EXCHANGE

The rate for small advertisements under this heading is 1/6 cash for 20 words, and twopenny for every other word thereafter.

FOR SALE.—Short-Wave Set, four valves, screen grid; 3 Willard B Batteries, Wet, 6000 MA; 1 Willard Accumulator, 6-volts; 1 Balkite Trickle Charger, 110 to 230 volts; 1 Willard B Charger; first-class order, received European and American stations on loud-speaker. 30 Ascot Street, Wellington.

"A. B. C." ELIMINATORS, with Westinghouse Rectifiers, make Battery Radio superior to most A.C. Radios. Quotations gladly given. Johns, Ltd., Chancery Street, Auckland.

RADIO Catalogue sent on request—Electric and Battery Radios, Speakers, Batteries, Valves, Motors, Pick-ups, etc. Royds-Howard Co., 553 Colombo Street, Christchurch.

MYSTERIOUS Pocket Lighter. What makes it light? 4/6. Two posted with Spark Pencil, 10/-. Agents wanted. Royds-Howard Co., Colombo Street, Christchurch.

Fading Might be Overcome Interesting Experiments Meet with Success

(By James H. Waiter)

FADING, one of the greatest bugbears in the path of long-distance reception, has long occupied the attention of experimenters, both amateur and professional, but until now the progress that has been made is negligible. Interesting particulars of extensive experiments just concluded on both sides of the Atlantic, however, definitely reveal that fading can be overcome, and will shortly, it is hoped, be a relic of the past.

Data and information harvested during the past few years, formed the basis of the tests which were performed by the Philips organisation. A special programme was broadcast to the United States from shortwave station PHI at Huizen on a wavelength of 16.88 metres. The N.B.C. network re-broadcast the programme throughout the whole of America, being picked up in Europe by special apparatus at Eindhoven, and then passed on to the broadcasting transmitters at Huizen and Brussels by land-line.

Surprisingly good results were obtained at the laboratories, and fading was entirely absent, but the quality of reproduction from the long-wave transmitters at Brussels and Huizen suffered owing to the length of telephone cable connecting them to the laboratories, and the distortion introduced by the number of repeating installations necessary. Nevertheless the relayed programme proved to be by far the most enjoyable yet received in Europe from America.

THREE directional aerials of the so-called dipole type were erected at the laboratories under the direction of Dr. Balith v. d. Pol, who had predetermined their construction to suit exactly the wavelength of the transmitter to be received. The object in using three aerials at a certain distance from one another was to compensate for the fading effect, for it has been found that fading in various places does not occur simultaneously. That is to say, that whereas fading will be experienced by one aerial, another in close proximity will escape. Each aerial

sent transmission is purely experimental, pending the completion of our permanent broadcasting station. Please find enclosed details of present station. —Yours, etc., Phra Oram, radio engineer.

Schedule of Transmissions.

CALL-SIGN, HS2PJ, wavelength 29.5 metres, power 500 watts, hours of operation, Sundays, from 13.00 to 16.00 G.M.T. The call-sign of the long-wave station is HS11PJ, wavelength 300 metres (1000 kc.), power 300 watts, hours of operation, Wednesdays, 13.00 to 16.00 G.M.T.

Announcements are in three languages, Siamese, English, and French.

was connected to an independent receiver, but the output of all three was combined. It was immediately noticeable that there was considerably less fading, than when only one aerial was used.

In order to avoid parasitic noises, which might be caused by electrical machinery operating in the neighbourhood, the receivers were placed in a cottage in an open space a few miles from the laboratories. The receiving apparatus consisted of ordinary commercial sets which had been altered to function on the super-autodyne principle. Their most noteworthy feature consisted of an automatic anti-fading device, the basic principle of which may be defined as follows:—

THE output of the last intermediate frequency amplifying valve of the receiving set is partly utilised to supply after amplification negative grid bias for the I.F. amplifying valves. The value of this negative grid bias, which also determines the I.F. amplification, is dependent upon the output. The circuit has been so designed, that when the output increases, the I.F. amplification decreases. This naturally results in a decrease of output, and consequently of the negative grid bias, with the result that the I.F. amplification increases again; automatically keeping the volume at the same level. In a nutshell the current is moving in a "vicious circle."

The great value of the experiment lies in the fact that it has definitely opened up the solution of successful shortwave international transmission and reception. Further experimental work is in hand, and it will be interesting to see whether the solution which will finally enable the amateur to entirely forget fading, will be the result of discoveries having a bearing upon the transmitter, or the receiver.

The Radio Knife

Surgical Invention

RADIO in America has been adapted in many novel and ingenious ways to serve the needs of the people, but in nothing more useful than its recent application to surgery. It has been used to provide a bloodless surgical instrument in the form of a radio knife. A patent, covering the circuit used to perform the work, was applied for as early as 1919, and the first public demonstrations of the knife were made about five years ago. Today many of the largest hospitals include it among their surgical equip-

ment, as it has proved very adaptable to certain kinds of operations.

The radio knife is a high-frequency function. The circuit used to furnish the rapidly-vibrating impulses is easily recognisable as a transmitting circuit identical with those used for common messages. The difference is in the fact that the high-frequency currents used in the knife are controlled and directed to the electrodes, which are placed in certain relationships to the human body.

In performing a surgical operation the electrode does not actually come in contact with the flesh. It is kept a fraction of an inch distant, and the high-frequency currents passing from the electrode sear the flesh and separate the tissues just ahead of it. The edges of the flesh are seared to such an extent that the blood is sealed within.

The discovery of the radio knife was accidental. The idea was suggested when it was found that the caps worn by the Navy personnel became hot in the front when worn in the laboratories where high-frequency currents were being generated. The cause was found to be that the metal band across the peak of the uniform caps became heated by the radio-frequency impulses in just the same way as the elements of a vacuum tube are heated when surrounded by a coil carrying a high-frequency current in the modern process of manufacturing wireless valves.

The largest manufacturers of wireless sets in America have recently gone into the manufacture of radio knives to meet the very extensive demand. Surgeons have given their final approval of the new instrument which has been described as "the most humane method of surgery that has ever been known."

ON the shelf of every Radio Listener should be found the **RADIO LISTENERS' GUIDE**

AN INDISPENSABLE WORK.
NEW EDITION OUT THIS WEEK.
PRICE 2/6 from Booksellers, or
2/9 Posted.
BOX 1032 :: WELLINGTON.

REGARDLESS

of the make of Set you have
we can fit

Our Famous Short Wave Addaphone

Works excellently on all types
of Sets. All-Electric or Bat-
tery. Built by and obtainable
only from—

MACK'S Radio Service

76 Kent Terrace, WELLINGTON.
Telephone 20-798.



Rural Electrification

THERE are now at least one hundred known uses and possibilities for electricity in the rural community, and electrification now exists to a sufficient extent to insure further growth, if the farmer's desire for electricity is encouraged by information of its possibilities.

Apart from the benefit it confers upon the farmer himself, his wife and his home, it should be definitely instrumental in stimulating the flow of workers from the towns toward the farms, since good wages for workers cannot be warranted until a day's work on the farm produces as much profit as the effort of the factory worker over the same period.

The output per man can only be increased by the assistance of ample power, the cost of which is infinitely small compared with the value of the time of the manual worker. Power aids production, and making the best use of electricity is undoubtedly a profitable business for the farmer, both indoors and outdoors.

Spreading the News

HERE is good news for consumers and intending consumers of electricity. The Electricity Department of the Wellington City Council intend staging a very comprehensive exhibit at the Winter Show to be held in July next. With the change-over to the 230 voltage now closing in toward the city and so near completion that the department will undertake the conversion for any consumer who is anxious to increase the existing installation on request, housewives will be able to avail themselves to the utmost of all the benefits electricity confers in the way of clean, healthy and economical cooking facilities, instant heat and hot water, and other labour-saving boons.

Skating de Luxe

AT Lake Placid Club, a holiday resort in the Adirondacks, skaters have enjoyed illuminated night skating during the winter through a plan of freezing incandescent electric light bulbs beneath the surface of the ice. The lights were placed in various artistic patterns, and at night the part of the lake reserved for skating was lighted with the sunken bulbs.

Our Prize Poem Competition

THIS week, although many contributions were received, none of them attained the excellent standard of the poems already published in this section during the currency of the Prize Poem Competition. We are, therefore, unable to award a prize. The average of the work submitted, however, exhibited a high order of intelligence, and we regret that no individual poem was of the quality essential in the prize poem.

Highly commendable are "Slim Jim's" silken songlet and the "Vision" of "Sardonyx"; the first writing with a gay grace, and the latter once more revealing herself as the possessor of the seeing eye and understanding heart.

"Thur" sends thoughtful, musical laudation of the call of the tui and the wind of the dawn. Her theme is well followed, and we surmise a spirit that is far from the madding crowd and in tune with the infinite.

T.A.O. sings of twinkling, twinkling little stars, but the song is rather tinkly and lacks substance.

V. May Cottrell sends a quartet of poems, compact of observation, imagination and facility, but none of them are sufficiently outstanding to romp past the winning-post.

H.S.C.: We like your brave Maori elfs among the stalactites.—Kia Ora.

J.V.W.'s muse sweeps from Maori maid to musical monologue, with a slight admixture of philosophy. We like your pluck, J.V.W.

"Clytemnestra": Conscientious, but dull; oh, dull! Which attributes were not those of your namesake, whatever else might be said of that fierce female!

"Xerxes" possesses a wandering eye, and one not unobservant of the passing show; but alas, 'tis not that of the poet "in a fine frenzy rolling."

Journey's End

*It's a hilly road, a winding road,
That leads to journey's end;
A trail of laughing memories
That greet me as a friend.
A sunny road, a singing road,
That winds up hill and down,
To one red roof that shines for me,
Beyond a little town.
It's a hilly road, a winding road,
Along the way I wend;
A happy way that leads me home
To you—and journey's end.*

—Rose Marie.

The House That Jill Built

ANOTHER feature of The Ideal Home Exhibition at Olympia, London, says the "Evening Post," is "The House That Jill Built." In order to give women an opportunity of bearing out an oft-repeated charge that architects cannot design a house to fully meet the requirements of women, a competition was organised, and the house that Jill built is based on the winning design of the first-prize winner, Mrs. P. A. Lee, of Croydon.

Although extremely original, and even daring in conception, it is of a very practical order. The principal idea has been to avoid any waste of

The Owl.

The owl sat up in the old oak tree,
"To wit, to wit, to woo," said he.
"This used to be a pleasant park
For all of it was nice and dark.
But now they've spoiled it all for me
For they have lit it up, you see,
So far away I must skidoo,
To woo."

The old owl flew to a far-off farm.
"To wit, to woo, now what's the harm?
I'm living here where all is dark;
Of danger there is not a spark;
With just the moon to bother me
My night will pass quite pleasantly.
There's lots of dark to help me through,
To woo."

But when the evening shadows fell
He ventured from his wooded dell,
Then gave a dismal sort of croak
For darkness there was just a joke;
Bright lights were there on every side—

The farm had been electrified!
So what the dickens can he do
To woo?

—Blaine C. Bigler.

money in unnecessary decoration, and to extend the outlay on good materials and a maximum equipment of real labour-saving devices. Fireplaces and mantelpieces are eliminated, there being only one fireplace—in the living room—the rest of the house being fitted throughout with central heating apparatus, operated thermostatically.

Instead of a dining-room, there is a dining recess where meals are served by way of a dresser fitment communicating with the kitchen.

£20 BETTER LIGHTING COMPETITION



PRIZES:

FIRST: £10. An order for £10, to be spent either in improved electrical wiring and lighting fittings of the home, or, by permission, in electrical apparatus.

SECOND: £5 (under the same conditions.)

THIRD: Five separate orders of £1 each, to be spent in lighting equipment.

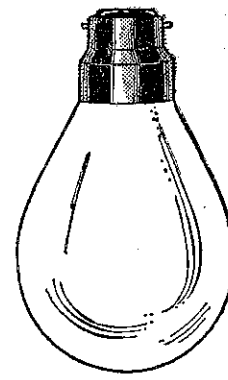
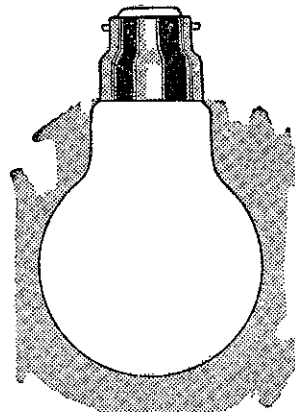
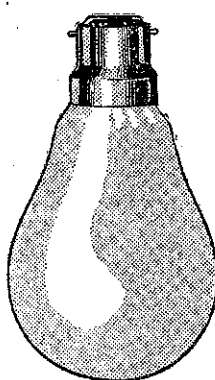
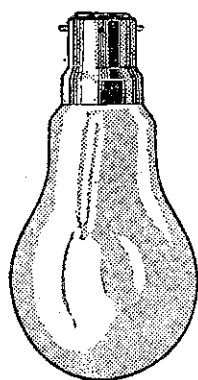
RULES AND CONDITIONS:

- (1) Write the trade name of each lamp as illustrated, in the order given.
- (2) Take any one of these trade names and compile a sentence with each word utilising in their consecutive order the letters of that trade name. (See examples in text).
- (3) Write neatly in ink on one side of paper only. Put name and address on entry.
- (4) The judge of the competition is the Managing Editor of the "Radio Record," Mr. A. J. Heighway, and his decision shall be binding and final on all competitors.
- (5) The competition is open to readers of the "Radio Record," and the general public who comply with the conditions; employees of newspapers, advertising agencies and electrical houses are ineligible.
- (6) The official entry coupon from any issue of the "Radio Record" must be used.
- (7) The competition definitely closes with the clearance of P.O. Box 1032, Wellington, at 9 p.m. on Saturday, June 21, and the award will be made as soon as possible thereafter.
- (8) The names and addresses of prize-winners, and the winning entry, will be published in the "Radio Record."
- (9) Prize-winners must select their prizes within one month of the award being made.
- (10) There is no limitation upon the number of entries by any one competitor, provided the official coupon and entrance fee are forwarded in each case.

Improve your Home Lighting at our expense in this entertaining way

NOTHING adds more to the middle of the room still prevails, as is needed used, thus effecting charm of living-room, draw- It dominates the eye, inducing economy; eye strain avoided and room, sitting-room or bedroom strain and discomfort . . . With health and comfort improved. than well placed, artistic lights.

In too many homes that awkward single pendant globe in the where it is required; only as much economy of your home by winning this simple competition.



THESE are illustrations of well-known globes advertised in this issue. Competitors must correctly name these globes in the order given. Next, take any one of the trade names and write a sentence which, while making perfect sense, shall have each word beginning with the consecutive letter of the trade name chosen. For example:—

"Osram:" Oh, some rooms are mellow.

"Philips:" Peace, happiness in living in Philips' sunlight.

"Siemens." Superb illumination explains many entrancing new shades.

"Condor." Condor offers new daylight over rooms.

It is immaterial which word is chosen. The prize will be awarded to the competitor who sends in that sentence which, complying with all the conditions, constitutes the best sentence, preferably embodying some characteris-

tic of the lamp and its service towards home comfort. Some of the names may prove more adaptable than others. Competitors have a perfectly free hand in making their selection. For the characteristics of lamps and improved lighting, they are referred to articles appearing in the "Radio Record" and

advertisements of the lamps concerned. Entries on official coupon clipped from the "Radio Record," accompanied by the entrance fee of 6d. in stamps, must be addressed to "The Radio Record, P.O. Box 1032, Wellington." The competition closes at 9 p.m. on Saturday, June 21, 1930.

This Coupon, clipped from any issue of the "Radio Record," must accompany every entry.

£20 "Radio Record" Better Lighting Competition

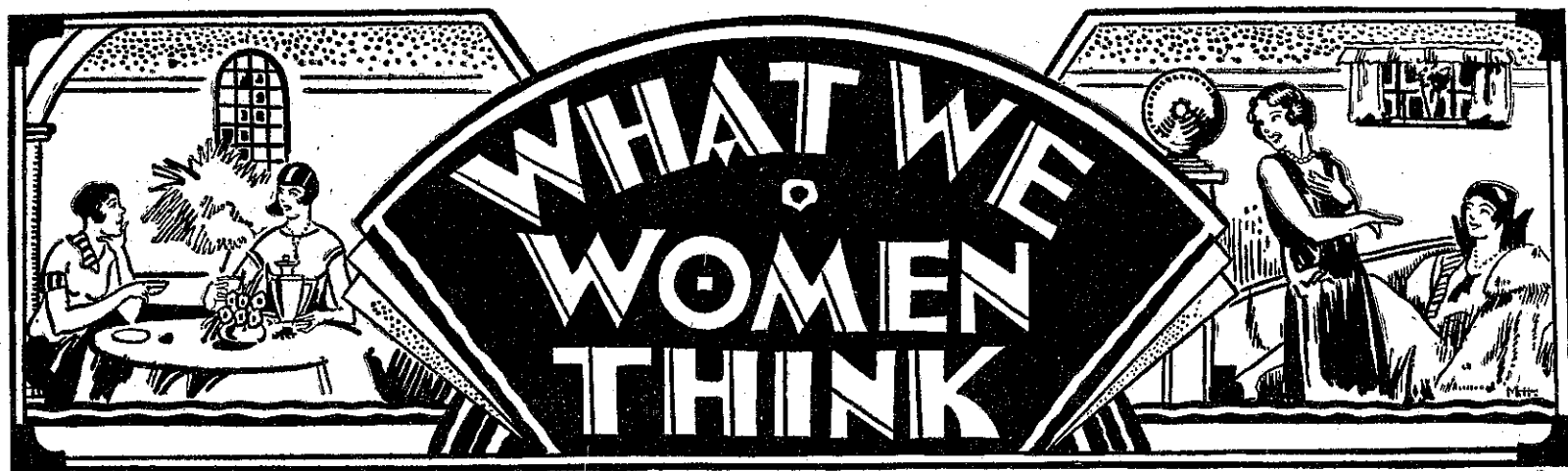
"RADIO RECORD,"

P.O. Box 1032, Wellington.

I enclose my entry for the £20 "Radio Record" Better Lighting Competition, with the entrance fee of 6d. in stamps, and agree to accept the decision of the judge as final.

NAME

ADDRESS



Gone Are The Days . .

THE modern mademoiselle, with characteristic adroitness and aplomb, has cast into the discard Eton crop, exaggerated casualness, and adorable skimpy skirt. Gone are the boyish camaraderie, the saucy stride, the sexless silhouette. And in their stead, what? A suggestion of subtlety, of Mona Lisa guile, frills and flutters, the Grecian bend! In this year of grace, the long thoughts of the sophisticated flapper turn to waspish waist and plethora of garments, without a sigh for a fashion that was sensible, hygienic and entirely charming.—M.A.

Modern Method and Modern View

I HAVE a supercilious friend, the gods of whose literary idolatry are Aldous Huxley, Bernard Shaw and John Galsworthy—these three, and the greatest of these is Galsworthy! Recently in London I induced this protesting highbrow to go with me to see the modern miracle of a talking picture; and very bored he showed himself to be, until when the lights went up, who should be sitting in the same row but Mr. Galsworthy himself, obviously keenly interested and absorbed in the show. Impossible to mistake that handsome head, which by the way bears a striking resemblance to a well-known Wellington Pressman.

The latest dramatic tour de force of the eminent playwright was running at Home during my visit, and I revelled in the episodic charm of "The Roof," with its curious juxtaposition of types, and its dialogue compact with that wit, wisdom and aloof sympathy and pity for poor humanity of which Mr. Galsworthy is past-master. I admired very much the acting, in a youthful role, of Miss Ann Casson, who is another example of the fact that, though it is written the sins of the fathers shall be visited on their progeny, just as often the gods decree that beauty and wit are bequeathed, for this gifted girl is the daughter of Miss Sybil Thorndike, the famous English tragedienne, whose "Lady Macbeth" and "Saint Joan" created such a hurricane of applause.—H.V.L.

Making Nature Noisy

AN interesting story lies behind the evolution of a remarkable wireless invention, which it is believed will prove invaluable in maternity nursing. It was the inspiration of the head of a firm of well-known chartered accountants in London, who wrote to the present manufacturers, suggesting that such an invention might be possible. If the manufacturers could produce it they offered to present it to a London maternity home.

It consists of a special Marconi-phone micro-

phone and an 8-valve apparatus, with which it is possible to listen-in to heart beats.

The microphone, an instrument of extraordinary sensitiveness, is connected from the ward in which the prospective mother is lying to a neighbouring room. Here, on a little table, beside the electrical controls and valves, are the loud speaker and a pair of headphones for the use of the nurse or surgeon in charge of the case.

Amplification is so strong that sounds which would be too tiny to hear at all in the ordinary way are almost uncomfortably loud through the earphones, and one occasion, when tests were made on a man's heart and transmitted through a loudspeaker, a window in the room rattled every time the man breathed heavily.—Rita.

Tormented

*My neighbour has a gramophone,
It's very bronchial;
She has it going by the hour,
From morn until nightfall.*

*My neighbour has a puppy dog,
A chubby thing he is,
He yaps and yaps for weary hours
I wonder why it is.*

*My neighbour has a bobtailed cat,
'Tis valuable, I'm told,
But all the same it sallies forth
As brazen and as bold.*

*As any other common cat,
And every jolly night
Beneath my window caterwauls
With evident delight.*

*Methinks I'll retire from the world,
Like old Diogenes,
Far from all bronchial gramophones
And cats' weird rhapsodies.*

—Helen G.

She Would Not Eat

SURELY the clever device adopted by the wardresses of St. Lazare's prison to persuade Madame Marthe Hanau, the woman wizard of finance, to break the hunger strike in which she persisted, reaches the height of refinement of torture.

Certainly it was only resorted to after Madame Hanau had bitten off with her teeth the milk tube, inserted into her throat during forcible feeding in hospital, and fought ten strong men and women, who attempted to hold her down.

Now the wardresses, who are kept in her cell day and night, have been ordered to eat their meals in her presence. The most odorous and appetising dishes and delicious fruits are brought in, and the wardresses eat them under her very eyes.

Although the same food is offered to the prisoner, who is a noted gourmet, up to the end of March, when last dispatches were received, this remarkable woman had refused all food.—R.S.

The Oat and Its Applications

IN the British House of Commons recently, the attention of the Secretary of State for Scotland was drawn to the alleged danger of the prominence afforded to oatmeal in the Scottish national dietary.

Lieutenant-Colonel Fremantle stated that according to a report published by the Medical Research Council, the consumption of oatmeal promoted the decay of teeth. Mr. Johnston, Under-Secretary of State for Scotland, spiritedly defended its consumption, declaring that Scots had far better teeth, when they were consuming more meal than they are doing to-day.

If we are not mistaken, it was Mr. Johnson's name-sake, the redoubtable Dr. Johnson, who said: "In Scotland, they feed their men on it; in England, their horses; and where will you find finer men or better horses?"—Mabel.

Where Is the Glamour of Romance?

I WONDER will it interest "Romantic" to know it was the custom with the young men of a certain district, some thirty years ago, to ask the lady of their choice, "if she would darn their socks for them"? If the lady assented, a wedding quickly ensued. Not very romantic certainly, but practical; and those men made good, reliable husbands.

I have also been informed, upon good authority, that as far back as the eighties, a young man was driving two girls home one evening, both of whom were rather fond of him; not wishing to offend either, yet being desirous of letting them know which he really cared for, he presently said: "Are your feet cold, Peggy?" And Peggy eventually became his wife.

While yet another in quite recent years, having no other means of transport, often walked a distance of 16 miles, either way, to woo his lady-love. Aye, and once having travelled all day by train, walked nearly 20 miles after dark; footsore and weary at length arriving at the abode of his lady-love in the small hours of the morning. Not wishing to disturb the household, he wrapped his overcoat about him, and slept under a tree until dawn. Romance is not dead yet.—Nada.

Beautifying by Electricity

How the Lounge, Drawingroom
or Sittingroom may be improved
by Schematin Lighting



FOR the attainment of good artificial lighting, it is highly necessary to recognise and understand the important functions that a lamp is called upon to perform, viz., decoration and illumination. Contrary to widespread ideas, all beautiful lamps can be useful, and all useful lamps can be beautiful, if a discreet selection be made. Attention is focussed upon lamps at night because they become vitalised by light, and the lamp in good taste will become such a harmonious part of its surroundings, that one is not conscious of the lamp itself, nor even of its subtle artfulness in providing the necessary and desirable illumination.

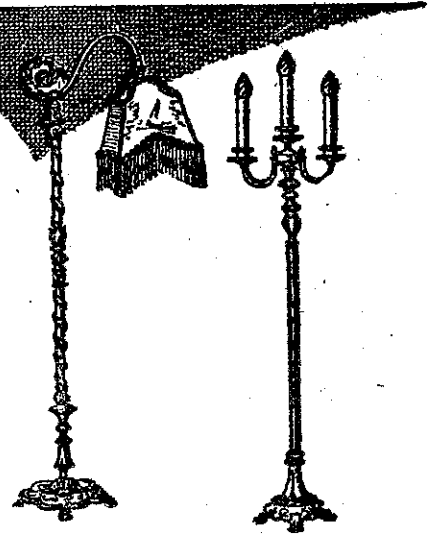
The lounge, sitting-room, or living-room is probably that in which most consideration is called for and rewarded, and the number of lamps is necessarily fixed by the size of the room and the purpose for which it is used. Lamps, although useful adornments, should never dominate.

LIGHT is needed at times around the entire room, as well as lesser or more concentrated lights for reading, sewing or card-playing; and

in a good-sized room, if wall brackets are employed over or near the mantelpiece, the central light can often be dispensed with. During winter, especially, it aids in forming an hospitable group around the fire-place. Used in conjunction with one or more mirrors, these wall brackets form a most effective addition to any scheme of decoration. A standard lamp that can be placed behind or at the end of a sofa, is a definite asset toward both illumination and decoration; and one or more table-lamps fulfil a very useful as well as decorative purpose. It will therefore be seen that any number of lamps from two to eight can be employed to advantage.

Where a centre fitting is desirable to light the entire room, the best form is that of one or more lamps enclosed in a fitting, through which a portion of the light is directed upward toward the ceiling. The lamp is covered by the texture of the fitting and is not itself visible. Part of the light is, of course, directed downward through the bowl or fitting, but the greater portion strikes the ceiling, and is again reflected back into the room in generous, softly-diffused quantities.

This is known as semi-indirect lighting, and

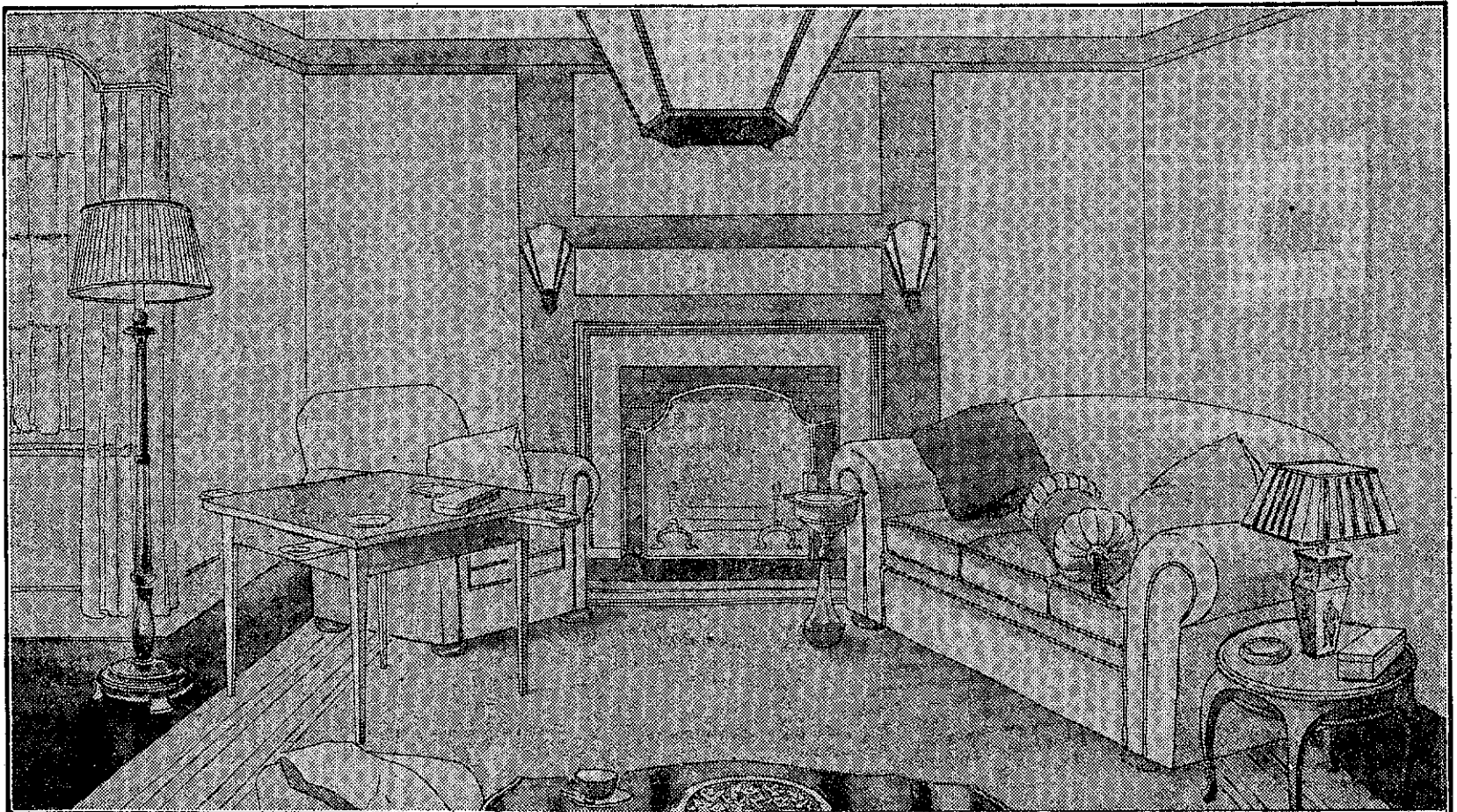


its value lies in the absence of irritating glare, owing to the bulbs being invisible.

ONE of the simplest means of improving light and avoiding glare is to use only "obscured" or frosted bulbs. "Obscured" is a misleading term, because the light from the bulbs is better diffused, and therefore seems actually brighter than that of clear glass bulbs. The introduction of opal glass bulbs is a great step forward, for they emit a light that casts no shadows and eliminates all danger of eye-strain, even for close work.

In many rooms, we fear, there is still only one chair or one place in which anyone can see comfortably to read, write, sew, or enjoy any other occupations which require close

(Concluded on Page 40.)



KIDNEY AND KUMARA PIE

MINCE finely 4 sheep's kidneys. Stew for 1 hour with 1 breakfast cup of water, a small chopped onion, $\frac{1}{2}$ teaspoon ground cinnamon and mustard mixed, one or two leaves of thyme and sage to season, salt and pepper to taste. Remove from the pan and place in a pie-dish with $\frac{1}{2}$ lb. of cooked, sliced kumaras on the top. Sprinkle lightly with salt and pepper, and add a few pieces of dripping to brown the top. Bake in a moderate oven, 350 degrees F., for half an hour.—*Mary.*

PARADISE TART

1 EGG, 1 large cup milk, one-third cup sugar, $\frac{1}{2}$ -cup desiccated coconut, pulp of two passion fruit. Beat egg well, add milk and sugar, and beat. Add the pulp of two passion fruit and desiccated coconut and beat all together. Line a tart-plate with short pastry and bake as an ordinary custard tart. Delicious hot or cold.—*Mrs. H. J. Wilson, Taupo.*

CURRIED SAUSAGES

2 LBS. beef sausages, 4 large onions, 1 pint water, $1\frac{1}{2}$ tablespoons flour, 1 teaspoon curry powder, salt to taste. Method.—Peel and slice onions into saucapan, add the water and salt, let this simmer while the sausages are frying. When cooked thicken with the flour and curry powder. Lift sausages carefully out of fat and put them in saucapan with onions, etc. Leave stand five minutes. Serve hot with sippets of toast and mashed potatoes. This makes a nice change, and the sausages appear to go further.—*Nada.*



The end of a pleasant evening ~

Is always marked by a cosy little supper. Next evening YOU have, serve dainty golden brown cakes and scones of your own baking. A few spoonfuls of—

ANCHOR SKIM MILK POWDER

added while you are mixing them and you'll be ever so proud of the result. More delicious—better appearance—and they keep fresh for DAYS longer.

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New Ideas for the Cook

BRAN BISCUITS

1 CUP flour, $\frac{1}{2}$ -cup milk, 1 cup bran, $\frac{1}{2}$ -teaspoon soda, 1 egg, 1 teaspoon cream of tartar, 2ozs. sugar, 4ozs. butter, a little salt. 1 heaped teaspoon of baking powder may be used in place of soda and cream of tartar.

Rub butter into bran and flour and add rising and sugar; beat egg well and add to the mixture. It may be found that the egg is sufficient to combine the ingredients, but if not add milk gradually until the mixture is a stiff paste. Roll out very thinly and bake in a moderate oven. It is essential to roll out the mixture very thin and cut into squares because these biscuits rise and they become a clumsy thickness if rolled out thick. They are delicious with plenty of butter.—*Black Cat.*

WALNUT TOFFEE

PUT 2 cups sugar, 1 cup cold water, 6ozs. butter in large pot on small element of electric range and turn on full. When butter is melted add $\frac{1}{2}$ -teaspoon cream of tartar. Boil quickly until hard. Before taking off range

drop in $\frac{1}{2}$ lb. chopped walnuts. Turn out on buttered dish.—*D. Sunly, Shannon.*

SIMPLE CUP PUDDING

1 CUP treacle, 1 cup raisins, 2 cups flour, 1 cup milk, $\frac{1}{2}$ -cup butter, 1 teaspoon baking powder.

Warm the milk, dissolving the butter in it, stone the raisins and cut them in halves, mix the baking powder with the flour. Boil the treacle and skim it, and stir it warm into the flour. Add rest of ingredients, mix well and turn into a buttered mould (or cups). Steam two hours if all in one mould; one hour if in cups.—*Miss Isa Voigt.*

QUINCE HONEY

5 LBS. Quinces, 5lbs. sugar, 1 pint water. Boil sugar and water to a syrup. Put quinces through a mincer, add to syrup, and boil five minutes. If liked thick, cook a little longer.—*Miss Eileen Hooson, Blenheim.*

WITH dance suppers and other festivities in the immediate offing the following confection, which the sender states is a pie fit for an epicure, should be an acquisition to the refreshment table. The 5/- prize is awarded for it to Lillian Masterman, who is asked to send her address:

LEMON PIE.—The filling is smooth and creamy, sufficiently firm for cutting, but not in the least rubbery. The meringue is light and dry, and would stand for days if given the chance. Two cups of milk, one cup of sugar, three tablespoons of cornstarch, quarter-teaspoon of salt, two egg yolks; one lemon, to make three tablespoons of juice and grated rind.

First scald the milk, then mix sugar, salt and cornstarch, and pour the milk on gradually. Cook in a double saucepan for fifteen minutes, stirring constantly until thickened and afterward occasionally. Beat the egg yolks and add to first mixture. Cook three minutes, stirring constantly. Remove from heat and add lemon juice and grated rind. Cool slightly, then pour into baked crust and cook for 25 minutes. This recipe makes enough filling for a pie in ten-inch plate. It is important not to add the lemon juice until the rest of the mixture has been thoroughly cooked and removed from the fire.

FOR THE MERINGUE.—Two egg whites, a pinch of salt, quarter-cup of fine granulated sugar are required. Add salt to egg whites, and beat until stiff. Add sugar gradually, continuing to beat all the while. Spread over pie and bake in slow oven for 20 minutes.

Lemon tarts are delightful miniatures of the lemon pie. The pastry shells can be baked over inverted muffin pans, and if pastry is taboo, the lemon filling and meringue can be served in custard cups.

SYLLABUB UNDER THE COW

TAKE a large bowl, the handsomer the better, and in it mix together smoothly the white of an egg, and a few tablespoonsful of rich cream. Add half a pound of sugar, the juice of a lemon and a little brandy or rum. Rum tastes the best. Stir all together and take the bowl to a cow already half-milked. Throw in a few biscuits, almond if possible, and go on milking into the bowl until it froths so high that you are afraid of its running over. Carry it carefully to a safe place, where it can remain until next day, when grate a few spots of nutmeg over it. This dish will give you a name for party affairs and is really very little trouble.—*Scylla Rongotea.*

BANBURY CAKES

TAKE 3lb. of currants, a pound of butter, four ounces of sugar, a quarter of an ounce of mace and the same of cloves and half a peck of flour. Then make it into a paste with boiled milk and three-quarters of a pint of made yeast. Place the dough near the fire to rise, and knead it well before you make it into cakes.—*Homie (Greymouth).*

FOR BREAKFAST

TAKE six slices of bread, six slices of tomato, six slices of bacon and a little grated cheese.

Butter the bread, on each slice place a slice of tomato. Cover with grated cheese and add a slice of bacon on top. Toast on griller until bacon is crisp.—*R.C.*

ALMOND PASTE

PUT 6oz. of loaf sugar with 1 table-spoon of water and a teaspoon of lemon juice into a stew-pan, bring to the boil, skim well, and boil to 237 degrees Fahr. Pour the syrup on to 4oz. of ground almonds, add about half the white of an egg, mix well together and use as required.

SPINACH

A STUNNING looking and a delicious spinach dish is created by placing creamed spinach upon a large platter and topping it with halves of hard-boiled eggs placed closely together. A cream cheese sauce is poured over the eggs, entirely covering them. The platter is then placed in a hot oven till the cheese sauce becomes a delicate brown. This is a most effective dish. Instead of eggs, small cheese dumplings may be served on top of the spinach with a plain cream sauce.—*Miss Whitelaw Kamo (North Auckland).*

Relieve
throat
soreness
quickly
with

Pulmonas
PASTILLES

Suck them slowly

1/6 all chemists

The Old, Old Stories

PROBABLY few living to-day remember actually writing out the old copy-book maxim, "Civility pays and costs nothing," but most will have heard it quoted at some time or another, most likely at then by one of the old brigade. In Austria to-day, it seems that the opposite obtains in one sense of the word, for citizens and visitors alike are heavily fined for infringement of the numerous by-laws, one of which counts as an offence, "wounding an official's honour."

An American tourist, who was guilty of calling a tram-car conductor a "born idiot" was fined 10/- on the spot, and, protesting, was hailed before the finance councillor. In his indignation, he so far forgot himself as to apostrophise that dignity as a "robber captain," for which indulgence he paid twenty-six shillings.

Other offences for which one is fined and called upon to pay for "on the nail" are:—

Crossing the street in the wrong place.

Walking on the grass,
Throwing papers about,
Broadening a tramcar in motion,
Driving on the wrong side of the road,
Driving too fast,

Leaving a horse and cart standing.
Affixing a poster to an unrented wall,
Playing a piano too loudly,
Letting a loud-speaker shout.

It is not impossible to find oneself involved in a series of fines when for instance fined for crossing the road in the wrong place, a receipt is duly given, which one throws down in disgust, is again fined, and more than likely becomes guilty of "wounding an official's honour."

An old woman who boarded a tram after the gate was shut, was left clinging to the side, shrieking for help, until the next stop, where the conductor cried to the nearest policeman, "Arrest this fool." In spite of the fact that the "fool" had by that time fainted, she was carried to the nearest police station and duly fined.

When travelling by rail you are thus adjured: Do not crush, but select a carriage with the dignity and politeness of a cavalier.

All of which reminds us of the late Jerome K. Jerome's experience in pre-war Germany. When found seated in a railway carriage without a separate ticket entitling him to a seat, he was fined and ejected into the corridor, where he was again fined for "standing in the corridor," which was "verboten."

The Choice of the winner of a great Dominion-wide Contest

When Miss Cargill ordered a nickel-finished SAVAGE at no cost to her she was exercising her right as winner of a great competition recently conducted jointly by the "Exporter" and "Radio Record." This competition was to discover the person capable of giving the best reasons for wishing to own an Electric Washing Machine. Miss Cargill proved herself most competent to assess the advantages of a washing machine. Therefore she won the competition. As the winner she was entitled to select any machine from a large number of leading makes. She chose a SAVAGE!

The SAVAGE Washer and Dryer was also selected as the winner at the Dunedin Exhibition when it was awarded the First Order of Merit Gold Medal. Choose carefully and you, too, will choose a SAVAGE. Deferred payment terms arranged, if necessary.

Ask us to send you the SAVAGE Booklet which is most interestingly written and elaborately illustrated. It will come post free.



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NEW!

NEW Designs NEW Finishes NEW Lower Prices

Have some say in the temperature of your home this WINTER. Go along to your electrical dealer and see his displays of the new 1930 season—

"CREDA" (Britain's Best) ELECTRIC FIRES

See the luxuriousness of the new styles in art metal, bronze and porcelain enamel. Test their heating qualities—AMAZING. Then ask the price and wonder how so much efficiency and beauty can be sold for the money.

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And now—what would you do?



REETINGS to all former competitors and a hearty welcome to the many new ones.

Mrs. Irvine is thanked for her letter and the very kind words she uses in reference to the competition. She will have seen in last issue that the date referred to was a misprint. Readers are once again warned of exceeding the original problem set. The question here was distinctly "Should she (Miss A.) tell Mrs. C?" Several competitors spoil their answers by going on to say what Mrs. C ought to do. In my opinion, it would be a great "faux pas" on Miss A's part to mention the matter at all to Mrs. C. The gossip will, of course, go the way of all gossip eventually, that is, die a natural death, and while it is, naturally, annoying to Miss A in the meantime, I feel that she is taking the whole thing too seriously. As many competitors say, it is hardly likely that the gossips can know that Mr. C actually proposed to Miss A, nor can it be certain that "Mrs. C knows nothing of this."

By approaching Mrs. C Miss A could only embarrass all three parties and do no good, whereas if they are sensible people and really friends, they will all ignore any gossip they may hear.

I do not like the suggestions made by some competitors that Miss A should ask Mr. C to acquaint his wife with the facts. He may have already done so, or look upon the episode as a passing infatuation, or even may say, like one of the Black Crows, "Why bring that up?" He may be thinking with Mrs. Browning,

"Well, Heaven be thanked,
My first love failed,
As, Heaven be thanked,
Our first loves do,"

while Mrs. C can certainly hug to her heart the French proverb which says that "a foolish woman prays to be the first in a man's life, while a wise woman prays to be the last."

In any case, I cannot see that Miss A improves matters by doing so, and very possibly would place herself in a still more awkward position. As long as she continues to stand right with her friends, I think that is all that need be considered. She will, of course, be careful not to place herself in any questionable position with regard to Mr. C to give foundation for gossip. Should Mrs. C mention the matter to her at any time she could lightly say, "Oh, that was all over and done with ages ago."

Best of all I like the reply from "Nemo," as follows:—

"Miss A should certainly not inform Mrs. C of the proposal, neither should she allow

A Weekly Competition for All

EACH week a problem in social relationships—just such as might confront anyone—is set, and our readers are invited to send in their solutions, for which marks are awarded. Prizes are offered to those obtaining the most marks over a series of ten. First prize, £2/2/-; second prize, £1/1/-; third, 10/6, for each series.

In the event of any competitor, who has already taken a prize, winning another of the same value during the same year, such competitor will be expected to give way to the next highest score. For example, a second or third prizewinner may take a first prize, a first prize may take a second or third, or a second prizewinner may take a first or third, but not one of the same value during the same year.

Competitors may send in their own problems for publication and solution and a prize of 7/6 will be given for the best one sent in during each series, and 2/6 for each contributed problem used. Those sending in problems are, of course, entitled, with other competitors, to send in a solution of same. The right is reserved to publish part or the whole of any solution sent in.

A non-de-plume may be used, but names and addresses must be sent. The same non-de-plume must be retained throughout the series. All replies must bear a post-mark not later than the Thursday after the date of the journal in which the problem appears, and should be addressed to "Savoir-Faire," Radio Record and Electric Home Journal, P.O. Box 1032, Wellington.

Savoir-Faire's decision must, in every case, be accepted as final.

PROBLEM No. 2.

2nd SERIES.

Mr. A. and Miss B. are engaged to be married; Miss B. meets with an accident and becomes disfigured for life. Mr. A., to his intense chagrin, discovers that his affection has now almost completely vanished and he decides that he cannot possibly enter into matrimony under these conditions. Suggest the most tactful measures he can adopt to convey this information to Miss B.

Suggested by "Radex."

Answers must be post-marked not later than May 22, 1930.

PROBLEM 3.

2nd SERIES.

A certain honorary position is vacant in a social institution, and volunteers are called for. One applicant is approached by the president and consents to take over the position.

When the matter is discussed "in committee," a very good reason is given by a committee woman why that person should not have such a responsible job. The position is still vacant, but how can the president convey to the person he first approached that she is not suitable. It is not wished to hurt her feelings as the matter does not reflect upon her character at all.—Suggested by "Sue."

Answers must be postmarked not later than May 20, 1930.

Mrs. C's frequent invitations to embarrass her. If her friendship with Mrs. C is sincere, it should be too precious to be broken by the shallow tongue of gossip. She has only to avoid any undue familiarity, and to behave naturally to Mr. C to give onlookers little opportunity for criticism.

"Supposing the gossip to be repeated to Mrs. C, Miss A's conduct will already have reassured the former, but if Mrs. C speaks of the matter to Miss A she can reply that it is quite true that Mr. C had paid her the compliment mentioned, but the incident was closed on both sides by her refusal, and that she (Miss A) valued Mrs. C's friendship too much to give the matter a second thought, and that Mr. C evidently regarded it in the same light, otherwise he would have reported the incident himself to Mrs. C."

"Michael," who says:—

"It should not be necessary for Miss A to tell Mrs. C of Mr. C's former relations to her, as it is quite possible that Mr. C has mentioned it to his wife. Even if Miss A did tell Mrs. C it would not stop the gossiping in the town and she might possibly lose a friend in Mrs. C," strikes the right note in a few words, and I also like the following solution from "Effie":—

"I do not think that Miss A should tell Mrs. C, as by doing so she would most likely cause trouble between Mr. and Mrs. C and perhaps break the friendship between Miss A and Mrs. C. If possible Miss A should avoid being in Mr. C's company without Mrs. C, but, otherwise, I do not see that she can do anything to alter matters, and really there is no reason for her to break her friendship with Mrs. C just because a few people try to make trouble out of nothing."

MARKS AWARDED.

Anon, 5; Amaryllis, 3; Anice, 0; Artful, 5; Bab-el-Mendeb, 3; Ben, 5; Miss Rachel Baker, 5; Bonza, 3; Clara, 5; Clericus, 0; Camp-fire, 0; Deerfoot, 5; Duplex, 3; Diabolo, 5; Devon, 5; Ecnan, 5; Elkay, 0; Effie, 5; Equity, 0; Fanny, 3; Frances, 3; Flirt, 5; Flora, 5; Ginger, 4; Grace, 0; Gungadin, 5; Haven, 3; Heather, 3; Hopscotch, 5; Iota, 0; Ivy Sen, 5; Irene, 0; Iambic, 3; Miss N. Johnston, 5; Jonquil, 3; Jimmy, 3; Mrs. Jones, 5; Kummel, 0; Kate, 5; Kia-Ora, 3; Lucid, 3; Lambton, 0; Michael, 5; Mrs. Mason, 5; Myra, 3; Mavis, 0; Magpie, 3; Nemo, 5; Nintz, 5; Natural, 5; Nomen, 3; Norah, 3; Never-Never, 0; Nippy, 5; Mrs. Oldman, 5; Olivia, 3; Octopus, 0; Open-door, 3; Pat, 5; Pumpkin, 5; Pansy, 0; Query, 3; Quince, 0; Radio, 0; Rosa, 3; Richmond, 5; Sardonxy, 3; Sue, 0; Scylla, 5; Summit, 0; Thames, 3; Tuner, 5; Topaz, 5; Tommy, 0; Undine, 5; Vivat, 5; V.L.A., 3; Viator, 5; Viola, 3; Verity, 0; Wynward, 3; Weaver, 0; Waretway, 0; Watchful, 5; Xerxes, 3; Xylonite, 5; Yummy, 0; Youngster, 3; Zenobia, 3; Barbara, 5; Apple-pie Mary, 5; Maybelle, 0.

Weather Sense of Animals

IT is no news to farmers and other country dwellers that animals have an abnormal weather sense. The mysterious sense they appear to have of changes approaching is said to be due to the sudden variations that result from atmospheric disturbances. Under normal conditions, a human being sustains an atmospheric pressure of approximately fourteen tons, and here and there, some are found who react to this pressure, any sudden change causing them to become restless or to lose appetite. Far more animals are so affected, because they are not constantly sheltered under roofs. They are consequently more sensitive to air pressure and develop an acute sixth sense of approaching changes.

It is not uncommon for fowls, pigs and other domesticated animals to manifest evidence of this "weather sense," many farmers knowing that when pigs begin lining their sleeping quarters with straw in the winter-time, that a storm is brewing.

A Popular Fallacy

Buying Cheap

THE folly of expecting to maintain electrical service in the home at its best with the use of under-standard appliances is deprecated in an American trade paper, which quotes the following pertinent words of John Ruskin, written many years ago:—

"There's scarcely anything in this world that some man cannot make a little worse and sell a little cheaper; and the buyers who consider price only are this man's lawful prey."

One wonders if Ruskin foresaw the day of electrical merchandise, with its flood of unduly cheap appliances, not to mention under-standard wiring devices and supplies. Efforts to wipe them out seem to make headway very slowly, and the only hope for real efficiency lies in the fact that the buying public is becoming slowly educated to the folly of purchasing sub-standard goods to save the cost of a few shillings on the first cost.

There are very many to educate and a new class is always coming forward, but women in particular are learning as they never did before that price is not a matter of first and only importance. The great lesson for all to-day is that where household appliances are concerned, untested and sub-standard equipment of any kind has no rightful place in the modern home.

A responsibility, too, rests on the shoulders of electrical dealers.

Now---A Prize Parody Competition

An Opportunity for Originality

MANY and varied have been the entries for our prize poem competition—not a few having tried burlesque, limerick and other aspects of versification. Now they are to have an opportunity to display their faculty for this style. In our issue bearing date June 13 the prize in the Prize Poem Competition will go to the best parody of the well-known verses of "Leisure." Here is an opportunity for some bright work and it is anticipated that there will be many novel versions of the well-known poem. Just remember that the MSS. must reach us not later than June 5. Beside the winning entry, others of sufficient merit will be published at space rates. Here is the poem—do your worst:

LEISURE.

What is this life if full of care

We have no time to stand and stare?

No time to stand beneath the boughs

And stare as long as sheep or cows,

No time to see when woods we pass

Where squirrels hide their nuts in grass,

No time to see in broad daylight

Streams full of stars, like stars at night,

No time to turn at Beauty's glance

And watch her feet, how they can dance.

A poor life this if full of care

We have no time to stand and stare.

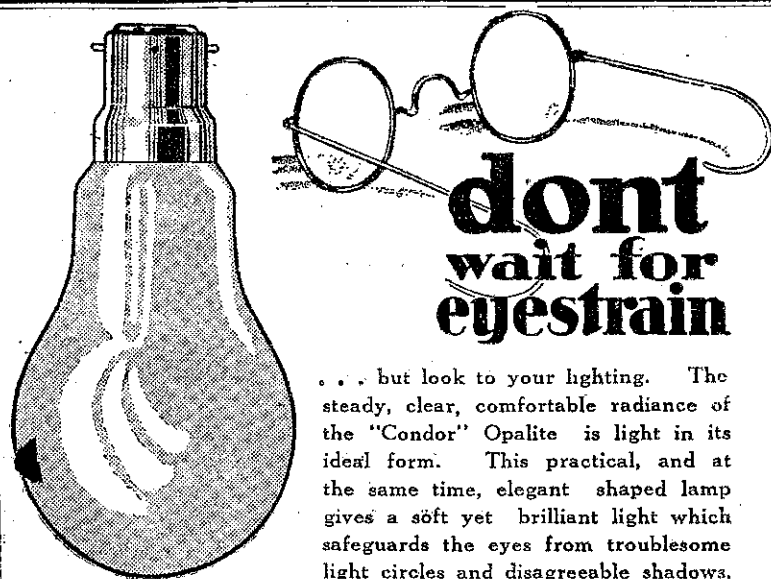
Tea, Cocktails, and Skirts

ACCORDING to the latest advices received from London, there is one war the League of Nations is powerless to abate, for the "battle of the skirts" continues to rage furiously. Famous dress-houses hold exhibitions and parades of mannequins every afternoon and evening, at which tea and cocktails are dispensed, while the latest in flowing gowns is displayed to reluctantly admiring onlookers.

For evening, and even for smart afternoon wear the majority of "chic" women are already convinced of the beauty and grace of the trailing and trained gowns, but the favour in which the shorter skirt is held for morning and outdoor occasions dies hard with British women. It is certain, however, that for the smartest of all outdoor functions, to wit, Ascot week, long frocks will be "de rigueur," albeit of voile, Nottingham lace and other cotton materials.

The sinister part of the return to long dresses is carefully kept in the background—that it entails a return to corsets, artfully referred to as "foundation garments" and, further, petticoats!

A lady who has recently returned from a visit to the Old Country, while admitting that the long gowns hold sway there in increasing numbers, sees no reason why New Zealand women should hamper themselves because it is "the fashion" on the other side of the world, but I am thinking that much of women's greatly talked-of emancipation will give way under the ordeal, and where personal adornment is concerned, many of us will be found "reverting to type."



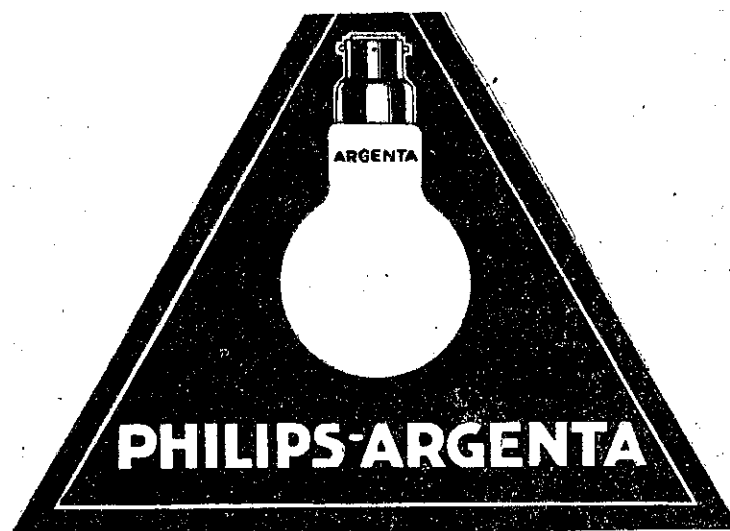
**don't
wait for
eyestrain**

... but look to your lighting. The steady, clear, comfortable radiance of the "Condor" Opalite is light in its ideal form. This practical, and at the same time, elegant shaped lamp gives a soft yet brilliant light which safeguards the eyes from troublesome light circles and disagreeable shadows.

**Condor
LAMPS**

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**Put your LIGHTING
in order for WINTER now**



PHILIPS-ARGENTA

Use Philips Lamps and SEE
Made in England
from one produced in New Zealand

Beautifying by Electricity.

(Continued from Page 35.)

Lighting. With only a single source of light in the room, usually on or over a centre table, rigid and either insufficient or so shaded as to be a source of glare, the inhabitants of the room are forced to gather round like moths. It is the more deplorable, since a little foresight enables good and suitable lighting at several points, with the comfort and convenience of inter-change.

WISE is he, who, when building, includes a generous number of outlets for lamps and other conveniences, for they cost much less to install than after completion. An admirable arrangement is to have power wires laid round the entire room behind the skirting board. These can then be tapped at any time and at any point to provide an extra outlet.

NOW about the form and position lamps are to take. Where rooms are furnished according to a period, this factor will naturally be taken into account, when making a choice, and there is not the slightest difficulty in obtaining designs to accord perfectly with Jacobean, Tudor, Futurist or Oriental schemes. The ideal arrangement of the average room of any pretensions is to provide a central fitting, of which beautiful specimens are ob-

tainable at from £3 to £7 a standard lamp. It is, of course, possible, but not necessary, to pay much more. These lamps are really things of beauty in natural woods, bronze, dull gold or colours—at from £3 to £5; wall-brackets at perhaps a couple of guineas each (either candle fittings, futurist, or other design, according to the room they are destined to adorn), and one or more table lamps, which begin in price as low as less than a pound apiece up to a few pounds. Table lamps are now exquisite in design, coming in the form of vases and ornaments in coloured pottery, woodwork, Satsuma ware, and even delightful little statuettes.

One's fancy can therefore be indulged to the utmost at a cost of from £10 to £15, or even less, and it must be remembered that by the expenditure of such a sum, furnishing needs as well as lighting facilities are being met very largely, and the cost should not be begrudged any more than in providing handsome curtains or cushions.

Beautiful lighting is a permanent source of joy and delight to the artistic sense. Efficient lighting—sufficient without glare—is a preventative of eye-strain and wear of nerves, all too prevalent in these days.

LAMP-SHADES, too, play an important part in both illumination and decoration, and the choice of a colour needs discrimination, because lighted

colour behaves differently to unlighted. Yellow, nearest to light itself, possesses greater luminosity than any other colour—so much so, that those artists in verbal description, the Chinese, call it "the elder daughter of light." Then follow, in order of merit, orange, green, red and blue, and lastly purple. This, of course, applies to the colours in their

bright orange-brown is better than green, red or blue; and tan and buff, being neutralised shades of yellow or orange, come fairly high in the scale of luminosity. Both blue and purple are apt to be disappointing shades at night. Certain tones of yellowy-green and brick-red or henna make good lamp-shades where it is desired to illuminate a particular spot, and if shades for reading-lamps are lined with white, any colour can be chosen for the outer side, the object in this case being to prevent, not to assist, the diffusion of the light.

A room lighted on these lines will be well but softly illuminated, will strike a definite note of invitation and hospitality directly it is entered, and give a real if silent welcome to the incomer.

A Lullaby

*Sleep, my little one,
Birdies are calling,
Cooingly, drowsily,
Down by the rill.*

*Sleep, my pretty one,
Lambkins are resting,
Quietly, peacefully,
On yonder hill.*

*Sleep, my dearie one,
Daddy is coming,
Cheerily, happily,
Home from the mill.*

*Sleep, my darling one,
Mother is watching,
Tenderly, lovingly,
Fearing no ill.*

—V. May Cottrell.

Solving An Old Problem

BRITISH housewives who attended the Ideal Home Exhibition consider that the many electric labour-saving appliances now on the market will solve the domestic servant problem. As one woman, inspecting an electric washing machine, well-known to us here in New Zealand, naively remarked, "What can we find for servants to do with all these things in the house? Even husbands can work these!"

A great impetus to the sale of electric labour-saving appliances is expected as the result of the exhibition especially as electric power is so much more easily available than heretofore. Thousands of little gadgets for saving time and temper found a ready sale.

full strength, but the principle applies throughout. For instance, a yellowish-green is found to be more luminous than a bluish-green, or than a full green, by reason of the added proportion of yellow. For the same reason, a

For General Lighting

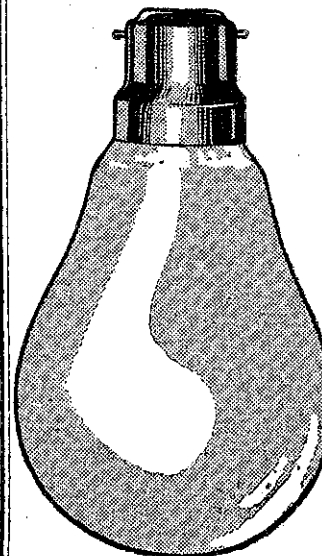
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