each towards a cup is excellent. My aerial is of the "L" type, 300 feet long, 60 feet high at the far end and 40 feet at the lead-in end. It is always advisable when trying out test aerials not to go by any improvement they might make to local reception or to that from high-powered stations at medium distances.—"Audio" (Blenheim).

Blacklisted.

LATEST verifications include 4GR, 4TO, and KFSD. The following stations are on my black list:—4ZL, 4ZW, 3WR, 2MV, WFAA, KTM, WLAC, and KTBS. DX81W: I logged 2XL at about the same time as you, and received my verification very soon after.—"Wainui" (Gisborne).

The "Radio Log"

An Enlargement

COMMENCING with the next issue of the "Radio Log," which will be on sale on November 24, certain improvements will be incorporated. The "Log," which has steadily increased in size, commencing at first with 16 pages and then advancing to 24, will be still further enlarged to 32 pages. There will be more illustrations, and this month a map of New Zealand showing the location of all the broadcasting stations. There will be also a complete list of all the New Zealand stations, with their schedules, frequencies, etc. Another interesting list will be that of all the American stations of 100 watts and over in power, with particulars concerning their methods of verification and other hitherto unpublished facts about the stations. This list alone to DX-ers will be worth the price paid for the "Log," which, by the way, is not being increased despite the enlarged size.

A new service for DX-ers will also be started in this issue, but before the issue comes out we are not saying anything about our intentions. We have no doubt that this feature will be a very popular one among DX-ers. The "Log" will in future have a semi-technical section in which semi-technical topics of interest to DX-ers will be discussed. For instance, in this issue we are discussing the pentode valve and its application to DX-ing. Is the pentode valve worth while from a DX-er's point of view? If so, how can it be coupled into existing sets? We are discussing the new super-heterodyne sets and giving readers some valuable advice concerning their circuits.

There comes a time when every DX-er wants to improve his present installation and get farther afield. Commencing in this issue, then, we are starting up this series of articles which will go under the general title of "Improving the Installation," and month by month we will take up various topics which are of vital interest to those who are anxious to get farther afield. These topics will, although of a semi-technical nature, not be difficult to understand and are prepared particularly for the DX-er who does not have a technical knowledge. However, even the enthusiast who has made his own set will, we venture to say, find the articles of particular interest.

Many enthusiasts have expressed their appreciation of our accounts of overseas stations, and this month we are continuing the good work commenced in previous issues. Short-wavers will find of particular interest our description of Radio Sargon, that very popular station which every short-wave listener has heard. More American stations are being dealt with this month, as well as a European which has been heard in this country.

If you are wise you will order your copy now, as supplies are limited, and you may be disappointed if you leave it until the last moment. Ask your bookseller to put one by for you, or, better still, give him 6/- for a year's subscription. You will never regret it.

A Visit to a New Zealand Radio Factory

An Up-to-date Plant

LAST week we had the very interesting experience of being taken over the embryo of a New Zealand radio factory—that of Messrs. Collier and Beale, who are manufacturing the "Radion" receivers.

We were very interested to note that this new "Radion" 'product—about which a laboratory report appears elsewhere—is wholly assembled in New Zealand. As far as possible British parts are used, and wherever possible the components are made in New Zealand. The cabinet work is the product of a Wellington firm and reflects great credit upon them. Indeed, it compares favourably with any manufactured article. The chassis is also made in the city and is stamped out in Collier and Beale's factory ready for the mounting of the various components. Transformers and chokes are also manufactured by this firm. At the present time the factory is a hive of industry. One sees sets in all stages of manufacture.

In one room the stampings are made and the chassis passed forward to the assembling room, where the various components are fitted into position. They then go forward to another section of the works, where each component is tested in position before the wiring is carried out. Experts proceed with the wiring and on the completion of this, a further test is made. At this stage, too, the condensers and coils—also made on the premises—are balanced up by precision instruments. A further stage is reached when the chassis are assembled in the cabinet and the final test made. Every set, before being released, is tested under several headings, including selectivity, sensitivity, and tone. It might be remarked that the speakers employed are a well-known and proved American line of dynamics.

The circuit for the receiver itself—a super-heterodyne employing pentode and multi-mus—was evolved by New Zealand engineers and, as we have remarked elsewhere, the performance compares favourably with our standard.

It is interesting to see another New Zealand industry thus springing up. The radio industry, which is now well established in most of the larger countries of the world, is on a very sound footing in Australia, where a tariff prevents the importation of sets from overseas. The result has been that the Australian industry has developed at a remarkable rate, and some very fine receivers, quite equal to the imported article, are now being manufactured. Although it is not proposed that so drastic a step as the imposition of a tariff in New Zealand be taken, yet it is indeed gratifying to see the New Zealand industry establishing itself. Already in other parts of New Zealand radio factories are to be found. In Auckland there are two or three from which a very large number of excellent receivers are sent out to the market. It is to be hoped that the fullest support will be given to these New Zealand products, which appear to be quite on a par with those imported.

Outspan Five

(To the Editor.)

I HAVE the Outspan working successfully, but I found it necessary to alter the coils. With 75.80.75 wound on 2FC was my limit, so wound 90 turns on each, with 33 on primaries, and now can get 7ZL. I am using .00035 condensers and .00015 differential condenser, using 45 turns on tickler which is not quite enough, as 2FC is not up to maximum strength with the moving plates full in.

The following three tips may be useful to constructors:—

(1) In winding the secondary and tickler coils, wind on more turns than necessary and finish of coils by bringing out the ends to solderlugs on top of the formers. This simplifies removing turns if necessary.

(2) In balancing up (see Q. and A's. for 16th October) break the lead from the .001 condenser to the top of the primary of detector coil and join it temporarily to the top of primary of the second radio coil, and then balance this coil with the detector and do the first coil last. This saves removing the detector coil to take the turns off the bottom.

(3) I found extra insulation on the grid leads to be an advantage, although I used glazite wire. To do this, obtain some bicycle valve tubing and slip over. To make it slip easily suck through some french chalk after cutting it to required length.—Moi Whare (Feilding).