grid circuit joined to the negative end of the filament. This will be the case if the wiring diagram given in Fig. 12 is adhered to. With such an instrument a 200-metre wave will usually be found a little over half-way round the scale of the variable condenser, rendering the instrument convenient for use on the licensed 180 metres wavelength as well.

When in use as a normal heterodyne unit the telephone terminals are not required and should be short-circuited by the link provided. They are only fitted to the instrument to enable telephones to be joined in circuit as a help for calibration purposes, and for other measurements.

The two terminals marked "capacity," in Figs. 11 and 12, are connected directly across the ends of the variable condenser. A very small single plate or vernier condenser can be joined across these terminals when desired to aid in fine adjustments of the wavelength. Such an addition is particularly desirable when heterodyning these short wavelengths, as the tuning range for maintaining the beat note within the audible limits is very restricted at these high frequencies. Such an addition, however, will, of course, alter the calibration of the instrument should it be desired to use it as a wavemeter.

The readings of the instrument may be calibrated against a standard wavemeter, so as to obtain the approximate wavelength corresponding to any scale reading of the condenser. Such a calibration, however, will vary slightly with all changes in the filament and H.T. batteries, and will usually also vary somewhat when the valve is changed. It must be carried out, of course, without any additional fine adjustment or vernier condenser connected to the "capacity" terminals, as such an addition, although very convenient for use, would constitute a serious disturbing element.

An important point to note when joining up the leads inside the instrument is that the wire from the grid of the valve should be joined to the *fixed* plates of the variable condenser, the movable vanes being connected to the filament of the valve. The potential of the movable vanes will then be lower, and the presence of the hand when making adjustments will be less serious. This precaution will be found of particular value when calibrating the condenser.

When accurate work is necessary with an instrument of this kind it is very desirable to fit a long handle to the condenser so as to enable the hand to be kept further from the instrument. Any convenient form of such handle can readily be added to this instrument, and will aid considerably the ease of its operation.

PRIZES FOR TRANSATLANTIC TESTS

AS promised in our last issue, we give below particulars of the valuable prizes offered by various manufacturers of wireless apparatus, in connection with the Transatlantic Competition.

Prizes are offered as follows, by the companies indicated :—

Amateur Supplies Association.—A "Simplex" cabinet valve set.

E. M. Ashley, Ltd.—A prize to the value of £8 to the winner, the prize to be completely at the disposal of the judges.

G. Z. Auckland & Son.—Apparatus from their stock to the value of £10.

Burnham & Co.—Three prizes—(1) A Burndept III receiver ; (2) a Burndept II ; and (3) a Burndept I. Prize (1) to be awarded to the individual or club receiving the signals ; prizes

(2) and (3) to go as consolation or other prizes to be given at the discretion of the judges.

Butler & Co.—A selection of apparatus from their list to the value of £5.

Dubilier Condenser Company, Ltd.—Condensers to the value of £10 to go to the most successful competitor, the winner choosing his own prize.

A. W. Gamage, Ltd.—A prize to be offered subject to the employment in the tests of apparatus purchased from them.

Halliwell & Good, Ltd.—A prize of goods selected from their catalogue to the value of £30, conditional on the successful competitor employing at least one essential unit of apparatus supplied by them.

B. Hesketh.—Any standard apparatus chosen from their list, current at the date of the award, to the value of £5 5s. This prize to be available, at the discretion of the judges, for the best designed circuit.

H. P. R. Wireless, Ltd.—Prize to be offered, but particulars not yet supplied.

H. W. Sullivan.—A Sullivan standard laboratory heterodyne Wavemeter (sold at £35 nett). The following conditions are imposed :—(1) That not less than two components of the set used shall be of their manufacture ; (2) that this prize be only awarded in the event of the signals actually being received.

It is felt that there must still be a large number of experimenters interested in the attempt to get these signals who have not yet registered their names with us. It is pointed out that the final details of the tests, together with any other special information on the subject, will be circulated by post only to those who have supplied their names and addresses in accordance with the regulations of the Competition set out in the last issue of *The Wireless World* (October 29th, pp. 482-483.)

Arrangements have been made for the transmission of special **calibration waves** on 200 metres at frequent intervals from after the appearance of this issue until the date of the commencement of the Transatlantic Tests. Particulars as to the dates and times of the transmission of these calibration waves will be circulated by post to those entering for the Competition.

DUTCH CONCERTS

BELOW we reprint a list of the total subscriptions received to date in response to the appeal for funds in support of the Dutch concerts :—

	£	s.	d.
The Wireless World	5	5	0
Sheffield and District Wireless Society	3	3	0
Mr. J. C. Walker	3	3	0
Wireless and Experimental Association	3	0	0
Mr. F. H. Berryman	2	2	0
Messrs. Burnham & Co.	2	2	0
J. R. C.	2	2	0
Mr. W. J. Crampton	2	2	0
Dr. Nesbitt Burns	1	1	0
Messrs. Arnold Mack & Co.	1	1	0
Mr. W. R Wade	1	1	0
Mr. W. S. Hubbard	1	1	0
"Billy Jones"	1	1	0
N. S. Rly., Electrical Dept. Wireless Soc.	1	1	0
Mr. N. K. Niness	1	1	0
Mr. B. E. Peal	1	1	0
Mr. W. C. Butler	1	0	0
Mr. H. E. Adshead	1	0	0
Captain R. B. Turbutt	1	0	0
Mr. J. A. A. Yeo	1	0	0
Mr. G. Smith Clarke	1	0	0
North Middlesex Wireless Club		10	6
Mr. S. R. Wright		10	6
Mr. P. R. Coursey		10	6
Mr. P. W. Harris		10	6
Mr. H. S. Pocock		10	6
Mr. J. R. Clay		10	6
Mr. H. J. Oram		10	6
Mr. E. Fowler Clark		10	0
Captain J. D. Adamson		10	0
Mr. H. Bevan Swift		10	0
Mr. C. L. Bell		10	0
Mr. J. P. Beeson		5	0
Mr. J. Wood		5	0
Mr. W. G. Boothroyd		5	0
Mr. E. J. Simmonds		5	0
Mr. D. M. Burn		5	0
Mr. H. S. Woolley		5	0
Mr. S. Evans		2	6
	£43	13	0