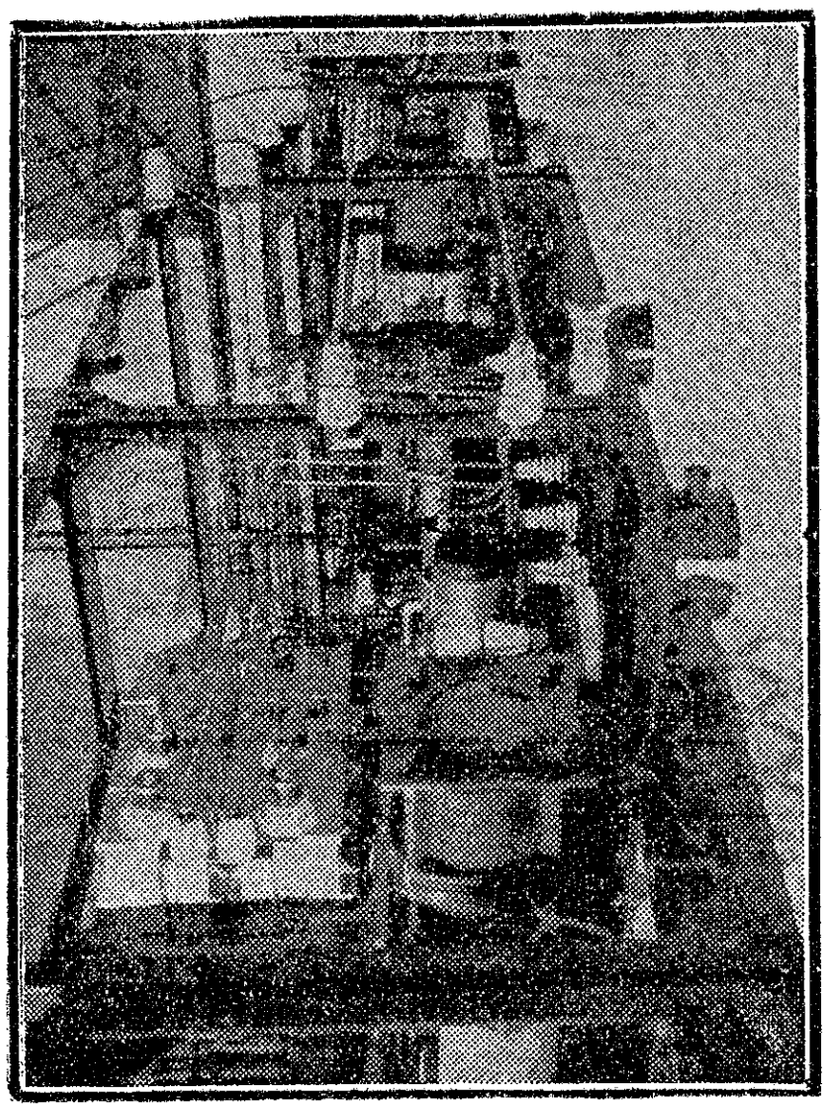


Portion of the front half of the transmitter, looking down on the front panels.

Some Coming Features on the Programmes.

Some outstanding attractions will appear on future programmes from the various stations. Among them are:—

Addresses by Rev. H. W. Whyte, Indian Missionary.

"Jhelum River, for which Miss Hilda Hutt and Mr. A. G. Thompson will be the vocalists (3YA).

The musical plays "Gipsy Love" and "To-night's the Night," are scheduled at 3YA.

An evening's programme of Indian music at 2YA.

Racing carnival week programmes at 3YA.

Wartime songs at 2YA.

Leckie v. Radford boxing match (3YA).

Schubert Centenary programmes.

Election results.

New Yankee Set

THE Graybar Electric Company, sales subsidiary of the Western Electric Company, announced recently its entry into the radio receiving set field. An innovation in radio set merchandising was promised. The production and marketing plan calls for five complete receivers and loudspeakers. Four of the sets are to be of the all-electric type, to operate from light sockets.

The new products are to be marketed through the Graybar system of wholesale branches in seventy principal cities of the United States, which are now said to do an electrical business of more than 70,000,000 dollars (£14,000,000) a year. The first of the new models was to be on the market by September 15. The line will comprise six and eight-valve receivers.

According to George E. Cullinan, vice-president and general sales manager of the company, the two larger models manufactured, of eight valves each, will incorporate a "new and revolutionary type of circuit."

"The Graybar company, in entering the receiver field, will not engage in radio valve manufactue, but will act as distributer for such equipment," he said. "The sets are to be sold without valves or equipped with RCA radiotrons at the option of the purchaser."

"We are entering into radio conservatively," said Herbert Metz, advertising manager, "with what we believe is the best possible background in all forms of electrical communication. The line will be made available to select dealers in every branch of the market. Under present production schedules all models should be in dealers' hands by the middle of next month" (September).

The list of models includes one with a built-in loudspeaker of the dynamic type. Others will be available with a special table containing a built-in magnetic-type speaker.

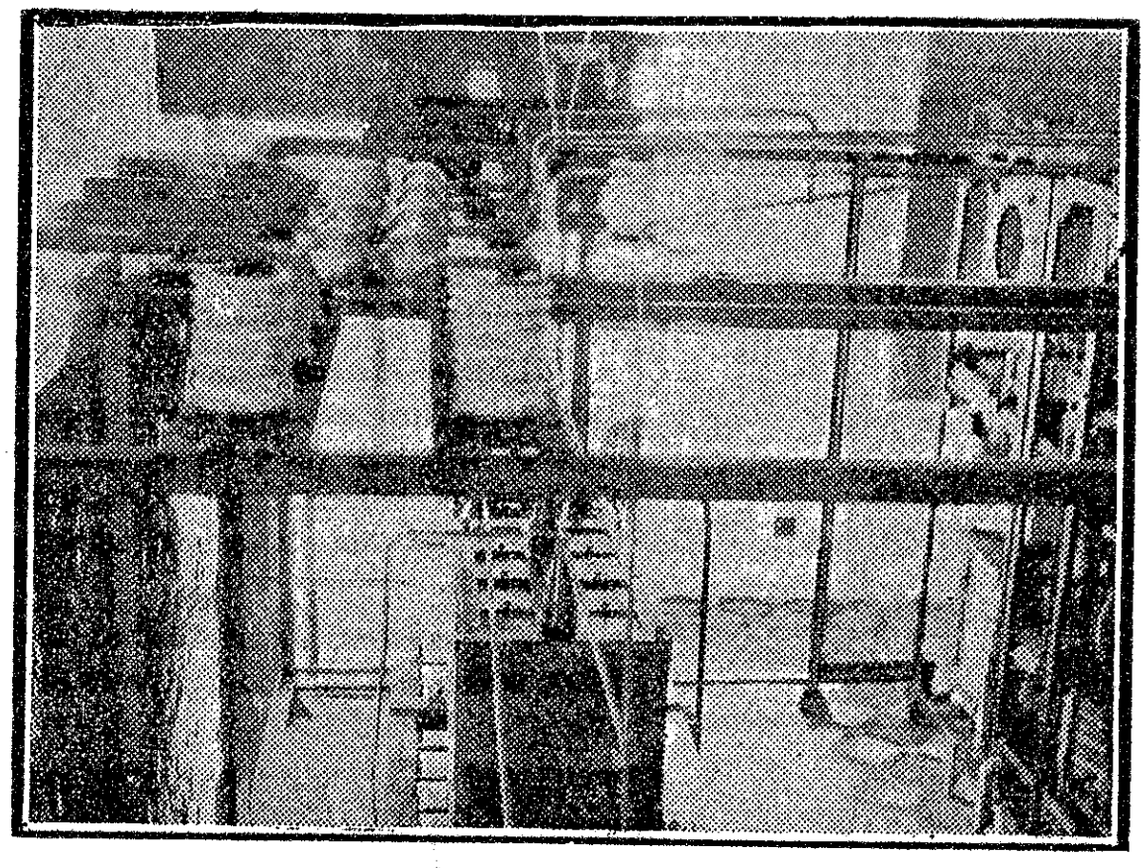
The plate is a cylinder of copper shaped like an elongated sewing thimble (but much larger), and is fixed to the glass bulb by means of a vacuum tight weld. The junction between the copper plate and the glass bulb can be seen in the photograph at the lower end of the glass portion. The purpose of the glass is merely to support the grid and filament which extend downwards into the inside of the plate and cannot be seen in the photo. The vacuum is, therefore, inside the plate, not the plate inside the vacuum as in the usual types.

WHEN inserting a tube in its receptacle, the plate, which is fitted with a clamping flange, is lowered into the water-jacket as shown and clamped tight. Water is forced round the outside of the plate by means of a circulating pump, and the temperature of the plate is kept at a safe value.

As the water is actually in contact with the plate, which is also at a potential of 10,000 volts, it is necessary to provide against electrical leakage.

This is accomplished by using a good grade of water (for pure water is not a conductor of electricity, as many people think), and connecting a long coil of rubber horse between the water mains and the tube.

When it is considered that the plate current of each tube is over 500 milliamperes at 10,000 volts and that the filaments each require over 40 amperes at 24 volts, some idea may be gained of the amount of heat required to be carried away by the water.

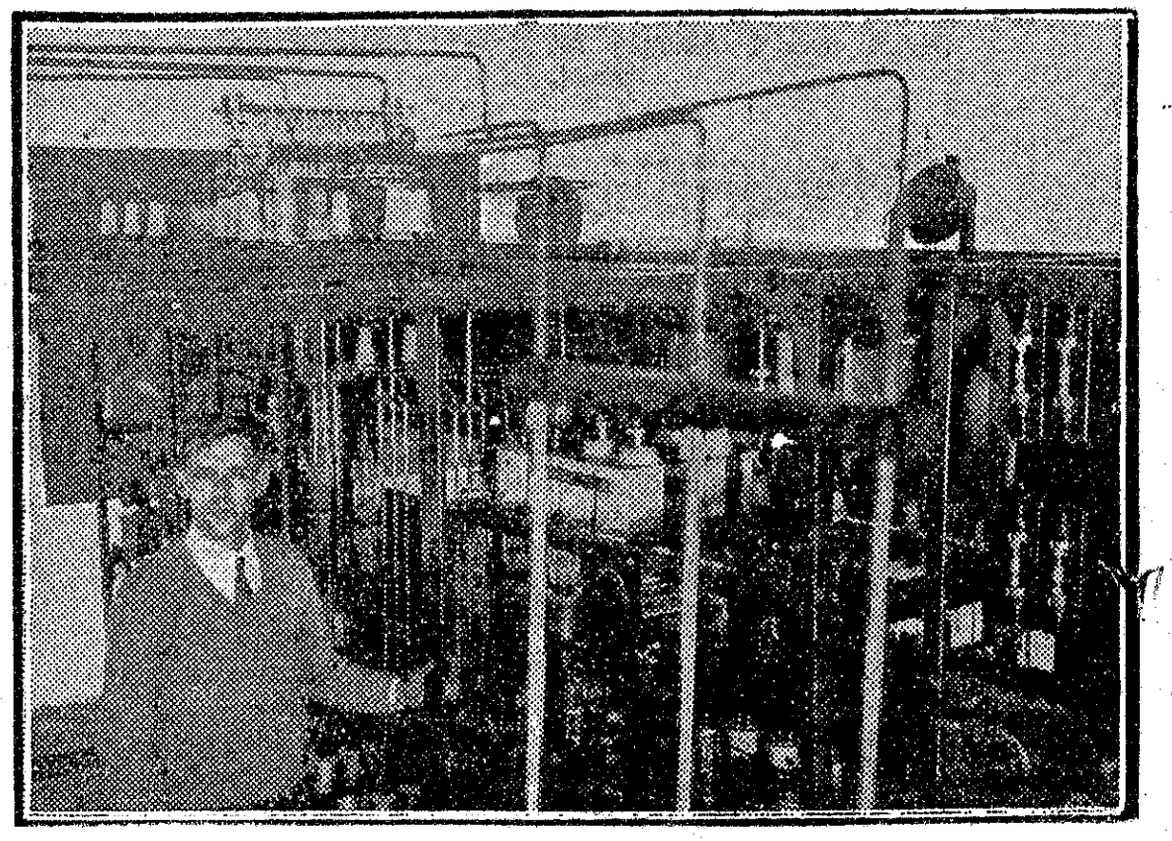


Another view looking down into the transmitter, showing protective spark gaps, H.T. filter condenser and resistances.

New Super-Het.

Armstrong's Latest.

According to advice from America a further patent of considerable interest has been issued to Mr. E. H. Armstrong, the inventor of the superheterodyne receiver. The new patent is designed greatly to reduce the size of the receiver, and it is stated that it will permit of a reduction of three valves in the set without any loss of efficiency. The full details of the improvements covered in the patent have not yet been made available, but according to brief reports the first valve in the receiver is made to perform the function of the frequency changing oscillator as well as the first detector. By other improvements it has been found possible to use only one intermediate amplifier between the first and second detectors, so that only three valves are required up to the second detector. In many cases it is stated that a fourth valve as a low frequency amplifier is all that is necessary to complete the receiver, and that two will give full loudspeaker volume from very distant stations. Thus Mr. Armstrong's new superheterodyne receiver will have only four or five valves, instead of six or eight.



A view taken in the interior of the transmitter, again conveying an excellent idea of the mechanism behind the front panels