## A Review and Commentary on the Progress, in This Brancly of Rapid Communication <br> Conducted by Thomas Elway

## Broadcasting from Mid-ocean

The giant Steamship Leviathan, noted already for her unusually complete radio equipment, has added a new set of laurels to her wireless crown. She has actually begun broadcasting the many ship's concerts. entertainments, and other doings while plug. ing at twenty-four knots an hour through howling gales and hissing turbulent seas. The success of her experiments has been amply proven by the tremendous influx of mail from both sides of the ocean, addressed to her Chief Radio Officer, E. N. Pickerill, one of the veterans of the transoceanic trade.
The first reports of reception indicated that he had been picked up when only some eight hundred miles out of New York, by several English stations, who said that they had been able to dance by the music of the ship's orchestra, at the same time that the pasengers were dancing in the vast ballrom on the palatial liner plowing her way toward the old world. Tube sets were saccesful at this distance, and in most cases ranged from three to five tubes.
transferred from a straight $C W$ or interrusted CW telegraph set to an excellent telephone set. By having a shielded line run from the orchestra gallery of the firstclass dining saloon, and one from the stage in the ballroom, the same sort of broadcast conditions apply as in any regular landline-outside-studio broadcast.
The set used is a four-tube one, each tube being one kw . plate input. Two tubes are used for rectifiers for the alternating current, one for oscillation, and one for modulation. The antenna radiation is 750 watts ( 10 amperes), and a regular broadcasting wavelength assigned by the U . S. Govermment is used. The antenna used for broadcasting is an auxiliary one, strung along the sides of the giant stacks-its length being 150 feet. It is a five-wise cage, as is also the main traffic antenna strung over the stacks between the masts-the latter being 600 feet long, however, and working on wavelengths of from 1.800 meters to 2.400 meters.

The actual object of these broadcasts is

frown Brothers.
The five-wire cage which is part of the antenna equipment of the Leviathan's broadcasting station

As the Leviathan neared Europe, the crays-al-set owners began to pick up the extra $r_{\text {ti sic }}$ stat was being "put on the air," and 1 ais began to pour in. Mr. Pickerill was so impressed by the enthusiasm of the European amateurs and broadcast listeners, that on his return trip he made a special point of broadcasting personal messages to as many as he could.
) The set is, according to the Chief Radio Officer, the only one of its type put out by Wee Kadi Corporation of Arnerica. being a
not one of publicity for the ship. but merely to ascertain clearly the possibilities of eventually establishing a radiotelephone communication system for use by the passengers. It would be of great use, Mr. Pickerill points out, to allow them to converse with other ships at sea, when the other ships will have installed such apparatus. But his real dream is the time when, two days out of Cherbourg, a passenger can walk into the radio office and telephone, via land-line relays, to his home or office in St. Louis or Detroit. Then,


## Driving Magnesia Pumps with a Jones Speed Reducer

The photograph above show: Reducer (Single Type) drivi pumps in one of the largest in illustrates the Double Type F


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