

Radiovision on Air Across Country

Radiovision

The amateur radiovision enthusiast will soon have at least 21 stations broadcasting such programs, located all the way from Lexington, Mass., to Los Angeles, Calif. These are operated by eleven different broadcasters. Nine are now broadcasting, while two have their stations under construction. Several others have applied to the Federal Radio Commission for authority to enter this field, but so far have neither been granted a license to operate nor a construction permit.

Included in this number are three of the chief manufacturing firms. The Radio Corporation of America, in New York City, has three bands of 100 kilocycles width each. One is now in use, while the other two soon will be. The General Electric Company, at Schenectady, N. Y., is regularly broadcasting on three different frequencies, including 790 kilocycles, that of the WGY broadcast station. These are all on ten kilocycle widths. The Westinghouse Electric and Manufacturing Co., of Pittsburgh, Pa., has been assigned two bands of 100 kilocycles width, at wavelengths of 63 and 150 meters. The former is now in use, but on an irregular experimental schedule.

Though the Federal Radio Commission has recently issued a new order regulating radiovision broadcasting, this does not affect the present situation very greatly. One of the chief points is that it may be

done freely, though with the necessary approval by the commission, on frequencies above 1,500 kilocycles, or wavelengths below 200 meters, the lower limit of the broadcast band. Radiovision broadcasting on frequencies between 550 and 1,500 kilocycles, the present band of the broadcast stations, will be permitted, with certain limitations. One is that no band wider than 10 kilocycles may be used for the purpose. Another is that it shall not be done more than one hour each day, and that it shall not be done between 6:00 and 11:00 p. m., in order not to interfere with broadcast listeners.

All of the present radiovision broadcasters are now using the shorter wavelengths, except the broadcasting stations WGY, WRNY, WCFL and WIBO. None have bands wider than 10 kilocycles, as that is the width of all sound broadcasting bands. Of these stations, only WRNY has been broadcasting radiovision in the evening hours, so that appears to be the only station even slightly affected. However, the radio commission has announced that there will be further reallocations of the radiovision bands. It is believed that this action will be to limit all of these broadcasters to a very few bands, of 100 kilocycles each, and let them divide time on them. In view of the limited power of most of the stations, and the fact that none broadcast more than a

short time daily, the necessary time division should be worked out to the satisfaction of all.

The Radio Manufacturers Association recently adopted as standard the 48 line, 15 picture per second method, with the scanning across the frame from left to right and top to bottom, as one reads the pages of a book in English. Though some of the broadcasters have not yet adopted this, four are now using it and probably more will follow. Some of the stations are using fewer lines, or fewer pictures per second. This is done in an effort to get more varieties of light and shade in the limited bands now assigned. With the 100 kilocycle band that will be used in the future, ten times the width used by many present broadcasters, it will be possible to send considerable detail with the 48 lines, and fifteen pictures a second.

Even the highest pitched sounds ordinarily heard are below 5,000 vibrations a second, and so may be sent satisfactorily in the present broadcast band. With radiovision, however, the number of vibrations required per second may be many times as great. Hence it requires a wider band. If the number of vibrations is cut by limiting the number of lines to the picture, there is loss of detail, or if the number of pictures per second is lower, there is an objectionable flicker.

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Aztec New Years

Archæology

School children of Peru are being urged to revive one of the most picturesque and important customs of the ancient inhabitants of tropical America—the celebration of the old native new year's day. Last year, young Mexicans revived the festival, which is in accordance with the archæological findings of Mrs. Zelia Nuttall, well known specialist in Mexican archæology.

Priests of the Aztecs, Peruvians, and other inhabitants of the tropics watched the skies for a sign to tell them when to record the passing of a year and when to plant their crops. Twice a year, the sun passed through the zenith, and stood directly overhead and they observed that there was a remarkable moment when a vertical object was entirely shadowless, Mrs. Nuttall states. They interpreted this as (*Turn to next page*)

Typhus Expert Honored

Pathology

Prof. Charles Nicolle, to whom the Nobel Prize in medicine for 1928 has just been awarded in recognition of his work on typhus fever, made his first discoveries about the disease in 1909. At that time he was a surgeon in the French Army, stationed at Algiers. Now he is director of the Pasteur Institute of Tunis.

Nicolle found that the body louse was more than pest and was an actual danger to life and health because it carried the germ of typhus fever. This disease had been a scourge of armies, jails, almshouses, tenements and all places where people live in close contact and without proper means for keeping clean. The louse also abounds in such places. Now, thanks to Prof. Nicolle, it is known that getting rid of the louse prevents typhus fever. (*Turn to next page*)

Seven-Inch Tail on Baby

Anatomy

A human tail of almost record-breaking length has just been discovered appended to a baby girl born at Knoxville, Tennessee, one of the states that outlaw evolution. This tail was reported to be seven inches long. The record is a nine-inch tail on a twelve-year-old boy from French Indo-China.

Only about twenty-five authentic cases of babies born with tails are known to science. However, every human being, including the late William Jennings Bryan, had a tail at an early stage of his life, stated Dr. Adolph H. Schultz, associate professor of physical anthropology at the Johns Hopkins University and research associate of the Carnegie Institution of Washington. Dr. Schultz has asked that the unique appendage be sent him for study.

Before birth, when man is in the embryo stage of (*Turn to next page*)