

Contributors to this Issue

MILLARD W. BALDWIN, Jr., E.E., Cornell, 1925; M.A., Columbia, 1928; Bell Telephone Laboratories, 1925-. Mr. Baldwin has been engaged in studies of vacuum tube modulation; more recently his work has had to do with some of the problems of picture transmission and television.

DAVID GEORGE BLATTNER, B.S.E.E., Kansas State Agricultural College, 1911; Assistant Instructor in Physics, Kansas State Agricultural College, 1911-13. Engineering Department, Western Electric Company, 1914-25. Bell Telephone Laboratories 1925-. Mr. Blattner's work has been in loud speaker, public address systems, and phonograph recorder and reproducer developments.

L. G. BOSTWICK, B.S. in E.E., University of Vermont, 1922; American Telephone and Telegraph Company, Development and Research Department, 1922-26; Bell Telephone Laboratories, Inc., Research Department, 1926-. While with the Development and Research Department, Mr. Bostwick's work involved general problems on systems for the high quality transmission of speech and music; since then his work has been largely on loud speakers and loud speaker measuring methods.

S. BRAND, B.S., Trinity College, 1915; Yale University Graduate School, 1915-17; U. S. Air Service, 1917-19; Plant Department, Southern New England Telephone Company, 1920-23; Department of Development and Research, American Telephone and Telegraph Company, 1923-. Mr. Brand has been engaged mainly in transmission development work on repeatered circuits.

A. B. CLARK, B.E.E., University of Michigan, 1911; American Telephone and Telegraph Company, 1911-. Toll Transmission Development Engineer, 1928-. Mr. Clark's work has been largely concerned with toll telephone and telegraph systems.

LLOYD ESPENSCHIED. Mr. Espenschied is in charge of radio development, assisting the Transmission Development Engineer, Department of Development and Research, American Telephone and Telegraph Company. He joined the Bell System in 1910, having graduated from Pratt Institute the previous year. He has taken an important part in practically all of the Bell System radio developments, beginning with the first long-distance radio-telephone tests of 1915, at which time

he received the voice in Hawaii from Arlington, Va. He has participated in a number of international conferences on electric communications.

FRANK GRAY, B.S., Purdue, 1911; instructor and graduate student in physics at the University of Wisconsin, Ph.D., 1916; member of the Naval Experimental Station during the war. Mr. Gray entered the Bell Telephone Laboratories—then the Engineering Department of the Western Electric Company—in 1919 and has been closely associated with Dr. Ives in his studies on light.

C. W. GREEN, B.S. in Electrical Engineering, University of Wisconsin, 1907; Instructor and Assistant Professor, Massachusetts Institute of Technology, 1907–17; Captain 1917, Major 1918, U. S. Army; Bell Telephone Laboratories, 1919. Mr. Green's work has had to do with the development of Carrier Telephone Systems and Voice Frequency Repeaters.

HERBERT E. IVES, B.S., University of Pennsylvania, 1905; Ph.D., Johns Hopkins, 1908; assistant and assistant physicist, Bureau of Standards, 1908–09; physicist, Nela Research Laboratory, Cleveland 1909–12; physicist, United Gas Improvement Company, Philadelphia, 1912–18; U. S. Army Air Service, 1918–19; research engineer, Western Electric Company and Bell Telephone Laboratories, 1919 to date. Dr. Ives' work has had to do principally with the production, measurement and utilization of light.

C. E. LANE, A.B., University of Iowa, 1920; M.S., University of Iowa, 1921; Engineering Department of the Western Electric Company, 1921–25; Bell Telephone Laboratories, 1925–. During the last four years Mr. Lane has been engaged in the development of such transmission networks as filters, attenuation equalizers and phase correctors in the Apparatus Development Department. The five years prior to this were spent by him in the Research Department, engaged in general studies in acoustics, such as speech, hearing and loud speaker development.

W. H. MARTIN, A.B., Johns Hopkins University, 1909; B.Sc., Massachusetts Institute of Technology, 1911; American Telephone and Telegraph Company, Engineering Department, 1911–19; Department of Development and Research, 1919–. Mr. Martin's work has related particularly to transmission of telephone sets and local exchange circuits, transmission quality and loading.

H. NYQUIST, B.S. in Electrical Engineering, North Dakota, 1914; M.S., North Dakota, 1915; Ph.D., Yale, 1917; Engineering Depart-

ment, American Telephone and Telegraph Company, 1917-19; Department of Development and Research, 1919-. Mr. Nyquist has been engaged in transmission work particularly relating to toll cables.

H. S. OSBORNE, B.S., Massachusetts Institute of Technology, 1908; Austin Research Fellow in Engineering, 1908-10; Eng.D., 1910; American Telephone and Telegraph Company, Engineering Department, 1910-19; Department of Development and Research, 1919-20; Department of Operation and Engineering, 1920-. Mr. Osborne is Transmission Engineer and as such is responsible for assisting the Associated Companies in connection with telephone and telegraph transmission and protection matters.

J. C. STEINBERG, B.Sc., M.Sc., Coe College, 1916, 1917; U. S. Air Service, 1917-19; Ph.D., Iowa, 1922; Engineering Department, Western Electric Company, 1922-25; Bell Telephone Laboratories, 1925-. Dr. Steinberg's work since coming with the Bell System has related largely to speech and hearing.

H. M. STOLLER, E.E., Union College, 1913; M.S. in Electrical Engineering, 1915; Engineering Department of Western Electric Company, 1914 and 1916-25; Bell Telephone Laboratories, 1925-. Mr. Stoller's work has dealt with special problems connected with electrical power machinery, particularly voltage and speed regulators; multi-frequency generators employed in voice frequency carrier telegraph systems; and synchronization and speed control equipment for sound-picture systems.

WILLIAM WILSON, Victoria University of Manchester, 1904-10; B.Sc., 1907; M.Sc., 1908; Cavendish Laboratory, Cambridge University, 1910-12, B.A., 1912; Lecturer in Physics, Toronto University, 1912-14; D.Sc. Manchester, 1913. Engineering Department Western Electric Company, 1914-24; 1925- Bell Telephone Laboratories; Assistant Director of Research 1928-. Dr. Wilson has published numerous papers on radioactivity and thermionics and since 1917 has been in direct charge of vacuum tube development and design and since 1925 has also been in charge of radio development.