The Contributors to this Issue

GEORGE A. CAMPBELL, B.S., Massachusetts Institute of Technology, 1891; A.B., Harvard, 1892; Ph.D., 1901; Göttingen, Vienna and Paris, 1893–96. Mechanical Department, American Bell Telephone Company, 1897; Engineering Department, American Telephone and Telegraph Company, 1903–1919; Department of Development and Research, 1919—; Research Engineer, 1908—. Dr. Campbell has published papers on loading and the theory of electric circuits and is also well-known to telephone engineers for his contributions to repeater and substation circuits. The electric filter which is one of his inventions plays a fundamental röle in telephone repeater, carrier current and radio systems.

ROBERT W. KING, A.B., Cornell University, 1912; Ph.D., 1915; assistant and instructor in physics, Cornell, 1913–17; Engineering Department of the Western Electric Company, 1917–20; Department of Development and Research, American Telephone and Telegraph Company, 1920–21; Information Department, 1921—. While with the Western Electric Company, Mr. King's work related to the design and construction of vacuum tubes and allied high vacuum apparatus.

KARL K. DARROW, S.B., University of Chicago, 1911; University of Paris, 1911–12; University of Berlin, 1912; Ph.D., in physics and mathematics, University of Chicago, 1917; Engineering Department, Western Electric Company, 1917—. At the Western Electric, Mr. Darrow has been engaged largely in preparing studies and analyses of published research in various fields of physics.

H. D. ARNOLD, Ph.B., Wesleyan, 1906; M.S., 1907; Ph.D., Chicago, 1911; assistant in physics, Wesleyan, 1906–07; Chicago, 1908; professor, Mt. Allison, 1909–10; Engineering Department of the Western Electric Company, Research Engineer, 1911—; Director of Research, 1923—. Dr. Arnold has been in direct charge of the development of the vacuum tube for telephone repeaters and radio purposes, and also other items of telephone equipment.

LLOYD ESPENCHIED, Pratt Institute, 1909; United Wireless Telegraph Company as radio operator, summers, 1907–08; Telefunken Wireless Telegraph Company of America, assistant engineer, 1909–10;

American Telephone and Telegraph Company, Engineering Department and Department of Development and Research, 1910—. Took part in long distance radio telephone experiments from Washington to Hawaii and Paris, 1915; since then his work has been connected with the development of radio and carrier systems.

HARVEY FLETCHER, B.S., Brigham Young, 1907; Ph.D., Chicago, 1911; instructor of physics, Brigham Young, 1907–08; Chicago, 1909–10; Professor, Brigham Young, 1911–16; Engineering Department, Western Electric Company, 1916—. The present paper by Dr. Fletcher gives some of the results of an investigation which is being made of the relation between the frequency characteristics of telephone circuits and the intelligibility of transmitted speech. Dr. Fletcher has also published on Brownian movements, ionization and electronics.