

Contributors to this Issue

M. M. ATALLA, B.S., Cairo University, 1945; M.S., Purdue University, 1947; Ph.D., Purdue University, 1949; Studies at Purdue undertaken as the result of a scholarship from Cairo University for four years of graduate work. Bell Telephone Laboratories, 1950-. For the past three years he has been a member of the Switching Apparatus Development Department, in which he is supervising a group doing fundamental research work on contact physics and engineering. Current projects include fundamental studies of gas discharge phenomena between contacts, their mechanisms, and their physical effects on contact behavior; also fundamental studies of contact opens and resistance. In 1950, an article by him was awarded first prize in the junior member category of the A.S.M.E. He is a member of Sigma Xi, Sigma Pi Sigma, Pi Tau Sigma, the American Physical Society, and an associate member of the A.S.M.E.

ROSEMARY E. COX, B.A., Ladycliff College, 1949; M.S. Fordham University, 1950; Bell Telephone Laboratories, 1951-. Miss Cox, who taught high school mathematics for a year before coming to the Laboratories, has been engaged in fundamental studies of contact physics. She won a New York State University Scholarship and scholarships from Ladycliff and Fordham.

GERALD V. KING, B.S., Carnegie Institute of Technology, 1920; Western Electric Company, 1921-24; Bell Telephone Laboratories, 1925-. Mr. King analyzed customer orders for step-by-step and manual systems for three years before turning to the design and checking of manual and dial PBX and community dial offices. From 1932 to 1939 he engaged in fundamental studies and development of new local and toll crossbar systems. He was involved in military work from 1939 to 1944 and since then he has been concerned with design and development of AMA accounting centers, central offices and crossbar tandem systems. He was appointed Switching Systems Development Engineer in 1952.

STEWART E. MILLER, University of Wisconsin, 1936-39; B.S. and M.S., Massachusetts Institute of Technology, 1941. Bell Telephone

Laboratories, 1941-. Since June 1954, Mr. Miller has been Assistant Director of Radio Research at Holmdel and has been in charge of research on guided systems and associated millimeter and microwave techniques. During World War II, he worked on airborne radar systems. He also worked on coaxial carrier transmissions systems. Mr. Miller holds patents in connection with automatic frequency control, an oscillator control scheme and the D-C amplifier. Member of the I.R.E., Eta Kappa Nu, Tau Beta Pi and Sigma Xi.

NORMAN A. NEWELL, E. E., Lehigh University, 1920. Mr. Newell joined Bell Telephone Laboratories in 1934 after fourteen years with the American Telephone and Telegraph Company. He has formed requirements for the development of circuit and equipment arrangements for intertoll trunk signaling systems, local and toll manual switchboards, toll switchboard trunking systems and automatic toll systems. He helped coordinate these projects and prepared descriptions of the systems for the operating companies. Mr. Newell holds patents in the fields of straightforward trunking, toll-call timing and single-frequency signaling. He is a member of the A.I.E.E., Tau Beta Pi and Pi Delta Epsilon.

WILLIAM PFERD, B.S. in M.E. Rutgers University, 1947; M.S. in M.E., Newark College of Engineering 1951. Mr. Pferd has recently been concerned with coin collector development. Previously, he worked on design and development of the station ringer for the 500-type telephone set and the dial mechanism for the same set. During World War II he served as a photographic intelligence officer in Italy with the 98th Bomb Group.

JOHN R. PIERCE, B.S., M.S., Ph.D., California Institute of Technology, 1933, 1934 and 1936; Bell Telephone Laboratories, 1936-; Appointed Director of Electronics Research, 1952. Dr. Pierce has specialized in the development of electron tubes and microwave research since joining the Laboratories. During the war he concentrated on the development of electronic devices for the armed forces. Since the war he has done research leading to the development of the beam traveling-wave tube for which he was awarded the 1947 Morris Liebmann Memorial Prize of the Institute of Radio Engineers. Dr. Pierce is the author of two books: *Theory and Design of Electron Beams*, published in second edition this year, and *Traveling Wave Tubes* (1950). He was voted the "Outstanding Young Electrical Engineer of 1942" by Eta Kappa Nu. Member of the A.I.E.E., Tau Beta Pi and Eta Kappa Nu. Fellow of the American Physical Society and the I.R.E.

ALLAN WEAVER, B.S. in E. E., University of Nebraska, 1921. Since 1945 Mr. Weaver has been in charge of a group concentrated on toll signaling with particular attention to the development of single-frequency signaling for use in connection with nationwide dialing systems. He joined Bell Telephone Laboratories in 1934 after thirteen years with American Telephone and Telegraph Company and was first concerned with the development of telegraph, telephotograph and teletypewriter systems. During World War II he was assigned to radar development. He holds thirty-seven patents in the fields of telegraphy, teletypography and signaling. Mr. Weaver is a member of the A.I.E.E., I.R.E. and Sigma Xi.