

fication yards. A further adaptation of this same form of communication is for telephone conversation between the enginemen and the conductor of freight trains, as well as between trains, or between trains and wayside stations. Articles describing the use of electronic devices in this form of communication were published in *Railway Signaling* for July, 1940; December, 1943; and March, 1944.

This discussion up to this point has dealt primarily with the use of electronics in apparatus and systems which have been widely adopted and have been in extensive use in regular railroad service for a number of years. A further fact is that, in the period since January 1, 1920, at least nine different railroads have co-operated with various manufacturers in making 20 different extensive tests of radio for train communication. Further developments and tests in this field comprise one of the activities of the Radio Technical Planning Board, a national body of which the Association of American Railroads is a sponsoring member, and is represented on the Board by representatives appointed by the Telegraph and Telephone Section, the Signal Section and the Electrical Sections of the A.A.R.

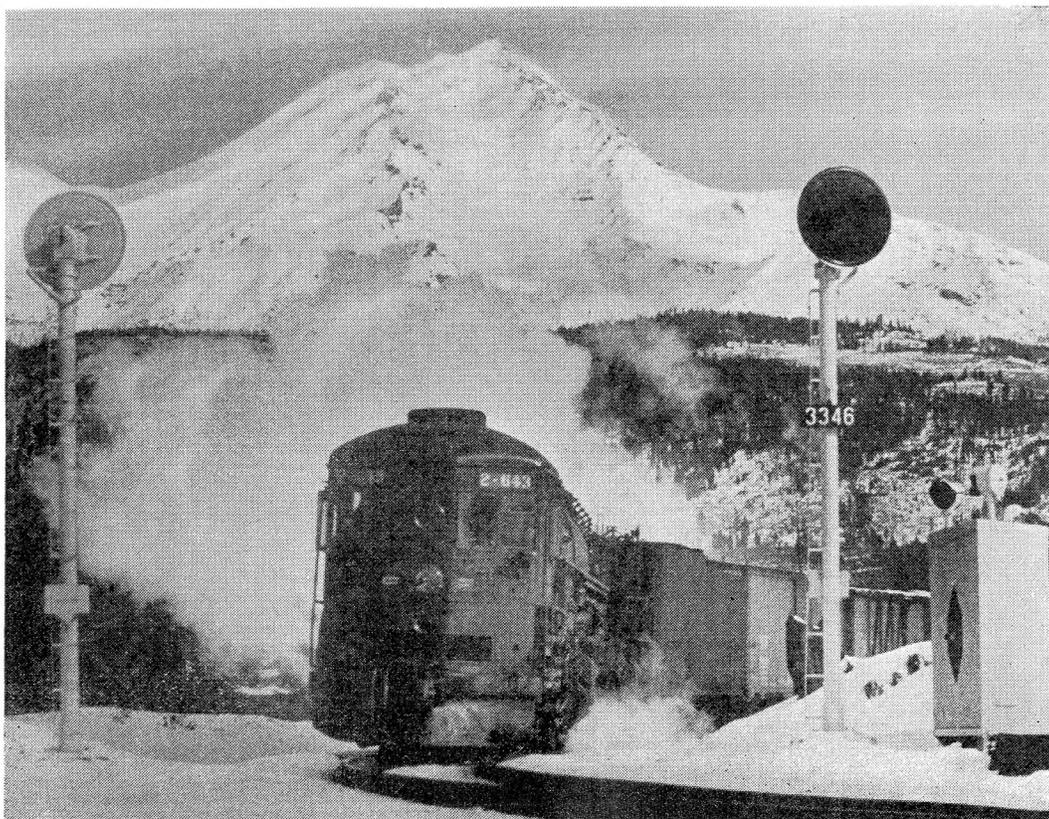
It is obvious from what has been said here that for 28 years the railroads and the manufacturers have been actively engaged in developing uses for electronics and installing apparatus including such devices. Developments of this nature are continuing and naturally they may be expected to be accelerated in the postwar period because of the greater availability of manpower and materials which will exist at that time. Electronics has its limitations, however, and damage can be done—in fact has been done—by statements made without a complete knowledge

of the history of electronics on the railroads, and of the requirements of train operation, signaling and communications on railroads.

## Centennial of Telegraph

On May 24, the telegraph industry, including the railroads, will pay tribute to the memory of Samuel Finley Breese Morse, the inventor of the Morse telegraph, in a centennial celebration of the sending of the first telegram. The first message "What God hath wrought," was flashed over the first telegraph line from the chamber of the United States Supreme Court, then the capitol in Washington, to the Baltimore & Ohio Railroad station in Baltimore, Md., on May 24, 1844. On May 24, 1944, this scene will be reenacted in Washington and Baltimore, and a Joint Congressional Committee will unveil a monument commemorating the sending of this first message by Samuel Morse.

The first telegraph line circuit was constructed on the right-of-way of the Baltimore & Ohio between Washington and Baltimore. Throughout the 100 years of development and expansion of telegraph and other forms of communication, the railroads have played an important part, and on May 24, 1944, the Association of American Railroads will join with the Western Union Telegraph Company, the International Telephone & Telegraph Corporation, the R.C.A. Communications, Inc., and the American Telephone & Telegraph Company to observe the centennial of the sending of the first telegraph message and to pay tribute to Morse and the men who assisted him.



Striking pictorial study of Southern Pacific cab-in-front freight locomotive framed between two automatic signals on the famous Shasta Route linking San Francisco and Portland. The backdrop is beautiful Mt. Shasta. The picture was made in C.T.C. territory near Dunsmuir, California.