

sion, as well as the continuous increase in public patronage, has laid an increased burden on the designers of systems and of control equipment which has been met promptly, or even anticipated by suitable apparatus developments. If it had not been met the present extensive use, for example, of repeater stations and of carrier-current systems for multiplex telephony and telegraphy would undoubtedly have been delayed or uneconomical. Many of these investigations also have been of service in Army and Navy equipment. In the fields of transportation and of power transmission respectively, these developments have resulted in systems for train dispatching and for the remote indication of the operating conditions at distant substations.

Although it is possible to classify the activities of Bell Telephone Laboratories as has been done above, in terms of the two major technical problems of electrical communication, such classification obscures the peculiar research organization which has been evolved for the efficient coordination of its many-sided approach to these problems and may even tend to emphasize certain developments at the expense of others, equally fundamental and economically necessary, which proceed continuously and have a steady and continuous but less spectacular effect upon the communication art.

FUNCTIONAL ORGANIZATION

In its functional organization Bell Telephone Laboratories divides into two main groups, the first of far the larger size concerned with research, development and engineering investigations, and the second, with the commercial operations of the company and the rendering of service to the first mentioned group. In the second group fall those activities of the maintenance of the buildings, and the operation of its efficient and well equipped model shop; the purchase of supplies and equipment; all accounting and auditing; estimates and cost studies;