

Section 2.—Telephones

The tremendous growth of Canadian telephone systems in the past ten years has been matched by their technological development. Automation in the Canadian telephone industry began on a large scale about thirty years ago with the introduction of dial telephones and step-by-step equipment for automatic completion of local calls. About 70 p.c. of all telephones in Canada are now served by this method and the proportion is increasing steadily. Crossbar, a type of automatic switching equipment faster and more flexible than step-by-step, is now being introduced in several Ontario and Quebec communities with heavy calling volumes. The same basic type of crossbar switching is employed in the new regional long-distance office opened at Toronto in 1955; a similar installation will soon be placed in service at Montreal. These machines enable operators to dial calls directly to telephones in many distant cities across the continent. Within a few years the extension of this system to most major centres in Canada and the United States, and the addition of automatic call accounting machines, will make it possible for customers themselves to dial a large percentage of long-distance calls.

These developments in the automatic switching of long-distance calls are accompanied by advances in the provision of transmission channels on a trans-Canada basis. The first inter-system microwave radio relay chain, between Toronto and Winnipeg, is under construction by The Bell Telephone Company of Canada and the Manitoba Telephone System. Projected extensions eastward and westward, with Bell's existing Ontario-Quebec chain as a nucleus, aim at coast-to-coast microwave facilities for telephone and television purposes by mid-1958.

Long-distance services make possible the interconnection of practically any telephone across the country with any other, or with any of the 53,000,000 telephones in the United States. Connections are also available with more than 100 other countries and territories. Within Canada, long-distance service is provided by the separate systems and, on a nationwide scale, by seven major systems which constitute the Trans-Canada Telephone System.

More reliable transatlantic telephony, over submarine cable, will become a reality in 1956 with the expected completion towards the year end of cables between Nova Scotia and Newfoundland and between Newfoundland and Scotland. This joint project of Canadian Overseas Telecommunication Corporation, the American Telephone and Telegraph Company and the British Post Office approached the halfway mark in 1955 with the successful laying of the first of two cables linking Clarenville, Nfld., with Oban, Scotland. Many years of intensive research on both sides of the Atlantic have culminated in the design of a repeatered cable that meets the exacting requirements of voice communication and promises to function reliably over a long-service life.

Canadian manufacturing companies produce the greater part of the telephone equipment and materials used in this country. Dependable high quality is maintained and desired uniformity is made possible in operating and maintenance practices across the country.

Telephone Systems.—The 2,788 separate telephone systems, large and small, operating in Canada in 1954 co-operated in providing service across the country; 2,236 of these were small co-operative systems in rural districts and 389 were shareholder-owned companies. The largest of the latter were The Bell Telephone Company of Canada operating in Ontario and Quebec and serving 60 p.c. of all the telephones in Canada, and the British Columbia Telephone Company serving 9 p.c. of the total. Four private companies serve the Atlantic Provinces and three systems operated by the respective provincial governments serve the Prairie Provinces.