

equipment. The box-car continues to be the backbone of the railway freight car fleet but there is a growing trend toward the provision of specialized equipment to meet the requirements of many Canadian industries. During 1963 many freight cars were converted for greater efficiency or specialized service: 100 gondola cars were equipped with raised sides to give increased capacity when hauling woodchips; roofs were removed from 50 box-cars to make them suitable for woodchip traffic; end stakes were added to 100 gondola cars for pulpwood movements; bulkheads were installed on 130 flat cars assigned to lumber or pulpwood traffic; 100 ice-actuated refrigerator cars were converted to mechanically controlled refrigeration systems; nine-foot doors were installed on 500 box-cars; a number of 52-foot gondola cars were equipped with canvas coverings to protect cargoes; and hopper cars and extra-wide-door box-cars were adapted to make them suitable for the movement of grain. In addition, 100 steel box-cars assigned to newsprint service are being equipped with special under-frame cushioning devices to protect the load from damage.

Shippers of bulk products have helped with design, installation and operation of pneumatic outlets on covered hopper cars. The CN worked closely with the aluminum industry on the design and construction of aluminum tank-design covered hopper cars, widely used today for the movement of potash from Saskatchewan. CN has pioneered in the development and in the promotion of the use of containers in Canada—a method of shipment that is going through a series of important changes. Joint effort by railway researchers and the meat packing industry resulted in the development of refrigerated walk-in containers for handling fresh meat and other perishable traffic from the Canadian mainland to Newfoundland. In 1963 the company manufactured 127 such containers in its shops at Point St. Charles, Montreal. There is also frequent consultation with the automobile industry on the provision of special equipment for handling shipments of automobiles to markets and of parts and components to assembly plants.

During 1964, a wide variety of freight equipment was purchased, including an additional 50 tri-level and 75 bi-level transporters for the movement of automobiles and trucks; 500 70-ton steel box-cars, 10 feet longer than the standard car; 100 specially designed flat cars for handling pulpwood and lumber traffic; four diesel-electric locomotives; and 500 steel hopper cars.

For the movement of express freight, the CN maintains a large truck fleet and a piggy-back fleet of tractor-trailers which together provide door-to-door pickup and delivery service for most types of traffic. These services have enabled the company to recover much of the freight traffic lost in earlier years to other transport services, and also to participate in the movement of trailers of for-hire carriers and some of private ownership. Piggyback tonnage carried by CN increased by 5.9 p.c. in 1963 over the previous year.

Recently, the company has been implementing the Master Agency concept of express-freight handling, which requires the co-ordination of road and rail services to provide customers in the vicinity, off rail-line points with the advantages of modern, centralized facilities, backed up by fast pickup and delivery. This concept integrates express and less-than-carload freight operations—a process that has been extended to various points across Canada—at main railheads that incorporate centralized, direct telephone line customer services. These have been established at Charlottetown, Halifax, Quebec City, Montreal, Toronto, Ottawa, Winnipeg, Edmonton and Vancouver, and at 13 other points where density of traffic requires them. Master Agency facilities feature the latest in materials-handling equipment—high speed conveyor belts, tape recorders and electronic billing aids; the larger centres can handle as many as 9,000 parcels an hour.

Co-ordination of road-rail operations also included the introduction of fast merchandise trains whose primary function is moving express and less-than-carload freight at high speed. These trains handle all package traffic to the railheads where it is sorted and immediately distributed to waiting trucks. Also, the removal of express and mail service from passenger trains has resulted in faster and more dependable passenger service and enabled the company to time express services to better suit the needs of shippers and industry.