

the five gate vessels will be launched before freeze-up and two of them will finish their sea trials by the end of the year. The fifth gate vessel will be launched in the spring of 1952.

The first of the escort vessels is scheduled for launching by the end of next month, two more for launching in the spring of 1952, two in the fall of the same year, five during 1953, and four by the spring of 1954.

The bulk of contracts for scheduled items such as turbine engines, auxiliaries, and other components have been let to manufacturers in this country.

I also mentioned last summer that we were converting and refitting thirty-four minesweepers and frigates. Inspection of these vessels has now been completed and preliminary work is under way. Hull repairs are well advanced on most ships.

Destroyers are also being modernized for anti-submarine work and expenditures are being made for the seaward defence of the principal Canadian harbours.

Guns and Ammunition

The guns and ammunition programme presents particular difficulties. Having taken the decision to standardize on United States type guns and ammunition as far as is practicable, we have had to make a detailed study of the various types of ammunition and weapons in order to determine which we can usefully produce in this country. This involved securing from the United States detailed plans and specifications. It has also been necessary to make arrangements for production experts from this country to visit the various arsenals of the United States in order to survey production methods and techniques. Despite the fact that we have enjoyed the greatest co-operation from the United States military authorities, this has been, of necessity, a time-consuming operation. Nevertheless some considerable progress has been made.

Production is already under way on 50 calibre ammunition and 3.5 inch and 2.25 inch rockets for Canadian armed forces. Deliveries of the 3-inch 50 calibre gun to the United States and Canadian navies will begin in December. By the end of the current fiscal year production will have commenced on the antisubmarine mortars and on practically all the large and medium calibre guns, mortars and ammunition required by our armed forces.

The guns and ammunition programmes are expected to accelerate throughout 1952 to peak production in the fourth quarter of next year.

Two explosive plants, one manufacturing picrite and the other a number of explosives including RDX/TNT and rifle powder, are already in production. TNT, cannon powder and double base powder will be in production in Canada early in 1952. Phosphorous and hexachlorethane are also being made to government specification, the latter principally for export to the United States. The timing of this programme is expected to coincide in the early stages with the requirements of Canadian shell-filling plants.