

*Staff.*—Two officers who were absent with the New Zealand Expeditionary Force returned to duty during the year, and the staff has been further increased by the appointment of an additional Inspector. Mr. R. Girling-Butcher, who is in charge of the Branch, after completion of his service with the Expeditionary Force was attached for four months to the Munitions Department in England, and later to H.M. Inspectors of Explosives at the Home Office for a further three months. Through the courtesy of the officers of these Departments he was enabled to obtain very complete information regarding the manufacture of both military and commercial explosives, and the administration of the Explosives Act generally. He also made inquiries into the administration of the Petroleum Acts by local authorities in Britain, and visited typical storage depots in different parts of the country. He returned to New Zealand via United States of America and Australia, spending about six weeks in each country in inquiries concerning the administration of the laws regarding explosives and petroleum.

The visits made by this officer have not only brought the Department into closer touch with the explosives trade and the Government Departments in the different countries, but the information collected will be of considerable service both in the administration of our Act in New Zealand and in drafting new legislation necessary to bring the storage of petroleum into line with other countries.

*Importation.*—The following explosives were imported during the year: Gelignite, 111,000 lb.; gelatine dynamite, 6,900 lb.; quarry monobel, 11,250 lb.; super-cliffite, 500 lb.; ligdynite, 20,200 lb.; bobbinite, 1,000 lb.; blasting-gelatine, 11,000 lb.; monobel A2, 60,000 lb.; Farmers' Friend, 25,000 lb.; blasting-powder—grain, 210,875 lb.; pellets, 60,800 lb.; sporting, 10,800 lb.; total, 529,325 lb. Detonators, 745,000; fog-signals and fireworks, 3,220 packages.

*Authorization of New Explosive.*—The following new explosive was authorized for importation into, and for manufacture, storage, and sale in, New Zealand during the year: Monobel A2.

*Manufacture.*—The undermentioned factories were licensed for the manufacture of explosives: (1) Sabulite (N.Z.) Limited, at Waikumete, for the manufacture of sabulite; (2) H. F. Bickerton, at Wainoni Park, Christchurch, for the manufacture of fireworks; (3) Colonial Ammunition Company, at Mount Eden, Auckland, for the manufacture of small-arms and ammunition.

*Storage.*—The total number of magazine licenses issued for the year was 168. Of these forty-six were for quantities up to 300 lb., sixty for quantities between 300 lb. and 2,000 lb., and sixty-two for quantities between 2,000 lb. and 20 tons. Government magazines available for public use remain the same as last year—viz., three, at Wellington, Greymouth, and Dunedin.

*Licensed Premises.*—607 licenses were issued during the year in respect of premises licensed to sell explosives and to keep explosives under Modes 1 to 3 of the regulations. This is an increase of forty-seven on last year.

*Accidents.*—No accident by fire or explosion occurred during the year in the manufacture, storage, or transport of explosives.

*Conveyance.*—The number of licenses issued during the year was 306, being a slight increase on the number issued during the previous period. During recent inspections it has been found that in many districts firms dealing in explosives have entirely replaced their horse-drawn vehicles by motors. The question as to whether it was advisable to modify Regulation 40—which prohibits explosives being conveyed in motor vehicles—has been therefore carefully considered. It has been decided to modify this regulation by permitting the carriage of not exceeding 100 lb. of explosives on a motor vehicle provided the explosive is placed at the back of the vehicle where it will be easily accessible in case of accident. The carriage of larger quantities of explosives will only be permitted if the vehicles are specially fitted up in accordance with the requirements of the recently issued British Home Office memorandum.

*Legal Proceedings.*—The policy of the Department has always been to obtain compliance with the law by explaining the purpose of the regulations, and showing dealers and other persons storing explosives that such compliance was as much in their own interests as in the interests of public safety. During the past year, however, it has been found necessary to prosecute in certain cases, and substantial fines have been obtained as follows:—Masterton: (a.) Storing 775 lb. of explosives in an unauthorized place—to wit, a merchandise-store (near railway-station); fine, £50 and costs. (b.) Storing 1,000 lb. of explosives in a magazine licensed under Mode 1 of the sale license to hold 100 lb.; fine, £5 and costs. Hamilton: Storing 1,000 lb. of explosives in a magazine licensed under Mode 1 of the sale license to hold 100 lb.; fine, £25 and costs. Taihape: Storing 435 lb. of explosives in an unauthorized place—to wit, a merchandise store abutting on street; fine, £10 and costs. In these cases the offenders held licenses under the Act and had been instructed regarding its requirements. The explosives were stored in each case in close proximity to occupied buildings.

*Condemned Explosives.*—The following explosives have been condemned during the year for the reasons given: Gelignite, 10 lb. (exudation); dynamite, 10 lb. (exudation); gelignite, 140 lb. (insensitiveness); Viking powder, 100 lb. (moisture-absorption).

*Inspection and Testing.*—The increase in the staff noted above has enabled systematic inspection work to be commenced, and the unsatisfactory state of things found in many districts has proved the necessity for regular inspection. There is normally a considerable change every year both in ownership and in staffs of country businesses, and this has been accentuated during the war period owing to men joining the Forces. The Department endeavours to keep in touch with these changes by correspondence, but the number of serious breaches of the Act and regulations observed has proved that instruction by letter or circular is of little use in enforcing the law. With the present organization, however, it should be possible to visit every licensee at least once during the year, and the larger magazines more frequently.

As in past years, shipments of explosives arriving in New Zealand have been physically examined and tested for stability, and occasional tests made on explosives stored in Government and private magazines. The usual heat, silver vessel, and moisture tests have also been made on military explosives for the Defence Department.