

Other licenses were (corresponding figures for previous year in parentheses): Conveyance, 213 (221); sale, 637 (601); storage, 385 (382).

Examination of Explosives.—Every shipment of explosives arriving from overseas is subjected to the usual routine examination and testing. No trouble has been experienced this year with any of the explosives imported from Australia or Great Britain, and it would appear that the improved hold conditions in shipments carried from Great Britain are having the desired effect in eliminating much at least of the trouble which has been experienced on occasions in past years and which has involved the agents in considerable expense by way of reconditioning of explosives. The shipping company which has the contract for carriage of explosives from Great Britain to New Zealand has instituted a system of special control of temperature and humidity conditions in the ships' holds. Copies of the records of conditions in the explosive magazine during the voyage out are obtained and recorded in this Office.

Fifty-per-cent. Gelignite.—Owing to the world-wide rearmament programme, supplies of glycerine became exceedingly short, and prices for this commodity soared very considerably. In view of these difficulties, the suppliers of explosives to the New Zealand market indicated that every effort would have to be made to conserve supplies of glycerine and that it was proposed either to replace the standard 60-per-cent. gelignite with 50-per-cent. gelignite, or, alternatively, to place on the market in New Zealand ammonia gelignites in which a portion of the nitro-glycerine is replaced by ammonium nitrate. The Department intimated that, owing to the hygroscopicity of ammonium nitrate, explosives containing this compound would not be acceptable in New Zealand, since the experience of the Department in past years with similar types of explosives has been markedly unsatisfactory. It was therefore decided to adopt the former alternative and substitute 50-per-cent. gelignite for the 60-per-cent. brand. The fact that the change-over was effected without any friction and that no complaints have been received would indicate that the Department's opinion that this explosive would be just as satisfactory for all ordinary purposes as the 60-per-cent. strength was correct.

Accidents.—No accidents occurred in connection with the manufacture or storage of explosives, and the number due to other causes was comparatively few this year. Reports on the departmental files do not show any fatalities occurring with the handling or use of explosives, but several cases of serious injury are noted. Misfires and smoking and employment of naked lights in the vicinity of explosives accounted for most of the accidents which were reported. All such mishaps can be traced to carelessness or ignorance amounting almost in some instances to positive stupidity. The number of accidents due to the finding of stray detonators was very much lower this year than last, and it is hoped that the warning charts which were circulated during the year to all schools have had some effect in reducing the injuries due to this cause. There is, however, one type of accident which is becoming increasingly common and concerning which it is felt a special note of warning should be struck. There has been noted recently a very prevalent tendency amongst schoolboys to indulge in the dangerous practice of mixing firework compositions, either at home or in the school laboratory. The ingredients for these mixtures are easily obtained either from the school laboratory or from any dispensing chemist, and the natural reaction of the pupil after having imbibed a smattering of chemical knowledge is to try his hand at the preparation of these explosive mixtures. Information as to the composition of these mixtures is usually drawn from elementary text-books, which frequently do not give adequate warning against the dangers of preparing them. Chlorate mixtures, which are particularly sensitive, appear to be much favoured by boys, and many accidents might be avoided if chemistry masters and dispensing chemists would use their best endeavours to discourage this practice amongst boys. It is perhaps not generally known that many of these mixtures are so sensitive that even the act of mixing the components is attended with grave hazards if carried out by inexperienced persons, and the use of these powders by laymen is, of course, hazardous in the extreme.

Sodium Chlorate.—It is regretted that, in spite of the very extensive publicity which has been given both in these reports and in the newspapers to the dangers of this material, the accident record still shows no appreciable falling off. No fatalities have been reported during the year under review, but there still comes to hand from year to year a number of cases of accidents causing severe burns. To mention in detail the causes of the various accidents would be but to reiterate what has already been published time and again in these reports, and this information, together with that disseminated by the press from time to time, should have served to ensure that all persons handling this chemical would be aware of its hazards and of the precautions which should be taken in its use.

Prosecutions.—During the year a prosecution was taken against a firm for illegal storage of explosives. A consignment of blasting-powder had become wet during transport, and the firm had purchased it from the agents under the impression that it was harmless. The powder was discovered stored in a strong-room, and included were four cases in good condition. The firm was convicted and a nominal penalty imposed, it being considered that the defendants had been misled by the vendors.

DANGEROUS GOODS.

Local-authority Administrations.—The number of local authorities who are licensing authorities under the Explosive and Dangerous Goods Amendment Act, 1920, still stands at 163, no new licensing authorities having been appointed during the year. As far as practicable the inspection visits to local-body licensing authorities have been maintained at the same standard as in previous years.

Departmental Administration.—With the limited inspection staff available and the augmentation of the duties of the inspectors, it is becoming increasingly difficult, if not impossible, to maintain at its previous standard of thoroughness inspections of districts under the control of the Department. During the year 2,247 licenses were issued, as compared with 2,191 for the preceding year.