necessarily brief duration. In Lyttelton the Harbour Board has purchased ten electric wharf cranes of the high pedestal type, each capable of lifting 5 tons at a maximum radius of 65 ft. These cranes represent the largest order for port cargo-handling appliances which has been placed in recent years. Cranes used on wharves are certificated under the Inspection of Machinery Act and, as they are used for the purpose of handling ships' cargo, must comply with the Department's Safe Working Loads, issued under the General Harbour Regulations, in addition to the requirements for purely land cranes.

Included in the new lifts are some very modern installations. The procedure adopted by the Department for the first inspection of machinery of this nature is that the importer or manufacturer must submit detailed plans and particulars to Head Office before erection. When plans have been examined and details finalized the District Office concerned is advised of the approved construction and instructed to inspect the installation, check it with the approved plans, and carry out the necessary tests of safety equipment. On receipt of the Inspector's report, together with a report from the local electrical supply authority, issued under the provisions of the Electrical Wiring Regulations, a certificate for the lift is issued. The certificate states the load or the number of persons the lift may carry and has a currency of six months. It must be posted in the lift-car. The type of lift now being installed in modern buildings is illustrated by the following brief description of a recent installation in a Wellington office building. The lift carries twelve persons and operates at a speed of 400 ft. per minute on car-switch or automatic push-button control. The source of power is alternating current at 400 volts, which is transformed by a motor-generator set to direct current for operation of the lifting machinery and the controls. A feature of the system is that all electrical circuits are operated at the low direct-current voltage of 60 volts and the controller is effectively isolated from the high-pressure mains and entirely eliminates any danger of high-voltage shocks from those using the lift or operating the doors. The landing-doors are provided with self-closers and the doors are so fitted that they must be locked in a closed position before the car can move. The lift is fully equipped with the latest electrical safety-devices and is fitted with an over-speed governor which operates and brings the lift to rest at a pre-determined over-speed.

Eight fatal accidents and 129 non-fatal accidents connected with machinery inspected by the Department were reported and fully investigated during the year. In the case of each accident the whole of the relevant facts were obtained and the matter was not closed until the Department was satisfied that the machine and similar machines were equipped with safeguards which under ordinary care of the worker would prevent a recurrence of like accidents. The total number of boilers and machines of all classes is 90,303, and the ratio of the number of accidents to the number of boilers and machines inspected is 1 to 659.

Two of the fatal accidents were connected with circular saws, two with lifts, and one each with a coal screen, an excavator, a churn, and a dough-mixer. Brief summaries of the fatal accidents taken from the reports are as follows :—

(1) In April, 1936, the owner of a small portable wood-cutting plant met his death while cutting wood near Christchurch. The plant consisted of a home-made bench of the sliding chariot type and a circular saw driven by an old motor-car engine. Various parts of old motor-cars were used in the make-up of the plant, and it appeared from a careful examination after the accident that the circular saw was in a particularly bad condition. The saw was 30 in. diameter with a centre hole $1\frac{3}{4}$ in. diameter. The saw spindle was 1 in. diameter, and a poorly fitted loose washer was let in to make up the deficiency in bore. There was evidence that the saw had been well hammered and severely handled, and several old cracks were visible in the parts examined. On the day of the accident willow-trees were being cut for firewood, and when a knotty piece was met the saw flew to pieces. One portion struck the owner, who was operating the plant at the time, and inflicted injuries which caused almost instantaneous death.

The plant had not been inspected by the Department and was therefore not certificated. Its condition was such that it would not have been passed for the issue of a certificate.

(2) The second fatal accident with a circular saw also occurred near Christchurch, and again the owner and operator of the plant was killed. On this occasion the plant was fully certificated and a visit of inspection had been made only three days prior to the accident. On 5th October, 1936, at a breast bench equipped with a circular saw, a piece of sawn timber was thrown over the saw and struck the sawyer and inflicted injuries, from which he died. It appeared from evidence at the inquest that the deceased had removed a riving-knife from the back of the saw immediately after the Inspector had left the mill. The riving-knife is a strict requirement of the Department for this class of saw, and its purpose is to prevent sawn timber from pinching the back of the saw and being thrown over the saw to the danger of the operator. It was rigidly enforced some twelve years ago, when this class of accident was fairly common, and met with a good deal of opposition from the older workers, principally on the score that it would slow up the work. However, it was found that a well-fitted riving-knife gave the sawyer greater confidence in his work and actually improved production.

An accident such as this, due to proved safeguards being deliberately removed by the owner of the plant immediately after a visit of inspection, is difficult to prevent.

(3) A fatal accident occurred in September, 1936, with an automatic passenger-lift installed in an Auckland building. The body of a tenant was found at the bottom of the lift-well and it is assumed from blood-stains on the side of the well and on the car-sill that deceased went through the restricted opening between the car and the side of the well in the neighbourhood of the fifth floor and fell to the bottom of the well. It is further assumed that the lift temporarily stopped between floors and that deceased, who was the sole occupant of the car, opened the car-gate for the purpose of reaching down to open a landing gate. While in this position the lift probably started and he was drawn between the