This factory also was equipped with a poor type of drinking fountain with obvious facilities for contamination of the nozzle by the hands of the workers.

The industry of storage-battery manufacture is expanding very rapidly in the Wellington district, and while some firms plan their factories in a satisfactory manner and co-operate well with the Departments of Health and Labour others are inclined to neglect some very necessary provisions and show a general lack of co-operation. This is partly accounted for by our present lack of suitable regulations dealing with this industry.

Early in this year such a factory was found to have commenced production, and to demonstrate almost every shortcoming possible. The mixing-room was inadequately separated from the rest of the factory, and drums of lead-powder had been opened outside it and the lead scattered about. There was no extraction apparatus where the lead-powder was weighed, and the hoods over the mixing-machines were inadequate. The pasting-benches were in the middle of the factory—not in any way separated off—and both benches and floor were dry. One paster who was seen at work was wearing no overalls and was standing in a heap of lead dust. Only one locker was provided for each employee, there were no washing-facilities except for one cold-water tap, and the dining-room was unlined and had no table or seats. No overalls were provided. All these shortcomings are now in process of being remedied.

In dealing with all the cases mentioned above, and particularly with the storage-battery factories, the lack of adequate regulations that can be strictly enforced has been severely felt. The existing regulations were drawn up to deal with the manufacture and use of paint only, and it is open to question whether any of their provisions could be enforced in a Court of law when dealing with any other class of industry. The exact detailed requirements for each class of work need to be specified both as a guide to manufacturers commencing operations and as a means of enforcing a high standard of safety at all times. Details which should be included are—

(1) Specification of the type of overall is required. For battery-manufacture the one satisfactory overall is one that will completely cover the other clothing. Rubber footwear used at work should be included in the term "overalls," and their removal required before entering any dining-room.
(2) Provision for the regular blood-testing by a competent pathologist of all employees engaged on the more hazardous occupations is necessary.
(3) Prohibition of smoking while at work is essential, as otherwise contamination of cigarettes and hence the lips is inevitable.

In addition to regulations dealing specifically with electric accumulator factories, additional regulations are required setting out in more general terms the precautions necessary in other industries which involve the handling of lead, and might be made applicable to any industry at the discretion of the Director-General.

With reference to the use of milk, there appears to be a very widespread opinion among employees generally that milk is the antidote *par excellence* for all forms of industrial poisoning, and particularly for lead poisoning. This is shown by the attempt by the Paint and Varnish Workers' Union to have incorporated in their most recent award a clause requiring the employer to provide milk gratis for his employees. As stated above also, men in contact with lead in motor-assembly works were found to be drinking milk freely and even while at work.

There is no scientific foundation for this idea, which may be harmful in inducing a false sense of security and leading to the neglect of other necessary precautions and safeguards. During the period of acute symptoms of lead intoxication a high calcium diet, including large quantities of milk, assists in removing the lead from the blood and more vital organs and fixing it in the bones, where it will do least harm. As soon as the acute symptoms have subsided calcium must be withheld so that the lead will gradually leave the bones and be excreted from the body. In so far, therefore, as milk hinders the excretion of the lead it would appear to be harmful. Obviously the wisest course to follow is to provide such facilities and safeguards, and to exercise such care in the handling of lead, that the amount absorbed will be reduced to a minimum, and to do nothing which will hinder the excretion of the small amount of lead which must inevitably be taken into the body. This is best secured by provision of the proper equipment with good conditions of work, and the exercise of scrupulous care and cleanliness by the workman, who should take an ordinary nutritious diet with avoidance of constipation. It only remains to state that periodic blood-examinations will indicate undue absorption or unusual susceptibility, and the necessary corrective measures can be taken before much harm is done.

In one battery-factory in Wellington routine blood-examinations were discarded, and reliance placed upon estimation of hæmoglobin and testing of the urine for albumen. Compared with the microscopic blood-test these tests are very crude, and would hardly serve to indicate any case of lead intoxication before it had given rise to obvious symptoms. This same factory, after two cases of poisoning, recommenced the microscopic test, and five employees were thereby found to be showing signs of lead absorption.

In conclusion it may be stated that during the past fifteen months an unduly large number of cases of chronic lead poisoning have occurred in the Wellington Health District. Most of them have arisen in direct connection with the recent expansion of the motor industry, and have affected the Wellington district particularly, as there is there a concentration of the motor-assembly factories as well as several factories which manufacture electric storage batteries. The introduction of adequate regulations dealing with the hazards of these industries would do much to awaken manufacturers to the risks involved and the precautions that must be taken. Finally, cases of this nature might be prevented if there were available an adequate-trained staff to carry out routine inspections of factories where any dangerous occupation was undertaken or likely to arise.