It is claimed that the cost of lighting the cars by the incandescent lamp compares favorably with that of lighting by compressed gas. During the heavy storms which prevailed during the first week of August, forty-eight cells of these storage batteries did the work on a telegraph-line which five hundred gravity-cells failed to accomplish.

CHLOROFORM AS AN ANAESTHETIC.

Experiments have shown that the vapor of thirty grams of chloroform, mixed with a hundred litres of air, will kill a dog in a few minutes; while a dose three times as strong, if diluted with a cubic metre of air, produces a sleep without danger, lasting two hours. The tension of the vapor, rather than the quantity, determines the effect; but the operator, in administering the anaesthetic, has to take into account the quantity: so that, under apparently the same conditions, very different results are obtained; and hence arises the difference of opinion among surgeons as to its use. Six grams in a hundred litres of air have very little effect upon a dog; ten grams produce insensibility for an hour and a half; while fourteen grams cause death in forty-five minutes, and twenty grams in five minutes. In the case of man, with an inspiration of half a litre, these results are produced by three, five, seven, and ten centigrams of chloroform respectively. It will be seen that the difference between the harmless and the dangerous proportions is very slight. Accordingly, the use of chloroform has always been considered dangerous; and, in order to make it less so, Mr. Paul Bert has made experiments upon animals, and afterwards applied them to man. His experiments with man have extended over two hundred cases, including patients of all kinds of temperaments, with always the same result. He uses ten grams of chloroform vaporized in a hundred litres of air, — a dose agreeable to some, and to none disagreeable. The most disagreeable effects of the anaesthetic have always been felt in the period of repulsion; but Mr. Bert almost entirely removes this. The period of excitement is not great, and only lasts from one to two minutes; while in the case of more than one-third of the adults it is entirely absent. The pulse is a little accelerated during the period of excitement, but remains perfectly normal and regular during sleep. Complete insensibility is produced in from six to eight minutes, and is maintained during the whole time of respiration. After the patient becomes insensible, the quantity of chloroform is reduced to eight grams, and later to six. Painful operations have no effect, except that the respiratory movements are slightly accelerated. There is no nauseation, and the amount of chloroform administered is not enough to cause poisoning; while there is no fear of asphyxia, for the amount of oxygen is reduced only by a hundredth. Indeed, with the exception of cerebral congestion and faintings, none of the ordinary dangers need be feared.

Condensed from *La nature*.

VAN ERMENGEM ON THE CHOLERA MICROBE.

Some months ago we spoke of Van Ermengem's results in investigating the cholera bacillus, and promised to refer to them again. His completed report, as presented to the Belgian minister of the interior, with additions in the way of notes and plates, makes a volume of some three hundred and sixty pages. As it is the most complete summary yet published of this much-vexed question — the relation of Koch's comma bacillus to cholera — we have thought it worth more than a passing notice. Commissioned by the government, Dr. Van Ermengem obtained material, and made observations upon the bacillus in Paris, Berlin, Marseilles, during the epidemic of the last year, and in his own laboratory at Brussels.

The report is divided into three sections, the first of which treats of his expedition to Paris, Berlin, and Marseilles, and the work which he did there; the second gives the results of his investigations; and in the third he discusses the consequences of this discovery of the comma bacillus.

First visiting Paris, the author saw Dr. Roux in Pasteur's laboratory, and obtained specimens from him, prepared under Koch's supervision at Toulon; from this place he went to Marseilles, where he was able to work with Nicati and Rietsch, and pursued his investigations until he was certain of the constant occurrence of the curved bacillus in Asiatic cholera, and until he had obtained sufficient material with which to pursue the study of the micro-organism in his own laboratory. To make doubly sure that he was working with the right thing, he went to Berlin, and showed his cultures and microscopic preparations to Koch himself.

The morphology of the cholera microbe is most exhaustively treated. Its curved shape is, of course, its most striking characteristic; and the author declares his belief that no other organism possessing all its peculiarities has been found. The method of preparation for the microscope is the usual one of Weigert Koch, and the organisms seem to have no special affinity for any coloring-material. Gram's method gives good results; and, in sections, the author prefers watery solutions of methylene blue, or methyl violet 5 B. Left in either of these solutions for from one to two

Recherches sur le microbe du choléra Asiatique. Rapport présenté à M. le ministre de l'intérieur le 3 novembre, 1884. Par le Dr. E. Van Ermengem, augmenté de nombreuses notes et orné de douze planches photographiques, reproduisant vingt-quatre microphotographies originales. Paris, *Bruxelles*, 1885. 8°.