

SCIENCE

FRIDAY, FEBRUARY 10, 1888.

THE ANNUAL REPORT of the New York State Department of Public Instruction has been laid before the Legislature by Superintendent Draper. It contains some very interesting statistics and observations. It appears that the department expended during the year, \$14,461,774.94, and this sum does not include the payment to Cornell University, the expenses of the regents, or the appropriations to academies; so that even this enormous sum does not fully represent the State expenditure for common schools. Over 31,000 teachers were employed, and only 5,821 of them were males. The average annual salary of a teacher is, in the cities, \$687.12; in the towns, \$262.44. The number of children of school age was 1,763,115, and the total enrolment was 1,037,812. The average attendance was only 625,610. The superintendent points out that the uneducated class is increasing, and that the attendance in the schools does not keep pace with the growth of the population. The shortcomings of the present compulsory Education Act are pointed out, and some excellent suggestions are offered as to the best way to remedy the difficulty. On the subject of manual training, Mr. Draper seems to be conservative, but still open-minded, and ready to recommend whatever is proven to be desirable. He says, "There has been much discussion during the year relative to the introduction of manual training as a regular branch of public-school work; and several cities, notably New York and Albany, have undertaken a thorough trial of the experiment. It is much to be hoped that it may prove a wise undertaking. There will hardly be two opinions as to the advantages of industrial training, but it must be demonstrated, upon actual trial, that it can be made a part of our common-school work with advantage to pupils, without detracting from the old-fashioned and essential work, . . . before it should be generally taken in hand by the school authorities. The experiments which have been entered upon will be watched with much interest. The test will be a severe one, but it must be met successfully, by a trial in good faith, before the already overfull courses of study in the schools should everywhere be opened to admit what is commonly called industrial training. There is a common misapprehension in this connection. Manual training need not be confined to carpentry work with boys, or making aprons and dresses with girls. Free-hand or industrial drawing may train the hand and the eye more effectually than handling a saw or a needle. It is easily taught, it is inexpensive, and it is practicable. It is the best possible preparation for further manual work. Every school in the State may undertake this without difficulty, and with good promise of excellent results, and then safely wait for the verdict of those who are further experimenting upon the subject. . . . The mission of the public schools is to best prepare the greatest possible number of children for the activities of life, for social and industrial relations, and for the responsibilities of citizenship under such a government as ours. The few must not be favored at the expense of the many. The beginners must have the most care and the best work. What is done must be practical. A philosophy is of small use unless it materializes. Children must be evenly educated in all directions. Just what shall be taught in detail, must depend upon what, in a practical way, promotes the end for which the schools are maintained at public and general expense." After a survey of the field of educational work, Mr. Draper is able to express a favorable judgment on what is being done, and concludes thus: "There seems to be unmistakable promise of an educational re-organization and revival in this State. Public occurrences during

the year have forced the subject upon the attention of the people. Our supervisory officers and teachers are coming more and more to realize the importance, as they are striving more and more earnestly to accomplish the organization of a comprehensive, symmetrical, and harmonious State educational system, in which the district schools, the union schools, the high schools, the academies, the normal schools, and the colleges and universities, shall have their appropriate place, and shall not rival or antagonize, but arrange their courses of instruction so as to support and supplement each other, and work intelligently together for a common and beneficent purpose. The fact must be hailed with universal and unfeigned satisfaction among all our people. The promise must become a realization, if our magnificent commonwealth would maintain her foremost position in the sisterhood of States."

THE DEATH PENALTY.

IT will be remembered that the Legislature of the State of New York in 1886 passed an act providing for the appointment of a commission "to investigate and report at an early date the most humane and practical method known to modern science of carrying into effect the sentence of death in capital cases." The commission, consisting of Elbridge T. Gerry, Matthew Hale, and Alfred P. Southwick, has just made its report to the Legislature. Immediately after its appointment, the commission met, and carefully considered the general outlines of the subject, and also examined the entire criminal law, from its earliest history down to the present time, as to the principles upon which the infliction of capital punishment was based, the methods of execution and the reasons therefor; and in its report, which consists of a pamphlet of one hundred pages, it gives a history of the law, beginning with that of Moses. Letters were sent to sheriffs, physicians, and judges, requesting their opinions as to the present modes of punishment, and inviting suggestions. To these letters two hundred answers were received, and, after their perusal and a careful study, the commission decided that electricity was the best means for effecting capital punishment.

The advantages claimed for electricity are, that death is instantaneous upon its application, and that resuscitation is impossible. For the administration of electricity to a criminal, all that would be essential would be a chair with a head and foot rest, in which the condemned could be seated in a semi-reclining position. One electrode would be connected with the head-rest, and the other with the foot-rest, which would consist of a metal plate. The expense of such a chair would not exceed fifty dollars. If the current of electricity is supplied from the electric-light wires, there would be but slight expense incurred to make the connection from the chair with the wires on the outside. An independent application would cost between two hundred and fifty and five hundred dollars.

The commission concludes its report with the following recommendations: that the death penalty must be inflicted by causing to pass through the body of the convict a current of electricity of sufficient intensity to cause death, and the application of the current must be continued until the convict is dead. The execution must take place within the walls of the State prison designated in the warrant, or within the yard or enclosure adjoining. It shall be the duty of the warden to be present at the execution, and to invite the presence of a justice of the Supreme Court, the district attorney, and sheriff of the county in which the conviction was had, together with two physicians and twelve reputable citizens. Besides one, or, at most, two clergymen, and seven assistants or deputy-sheriffs, no persons other than those mentioned shall be permitted to be present. Immediately after the execution, a post-mortem examination of the body of the convict shall be made by the physicians