SCIENCE.

FRIDAY, JULY 18, 1884.

COMMENT AND CRITICISM.

In a previous number of *Science* we have alluded to several items of scientific interest in the sundry civil bill. All these items, except that relating to the naval observatory, have passed in a satisfactory form. The electrical commission, which is to prosecute its labors during the Franklin institute exhibition next autumn, is to be appointed by the president. No special number of commissioners is prescribed, so that the composition of the commission is entirely in the hands of the authorities. The most difficult question connected with the make-up of the commission will be that of admitting into its ranks those who are interested in the various electric-light companies, or who are employees of such companies. There is no doubt whatever, that, if any such interested parties are appointed on the commission, care should be taken that the leading companies be equally and fairly represented. That this could be done in a satisfactory manner does not seem at all likely; and we must therefore look forward to a disinterested commission, before which all parties interested shall have a fair hearing. The amount appropriated for expenses is seventy-five hundred dollars.

An appropriation of five thousand dollars has been made for the expenses of the meridian conference called by our government. Provision has been made for two additional conferees on the part of our government, thus conforming to the views expressed in a recent number of *Science*. That course seems to have been suggested independently by the government, and was, no doubt, prompted by the evident desirability of having astronomical science well represented in our discussion of the question.

The question of the organization of the signal-service, coast and geodetic survey, geological survey, and hydrographic office, is to be considered by a congressional commission of three senators and three representatives. The senators are Messrs. Allison, Hale, and Pendleton; the representatives, Messrs. Lowry of Indiana, Herbert of Alabama, and Lyman of Massachusetts. The selection of Mr. Lyman is understood to be due to his membership of the National academy, which designed the organization of the geological survey five years ago.

The proposition authorizing the appointment of a scientific commission to inquire into the organization of the naval observatory, under direction of the secretary of the navy, was rejected by the senate after passing the house. The significance of the rejection hardly needs to be commented upon, further than to remark, that it is well understood to be due to naval influence, and may be taken as an index of the willingness of naval officers to have their management inquired into.

Two academic honors have recently been conferred in this country upon scientific men, which are worthy of note because more rare and costly than such distinctions usually are. At New Haven, on the day before commencement, a bronze statue of Professor Silliman, for more than fifty years a teacher of chemistry, mineralogy, and geology in Yale college, and the founder of the *American journal of science and arts*, was placed on its pedestal near the new chapel. The artist is Prof. John F. Weir of the Yale art school. He had not the advantage of knowing Professor Silliman, but from numerous existing portraits, and from a study of the personality of his subject, he has succeeded in reproducing and perpetuating, in a very satisfactory manner, the aspect, the bearing, and the character of one of the pioneers in American scientific education. The figure is standing, is larger than life, and is in the costume of the day.

skilfully draped with a cloak. In the right hand a crystal is held, the only symbolism which the artist has employed. The inscription is restricted to the name, the title, and the dates; and it might well be supplemented, on the other side of the pedestal, with some descriptive phrase or with an appropriate motto. Without such accessories, the monument barely suggests the affectionate regard in which Professor Silliman was held by those who graduated at Yale during the first half of this century. The regret has also been expressed, that the statue was not placed in or near the Peabody museum of mineralogy and geology, where everybody would be reminded, that, when Silliman began his work, the collections of Yale college (now so magnificent) were packed in a candle-box, and carried to Philadelphia for identification. The man and his influence would thus be inevitably associated. If these two changes could be made in the inscription and the position, this well-deserved and well-executed memorial would be still more satisfactory than it is to those who honor the teacher whom it represents.

The other honor to which we refer is that of a medal struck at the U.S. mint in Philadelphia, at the request of the colleagues and friends of Professor Sylvester, to commemorate his residence in Baltimore during a period of seven years, marked, among other things, by the establishment of the *American journal of mathematics*. The medal, in size and general aspect, is not unlike that which was struck in commemoration of the life of Agassiz. On one side is an accurate and spirited portrait of the mathematician, with the name Sylvester: on the reverse a Latin inscription commemorates the fact that he was for seven years professor of mathematics in the Johns Hopkins university, — from 1876 to 1883. The original medal in gold was sent to Professor Sylvester, in his new home in the University of Oxford; a duplicate in silver was retained in Baltimore; and a few impressions in bronze have been distributed among his scientific friends and correspondents.

ATTENTION is called elsewhere in our columns to the laborious researches and brilliant discoveries by Koch before he was sent by the German government to Egypt and India to study cholera. Work of value upon the subject of micro-organisms is not done in this country, nor will it be until some such encouragement is offered to investigators, as is the case in France and Germany. This kind of research requires the rare combination of many forms of training, added to a critical, analytical, and judicial mind. These we can have; but until the facilities for the work are offered, until the necessity for personal sacrifice and self-denial is done away with, we can hope for no better work in the future than has been done in the past: in other words, what is first needed in order to place our own investigations upon an equality with those of the two countries mentioned above, is a thoroughly equipped, fully endowed laboratory, with a strong corps of well-trained and salaried officials.

The congressional bill, offering a reward of one hundred thousand dollars to the discoverer of the cause of yellow-fever, will meet with no claimants worthy of the name from workers in this country. It may, and probably will, attract a crowd of mycologists; but the hope that any thing of permanent value will come from it is an exceedingly faint one. The investigation can only be made through the outlay of private capital, which will be slow to seek any such channel for investment. The first expense would be great, and the total disbursements necessary for any complete experimental evidence upon the subject would be beyond the calculations of any but those familiar with such work. The true way to encourage such an inquiry lies in the establishment of a commission composed of men thoroughly trained and qualified for the work, and then to treat it as the German government has treated its cholera commission; that is, to give it full powers and funds to allow the prosecution of its labors to the end.

So far as Koch's work upon tuberculosis is

concerned, it remains a complete monument of scientific accuracy, and has suffered nothing in the time since it was erected. The strength of his arguments has not been in the least weakened, the accuracy of his experiments stands unassailed, and the justness of his conclusions is thus far incontrovertible. As matters stand to-day, we are bound to consider that the cause of tuberculosis is found, and that that cause is, or is contained in, the bacillus of Koch, to whom all honor is due for the beauty and completeness of his investigations upon this important subject.

IN our account of the last annual meeting of the National academy of sciences, reference was made to the gift of eight thousand dollars by the widow of the late Dr. J. Lawrence Smith, a member of the academy. The deed of trust has recently been executed, and provides that the interest of the fund shall be used in striking a gold medal of the value of two hundred dollars, to be called the 'Lawrence Smith medal,' and to be awarded by the academy, not oftener than once in two years, "to any person in the United States of America, or elsewhere, who shall make an original investigation of meteoric bodies, the results of which shall be made known to the public; such result being, in the opinion of the National academy of sciences, of sufficient importance and benefit to science to merit such recognition." The investigation for which the award is made, or its completed publication, must "have been made since the time of the last preceding award." Preference is given to a citizen of the United States, when the choice may lie between such a one and a foreigner. Any sums which may accumulate from the interest of the fund, above what is required for the purposes specified, is to be used "in aid of investigation of meteoric bodies, to be made and carried on by a citizen or citizens of the United States of America."

We recall but three other important honorary awards at the disposal of learned societies in this country, — the Magellanic, the Rumford, and the Walker, to mention them in the order of their foundation. The Magellanic, founded by John Hyacinth de Magellan, is an "oval plate of solid gold, of the value of ten guineas," which may be annually bestowed by the American philosophical society "to the author of the best discovery or most useful invention relating to navigation, astronomy, or natural philosophy (mere natural history only excepted);" but the discovery must be unpublished, and never before publicly rewarded. We are not aware that it has ever been bestowed. The Rumford, founded by Count Rumford, is a gold and silver medal, bestowed biennially by the American academy of arts and sciences for notable researches by an American in light or heat. The Walker, founded by the late Dr. William J. Walker of Boston, is a money-prize of from five hundred to a thousand dollars, given once in five years by the Boston society of natural history to an American for specially valuable investigations in some department of natural history. The addition to this meagre list is therefore most welcome. Through the excellent provision granting the power of using any surplus in the direction of research, the necessity of awarding the prize to claimants of insufficient merit is avoided, and the branch of investigation to which it applies is thereby doubly fostered: but we wish the requirement that the investigation which is crowned must have been made since the previous award, could be modified to a definite term of years; since, if two important investigations claimed the award, one would now be forever debarred.

LETTERS TO THE EDITOR.

**** Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

The use and spelling of terms, and some facts in embryology.

IN *Science*, No. 73, a critic notices my recently published 'Contribution to the embryography of osseous fishes.' I reply as follows: Fault is found with my terms 'embryography,' 'yelk,' etc. I chose the word 'embryography,' not from a mere pedantic or eccentric whim, but because it was an expressive term, and covered what I meant in the general discussion, or *description*, of the development of a considerable