

SCIENCE.

FRIDAY, APRIL 25, 1884.

COMMENT AND CRITICISM.

THE National academy of sciences, which met at Washington last week, labors under a serious disadvantage in being able to meet but twice a year; more frequent meetings of a society whose membership extends over the entire country being impossible under present conditions. Notwithstanding this disadvantage, it is of the highest importance that the leading scientific workers of the country should form an organized body; and the academy seems to fulfil the objects of such an organization as well as any that could be devised. It is hampered by no rules that do not admit of being amended whenever it is found necessary so to do, and there is no limit upon the membership except what the academy may itself see fit to impose. The infrequency of its meetings does not prevent it from being always ready for action on any subject referred to it by congress, or any department of the government. The president of the academy can at any time appoint a committee of experts to investigate and report upon the questions submitted, and he has authority to accept the report of such a committee. At first sight, this system might seem to place too much power in the hands of the president and any committee he chooses to name; but, practically, the danger of this power being abused is no greater than in all human affairs. Important reports are submitted to the academy for approval whenever practicable; but even then the academy can seldom or never do better than accept the opinion of the experts who have investigated the subject. The varied applications of science are now so highly specialized, that conclusions depend more upon a minute examination of details, such as only a committee can enter upon, than upon general opinions.

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The most important functions of the academy are those which grow out of its relations to the government. The liberal spirit which animates both congress and the executive departments in their dealings with scientific affairs is very apt to lead them into the support of scientific enterprises without any sufficient consideration of the conditions of success and of efficient and economical administration; and a careful consideration of each proposed undertaking by a committee of experts is what is wanted to insure the adoption of the best methods. Indeed, it is worthy of consideration, whether congress would not do well to adopt the principle that it would make no appropriation for a new scientific object unless the plan of operations were first submitted to and approved by the academy.

OLEOMARGARINE, suine, and all forms of imitated and adulterated butter, receive heroic treatment by the legislature of New York. A bill has passed the senate by a vote of twenty-five to four, and the assembly by ninety-nine to one, which absolutely prohibits the manufacture or sale of bogus butter within the state. Penalties in fines of from fifty to a hundred dollars are imposed for violations of the act; and a dairy commissioner, appointed by the governor, with a salary of three thousand dollars, is to be allowed twenty thousand dollars with which to enforce the statute. At this writing, the bill only awaits the signature of Gov. Cleveland to become a law, and go into effect the first day of June.

This action resulted from an order of the senate, to its committee on public health, to inquire into the adulteration of food and dairy products. Various agricultural organizations had previously pressed the matter upon the legislature; the State dairymen's association sending an active committee to Albany to look after it, and furnishing counsel for the senate

committee. The latter, with Senator Low of Orange county as chairman, made a vigorous campaign, gave public hearings at Albany and New York, aroused popular interest, and submitted an elaborate report. The investigation was extremely one-sided throughout, and the facts were absurdly exaggerated and distorted; as, for example, when it was seriously argued that the factory manipulation of butterine generated loathsome diseases among employees, and that the extending use of imitation-butter caused an increase in the death-rate of New-York City.

The main points brought out by the inquiry were these: that previous laws of restriction and regulation were ignored because no proper provision was made to execute them; that while the imitations and adulterations of butter were generally known where handled in the wholesale trade, and changed hands without deception, although often unmarked, these articles were almost uniformly fraudulently retailed as real butter; that farmers and merchants, including exporters, believed the production and sales of genuine dairy-products to be suffering from the frauds; that the later modes of manufacture were less cleanly and healthful than when oleomargarine was first made; that nitric acid and other objectionable substances were carelessly used in the newer processes; and that honest dairymen were being induced, under pressure of competition, to buy oleo-oil and 'neutral lard' (deodorized low-grade fats) to extend the quantity of home-made dairy-products.

Missouri is the only state which has, previous to New York, adopted the policy of prohibition as a cure for dairy frauds. The result will be watched with interest. Although under active management, supported by popular prejudice, this extreme legislation has been secured almost unopposed, there are those who doubt its wisdom, both as regards cheap food, and the true dairy interests of the great dairy state. The matter is also being agitated in New Jersey and Pennsylvania.

ATTENTION was called in one of our previous numbers to the difficulty experienced by the signal-service in securing young men, well trained in meteorology, for scientific work in the central office at Washington, on account of the lack of adequate instruction on this subject in our universities. Signal-service note, no. ix., prepared by Mr. Frank Waldo, after a year's residence in Germany, on the study of meteorology in the higher schools of Germany, Switzerland, and Austria, shows how much more attention is there devoted to this growing subject, although in many universities or technical schools it is taught only in an elementary way, or not at all. Such names as Hann, Oberbeck, Simony, Sohneke, Supan, Thiesen, Zöppritz, appear on the list here given; all of these professors giving original lectures. The chief reason for this latter point is, we may suppose, because no text-book has appeared which fully represents the present attitude of the new meteorology. In the absence of any serious modern treatise, articles in scientific journals form the main source of the newer material not original with the instructor. Workers in this country may therefore congratulate themselves on the opportunity for technical publication and discussion now offered in the American meteorological journal lately announced.

NEW JERSEY is in a fair way to be the first state in the Union provided with a good topographical map. About a year ago we described the two sheets of the northern part of the state then issued. The considerable progress achieved since then is now detailed in our notes, together with the plans for the future. Professor Cook, director of the geological survey of New Jersey, states, in his recent annual report, that the topographical sheets already published have been very generally approved, and are now in demand for the laying-out of water-supply and drainage works, roads and railroads. The work is one that New Jersey may well be proud of, and that other states must envy.