SCIENCE.

FRIDAY, SEPTEMBER 24, 1886.

COMMENT AND CRITICISM.

THERE IS NO MORE IMPORTANT SUBJECT for both thought and action than the wholesomeness of the milk-supply of our large cities. It has been estimated that in the city of Brooklyn the daily consumption of milk amounts to 152,575 quarts. A considerable part of this forms the sole food of thousands of children and invalids, and it is therefore of the greatest importance that it should be of the highest degree of purity attainable. The influences at work to deterioriate milk are manifold. The cows themselves may be affected with tuberculosis or some other form of disease which may by the medium of the milk be communicated to its consumer, or the sanitary condition of the stable in which these animals are confined may be so defective as to render the atmosphere impregnated with filth and the germs of decomposition, which act most perniciously upon the milk. In speaking on this subject before the Massachusetts medical society, Dr. B. F. Davenport called attention to the readiness with which milk will absorb impurities, and also to the fact that the milk which is delivered in Boston is, at the time of its delivery, nearly three days old, and that it has been exposed to such a probability of contamination as to be practically on the very point of souring. He attributes no inconsiderable part of the summer diarrhoea to this changed condition of the milk. Dr. Davenport believes that the difference in the coagulation of human and cow's milk in a child's stomach is owing to the difference in their chemical reaction; that of cows being acid, and the other neutral or slightly alkaline. If milk could be served to the consumers on the same day of its production, and in a condition free from all impurities, there is no doubt that this would be an important factor in reducing the sickness and death of the infantile population.

PROF. E. C. PICKERING, the director of the Harvard college observatory, has put forth a pamphlet in which he broaches a scheme which may result in much advantage to the astronomical world, and in time to the outer world, which is slowly but surely benefited by all progress in science. The premises from which Professor Pickering starts are these: observatories with good instruments but no funds to pay observers, and good astronomers with no instruments or money to get them. Like all schemes of this day, Professor Pickering's is one of consolidation. He would have a fund raised the income of which should be available for paying the cost of astronomical work, whether it be done at Harvard, at the Lick observatory, or in Europe, — no matter where, so long as the workers were fit for their labor. As Professor Pickering is cognizant of the good results obtained with the Elizabeth Thompson fund for scientific investigation in general, being one of the trustees, we judge he must be encouraged to employ the same method in his own field. The plan as given in the pamphlet is one deserving the attention of all able to aid scientific work.

The Lick observatory, although so well equipped, is a case in point. Of the $700,000 given by Mr. Lick, $500,000 have been expended for the 'plant.' Although the whole plan of the observatory has been made with direct reference to keeping its running expenses low, it is clear that the company of astronomers will have to be kept small. It would require a staff of at least ten astronomers to return the full results from the outfit, and at present not more than three can be employed. The work of these must be concentrated on the large equatorial, and even then their energies will not be sufficient to utilize every moment. Now, this is Professor Holden's plan, and we suspect he was hard-pressed to devise it: "We mean to put the large telescope at the disposition of the world by inviting its most distinguished astronomers to visit us one at a time, and to give to them the use of the instrument during certain specific hours of the twenty-four. Each day there will be certain hours set apart when the observatory staff will relinquish the use of the equatorial to distinguished specialists who will come from the United States and from Europe to solve or to attack some one of the many unsolved problems of astronomy. In this way we hope to make the gift of Mr. Lick one which is truly a gift to science, and not merely a gift to California and to its university."

IN A RECENT NUMBER of *Science* it was stated that cholera did not seem to be very active in Italy, although it had extended thence to Trieste and Fiume. From here it has invaded Carmola and Croatia. At Lie, a village of Croatia, it seems to have awakened to new life, developed doubtless by reason of the unsanitary condition in which it has found the inhabitants of that place, some nine hundred in number. Although it seems to have but just appeared in that place, ninety persons are reported as having contracted the plague, of which number twenty-eight are already dead. It will be seen from this that the disease must be of a very virulent type. The excitement among the people is said to be intense and uncontrollable. The scenes which were enacted in Spain during the epidemic which ravaged that country are being repeated in Croatia. The physicians are being stoned, and wives and children deserted. The superstition of these people is so great that almost any form of barbarity may be expected. The matter begins to have a serious aspect for central Europe, when cholera in a virulent form has obtained so firm a foothold in Austria; and, if the disease continues to spread, something like a panic may be anticipated. If the report of the appearance of cholera at Pesth is confirmed, the danger is greatly increased, as the onward march of this epidemic disease is greatly favored, when it reaches cities situated upon rivers which are great highways of travel.

THE FEVER which broke out in Biloxi, Harrison county, Miss., in August last, has occasioned great excitement and alarm throughout the length and breadth of the Mississippi valley. The opinion was expressed by us at that time, that it was undoubtedly yellow-fever. This was based upon our knowledge of the skill and experience of Dr. Joseph Holt, president of the Louisiana state board of health, who declared the disease to be of that nature. This opinion has been controverted by the physicians of Biloxi, which is not a matter of surprise, and also, as appears in the daily press, by the physicians of the U. S. marine hospital service. We have just received from Dr. Holt a detailed account of the outbreak and its subsequent history, and are more convinced than ever that the citizens of Biloxi have had true yellow jack in their midst, and that, if the disease is now under control, that result has been attained by the vigorous action of the Louisiana board in instituting a quarantine against the infected city. Had this not been done, the existence of the fever would probably have been concealed until it had obtained such a hold that months rather than weeks would have elapsed before it was conquered. It is a sad commentary on human nature, that not only the people, but even medical men and officials, will attempt to delude themselves into the belief that a pestiferous disease does not exist in their midst, simply to avoid the risks to reputation and commerce which a knowledge of the true state of things would create, when they must know, from an experience which has been repeated over and over again in the past, that concealment or suppression can at best avail nothing, and that such a policy can but result in a wide-spread and probably uncontrollable epidemic, which will cause untold suffering and misery, and increase the mortality a hundred-fold.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE British association meeting is now drawing to a close, and may be said to have been very successful in all respects, but without any great sensation. About twenty-five hundred tickets have been taken for it, and the local arrangements were most complete. A special feature in them is a large exhibition of the manufactured products of this so-called 'workshop of the world.' Great care has been exercised in the selection of the exhibits, which must have been produced within a radius of fifteen miles from the centre of the town, and they illustrate in a remarkable degree the applications of science and art to manufacturing processes. A very large number of firms have also thrown open their works to the inspection of visitors. An unusual number of colonial and American visitors are attending the meeting, among the latter of whom Professor Barker and Prof. Carvill Lewis, both of Philadelphia, are prominent figures. The president, Sir W. Dawson of Montreal, opened the meeting with an address upon "The geology of the Atlantic Ocean and the land on its borders," which, together with the addresses of Prof. G. H. Darwin, president of the section of mathematics and physics, and of Mr. Crookes, president of the chemical section, will be found in full in *Nature* for Sept. 2. The subject of the former was "The value of the unit of geological time, from the point of view of cosmical physics." Mr. Crookes dwelt, in somewhat hypothetical fashion, it is true, with the genesis of the chemical elements, and he suggested a process for their evolution by the gradual cool-