

American *Lepidoptera*. This large caterpillar was picked up by Capt. Blakeney, R N., who immediately felt an electric shock in his arm, and of such force that his life was almost despaired of, and his arm became useless for a considerable length of time.

A SAMPLE copy of a new weekly record of scientific progress, illustrated, and entitled "Science," has recently come to hand. It bears the date July 3rd, 1880, and is published in New York, with John Michels as Editor. Many of the names mentioned as associate editors and correspondents are those of justly celebrated scientists. Among the articles which appear in the sample number may be noticed "A Bit of Summer Work" by Prof. Burt G. Wilder, of Cornell University; "Electricity as Power," by Francis P. Upton, Esq.; "The United States Naval Observatory, Washington," by Prof. Edward S. Holden; and "Diatomaceæ versus Desmidiaceæ" by Prof. H. L. Smith, of Geneva, N.Y. Mr. Michels expresses the desire that "Science" as a weekly journal may, in the United States, take the position which "Nature" so ably occupies in England, in presenting immediate information of scientific events.

THERE is now in extensive use upon this continent and in some European countries an article of diet, bearing the polysyllabic name Oleomargarine, or rather Oleomargarine and Arnotto, and possessing also a very formidable chemical formula. It is remarkably like butter in both appearance and flavour, notwithstanding the assertions of dairymen to the contrary. This fatty compound, sold under the name of butter by numerous grocers, is manufactured in enormous quantities at New York, Philadelphia, Baltimore, New Haven, Boston, Providence, St. Louis, Chicago, Cincinnati, Pittsburgh, Indianapolis and Louisville. The New York Commercial Manufacturing Company produces about 45,000 pounds of oleomargarine every day. The following is an outline of the process of manufacture: It is made from

the fat of cattle, killed by the butchers of the city. This fat is collected and conveyed every evening to the factory, where it is washed and separated out, the inferior portions going to make soap, the best pieces being finely minced, and then melted in double-walled tanks containing hot water between the walls, at as low a temperature as possible, usually about 50 degrees centigrade. During the melting process a revolving shaft with arms stirs it thoroughly; then it is allowed to settle, and the supernatant liquid is removed to wooden tanks, where it remains for thirty-six hours, in order that the stearine it contains may become granulated. Then, to get rid of stearine it is packed in heavy duck cloths and subjected to an increasing pressure. This forces the transparent liquid oil or oleomargarine out into a tank, the solid white cakes of stearine remaining behind in the cloths, to be employed in candle-making. A quantity of milk, about 20 per cent., is mixed with the oily liquid, and also some arnotto or annato to give it colour, and then the mixture is well churned. This done, it is removed to a tank half full of ice. Being thus suddenly cooled it becomes greatly granulated so as to bear a strong resemblance to natural butter. Afterwards it is salted and put up in tubs, or in smaller packages, for sale. If the manufacture of this so-called artificial butter be attended with scrupulous cleanliness and strict honesty there would seem to be no good reason why the said article should not form an admirable substitute for the ordinary butter produced from the milk of cows. It is pretty generally held that the fatty matters which in milch cows go to form the butter of the milk, in cows that do not give milk, are deposited in the tissues as fat. If this is true, the butter obtained from the tallow of the cow may, after all, be just as truly *natural* butter as that obtained from her milk. The only question of vital importance appears to be one of cleanliness in its production, and that is a consideration which obtains equally in both processes.