

which had previously been almost worthless, was largely employed in the manufacture of sulphuric acid. The growth and competition of large soda factories reduced the price until it became necessary to look for new sources of profit, which were found, for awhile, in the manufacture and sale of chloride of lime. The leaching of the crude soda to extract the carbonate left residues, which contained all the sulphur of the sulphuric acid united to the lime. This refuse incommoded the whole neighborhood, infecting the water courses and the shores of the sea itself. These annoyances were removed by the invention of a process for regenerating the soda which was left from the leachings. The manufacture of chlorine and chloride of lime consumed peroxide of manganese, and produced chloride of manganese in great quantities. The peroxide is a natural product of limited supply; to increase its consumption is to raise its price. The chloride destroys vegetation and infects the streams; a considerable daily production of it creates a thousand difficulties. They have been obviated by a process for regenerating the peroxide and thus getting rid of the chloride. Meanwhile, the competition continuing, and the price of soda steadily falling in proportion as the cost of manufacture diminished, help was sought, not in new economies, but in the treatment of ores capable of furnishing remunerative merchantable products. Hence the iron pyrites was replaced by copper pyrites which were accompanied by precious metals, and the profit was sought in the silver or gold which could be extracted from their cinders. This strife is now to be renewed with a rival process founded upon the decomposition of salt by ammonia in presence of an excess of carbonic acid. Whatever may be the result of the contest, it is fortunate that modern chemistry has had the various practical schools of industry which have resulted from Leblanc's process, and which have exercised an incalculable influence upon all civilized countries.—*Les Mondes*, Aug. 11, 1883. C.

Dangers in the Use of Earthenware.—E. Peyrusson, having been called upon to examine some pottery which was suspected of having produced lead-poisoning, found that, in spite of the ministerial circulars, the glazing often contains lead enough to make it dangerous for use. M. Constantin has invented a process which is entirely harmless as well as economical—varnishing with boro-silicate of lime. The glazing of fine French and English china has been much improved by the addition of boric acid and borate of lime, which allows a great

diminution in the quantity of ceruse employed; but even their habitual use may occasion injury by the accumulation of small quantities of lead in the system. There are always cracks in the glazing even of the finest china after it has been used for some time. These cracks may retain, in spite of the most careful washing, germs of fermentation, as is shown by the fact that milk or broth will ferment more readily in a vessel which has once been soured than in one which is new. The analogy between fermentation and contagious diseases gives room to fear that earthen vessels which have been used by the sick may carry contagion to others.—*Les Mondes*, Aug. 25, 1883. C.

New Mining Powder.—According to the *Annales Industrielles*, M. Michalowski, an engineer at Montceau-les-Mines, has just invented a new explosive. It is a powder of a density little more than half as great as that of ordinary powder, with irregular grains of a slate-gray color. It does not explode by the action of fire, and detonates only under a blow, like dynamite.—*Les Mondes*, Aug. 25, 1883. C.

Book Notices.

TRAITÉ PRATIQUE D'ÉLECTRICITÉ COMPRENANT LES APPLICATIONS AUX SCIENCES ET L'INDUSTRIE, ETC. Par C. M. Gariel. Tome Première. Avec 253 figures dans le texte. Paris: Octave Doin, Editeur. 1884.

The intention of the author is at once to avoid the classic routine of the ordinary text-book on electricity, and to present the more important developments of electrical science in such form as may be particularly instructive to the general or non-technical reader. Instruction, as the main object, is followed with honest plodding purpose, to the exclusion of much that might scientifically amuse, and we may say, as we pick this book out of the present frothing flood of light literature on electricity, that it is quite above the average popular work in tone and in execution.

While freshness and point is given to the treatment by keeping the applications steadily in view, the author does not hesitate to explain many essential theoretical matters omitted from works of a more technical pretension. Asserting that it is not necessary in a work of applied physics that the facts should disappear “derrière les équations,” the