cheap as danger. Lately, with this object in view, Prof. C. Gardner has perfected an invention through which, by electrical energy and the cheap production of carbonic acid, applied through a special apparatus, in combination with the necessary acid vapor at the proper temperature, the formation of white lead of the purest color and best quality is rapidly and cheaply carried out in closed chambers; the lead resting upon shelves, which are lifted out when converted, and emptied, without any dust being raised, into a combination of machinery closed in, from which it comes forth as white paint ground ready for the market, or, if required, as dry powder. In either case the dangerous operations of the 'white bed,' and washing and stoving, are completely done away with, and no opportunity is given for the dust to enter the air, or touch the persons of the workers.

— Mr. G. Brown Goode, U. S. commissioner to the fisheries exhibition, sailed from London for the United States on the 19th ult.

— The summer station of the U. S. fish-commission at Wood's Holl, Mass., will remain open until about the 20th of this month, at which time the commissioner will return to Washington.

— Dr. R. W. Shufeldt, U.S.A., who was engaged in making collections in Louisiana, has been released from duty on account of ill health.

— Mr. Robert Ridgway has left his duties at the national museum for the present on account of ill health, and is recruiting in New York.

— Dr. Charles Rau has in preparation a monographic work upon prehistoric fishing-implements. It will be published as one of the Smithsonian Contributions to knowledge.

— Professor Lester F. Ward has returned from the west. He reports having thoroughly explored about seventeen hundred miles of the Missouri River.

— The very prevalent idea that aniline dyes have poisonous properties has inspired the German chemist, Dr. Grandhomme, to investigate the subject as illustrated in the coal-tar color-works of Messrs. Lucius and Brüning at Höchst-on-the-Main. Nowhere else could these researches have been conducted in so satisfactory a manner, as the Höchst color-works employ six hundred and seventy-two men in the actual manufacture of the colors, exclusive of their large staff of mechanics and laboratory assistants. One regulation provides that no workman shall enter any other department than his own; so that the works offer an excellent field for accurate observation. The following results were obtained by Dr. Grandhomme from personal observation, and the tables of accident and illness kept in the works. Nitrobenzol is known to be poisonous, yet symptoms of nitrobenzol-poisoning only appeared in the cases of illness reported in that department during four years. Aniline is unquestionably poisonous; yet, out of one hundred and seventy-one cases of illness in that department, only eighteen were due to aniline: none were fatal, and the average duration of the illness was one and one-half days. Magentas made by the arsenic process, and duly purified, are recognized as poisons; but the symptoms recorded are those produced by arsenic, which, in some inferior magentas, exists in the proportion of even eight per cent. No illness caused by pure magenta was recorded at Höchst, and aniline no more exists in the finished magenta than manure exists in wheat. In the department where blue colors were made, only one case of aniline-poisoning was recorded; none in the violet and green departments. A special disease appeared in the eosine department, causing extreme perspirations from the pores of the hands, but not among the men employed in packing the finished colors. No special disease was noted in the naphthol and alizarine departments. The use of alcohol was found to reduce the power of the constitution to bear the action of aniline: so no alcoholic drinks were allowed in the Höchst works, and no men addicted to drinking admitted.

— In Namaqua-land, South Africa, no rain has fallen since Aug. 15, 1881, and plants, animals, and men are dying of drought and starvation. Wheat and seeds have been sent by the Cape Colony, and a relief committee has been formed.

— Tillo has determined the total length of navigable rivers in European Russia, which is only 72,000 kilometres for that vast territory, a deficiency due to the dryness of the climate.

RECENT BOOKS AND PAMPHLETS.

Bacharach, M. Abriss der geschichte der potentialtheorie. Göttingen, *Vandenbroeck & Ruprecht*, 1883. 3+78 p. 8°.

Birnbaum, K. Die prüfung der nahrungsmittel und gebrauchs-gegenstände im grossherzogthum Baden und die resultate einiger in der mit dem chemischen laboratorium des polytechnikums in Karlsruhe verbundenen prüfungs station ausgeführten untersuchungen. Karlsruhe, *Braun*, 1883. 8+119 p., 1 pl. 8°.

Brass, A. Biologische studien. theil i.: Die organisation der thierischen zelle. hefti. Halle, *Strien*, 1883. 8+80 p., 4 pl. 8°.

Claus, C. Fragment einer monographie des platins und der platinametalle, 1865-83. Leipzig, *Voss*, 1883. 5+92 p. 8°.

Handwörterbuch der chemie. Herausgegeben von Prof. Dr. Ladenburg unter mitwirkung von Dr. Berend, Dr. Biedermann, Prof. Dr. Drechsel, etc. band i. Breslau, *Trewendt*, 1883. 8+712 p., illustr. 8°.

Hopkins, Louisa Parsons. Handbook of the earth: natural methods in geography. Boston, *Lee & Shepard*, 1883. 78 p. 24°.

Kaempfer, D. Ueber die messung electrischer kräfte mittelst des electrischen flugrads. (Inaug. diss.) Berlin, *Friedländer*, 1883. 36 p. 8°.

Löwe, O. Ueber die regulären und Poinsot'schen körper und ihre inhalts bestimmung vermittelst determinanten. München, *Rieger*, 1883. 28 p., 1 pl. 8°.

Merkmal, das verlorene, des winkel-begriffes eine folge der fortschreitenden bewegung auf dem gebiete der geometrischen formenlehre nach wesentlichen ideen und neuen gesichtspunkten. Teschen, *Cotula*, 1883. 23 p. 8°.

Petzoldt, K. Petrographische studien an basaltgesteinen der Rhön. (Inaug. diss.) Halle, *Tausch*, 1883. 48 p. 8°.

Samuels, E. A. Our northern and eastern birds. New York, *Worthington*, 1883. 600 p., illustr. 8°.

Schmitz, F. Die vegetation des meeres. Bonn, *Strauss*, 1883. 21 p. 8°.

Smoke abatement committee, 1882, report of. With reports of the jurors of the exhibition at South Kensington, and of the testing engineer, to which are added the official reports on the Manchester exhibition. London, *Smith, Elder, & Co.*, 1883. 14+193 p., 76 pl. 4°.

Taugermann, J. D. Licht, harmonie und kraft. Eine naturwissenschaftlich-philosophische studie. Leipzig, *Mutze*, 1883. 70 p. 8°.

Tischner, A. The sun changes its position in space, therefore it cannot be regarded as being 'in a condition of rest.' Leipzig, *Fork*, 1883. 37 p. 12°.