

stance, experiment 7, coming under the head of "Various Ways of Inducing Chemical Change." The student is told to mix together potassium chlorate, sugar, and concentrated sulphuric acid, these directions being followed by an interrogation mark, which is presumably intended to elicit from the student an explanation of what has taken place. An exclamation point would, however, seem more suitable after such an experiment!

NOTES AND NEWS.

ON Dec. 5 Professor William H. Holmes read a paper before the Anthropological Society of Washington, in which he connected some types of pottery from the extreme southern states with that of the Caribs, by means of the peculiar style of ornamentation, observed also on the wood-carving described in Prof. O. T. Mason's pamphlets on the Latimer collection and the Guesde collection. In this same connection it is interesting to recall the observations of Prof. Jeffreys Wyman upon the evidence of cannibalism in the shell-heaps of the St. John's River, east Florida. Professor Wyman first came upon these evidences in 1861 and the results are stated in the seventh annual report of the Peabody Museum, published in 1874. With this bit of evidence, connecting the Caribs with southeastern United States, should also be associated the practice of some southern tribes of weaving a band of cotton or other textile above the calf of the leg so as to increase the size of the limb. This was practised by the Caribs also. Not much weight should be given to the co-existence among the Caribs and the southern tribes of the sarbacan and the blow-tube, because the last-named apparatus might be found wherever good straight reeds occur. The Cherokees, the Choctaws, the Chetimachas, the Attacapas, and perhaps some other tribes, make use of this weapon. It is interesting to mark that the Chetimachas anticipated the invention of the revolving fire-arm by employing the compound blow-tube made by fastening four or more canes together, as the tubes in an organ or pan-pipe. Perhaps no one of these fragments would absolutely identify the

Caribs with the southeastern Indians, but it would seem strange if a people who could navigate the Caribbean Sea in large open boats were incapable of crossing from Cuba to Florida.

—*Nature* announces the death of Baron von Bülow, at Kiel. Von Bülow's Observatory, better known, perhaps, as Bothkamp Observatory, was the first in Germany devoted to astro-physical researches, and it stands as a splendid monument to his interest in astronomy. By his death astronomical physics has lost one of its most enthusiastic supporters.

—Macmillan & Co. will publish very shortly a work on "Mental Development in the Child and the Race," by Prof. J. Mark Baldwin, of Princeton, editor of the *Psychological Review* and author of the "Hand-Book of Psychology," etc. This book is to be a contribution to genetic and comparative psychology. It will deal in detail with the child's mental growth, and with questions concerning the nature and capacities of the animal mind. Special treatment is given to the problem of the origin of the mental faculties, such as Attention, Memory, Speech, Hand-writing, Imitation, Volition. Although the book is to be mainly scientific in its method and results, the author hopes to interest teachers of a psychological turn by such chapters as Educational Bearings of Imitation, Social Suggestion, Habit and Accommodation, etc.

—*Wiedemann's Annalen der Physik und Chemie* for November, says *Nature*, contains an interesting paper by R. Hennig, on the magnetic susceptibility of oxygen. The method employed, namely, the measurement of the displacement in a magnetic field of a short column of liquid in a slightly inclined capillary tube, due to the difference in the susceptibility of the two gases (oxygen and air) at the two ends of the liquid column, would hardly seem at first sight capable of giving very accurate values. The author, however, has obtained very fairly consistent results, and finds the value 0.0963×10^{-6} for the difference between the susceptibility of oxygen and air at a temperature of about 26°C ., and at pressures varying from 75 cm. of mercury to 328 cm. In

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order to measure the strength of the magnetic field a small coil was suspended by a bifilar-suspension close to the capillary tube, and from the deflection, when a known current was passed through this coil, the strength of the field was calculated. The results obtained by this method were also compared with those found by the rotation of polarized light in a piece of heavy glass, and by means of a small induction coil which could be rapidly moved out of the field.

—Macmillan & Co. have nearly ready for publication, under the title "Pain, Pleasure and Aesthetics," an essay by Mr. H. R. Marshall concerning the psychology of pain and pleasure with special reference to aesthetics. Some parts of the argument have already been presented in the pages of *Mind*, and the author acknowledges special indebtedness to the late Prof. Croom Robertson for sympathy and encouragement.

—Some interesting investigations on the vitality of the cholera organisms on tobacco have been made by Wernicke (*Hygien: Rundschau*, 1892, No. 21), according to *Nature*. Small pieces of linen soaked in cholera broth-cultures were rolled up in various kinds of tobacco, and the latter were made into cigars. At the end of twenty-four hours only a few bacilli were found on the linen, and none on the leaf. On sterile and dry tobacco leaves, the bacilli disappeared in one-half to three hours after inoculation. On moist, unsterilized leaves they disappeared in from one to three days, but on moist and sterile leaves in from two to four days. When introduced into a five per cent. tobacco infusion (10 grams of leaves to 200 grams of water), however, they retained their vitality up to thirty-three days; but in a more concentrated infusion (one gram of leaves to two grams of water) they succumbed in twenty-four hours. When enveloped in tobacco smoke, they were destroyed, in broth-cultures, as well as in sterilized and unsterilized saliva, in five minutes. Tassinari, in his paper,

"Azione del fumo di tabacco sopra alcuni microrganismi patogeni" (*Annali dell'Istituto d'Igiene*, Rome, Vol. I., 1891), describes a series of experiments in which he prepared broth-cultures of different pathogenic microbes, and conducted through them the smoke from various kinds of tobacco. Out of twenty-three separate investigations, in only three were the cholera organisms alive after thirty minutes' exposure to tobacco fumes. But in actual experience the apparent antiseptic properties of tobacco have not unfrequently been met with; thus, during the influenza epidemic in 1889, Visalli (*Gazetta degli Ospedali*, 1889) mentions the remarkable immunity from this disease which characterized the operatives in tobacco manufactories; that in Genoa, for example, out of 1,200 workpeople thus engaged, not one was attacked; whilst in Rome the number was so insignificant that the works were never stopped, and no precautions were considered necessary.

—Prof. Felix Klein, of the University of Göttingen, after attending the Chicago Congress of Mathematics last August, delivered a two weeks' course of lectures on modern mathematics at Evanston, Ill., before members of the Congress. These lectures will be published (in English) substantially as they were given, with the addition of the interesting historical sketch of the development of mathematics in Germany during the present century (up to the year 1870), recently contributed by Professor Klein to the work "Die deutschen Universitäten." The lectures present, within certain limits, a general view of the most important advances that have taken place in mathematical thought and research during the last twenty-five years. Only the rare ability, possessed in so eminent a degree by Professor Klein, for taking hold of the most characteristic features of a given subject and presenting it vividly to his hearers from various points of view, could make it possible to give so much in so small a compass.

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