

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 Æsthetics," an essay by Mr. H. R. Marshall concerning the psychology of pain and pleasure with special reference to æsthetics. 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 deli 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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W. O. STODDARD, who has just written a book published by the Scribners, on "Men of Business," tells

how the late Senator Stanford chopped his way to the law. "He had grown tall and strong," says Mr. Stoddard, "and was a capital hand in a hay-field, behind a plough, or with an axe in the timber; but how could this help him into his chosen profession? Nevertheless it was a feat of wood-chopping which raised him to the bar. When he was eighteen years of age his father purchased a tract of woodland; wished to clear it, but had not the means to do so. At the same time he was anxious to give his son a lift. He told Leand, therefore, that he could have all he could make from the timber, if he would leave the land clear of trees. Leand took the offer, for a new market had lately been created for cord-wood. He had saved money enough to hire other choppers to help him, and he chopped for the law and his future career. Over 2,000 cords of wood were cut and sold to the Mohawk and Hudson River Railroad, and the net profit to the young contractor was \$2,600. It had been earned by severe toil, in cold and heat, and it stood for something more than dollars.—*Brooklyn Times*.

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IN "Orthometry" Mr. R. F. Brewer has attempted a fuller treatment of the art of versification than is to be found in the popular treatises on that subject. While the preface shows a tendency to encourage verse-making, as unnecessary as it is undesirable, the work may be regarded as useful so far as it tends to cultivate an intelligent taste for good poetry. The rhyming dictionary at the end is a new feature, which will undoubtedly commend itself to those having a use for such aids. A specially interesting chapter is that on "Poetic Trifles," in which are included the various imitations of foreign verse in English. The discussion of the sonnet, too, though failing to bring out fully the spiritual nature of this difficult verse form, is more accurate than might be expected from the following sentence: "The form of the sonnet is of Italian origin, and came into use in the fifteenth [*sic*] century, towards the end of which its construction was perfected, and its utmost melodious sweetness attained in the verse of Petrarch and Dante." In the chapter on Alliteration there are several misleading statements, such as calling "Piers the Plowman" an "Old English" poem. In the bibliography one is surprised not to find Mr. F. B. Gummere's admirable "Handbook of Poetics," now in its third edition. In spite of these and other shortcomings, which can be readily corrected in a later issue, this work may be recommended as a satisfactory treatment of the mechanics of verse. A careful reading will improve the critical faculties.—*The Dial*.

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