respect to these classes, we recommend that the returns of persons doubly and trebly afflicted be not classed with the deaf, the idiotic, etc., respectively, but be grouped in classes by themselves, and placed in charge of some specially qualified person for the careful examination and verification of the returns, and for an investigation into the causes of these terrible afflictions.

"9. An impression is prevalent that deafness, blindness, idiocy, and insanity are often due to consanguinity in the parents; and statistics have been collected which show that a considerable percentage of the deaf, blind, idiotic, and insane are the children of first-cousins. These statistics, however, can be of little value in determining the questions involved until we know what percentage of the general population are the offspring of such unions. We therefore recommend that in Schedule No. 1 the question be asked, 'Were the parents of this person first-cousins?'

"We trust that these suggestions will commend themselves to your judgment, and believe that, if adopted, they will result in a more accurate and satisfactory census of the class in whose welfare we are especially interested than has yet been obtained."

HEALTH MATTERS.

Baking Bacilli.

AT a meeting of the New York Academy of Medicine, June 20, Dr. A. Jacobi read some notes on the baking of bacilli, being a denunciation of Weigert's advertising scheme, and a review of his own experience with the inhalation of hot air in the treatment of phthisis. Weigert, supposed to be an American physician, now of Germany, claimed to have discovered a method of curing phthisis by the inhalation of hot air, and he had made free use of Dr. Jacobi's name in advertising his apparatus for carrying out this treatment. The treatment was not original with Weigert; nor had Dr. Jacobi, as had been asserted, bought, indorsed, or recommended the apparatus in question. Moreover, as appeared further along, he had little confidence in the method. To Halter belonged the honor of suggesting the treatment of phthisis by the inhalation of hot air with the view of killing the bacilli in the lungs. The idea arose from observing the immunity from phthisis of workmen in a lime-kiln where they were exposed to a high degree of heat (122° to 158° F.), — so high that it would destroy the tubercle bacilli, provided it continued at that degree until it had reached the lungs. The air inhaled by workmen in a lime-kiln was dry and rarefied. A moist atmosphere of a like temperature would be more destructive of the bacilli, but was less endurable by the phthisical patient. Dr. Jacobi said, that, having been requested to admit Weigert's apparatus into his wards at Bellevue Hospital, he did experiment with it some time ago, and for a while the results made a favorable impression on the physicians in attendance, for the patients, or a part of them, seemed to improve under the treatment. More careful observation, however, showed that the improvement was doubtless due to rest in the hospital, in an atmosphere much purer than that in which the patients had lived in their tenement homes. The instrument itself was not as good as that which one of ordinary ingenuity could improvise. The atmosphere on its way to the lungs from the flame was found to have fallen from above 300° F. to about the temperature of the body when it had reached the mouth. Of course, if it were above the temperature of the blood, it would become further cooled on its passage toward the lungs. Some of the hot air might get into the alveoli, but very little. In order to obtain benefit from such treatment, it would be necessary not only that the air inhaled be of a high temperature, but that the patient be in a room in which the thermometer registered at least 105.5° F.: in other words, it would be necessary to produce a sort of artificial fever, and it was evident that such treatment must prove injurious to any other than patients in the very first stage of phthisis.

Professor Huxley and M. Pasteur on Hydrophobia.

On Monday, July 1, a meeting called by the lord mayor of London to hear statements from men of science with regard to the recent increase of rabies in England, and the efficiency of the treatment discovered by M. Pasteur for the prevention of hydrophobia, was held at the Mansion House. Several letters were read from those who were unable to attend. Among these letters was one from Professor Huxley, in which he says, "I greatly regret my inability to be present at the meeting which is to be held, under your lordship's auspices, in reference to M. Pasteur and his institute. The unremitting labors of that eminent Frenchman during the last half-century have yielded rich harvests of new truths, and are models of exact and refined research. As such they deserve, and have received, all the honors which those who are the best judges of their purely scientific merits are able to bestow. But it so happens that these subtle and patient searchings-out of the ways of the infinitely little — of that swarming life where the creature that measures one-thousandth part of an inch is a giant — have also yielded results of supreme practical importance. The path of M. Pasteur's investigations is strewed with gifts of vast monetary value to the silk-trader, the brewer, and the wine merchant; and, this being so, it might well be a proper and a graceful act, on the part of the representatives of trade and commerce in its greatest centre, to make some public recognition of M. Pasteur's services, even if there were nothing further to be said about them. But there is much more to be said. M. Pasteur's direct and indirect contributions to our knowledge of the causes of diseased states, and of the means of preventing their occurrence, are not measurable by money values, but by those of healthy life and diminished suffering to men. Medicine, surgery, and hygiene have all been powerfully affected by M. Pasteur's work, which has culminated in his method of treating hydrophobia. I cannot conceive that any competently instructed person can consider M. Pasteur's labors in this direction without arriving at the conclusion, that, if any man has earned the praise and honor of his fellows, he has. I find it no less difficult to imagine that our wealthy country should be other than ashamed to continue to allow its citizens to profit by the treatment freely given at the institute without contributing to its support. Opposition to the proposals which your lordship sanctions would be equally inconceivable if it arose out of nothing but the facts of the case thus presented. But the opposition which, as I see from the English papers, is threatened, has really, for the most part, nothing on earth to do either with M. Pasteur's merits or with the efficacy of his method of treating hydrophobia. It proceeds partly from the fanatics of *laissez faire*, who think it better to rot and die than to be kept whole and lively by State interference, partly from the blind opponents of properly conducted physiological experimentation, who prefer that men should suffer rather than rabbits or dogs, and partly from those who for other but not less powerful motives hate every thing which contributes to prove the value of strictly scientific methods of inquiry in all those questions which affect the welfare of society. I sincerely trust that the good sense of the meeting over which your lordship will preside will preserve it from being influenced by these unworthy antagonisms, and that the just and benevolent enterprise you have undertaken may have a happy issue."

M. Pasteur, in a letter dated Paris, the 27th ult., and read by Sir H. Roscoe, writes, "I am obliged by your sending me a copy of the letter of invitation issued by the lord mayor for the meeting on July 1. Its perusal has given me great pleasure. The questions relating to the prophylactic treatment for hydrophobia in persons who have been bitten, and the steps which ought to be taken to stamp out the disease, are discussed in a manner both exact and judicious. Seeing that hydrophobia has existed in England for a long time, and that medical science has failed to ward off the occurrence even of the premonitory symptoms, it is clear that the prophylactic method of treating this malady which I have discovered ought to be adopted in the case of every person bitten by a rabid animal. The treatment required by this method is painless during the whole of its course, and not disagreeable. In the early days of the application of this method, contradictions such as invariably take place with every new discovery were found to occur, and especially for the reason that it is not every bite by a rabid animal which gives rise to a fatal outburst of hydrophobia: hence prejudiced people may pretend that all the successful cases of treatment were cases in which the natural contagion of the disease had not taken effect. This specious reasoning has gradually lost its force with the continually increasing number of persons treated. To-day, and speaking solely for the one anti-rabic laboratory of Paris, this total number exceeds 7,000; or exactly, up to the 31st of May, 1889, 6,950. Of

these, the total number of deaths was only 71. It is only by palpable and wilful misrepresentation that a number differing from the above, and differing by more than double, has been published by those who are systematic enemies of the method. In short, the general mortality applicable to the whole of the operations is 1 per cent; and, if we subtract from the total number of deaths those of persons in whom the symptoms of hydrophobia appeared a few days after the treatment, — that is to say, cases in which hydrophobia had burst out (often owing to delay in arrival) before the curative process was completed, — the general mortality is reduced to .68 per cent. But let us for the present only consider the facts relating to the English subjects whom we have treated in Paris. Up to May 31, 1889, their total number was 214. Of these, there have been five unsuccessful cases after completion of the treatment, and two more during treatment, or a total mortality of 3.2 per cent, or, more properly, 2.3 per cent. But the method of treatment has been continually undergoing improvement; so that in 1888 and 1889, on a total of sixty-four English persons bitten by mad dogs and treated in Paris, not a single case has succumbed, although among these sixty-four there were ten individuals bitten on the head, and fifty-four bitten on the limbs, often to a very serious extent. I have already said that the lord mayor, in his invitation, has treated the subject in a judicious manner, from the double point of view of prophylaxis after the bite and of the extinction of the disease by administrative measures. It is also my own profound conviction that a rigorous observance of simple police regulations would altogether stamp out hydrophobia in a country like the British Isles. Why am I so confident of this? Because, in spite of an old-fashioned and widespread prejudice, to which even science has sometimes given a mistaken countenance, rabies is never spontaneous. It is caused, without a single exception, by the bite of an animal affected with the malady. It is needless to say that in the beginning there must have been a first case of hydrophobia. This is certain; but to try to solve this problem is to raise uselessly the question of the origin of life itself. It is sufficient for me here, in order to prove the truth of my assertion, to remind you that neither in Norway, nor in Sweden, nor in Australia, does rabies exist; and yet nothing would be easier than to introduce this terrible disease into those countries by importing a few mad dogs. Let England, which has exterminated its wolves, make a vigorous effort, and it will easily succeed in extirpating rabies. If firmly resolved to do so, your country may secure this great benefit in a few years; but, until that has been accomplished, and in the present state of science, it is absolutely necessary that all persons bitten by mad dogs should be compelled to undergo the anti-rabic treatment. Such, it seems, is a summary of the statement of the case by the lord mayor. The Pasteur Institute is profoundly touched by the movement in support of the meeting. The interest which his royal Highness the Prince of Wales has evinced in the proposed manifestation is of itself enough to secure it success. Allow me, my dear colleague, to express my feelings of affectionate devotion."

BOOK-REVIEWS.

Der Hypnotismus. Von Dr. Med. ALBERT MALL. Berlin. 8°.

THE modern study of hypnotism may now be said to have outgrown the limits of its birthplace, France, and to have acquired that universal recognition that belongs to a scientifically established body of doctrines. The attitude of Germany towards these extremely fascinating experiments and results was at first suspicious, then rather adversely critical. Now, while retaining a judicious scepticism regarding the more surprising results, German scholars have come to recognize the intrinsic value of hypnotism as a psychologic method, as well as the importance of the place it occupies in modern psychology.

The German literature consists in the main of single contributions, partly critical and partly original, dealing with single phases of the various hypnotic conditions. There have been but few general treatises aiming at a convenient *résumé* of what has been established, and the present work by Dr. Mall is a rather successful attempt to supply this lack.

The work is methodically arranged, intelligibly written, but is defective in laying too much stress upon individual minor points of special interest to the author, and in a lack of clear distinctions between the important and the subsidiary, perhaps uncertain points.

After a brief historical introduction, in which some hitherto neglected points in the history of hypnotism in Germany are noted, the general symptoms of the hypnotic conditions are described. The various stages are distinguished as to their intensity merely, no other criterion as yet offered being found satisfactory. The more detailed description consists of a physiological and a psychological portion. In the former the changes in the movements and sensations, in the latter effects brought about in the region of memory association and more complicated processes, are described. This is naturally the most important part of the work, and is a useful *résumé* of the position taken by the Nancy school. The processes are described throughout as explicable on the ground of suggestion, conscious or unconscious. The *rôle* of the latter is particularly important, and finds here due recognition. A further point of view pervading the entire exposition is the assimilation of psychic and physiological conditions observed in hypnotism with analogous occurrences in sleep and waking life. This analogy with the phenomena of normal sleep is both real and important; and, while it does not warrant our regarding hypnotism as something entirely normal, it ought to remove the usual view that places it entirely in the region of pathology.

The latter half of the work deals with various aspects of hypnotic study, its theoretical bearings, its practical bearings as a therapeutic agent, its forensic aspect as a means of concealing crime, the allied conditions found in the lower animals, and so on. While some of the opinions there set forth will doubtless have to be modified, the work none the less reflects the present state of knowledge very well. The work is not original, except in its arrangement and the various degrees of importance it attaches to different results of experimentation. The chief objection to its use by the laity is the rather uncritical collation of good and indifferent works, of important and trivial points. As a contribution to the German literature on hypnotism, it is welcome, and will find use.

AMONG THE PUBLISHERS.

A HOST of boys and girls under eighteen years of age have been profiting themselves, and at the same time entertaining their teachers, parents, and friends, by telling prize-stories in *Treasure Trove Magazine* of New York. They have won cash prizes to the extent of two hundred dollars, besides seventy dollars' worth of books. Story-telling as a means of education is taking a first place in the regular exercises of our public schools, where the usually irksome task of composition-writing, upon which so many other studies depend, has been turned by these prize-story competitions into a genuine pastime.

— *Babyhood* for July contains much seasonable advice for mothers of young children, the question of where to go and where not to go during the summer months being thoroughly discussed. "Botany for the Little Ones" is continued, and there are entertaining and instructive contributions concerning the many perplexing questions that are apt to arise at the present time in the city nursery as well as in the temporary country home.

— Messrs. E. & F. N. Spon announce as in preparation "Chemical Technology: the Application of Chemistry to the Arts and Manufactures," by C. E. Groves and William Thorp (about 8 volumes); and "Egyptian Irrigation," by W. Willcocks, M.I.C.E., with introduction by Lieut.-Col. J. C. Ross, R.E., C.M.G., being a physical description of Egypt, with particulars of various methods of irrigation and drainage, and full details of engineering construction, and illustrated by numerous plates. They also announce as nearly ready, "The Engineer's Sketch-Book of Mechanical Movements, Devices, Appliances, and Contrivances," by Thomas Walter Barber, containing details employed in the design and construction of machinery for every purpose; collected from numerous sources and from actual work; classified and arranged for reference for the use of engineers, mechanical draughtsmen, managers, mechanics, inventors, patent agents, and all engaged in the mechanical