

Book Notices

\$22,000,000). Nearly twelve million cases had been treated and nearly £5,000,000 (about \$24,000,800) had been disbursed in meeting sickness claims. Seven hundred and fifty thousand babies had been born of mothers cared for under the provisions of the law, and £1,200,000 (about \$5,850,000) had been paid out in the form of maternity benefits. Mr. Churchill insisted that no voluntary system had ever in the past met the case of those needing help, and that such a system would release the employer from any obligation and would place the entire burden on the workmen and the state, with the result that the friendly societies would be deprived of nearly half their income and would be actually bankrupt as a result.

The *British Medical Journal*, commenting on Mr. Churchill's statements, says that if it is true that 22,000,000 visits have been paid at an expense of £4,500,000, this would indicate that the average payment for each visit was 4s. 1d.—about a dollar. The most important conclusion to be drawn from his figures, however, is that the average cost to the medical benefit fund of each case treated during the nine months of operation of the law was 7s. 6d.

IN RUSSIA

In Russia, an insurance law against disease and accidents has been enforced since last June. This law applies to all workers, the administration of the sick-fund being managed by representatives elected by the working men and the employees. Medical aid included first aid and care in cases of childbirth, and also drugs in all cases. Funeral expenses are paid in case of death. Employees contribute at the rate of from 1 to 3 per cent. of their wages. Employers contribute two-thirds of the amount contributed by the workmen. The government does not contribute anything to the fund, but has a general oversight of its administration.

IN NORWAY

In Norway a compulsory insurance act went into effect in July, 1911. There, the medical profession was well organized, practically every physician in the country belonging to the Norwegian Medical Association. The physicians, as represented by the association, had no trouble in making acceptable arrangements with the government, securing free choice of physicians on the part of the patients, and payment on a scale in proportion to the amount of work done. The fee table is elaborate and detailed and has been on the whole satisfactory to the medical profession. The result, according to the *British Medical Journal*, has been a marked increase in the demand for medical attendance, those affected by the law going to physicians at once when in need of treatment.

UNDER CONSIDERATION IN AUSTRALIA

In Australia, the subject is under consideration. At the annual meeting of the Melbourne Medical Society an address was delivered by Dr. J. Ramsay Webb on the subject of medical politics. It was really devoted to a discussion of the economic policy of the profession rather than to politics in the sense in which the word is understood in this country. Discussing medical insurance in Australia, Dr. Webb said that the total membership of the friendly societies in that country in 1912, was 530,309. On the assumption that each workman had an average of three persons dependent on him, this would amount to 2,120,000 persons for whom medical attendance was provided by the friendly societies. This is more than 40 per cent. of the total population. The cost of such services to the friendly societies is estimated at from 4 to 5 shillings per annum. Dr. Webb compares this situation with that of Germany, which, after twenty-six years of operation, only 22 per cent. of the population was affected, while in Denmark, sixteen years of operation of the voluntary system, had reached only 23 per cent. His principal argument is that the adoption of a compulsory system under the control of the state in place of a voluntary system under the control of the friendly societies would "pervert the self-respecting, public-spirited lodge members to the shameless, rapacious receivers of pensions."

As has been frequently pointed out in THE JOURNAL, the entire subject is one of the utmost importance and interest to the medical profession and should receive the careful attention and study of physicians in this country.

ELEMENTARY CHEMISTRY. With Special Reference to the Chemistry of Medicinal Substances. By H. M. Gordin, Professor of Chemistry in the Schools of Pharmacy and Dentistry of the Northwestern University. Volume I. Inorganic Chemistry. Cloth. Price, \$3. Pp. 482, with illustrations. Chicago: Medico-Dental Publishing Company, 1913.

Pharmacy schools do not require college work as a prerequisite to admission. Yet to enable their students to pass the pharmacy boards, teachers must make a pretense of covering in a short two-years' course, which, in its pretensions, will put a university curriculum to blush, everything from the fundamentals of physics and chemistry to advanced organic chemistry with quantitative chemistry. The difficult task which is set for the author of a "pharmaceutical chemistry" is evident. In this case the task was made still more difficult in that Gordin was obliged also to adapt his book to the needs of dental students. Altogether he has done his task well. The book presents a large mass of carefully selected chemical data.

While entirely too little use is made of modern chemical theories, the facts set down are almost always in accord with our present knowledge. This can be said of few pharmaceutical chemistries. That this accumulation of data about general chemical and physical matters and of special pharmaceutical and dental information has resulted in a text that is a bit dry was to be expected.

Gordin's book is intended for those studying for or engaged in the practice of medicine, pharmacy and dentistry. If adapted for dentistry and pharmacy classes, the book is not adapted to chemistry instruction given in medical schools. Students in medical schools should have obtained their primary instruction in chemistry before they took up the study of medicine, and, moreover, the medical curriculum is too well filled to permit a course in technical chemistry such as that contained in the book under discussion. Nevertheless, both the medical student and the practicing physician will probably find this a useful book of reference for information about inorganic drugs.

TREATMENT OF TUBERCULOSIS. Ordinary Therapeutics of Medical Men. By Albert Robin, Professor of Clinical Therapeutics at the Paris Faculty of Medicine. Translated by Dr. Léon Blanc and H. de Méric. Cloth. Price, \$7 net. Pp. 616, Philadelphia: P. Blakiston's Son & Co., 1913.

While it is usually assumed that the rapid spread of information has abolished national boundaries so far as science is concerned, there seem to be certain exceptions to this rule. The view of tuberculosis entertained by Robin seems to have been neglected outside of France, although his assertions, if true, should point the way to a successful therapy and especially to a more efficient prophylaxis. Briefly, Robin's theory is this: Tuberculosis is preceded by a state of predisposition which is characterized by wasting and emaciation, and occurs in persons who present certain physical characteristics. Physiologically this period is characterized by two phenomena. The first is an increased rapidity of the respiratory exchanges so that more oxygen than normal is taken in by the lungs; and not only is a greater amount of carbon dioxide excreted, but also a portion of the oxygen disappears without being represented by the excreted carbon dioxide. This portion of oxygen is also greater than in normal persons. The second phenomenon is a demineralization of the body, a greater excretion of the inorganic constituents of the tissues than is compensated for by the food intake. This demineralization is also shown by a lessened content of the blood and other tissues in inorganic constituents, especially calcium, than is found in the normal state. This condition of excessive wasting or accelerated metabolism Robin regards as essentially the first stage of consumption. To this condition infection with the bacillus of Koch adds an increased impulse, so that excessive rapidity of respiratory exchange and demineralization, especially in regard to calcium, become important processes in pulmonary tuberculosis, a fact which has not been commonly recognized by pathologists. This condition consti-

Miscellany

The Fundamental Basis of Nutrition

From an Address by Dr. Graham Lusk before the New York Academy of Medicine

It seems as though mankind has a right to a knowledge of the value of foods which a bountiful Nature has provided for human use. Even among educated persons there are the grossest errors of judgment regarding the nutritive value of a hen's egg, and few of those who eat at restaurants realize that the greater quota of the nourishment brought to them is not in the specific dish served but in the bread and butter which ostensibly is presented as a gift. The function of nutrition is to furnish fuel to the organism that the motions of life may continue, and furthermore, the workshops of life are in a constant state of partial breaking down, and materials must be furnished to repair the worn-out parts. In the fuel factor and the repair factor lies the science of nutrition.

The heat given off by the body is found to be equal to the quantity of heat which would have arisen from the oxidation of just that quantity of protein, fat and carbohydrate estimated to have been destroyed. Drs. Du Bois and Warren Coleman discovered that a typhoid fever patient, during a period of five hours of rest in their calorimeter, produced the same number of calories as it was calculated that he should produce from the materials that were oxidized in his body. The contemplation of such a result drives home the fact that if the typhoid fever patient is to be kept from losing his own body-muscle and fat, he must be given the equivalent of 422 calories in food substance during a five-hour period. Measurement of the total heat production becomes a measure of the intensity of the life processes. All well-nourished mammals produce the same number of calories per square meter of surface. A normal man resting in bed in the morning, having been without food for fifteen hours, will manifest a minimum level of heat production. The basal heat production of an average man weighing 70 kg. will be 70 calories per hour, or 1,680 calories in twenty-four hours. If food were taken extra heat would be produced, but not exceeding 10 per cent. of the basal heat production, or 7 calories per hour, or 168 per day, so that the maintenance requirement of this man resting in bed was 1,848 calories daily. Beyond this the amount of fuel needed depended on the amount of work done. The normal man requires exercise and this calls for an additional amount of fuel. A man leading a sedentary life and taking perhaps two hours of exercise daily needs in round numbers 2,500 calories daily in order to provide proper nourishment and repair. Men doing heavy physical labor require at least 3,000 calories. A boy of 12 years requires 1,500 calories daily, and a baby when first born requires 100 calories. In fever hyperthyroidism and conditions in which the heat production of the body is far above the normal, increased nourishment is indicated. While the body may suffer from the deficiency of certain elements as calcium or iron, the really important material to be treasured and protected is the body protein. Proteins are especially valuable if they contain an array of units which when reunited in the body form body proteins. Proteins in which one or more of the necessary units are lacking can never be reconstructed into body proteins. Such inferior proteins occur among the plants. Plant proteins are reconstructed into beef proteins and thus beef proteins attain a higher biologic value than plant proteins. There can be no doubt, in view of the results of experiment, that meat, fish, milk and egg proteins possess superior value to the vegetable proteins. The proteins of rice and potato are of more value than those of bread, beans and Indian corn. Such facts make it possible to classify proteins into groups according to their physiologic value, and as milk is now sold in three grades, in like manner the protein of foodstuffs could be labeled A, B and C according to their physiologic value, and to Group D might belong gelatin and some other proteins that cannot replace body protein that is continually wearing away.

tutes not only preparatory soil for the implantation of the disease, but also especially favorable culture-medium for its further propagation. One peculiarity is revealed by Robin's analysis of tuberculous lung tissue: While the blood and other tissues of the consumptive contain less than their normal contents of calcium, and the bones show evidence that lime has actually been withdrawn from them, the healthy parts of the lung adjoining the diseased portions show an increased amount of calcium, indicating, in Robin's opinion, that the calcium plays a defensive rôle in protecting the tissues against the infection.

On these data Robin finds a comprehensive plan of treatment of consumption and tuberculosis. Here it may be remarked that he uses these terms in a somewhat different sense from the usual one. Tuberculosis is, as it were, something added to the consumptive state. He transposes Niemeyer's celebrated dictum and says that "the greatest danger which threatens a consumptive is to become tuberculous." The indications for treating the disease are given under five headings: preventive medication, remineralization, direct antiseptic medication, local medication and antitoxic medication.

Robin uses tuberculin in doses just sufficient to provoke a focal but not a general reaction, hoping thereby to produce a stimulant or counterirritant effect on the focus or infection and the healthy surrounding tissues.

Space is lacking to criticize the fundamental assertions on which the theory of Robin is based. One may be permitted to ask, however, how the determination of the proportions of minerals in a tissue can prove a demineralization. May not this relative decrease in the amount of inorganic constituents reckoned on the weight of the fresh tissue be due in fact to an increase of contained water? Whether or not a similar criticism applies to his urinary determinations we are not able to ascertain from the figures in the book. Assuming the phenomena to be correctly determined, the question arises, May not this accelerated metabolism be due to a tuberculosis already existing? It is now pretty generally accepted that most persons acquire tuberculosis in infancy or early childhood; may not the symptoms observed in predisposed persons be really the slight but persistent action of an unhealed tuberculosis?

THE PRACTITIONER'S VISITING-LIST, 1914. Leather. Price, \$1.25. Philadelphia: Lea & Febiger.

THE PHYSICIAN'S VISITING LIST FOR 1914. Sixty-Third Year of Its Publication. Leather. Price, \$1 net. Philadelphia: P. Blakiston's Son & Co.

MEDICAL RECORD VISITING LIST FOR 1914. Leather. Price, \$1.25. New York: William Wood and Company.

The Physician's Visiting Lists offered by various publishers this year are, as usual, very attractive and useful. All of them contain special memorandum pages for each month ruled for each date, and amount and ledger page. In addition there are special pages for miscellaneous memoranda, obstetrical cases and practice, vaccinations, patients' and nurses' addresses and cash accounts. There are various calendars, tables, dosage lists, etc. All are well known, practical and attractive, and probably every physician has his particular choice.

THE DOCTOR IN COURT. By Edwin Valentine Mitchell, I.L.B. of the Massachusetts Bar. Cloth. Price, \$1. Pp. 152. New York: Rebman Company, 1913.

This book contains a practical and interesting discussion of physicians' relations to the courts, and of the general principles of the laws affecting them. The first chapter is the most interesting and valuable to the physician who but seldom goes on the witness-stand. It contains advice that is well worth heeding, and the witness, if he follows it, would make a better spectacle than does the average doctor when giving evidence. The remaining chapters discuss the laws, including those on the regulation of the practice of medicine, which affect physicians and with which every physician should be familiar. While not large or exhaustive, this work is sufficiently complete for all ordinary purposes. The language is clear and non-technical. We commend the book to those who may be called into court, which means to all in the practice of medicine or surgery.