HEALTH MATTERS.

Sea Air for Phthisis.

IN reviewing a recent work by Dr. Remondino, president of the Board of Health of San Diego, Cal., *The Lancet* says: "Dr. Remondino discusses at considerable length the influence of marine climates upon phthisis, and sums up strongly in their favor. This is a return to the views of Laennec and most of the older authorities—a doctrine thrown somewhat undeservedly into the shade by the good results obtained at some of the high altitude sanatoria. In forming a rational creed upon this difficult question, we must beware of the fallacy that lurks under most sweeping generalizations, and we must never shut our eyes to any well-authenticated facts. The good results obtained at Davos, Görbersdorf, Denver, Bogota, and such like elevated sanatoria, must not make us rush to the fallacious generalization that high altitudes are a specific for phthisis, nor should such facts cause us to ignore for a moment the excellent effects that often attend a sea voyage or a residence at a marine sanatorium. We have to recognize that good results may attend either method, that general rules lead only to confusion, and that our business is not to exalt the high altitudes over the sea voyage and the marine resort, or *vice versa*, but to seek as patiently as possible to determine the indications and the contra-indications for and against each type of climatic treatment. Dr. Remondino is emphatic in his opinion that atmospheric moisture, as compared with soil moisture, has no influence in generating phthisis, a view in which we quite concur.

"As regards the results of the treatment of phthisis at San Diego, Dr. Remondino speaks very confidently. He informs us that the banks, stores, and business houses are largely manned by cured consumptives; and that of the physicians, dentists, lawyers, and clergymen, it is safe to say that eight out of ten resorted to California for their health. Of 258 deaths registered from phthisis during ten years at San Diego only nine cases were born in California. In estimating the value of this fact we must remember that we are dealing with a new country, mainly peopled by immigrants. Dr. Remondino thinks cases of hemoptysis do very well in California; he has also seen apparently wonderful results in laryngeal phthisis, in which affection his experience would appear unusually fortunate.

"If past experience warns us that roseate accounts of new sanatoria must be received with much reserve, there seems every reason to admit that southern California is one of the most favored regions of the world, that its climate possesses a conjunction of advantages rarely to be found, and that the country presents many attractions for the tourist, settler, or invalid."

Death from Tight Lacing.

Happily the practice of tight lacing, though still a fruitful source of illness, does not now occupy a foremost place among the recognized causes of death. The fact that it does occasionally stand in this position, however, should be noted by those foolish persons whose false taste and vanity have made them the suffering devotees of a custom so injurious. It should be remembered also, that, whatever may be said of the more evident effects, the indirect consequences of thus tightly girding the body can not be exactly estimated. They can not be but hurtful. The veriest novice in anatomy understands how by this process almost every important organ is subjected to cramping pressure, its functions interfered with, and its relations to other structures so altered as to render it, even if it were itself competent, a positive source of danger to them. Chief among the disorders thus induced are those which concern the circulation, and it is to the laboring incapacity of a heart thus imprisoned and impeded, both as regards the outflow and return of blood, that such disastrous consequences as occurred not long ago in a Berlin theatre must be attributed. According to *The Lancet*, one of the actresses, who had taken part in an evening performance, and then seemed to be perfectly well, was found next morning dead in bed. Subsequent examination of the body showed that death was due to syncope, and this was attributed to tight lacing, which the deceased had practised in an extreme degree. As regards the persons immediately affected, the warning conveyed by this incident is obvious.

Restriction and Prevention of Diphtheria.

In a recent communication to the Health Officer of Detroit, concerning disinfection by the fumes of burning sulphur, the secretary of the Michigan State Board of Health calls attention to some important facts bearing on the subject. Excluding Detroit and Grand Rapids (the data from which cannot be profitably included with the data from the smaller places), the official reports prove, beyond a reasonable doubt, that isolation and disinfection do restrict diphtheria. In those outbreaks in which isolation and disinfection were neglected, there were on the average over fourteen cases, with nearly three deaths, to an outbreak; while in those in which isolation and disinfection were enforced, there was an average of only a little over two cases, with only about six-tenths of one death, to each outbreak. It must be remembered that these figures relate to instances in which at least one case of diphtheria had already occurred in the community, and that occasionally several cases occur at once, on the start. The method of disinfection referred to is that recommended by the State Board; namely, burning three pounds of sulphur for every thousand cubic feet of air space in a room, infected articles being loosely spread out; and, because of movement of infected articles from the sick-room and from one room to another, all rooms in the house are disinfected, together with all contents. Experiments by Pasteur and M. Roux, with the co-operation of Dujardin-Beaumetz, prove two important points in this connection: (1) that the burning of two pounds of sulphur per thousand cubic feet of air-space is not always certainly effective, and (2) that three pounds is effective. This applies to a closed room; if there are openings through which the fumes may pass, more sulphur is required.

Disappearance of Small-pox in Germany.

Under the law of Germany making vaccination compulsory and providing for re-vaccination at stated periods of life, says the *Sanitary Inspector*, small pox is almost completely disappearing from the German Empire. A late official report states that in 1888 only 110 deaths from small-pox occured in the whole empire, and that this number is 58 fewer than occurred in 1887, and 87 fewer than in 1886. Of the 110 deaths, 88, or about four fifths of the whole number, occurred in those parts of the empire immediately bordering other countries not well protected by vaccination, and in which there is constant intercourse between the vaccinated and the unvaccinated sides of the boundary. More than one-third of all the deaths occurred in the Prussian province of Posen. Comparing the small-pox death-rate of the large cities of other countries with that of the larger cities of Germany, it was 136 times as great in the cities of Austria, 30 times as great in those of Hungary, 16 times as great in those of England, 24 times as great in those of Belgium, and twice as great in those of Switzerland, as in the German cities.

Treatment of Snake-Bites.

In a paper in the *Revue Scientifique* describing his recent researches and experiments regarding the bites of poisonous snakes, Professor Kaufmann advises that in the treatment of a bite the injured limb should be tightly bound above the bite as quickly as possible, with a handkerchief or any other available constrictor, and that then a 1-to-2 solution of chromic acid should be injected deep into the wound, making several similar injections in the neighborhood of the wound. If these directions are carefully followed, the poison will be destroyed before being absorbed. If there is already much swelling of the wound, more injections should be made in various parts of the swelling, which should then be manipulated to bring the acid thoroughly into contact with the poison. The swelling should then be freely lanced and as much as possible of the fluid squeezed out. The skin should be washed with the chromic acid solution, followed by the application of compresses saturated with the solution. If the swelling returns, these procedures should be repeated. This local treatment should be supplemented by the internal administration of alcoholic stimulants and aqua ammonia. Professor Kaufmann, however, strongly condemns the use of large quantities of alcohol, which, he thinks, paralyze and depress the nervous system.

Surgeon Parke on Vaccination.

At the great banquet of welcome given in London to Surgeon Parke, he briefly referred to the inestimable benefit of vaccination. Before the expedition started for Africa, says the *Medical News*, he vaccinated nearly every man in Stanley's little army, with the result that when they were surrounded by small-pox there were only four cases among the members of the expedition, none of which proved fatal. But among the camp-followers and irregulars, who had not been vaccinated, small-pox was almost universal, and large numbers of them died. It is probable that without the precaution of vaccination the expedition would never have had strength to complete the march across Africa.

LETTERS TO THE EDITOR.

**** *Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

The editor will be glad to publish any queries consonant with the character of the journal.

On request, twenty copies of the number containing his communication will be furnished free to any correspondent.

Wind-Systems.

THE remarks on the general wind-systems of the globe on page 80 of *Science* for Aug. 8 are interesting. I have been securing from various mathematicians and meteorologists numerical statements of the deflective force of the earth's rotation on moving bodies on its surface. No two such statements thus far secured agree with each other or correspond with the deflection of air-currents actually depicted on the weather maps. As I understand the communication above mentioned, there is substantial agreement on the basis of the reasonings there presented that there is neither eastward nor westward movement of the atmosphere at latitude 35° 16′. It is true that the south Atlantic anti-cyclone is located at nearly this latitude, and is quite persistent. But the other anti-cyclones of the northern hemisphere, with reference to which alone we have full information, are not located at this latitude. On the contrary, they form a belt, not about the geographical pole, but about a point situated twenty degrees from it at longitude 96° west. In consequence of this displacement the centre of this belt is found as far north as 55° in the eastern hemisphere. Moreover, the separate anti-cyclones constituting it have a decided tendency to move eastward. Even the south Atlantic anti-cyclone pushes eastward not unfrequently at all seasons, and either fragments are detached from it or it moves bodily across Europe. At certain seasons this easterly movement of anti-cyclones is rapid, and at times appears to be independent of surrounding cyclones. This would seem to be a feature of the circulation of the atmosphere that is not consistent with the assumption that there is absence of eastward or westward movement at latitude 35° 16′.

M. A. VEEDER.

Lyons, N.Y., Aug. 18.

On the Lack of the Distance-Sense in Prairie-Dogs.

SEVERAL individuals of various ages under observation at Cornell University walked off chairs, tables, and window-sills with nearly equal absence of hesitation. This deficiency of a faculty which is so conspicuous with squirrels and some other rodents may be ascribed to the nature of their usual habitat, a plain, in which the only sharp inequalities may be the burrows and mounds of their own making.

One adult female, however, has manifested an immunity from the ill effects of falls which is not easily accounted for, and may be worthy of record. When about three years old it fell down a shaft upon the wooden top of an elevator 6.6 metres (21.6 feet) below. For a few minutes it remained nearly motionless, as if stunned, but gradually revived and completely recovered. On the 14th of July, 1890, at the age of 7½ it fell an equal distance from a window-sill upon a broad granite step. On looking out, it could not be seen; closer inspection revealed a single spot of blood, and, at the foot of the steps, a hole into which, presumably, it had crept, and from which, four days later, it was coaxed, a little wild but apparently uninjured. These two survivals are notable in view of the peculiarly solid and "chunky" form of the animal, and the improbability that such accidents should occur in a wild state. By allowing it to fall into water or upon soft material it is intended to observe the attitude during descent. The sense of distance may be cultivated. The brains of prairie-dogs will be compared with those of squirrels.

The subject of this note is 30 centimetres (12 inches) long, the tail contributing 6 centimetres; it is fat, and weighs 755 grams (26.6 ounces); the writer does not know the ordinary size and weight. It is friendly to all, but recognizes familiar voices and hands; is practically omnivorous, drinks milk, and has killed and devoured a ruffed grouse. Like all of the species, to a sudden sound, the fall of an object, a rap on the door, the voice, a cough, and particularly a sneeze, it responds by erecting the body and barking. The nervous mechanism involved seems to be largely reflex, rapidly exhausted, but nearly or quite uncontrollable; indeed, there is reason to believe that the second fall was due to an unguarded erection of the body at the edge of the window-sill; the bark was heard at the striking of a large clock in the same tower, and when the occupant of the room turned the dog had disappeared. Do any other animals display this reflex responsiveness to sounds?

As a slight contribution to the mechanism of dreams it may be added that the second fall and disappearance occurred during the writer's absence; that he is much attached to the prairie-dog, and promptly sent directions to search for it, urging that the steps should be removed if necessary; and that the following night he dreamed of superintending the demolition of McGraw Hall; finally that neither to him nor to any others connected with the university did their appear any incongruity in the destruction of a fifty-thousand-dollar stone building for the recovery of a prairie-dog.

BURT G. WILDER, M.D.

Ithaca, N.Y., Aug. 16.

Ballooning of Spiders.

MCCOOK'S great work on "American Spiders," whilst properly rejecting some proposed explanations of their aeronautics, does not offer any better explanation, but merely speaks of ascending air-currents, and gives important observations which show that the point of departure is an exposed rail fence or other elevated place in sunshine. I would suggest that the explanation is to be found in the fact that sunshine on such departure-platforms causes an upward current by heating and rarifying the air, and so starts the flight; and when (often after several vain attempts) the gossamer-line is at length sent aloft, the sunshine on the line litself will warm and rarify the surrounding lamina of air, and so increase the ascending current as to carry upwards both the filament and the suspended spider. For this last point I am indebted to Professor C. S. Young.

If these suggestions be good, then the interesting aeronautics may be expected to occur only during sunshine, and the term "ballooning" will not be entirely metaphorical, save in the sense that the rarified gas is outside instead of inside the silk mechanism.

F. MACLOSKIE.

Princeton College, N.J., Aug. 18.

AMONG THE PUBLISHERS.

THE index for the September number of the *Chautauquan* shows the following inviting subjects: "On the Nature and Value of Folk Lore," by L. J. Vance; "Sacred Trees," by Dr. Ferd. Adalb. Junker von Langegg; "The Supreme Court of the United States," by Eugene L. Didier; "Experiment Stations: What is an Investigation?" by Byron D. Halsted, Sc.D.; and "Modern Magic and its Explanation," by Marcus Benjamin, Ph.D.

—E. & F. N. Spon announce a treatise on "Water Supply, Drainage, and Sanitary Appliances of Residences," including lifting machinery, and lighting and cooking apparatus, by Frederick Colyer; "Sewage Disposal," being fourteen years' experience in works of intermittent downward filtration, separately and in combination with surface irrigation, with notes on the practice and results of sewage farming, by J. Bailey Denton (second edi-