ether purchased at open shops and at stores was doled out in wine-glasses. The drinker first washed out his mouth with a draught of cold water, and after that tossed off a wine-glassful of ether "nate," as it was said, drinking it quickly, almost at a gulp. Both men and women took part in this indulgence, and were speedily brought into a state of intoxication more or less complete. The intoxication differs from that produced by alcohol. It is more rapidly induced, and more rapidly dispelled: in fact, the effect of one dose may be developed and cleared off in a quarter of an hour or twenty minutes. The delirium is sharp; the stupor, for a brief period, deep; and the excitement, so long as it lasts, hysterical.

Particulars were gathered from a trustworthy medical source of several instances in which the narcotism caused by the ether had proved dangerous, calling for the employment of artificial respiration; and evidence was found of four actually fatal intoxications, either from an excessive dose, or from asphyxia caused by the entrance of some of the fluid into the glottis, with succeeding spasm or obstruction. It was gathered, at the same time, that tolerance to the effects of ether was much less marked than tolerance to alcohol; and that organic disease from the habitual taking of ether was exceedingly small compared with the ravages and degenerations which alcohol leaves in its train. The explanation of these facts is not difficult: alcohol is so soluble that it enters the blood freely; pervades, with the water of the blood, all the tissues; and is readily retained by them to work out those serious osmotic changes which demonstrate its action as the most potent of degenerators. Ether, on the other hand, is comparatively insoluble; and as it boils at the temperature of the body, and is diffused nearly as fast as it is introduced, it leaves few marks of mischief, except when it destroys life directly. Occasionally it gives rise to dyspepsia and to gastric irritation, with free eructations of gases mixed with etherial vapor. But these symptoms belong to ether topers of a hardened sort, and soon pass off when the habit is abandoned.

Of late years the use of the cheaper methylated ether has taken the place, to a considerable extent, of the ethylic variety, and some think with more injurious effects; but on this point there is no evidence strictly trustworthy. Officers of the government have at various periods made inquiries in order to see if, by legislative action, the habit could be controlled or prevented; but as yet nothing has been suggested that has promised success, and the excise officers are helpless, inasmuch as the spirit from which the ether is made has paid the usual duty previously to the manufacture.

## HEALTH MATTERS.

### Leprosy in Spain.

SOME interesting particulars are given by the British consul at Cadiz, in his last report, as to the San Lazaro Leper Hospital, which has been in existence at Seville for over six hundred years, says the *British Medical Journal*. The first leper-house in Spain was founded at Valencia, in 1067. The San Lazaro Hospital was founded by Ferdinand III., when he took Seville from the Moors, in 1248. It is situated about a mile to the north of the city. A decree was issued in 1478, confirming previous enactments to the same effect: "That all persons without distinction residing within the Archbishopric of Seville and the Bishopric of Cadiz, denounced and declared lepers, must go to the Hospital de San Lazaro, Seville." This decree was carried out with great rigor. From the reign of Alfonso X., down to the last century, it was the custom for four patients to visit Seville daily on horseback, begging; and, as they were not allowed to speak to ordinary persons, they attracted attention by means of boards. In 1854 the hospital was put under the charge of the Diputacion Provincial: the edifice was then little better than a ruin, and contained only 29 patients. In 1864 the building was repaired. The patients, who number on the average from 30 to 36, are looked after by sisters of charity. From the official reports it appears that the patients are not all lepers, cases of cancer and other diseases being admitted.

### Cremation at Milan.

Two systems of cremation are followed at Milan, by one of which the body is burned in a furnace surrounded by wood and charcoal, while by the other the combustion is brought about through a number of jets of gas which cast their heat upon the furnace from all sides. When wood and charcoal are employed, as stated in the *Medical Record*, about six hundred pounds of wood and one of charcoal are found necessary, and the process lasts two hours. When gas is used, all that is consumable in the body is burned up in less than fifty minutes. The body may, in ordinary cases, be introduced into the furnace with or without the coffin; but, if death has been caused by some infectious disease, the coffin and body must be burned together. The weight of the remains after cremation, in the form of bones and dust, is about four pounds. They are in color pure white, tinged here and there with a delicate pink; and it is a rule never to touch them with the hand. The bones, and vestiges of bones (which are for the most part burned into powder), are taken up with silver tongs, while the ashes are removed from the furnace with a silver shovel, to be placed on a silver dish, and then deposited in an urn for retention in the cinerarium. Here the ashes are preserved in separate compartments, each with a suitable inscription beneath it. The cost of cremation is five dollars to a member of the Society for Extending Cremation in Italy, or ten dollars in the case of non-members.

### Child Suicides.

The *Medical and Surgical Reporter* is authority for the statement that from Jan. 1 to Sept. 1, 1890, 62 children—46 boys and 16 girls—committed suicide in Berlin. Of this number, 24 had attained the age of fifteen, 14 their fourteenth year, 9 their thirteenth, while 7 were only twelve years of age, and one had not attained the age of seven. In most of the cases the immediate cause for the act remains a secret, but it is supposed to have been due to exceptional severity on the part of servants or teachers.

### Malarious Africa.

Malarial-fever is the one sad certainty which every African traveller must face. For months he may escape, but its finger is upon him; and well for him if he has a friend near when it finally overtakes him. It is preceded for weeks, or even for a month or two, by unaccountable irritability, depression, and weariness, says Drummond in his well-known book. This goes on day after day till the crash comes,—first cold and pain, then heat and pain, then every kind of pain and every degree of heat, then delirium, then the life-and-death struggle. He rises, if he does rise, a shadow, and slowly accumulates strength for the next attack, which he knows too well will not disappoint him. No one has ever yet got to the bottom of African fever. Its geographical distribution is still unmapped, but generally it prevails over the whole east and west coasts within the tropical limit, along all the river-courses, on the shores of the inland lakes, and in all low-lying and marshy districts. The higher plateaus, presumably, are comparatively free from it; but, in order to reach these, malarious districts of greater or smaller area have to be traversed. There the system becomes saturated with fever, which often develops long after the infected region is left behind. The really appalling mortality of Europeans is a fact with which all who have any idea of casting in their lot with Africa should seriously reckon. None but those who have been on the spot, or have followed closely the inner history of African exploration and missionary work, can appreciate the gravity of the situation. The malaria spares no man; the strong fall as the weak; no number of precautions can provide against it; no kind of care can do more than make the attacks less frequent; no prediction can be made beforehand as to which regions are haunted by it and which are safe. It is not the least ghastly feature of this invisible plague that the only known scientific test for it at present is a human life. That test has been applied in the Kongo region already with a recklessness which the sober judgment can only characterize as criminal. It is a small matter that men should throw away their lives, in hundreds if need be, for a holy cause; but it is not a small matter that man after man, in long and in fatal succession, should seek to overleap

what is plainly a barrier of nature. And science has a duty in pointing out that no devotion or enthusiasm can give any man a charmed life, and that those who work for the highest ends will best attain them in humble obedience to the common laws. Transcendentally this may be denied; the warning finger may be despised as the hand of the coward and the profane: but the fact remains,—the fact of an awful chain of English graves stretching across Africa.

### Hairs as Records of Emotional Disturbances.

Dr. Pineus of Berlin claims to be able, by the aid of the polariscope, to detect certain traces of past emotions in the hairs. He explains, that, under the influence of mental disturbances of a violent kind, the hairs become decolorized at the junction of the lower two thirds with the upper third, reckoning from the surface of the skin to the root of the hairs. The observation, if exact, is interesting, but the recollection of such emotions is generally too vivid to render any artificial aid to memory necessary. If Dr. Pineus could only devise a means of detecting emotions to come, says the *Medical Press*, his *procédé* would excite a vast deal more curiosity.

## NOTES AND NEWS.

IN the course of an article on recent progress in Egypt, the London *Times* says, "Both Egyptians and English are now alive to the need of educational progress. The people are no longer apathetic, as they were in the days of Mehemet Ali, who collected his pupils by force as he did his conscripts, and only kept them together by giving them food, lodging, clothing, and a monthly money payment of considerable value. Parents no longer believe the Koran contains every thing, or, rather, that what it does not contain is worth nothing. They are not yet alive to the advantages of trade or handicrafts, but they are fully alive to the advantages of government employment; and even in the villages a better class of education is urgently demanded. But want of funds stops the way. A general system of sound elementary education throughout the country would be one of the greatest blessings the English could confer; but it would cost money, and it cannot be done. All attention is concentrated on the higher schools in the big towns and in Cairo. You might as well try to build a pyramid without a base. Then, again, there are no teachers to teach the pupils. Inspection of such teaching as there is, and the establishment of normal schools for the training of the teachers of the future, are sadly wanted. Although the obvious duty of the English is to produce a class of Egyptian teachers, still the higher schools must remain for some time in the hands of professors from Europe. The educational system does not look so bad on paper. There are over 7,000 schools in the country, and 7,764 teachers; but the teaching is miserable, and out of a population of nearly 7,000,000 of people, only 200,000 can read and write."

— In Austria there is not only a high school of agriculture, costing the state 125,000 florins a year, but there are fifteen intermediate and eighty-three primary agricultural schools, besides nine chairs of agriculture in polytechnic establishments and agricultural experiment stations. Moreover, as stated in the London *Educational Times*, there are 162 courses of agricultural lectures, attended, on an average, by about 10,000 persons a year. The whole expense of agricultural subventions is set down in the Austrian Estimates for the present year as 1,777,034 florins.

—At a meeting of the International Meteorological Congress, held in Paris last September, the Rev. Father Denza read a paper on "The Decrease of Temperature in the Vertical Line." According to the figures he produced, the annual mean ascent required to obtain a decrease of one degree of temperature was 150 metres in the valley of Aosta, and 191 at Moncalieri (Monte Cenis), while 192 was the mean for the whole of Italy. At Pike's Peak, Colorado, 159 metres is the height required. In the winter months the heights in the valley of Aosta and at Moncalieri are 189 and 375 respectively, and 289 is the mean for Italy. It frequently happens that the temperature rises until a certain height is reached, and then decreases. This was particularly noticeable in January, 1887, when the temperature increased up to 700 metres (about 2,200 feet), and then diminished according to the ordinary law. The barometric pressure was high, the air dry and calm. This phenomenon was confirmed by observations referred to by other members of the congress, and Père Dechevrens pointed out the necessity of taking the barometric pressure into account in comparing changes of temperature in the vertical. In China, at an observatory situated on a mountain in the midst of a vast plain, a rise of ten degrees of temperature is always observed for a fall of 20 millimetres in barometric pressure; and at Mount Washington, when the wind blows at the rate of 100 miles an hour, the variation of the temperature is thirty degrees for the same decrease of pressure.

— In the Teachers' School of Science of the Boston Society of Natural History, Dr. J. Walter Fewkes will give a series of ten lessons (Lowell free courses) during the winter of 1890–91, "On Common Marine Animals from Massachusetts Bay." The general scope of this course will embrace the ordinary marine animals of New England. It is intended to give special attention to the mode of life, differences in external forms, local distribution, habitats, methods and proper time to collect the eggs, young, and adults. The anatomy, embryology, and morphology of the species considered will be dealt with incidentally, wherever these branches of research can be used advantageously. The introductory lecture will give an outline of the course. The relative abundance of species and individuals, local causes which influence distribution, the rocky or sandy nature of the shores and their characteristic faunæ, and the influence of depth of water, tides, and temperature, will be considered. The relations and boundaries of the marine fauna of New England will be treated of under the following headings: comparison of the fauna of Massachusetts Bay with that of Narragansett Bay and the Bay of Fundy, and causes of the differences observed; pelagic animals; littoral and shallow-water genera; introduced and indigenous marine animals; marine animals which inhabit both brackish and fresh water. In the remaining lessons the principles discussed in the first lesson will be applied to the life histories of various characteristic species among the lower forms of marine animals. The course will be illustrated as far as possible. For further information address the secretary of the Boston Society of Natural History.

—Writing to *Nature* on the subject of sonorous sand, Mr. Henry C. Hyndman asks whether Professor H. C. Bolton is aware of an inland locality in South Africa, where, it is stated, the sands are sonorous. In a recent letter to the *Scotsman*, Mr. Hyndman mentioned that he had come across a paragraph in a work entitled "Twenty-five Years in an African Wagon," by Andrew A. Anderton, published in 1887, in which the author said, "Before leaving this part of the Griqualand West, I should like to describe that peculiar sand formation on the west side of the Langberg Mountain, which is in fact part of it. I heard from many of the Griquas and Potgielet living near it, that the lofty hills are constantly changing; that is, the sand-hills, 500 and 600 feet in height, in the course of a few years subside, and other sand-hills are formed where before it was level ground." And then in a footnote it is added, "I regret very much that the description of this sand formation has been left out, it being the only extraordinary geological formation known in Africa, and fully describes the musical sand."

— A means of easy intercommunication between writers, editors, and publishers has long been needed. To supply this need, the editor of *The Writer*, the Boston magazine for literary workers, has undertaken to compile a "Directory of American Writers, Editors, and Publishers," which will be published at the earliest possible day. No charge whatever will be made for the insertion of names and addresses in this directory, the usefulness of which, particularly to editors and publishers who wish to communicate with writers, will be evident at a glance. The desire of the editor is to make the directory as nearly complete as possible, but the army of minor writers is so great that it will be necessary to limit the number of addresses in some reasonable way. It has been thought best, therefore, to include in the first edition only the names of writers who have had a contribution printed in some one of the leading magazines or weekly periodicals during the last five years, or who have had a book published within the