

## SCIENTIFIC AND SANITARY.

PROFESSOR HOUSTON points out five features in the progress of electricity which appear to him as quite possible, namely: electricity produced direct from coal, the steam-engine entirely replaced by the electric motor, aerial navigation effected, production of light without heat, and the application of electricity to the curing of diseases and the prolongation of life.

SWEDISH iron, which is soft, yet strong and ductile, is almost free from phosphorus and sulphur. It is held to be practically inexhaustible, though taken out at the rate of about a million of tons a year. It is found all through the country, though mined chiefly in central Sweden, in the Dannemora district. Several of the heights as truly deserve to be called iron mountains as those in Missouri, and there is one in Gellivare, in Swedish Lapland, beyond the Arctic Circle, where the ore occurs in four gigantic strata, that would supply nearly all the iron that the country would require in a century.—*Minerals.*

DIFFERENCES in races, says *Science*, are not confined to matters of anatomy and physiology, but show themselves to a marked degree in special liability to, or immunity from, certain classes of diseased conditions. This has attracted the attention of the medical profession from time to time, but only recently, since the discriminating traits of races have been more closely studied, has it received proper attention. The study of the causes of social immunity from disease has a very practical side. When we find, for instance, that the Japanese are not liable to scarlet-fever, and the negroes are equally exempt from yellow-fever, if we could ascertain what condition it is that confers upon them this exemption, we might be able to take a long step in the direction of personal and general prophylaxis.

ODDITIES ABOUT THE RIVER NILE.—The Nile has a fall of but six inches to the thousand miles! The overflow commences in June every year and continues until August, attaining an elevation of from twenty-four to twenty-six feet above low water mark, and flowing through the "Valley of Egypt" in a turbulent body twelve miles wide. During the last thousand years there has been but one sudden rise of the Nile, that of 1829, when 30,000 people were drowned. After the waters recede each year the exhalations from the mud are simply intolerable to all except natives. This mud deposit adds about eight inches to the soil every century, and throws a muddy embankment from twelve to sixteen feet into the sea every year. This being the case it is plain that the mouth of the river is thousands of feet further north now than it was in the time of the Ptolemies, and it is only a question of time when the sediment will make a dam entirely across the Mediterranean Sea.

MACHINERY IN SHOEMAKING.—The chief tools of the shoemaker then consisted of his hammer, his awl, his lapstone, his knives, and his harness for "setting-up" his boots or shoes. The essentials of a shoe are the upper, the sole, the counter of heel stiffening, and the heel. These parts are again subdivided into the "vamp" for covering the front of the foot, the large and the small quarters for encircling the ankles, the button-piece, etc. The work of the shoemaker is to prepare and close these various parts of the upper and the linings together, to bring them into the desired shape, to fasten them to the sole which has been previously cut, to attach the heel, and then to give the various parts the desired finish and style. These processes indicate the lines along which machinery had to be applied. All the operations have been subdivided to the minutest detail, and in the performance of all of them, machines—more or less satisfactory in their workings—have been devised. The parts of the uppers are now sewed together by machinery, and they are pegged, sewed, or screwed to the sole by machinery. Instead of the lapstone and the hammer for condensing the leather are now swiftly revolving rollers, and instead of the patterns for cutting out the soles are dies or sole-shaped knives set in machines.—*From Manufacture of Boots and Shoes, by George A. Rich, in the Popular Science Monthly for August.*

THERE are no family names in Madagascar, and almost every personal name has some distinct meaning, being, with few exceptions, the names of things—birds, plants, inanimate objects—or names describing colour, quality, etc., or words denoting actions of various kinds, so that the names of the chiefs most always contain some word in common use by the people. In such a case, however, the ordinary word by which such a thing or action has hitherto been known must be changed for another, which takes its place in daily speech.

SIR JAMES CRICHTON BROWNE, in an address delivered before the London Medical Society, expressed his conviction that the tendencies towards forcing "higher education" on women are unfortunate, unnatural, and pregnant with evil. There are, he claimed, differences in the sexes—real and deeply founded in structure—which cannot safely be ignored in education. He alleged that the female brain is lighter than that of the male; that the specific gravity of parts of the female brain is less than that of corresponding parts of the male brain; and that the blood supply, which, in the male, is directed chiefly to the volitional and intellectual processes is, in the female, more directed to the portions of the system concerned in the discharge of sensory functions. In the *Scottish Review* Dr. J. Beddoe brings together some facts and suggestions concerning the influence of conjugal selection on the complexion and the colour of the eyes and hair. It is certain that blond, long-headed men once played a great role in history, for it was they who colonized Galatia and brought home the treasures of Greece and Italy to Toulouse; who overthrew the Roman Empire in the West, and won England from the Britons. It is equally certain that this physical type was once much more dominant and widely distributed than it is now, and that it is tending to die out. This is especially true of that pronounced form of blonds which is distinguished by red hair. Red-haired persons do not now constitute the majority in any known tribe or nation; but Dr. Beddoe sets forth grounds for thinking that red hair was once much more prevalent. It must have occurred, for instance, among the Brahmans, since they were forbidden by the laws of Manu to marry red-haired women. There is no doubt that blonds and red-haired persons are still encountered about the Hindu-kush, among the tribes from whom the Brahmans are supposed to have been emigrants. But obedience to the law mentioned would in the course of time annihilate the tendency to their reproduction. Mere prejudice operating through conjugal selection would have the same effect. In Germany red hair and the complexion that accompanies it seem to have been unpopular from very remote times, although they were characteristic of the nobles and freemen who were of true Germanic blood. If the classical writers can be trusted, the Germans were once as preponderantly red haired as we know from an examination of their skulls that they were long headed. At present, however, red hair is not common among them, and when found it does not resemble the brilliant red encountered in the Highlands of Scotland.—*N. Y. Sun.*

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John Mader, Mahone Bay, informs us that he was cured of a very severe attack of rheumatism by using MINARD'S LINIMENT.

AN UNUSUAL DEATH-RATE.—At this season of the year there are always many deaths, particularly among children, from Summer Complaint, Diarrhoea, Dysentery, Cholera Morbus, Cramps, etc., but this season the cases seem to be unusually frequent and fatal, and every one ought to know that a sure and speedy cure can easily be obtained by taking a teaspoonful of PERRY DAVIS' PAIN KILLER in sweetened water (hot water is the best), every half hour until relieved. This remedy has never been known to fail. Full directions are with each bottle. It is kept by every respectable druggist. New Big bottle old popular 25c. price.



Mr. R. J. Brundage

## No Wonder

People Speak Well of HOOD'S. "For a long time I was troubled with weak stomach, Indigestion and Dyspepsia. I began taking Hood's Sarsaparilla and have not felt so well all over for years. My food seldom troubles me now. My sister also took Hood's Sarsaparilla with very pleasing results. I don't wonder people speak well of Hood's Sarsaparilla. Don't see how they can help it." R. J. BRUNDAGE, Norwalk, Ct.

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HOOD'S PILLS act easily, yet promptly and efficiently on the liver and bowels.

THE Clarendon press will publish a second volume of Professor Weismann's work on "Heredity and Kindred Biological Problems." It contains four essays, of which only the shortest has previously appeared in an English form (in the columns of *Nature*). The first essay deals with degeneration, and clearly shows by abundant illustrations that it has resulted from *panmixia*, or the cessation of natural selection. The second is an attempt to explain the development of the art of music, and to show that the hereditary transmission of the results of practice is quite unnecessary in order to account for its rise. The third contains a reply to certain objections urged by Professor Vines. It will be useful in giving clearer expression to the ideas on the death of multicellular beings and the immortality of the unicellular. The fourth and last essay is by far the longest and most important. It deals with the essential significance of sexual reproduction and conjugation, etc., as inferred from the results of the most recent researches. Professor Weismann's older views on these subjects, especially concerning the polar bodies, have been modified and in part abandoned. The immortality of unicellular beings and the question of the transmission of acquired characters by them are also discussed in detail with reference to recent observations.

DECREASING FAMILIES.—The decrease in the size of families is a subject which causes some alarm. Taking the United States as a whole, it is found by the census figures that in 1850 the average family consisted of 5.55 persons. There has been a gradual decrease, it being in 1860 5.28, in 1870 5.09, in 1880 5.04, and in 1890 4.94. Looking at the different geographical divisions, it is found that this rule holds true except in the Western division, where the average size of the family has risen from 4.18 in 1850 to 4.88 in 1890, the increase having been steady through the intermediate decades. This result would have been expected, of course, on account of the settlement of the West in the last few years, the population having increased rapidly and being more and more brought to the family basis instead of that of single individuals or young families settling in Western Territories. The small average size of the family in Oklahoma, now a territory just opened for settlement, shows the influence of new settlements upon the size of the family. In Oklahoma the size of the family will increase until population becomes fairly dense, when it will follow the rule of older communities and decrease. When population becomes more or less urban in character the maximum is reached, and after that a constantly receding average will probably be shown at each succeeding census.—*From Lessons from the Census, by Carroll D. Wright, in the Popular Science Monthly for August.*

Minard's Liniment for Rheumatism.

OLD ORCHARD STILL THE RENDEZVOUS OF TORONTO'S JOVIAL HOLIDAY MAKERS.—Old Orchard Beach still holds its own amongst the many attractive watering places of the Maine Coast, and as a holiday resort a Torontonian could not select a more delightful spot. To this must be added the abundant choice of routes—each one a holiday in itself—by which the Coast may be reached. It must be distinctly understood that the most picturesque portion of the rail journey will be missed unless a daylight view is obtained of the White Mountains, and as the Canadian Pacific Railway have catered specially to meet this want, we can recommend their route as being the one to select if they wish to view tit-bits of the White Mountain scenery. Through cars are run; leave Toronto 9 o'clock p.m. every Tuesday and Friday for the Beach.

AN interesting discovery has been made in a deep railway cutting at Andresy, near Paris, France, where the workmen ran upon a huge Merovingian cemetery of the sixteenth century. As many as six hundred tombs have already been uncovered, yielding a hitherto unheard of mass of carved sarcophagi, knives, spears, vases, ornaments, and pottery of unique shapes and styles of decoration. It is recalled now that the tiny hamlet of Andresy, in the generation succeeding the introduction of Christianity, was an important missionary centre.

It is what Hood's Sarsaparilla actually does that tells the story of its merit and has given it the largest sale of any medicine.

ARCHAEOLOGICAL research is rapidly dispelling the erroneous notions that the early civilizations of the Mediterranean were derived from Asia or Egypt, and that previous to the mythical advent of Cadmus, or the founding of Carthage and Rome, the coasts of this great sea were peopled by savages. In fact, one of the most brilliant periods of commerce and culture on the Mediterranean was about 1500 B.C. At that date there were several centres on the European shore of high civilization, wholly independent and occidental in their ideals and technique; on the southern shore, the Hamitic Libyans and Mauritanians had by spontaneous development reached a degree of culture quite up to that of the Egyptians.—*Science.*

WHAT STRONGER PROOF is needed of the merit of Hood's Sarsaparilla than the hundreds of letters continually coming in telling of marvellous cures it has effected after all other remedies had failed? Truly, Hood's Sarsaparilla possesses peculiar curative power unknown to other medicines.

Hood's Pills cure constipation by restoring the peristaltic action of the alimentary canal. They are the best family cathartic.

# "German Syrup"

The majority of well-read physicians now believe that Consumption is a germ disease. In other words, instead of being in the constitution itself it is caused by innumerable small creatures living in the lungs having no business there and eating them away as caterpillars do the leaves of trees.

**A Germ Disease.** The phlegm that is coughed up is those parts of the lungs which have been gnawed off and destroyed. These little bacilli, as the germs are called, are too small to be seen with the naked eye, but they are very much alive just the same, and enter the body in our food, in the air we breathe, and through the pores of the skin. Thence they get into the blood and finally arrive at the lungs where they fasten and increase with frightful rapidity. Then German Syrup comes in, loosens them, kills them, expels them, heals the places they leave, and so nourish and soothe that, in a short time consumptives become germ-proof and well. ●

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