Correspondence.

Electrical Transportation of Farm Products.

Mr. A. Jeffers writes that electricity is being used in the vicinity of Old Point Comfort to take the farm products—cabbages, potatoes, beans, peas, etc.—from the truck farms near Hampton to the government wharf for local consumption and for shipment north by steamer to New York, Philadelphia, Boston, Baltimore, or Washington. He also states that there are other lines near Norfolk contemplating the same thing. An electric motor placed on a flat car constitutes the locomotive, and other flat cars are attached which are loaded up to their full capacity.

How They Prevent Mosquitoes in Siam.

To the Editor of the Scientific American:

I saw in the April 16 number an article on "The Best Mosquito Remedy," and thought that those who have read it would be interested to know how we manage it here. The position of this section of the country is such that we cannot procure conveniently pure drinking water unless we collect the rain water in vessels during the rainy season, and thatof sufficient quantity to last over to the next year. Ordinarily the rain water is kept in unglazed earthen jars of about 25 or 30 gallons each.

To prevent the mosquitoes from depositing eggs in the water, an iron nail is placed in each jar. For the first few days this will not prevent them, but after that time there will be no more mosquitoes or larvæ in the jars. To remedy this evil from the start, I heated the nails red hot, so as to produce oxide scales on the nails at once. A year ago I placed in every jar of rain water a couple of 5 inch wrought iron nails heated red hot. Several jars are now left over from then, and the water in them is as pure and free from mosquitolarvæ as any one can wish.

The process described as above is not universally practiced now, but many years ago the ancient people did so during cholera time and cases of prevalent sickness, believing in the mysterious virtue of the iron nails to prevent harm and the mosquito larvæ from being in the drinking water. M. KAWN.

Bangkok, Siam, June 17, 1892.

Personal Recollections of Eminent Men.

BY DR. VANDER WEYDE.

Prof. Louis John Rudolph Agassiz, of Neuchatel, Switzerland.

The fifth decade of our century was made remarkable by the announcement that there had been a glacial period, when the whole earth was covered with a crust of ice, which in many localities had left its records by erratic, huge bowlders. Such bowlders, evidently, could only have been carried there from distant mountains by moving ice fields, such as glaciers. These glaciers, by their erosive action, had left also their marks on the rocks along which they had moved. These marks are abundantly found in many localities.

Charpentier was the first who, in 1840, published these facts, which soon attracted the attention of Agassiz, who at once went to study the details of the behavior of the glaciers in his native land. The result was that he not only accepted the idea of Charpentier that these glaciers had once covered the plains and valleys of the rivers Rhone and Aar; but he went further, and held that they had covered the whole of Europe north of Switzerland, and that even in South America glaciers had left similar records between the Andes and the Atlantic coast.

When, in 1846, he visited Scotland, he found also there undeniable evidences of glacial action, and announced his discovery to the Royal Society, of London, coming forward with the hypothesis that there had once been a period of intense cold over the whole surface of our earth, during which it became covered with a crust of ice, destroying the greater portion, if not all, of the vegetable and animal life then in existence.

No wonder that such a novel idea announced as a positive fact by such an eminent savant attracted universal attention, and the scientific journals of almost every enlightened country in Europe commenced to treat the subject. In this I took part by giving abridged translations in the Holland language of some of Agassiz's writings on the subject. I was induced to write on it by the request of editors of such journals under whose attentions I had been brought, upon receiving from Amsterdam, in 1845, a gold medal for a scientific prize essay.

I confined myself, however, strictly to an *exposé* of Agassiz's labors, without giving my opinion, reserving this until good luck might perhaps give me an opportunity to have a conversation with the eminent originator of this at once famous glacial theory.

In 1847 the newspapers announced that Prof. Agassiz had been appointed to the chair of geology and zoology in Cambridge, Mass., with a far more liberal salary than he obtained by his professorship in Switzerland. Of course he accepted this, also because it gave him an opportunity to study the North American continent in regard to his pet theory, the great glacial period.

About that time I commenced to prepare for a visit to the United States as a *reconnoissance*, to see how I would like it, and find out in how far I might succeed professionally. Additional attractions were the eminent men I would have an opportunity to meet, such as Prof. John William Draper, from whose excellent book on the influence of sunlight on plants I had translated and published some extracts, and who had made daguerreotypes immediately after the process had been published by the French government (after buying it from its inventor by a pension for life). As I also had been making daguerreotypes in Holland at the very same early period I was, of course, anxious to see a co-laborer in that field, which was so fascinating and inspiring during its first applications. There was Dr. Valentine Mott, who had visited Europe and extended his journey to Turkey to study leprosy in the country where it is indigenous. Then Dr. Hare, of Philadelphia, professor of the University of Pennsylvania, whose deflagrator I had constructed according to the published descriptions, and had added some improvements. Another was Prof. Henry, of the Smithsonian Institution, whose colossal electro-magnets, which he made while in Princeton College, I had imitated, with the improvements described by Pouillet in his "Elements de Physique," consisting in a colossal wooden frame containing two iron horseshoes of 100 pounds weight, each serving as the armature of the other and supporting, when charged, about a ton weight.*

There were other men whose reputation had crossed the Atlantic, but my desire to see the United States and some of its eminent men, of which the number was now increased by Professor Agassiz, was not fulfilled until two years later, when in 1849 I crossed the Atlantic.

On my arrival in New York I found at once that two scientific lectures were advertised to be given in the Tabernacle, then situated in Broadway, near Duane Street. Lectures were at that time very frequent and well attended, as then the few theaters had not yet absorbed so much of the public attention as they do now. A few years before an attempt had been made to introduce the ballet, but the spectacular additions of the present day had not been invented and the public taste appeared to be satisfied by attending lectures, concerts, quartet soirees for voices or stringed instruments, etc.

The first of the two lectures was very unsatisfactory to me, but the second, to be given by the great Agassiz, was excellent. He, however, did not treat the topic I expected and highly desired to hear him speak about, his glacial theory (about which I was of course most intensely concerned), but he treated a very different and interesting feature in the field of comparative anatomy, namely, the relative position of the great ganglion in the nervous system among the different classes of animals. He explained how in the oyster, which he considered as the very lowest type of intellect in the animal series, the great ganglion, the brain, was placed in its very lowest part, in a depression of the under shell; how in the clam and mussel, more intelligent than the oyster, this ganglion occupied a higher position; while in the snail, who could lift up her head outside the shell, there is added a far greater intelligence.

He explained how among the quadrupeds the lowest type, such as the pig, carried its head lower than the spine, that the ox carried it on a level, the horse had it higher. In the different grades of monkeys, the spine was no more horizontal, but inclined at an angle of 45 degrees, more or less, with the brain at the highest portion, while finally in man the spinal column was vertical with the brain on top. He concluded from this that, as the vertical position is the limit beyond which it is impossible to proceed, it is also impossible to imagine any further progress in this direction, and that therefore man must be the highest intellectual creature to be conceived, and beyond which there is no higher type possible.

After the lecture I introduced myself as a translator of some of his writings in the language of Holland, and as at that time I was not enough trained in the English pronunciation to express myself with ease, I asked him what language he preferred me to use—French or German. He answered, "Tout ce que vous voulez," and I continued the conversation in French, asking him if he still adhered to his opinion about the existence of a great glacial era once extending over the whole earth. He answered promptly, "Plus que jamais" (more than ever). I made the suggestion if there could perhaps not have been separate regions, which at different times became glacial, by an upheaval of only four miles above the surrounding level, as is now the case in the Alps, in the Andes, and in the Himalayas, where a glacial period is undoubtedly now in full operation, adding that such a temporary upheaval of the earth's crust, of three or four miles in altitude, is comparatively a mere trifle for a globe of 8,000 miles in diameter. I added hesitatingly that, according to this suggestion, it was not necessary to invent an additional theory to account for a catastrophe like a universal low temperature, such as that our earth and the whole planetary system had moved over very cold regions of the celestial space. But Prof. Agassiz answered promptly: "No; this catastrophe was only one of the many cataclysms of various kinds which preceded the creation of new species of plants and animals, and fossilized the existing ones. He added that this glacial period was perhaps the greatest of them all, and took place a short time (geologically speaking) before the appearance of the human race.

These were not his own words, as he expressed himself in elegant French, with an enthusiastic conviction which reminded me of the eloquence of Arago, whom I had once the advantage to hear lecture in Brussels, some ten years previously. I have, however, attempted to give a correct report of his meaning.

I ought to add that my boldness in differing with him in opinion had not the least influence in regard to his friendliness and kindness to me, when on suitable occasions I had some questions to ask him, such as, for instance, certain details in the osteology of ganoids, about which I heard him give a most masterly lecture. His desire to benefit others with what he had found out was a predominating trait in his character, and he did this with the greatest pleasure, sometimes not devoid of humor, shown in his eyes, which, in reality, at certain occasions had a laughing expression. For instance, when, during a session of the American Association in Boston, we were invited to an excursion by steamer outside the harbor and along the coast of Massachusetts, he was induced to talk about the enormous changes brought about by wave action on the shores during past geological ages. He stated, among other things, that the spot over which our steamer was sailing was once dry land. One of his lady hearers asked: "Professor, in what year was that the case?" He answered promptly, "Madam, that was before the Pilgrim Fathers came here." At the same time I caught his eyes, which were actually laughing when he winked; without that, his mouth showed no trace of his interior amusement.

I have, however, seen the opposite expression in those same eyes. On one occasion, a certain "Professor" Grimes, whose ignorance I had discovered by a previous private conversation, commenced reading a paper on geology, in which he exposed his own absurd theories. Very soon Professor Agassiz jumped from his seat, his eyes flashing with scorn and indignation. He said: "Gentlemen, have we come together here to listen to the ravings of a man who does not know the A B C of geology? I call on the president to maintain the dignity of our association." The motion was seconded almost by acclamation, and "Professor" Grimes was compelled to sit down. It was just time for recess, and Professor Agassiz, when passing me, said, in a laconic way: "That man will not trouble us any more."

On another occasion he was still more indignant. It was when he had been invited to accompany a gentleman who would conduct him to a place for seeing some "alleged new experiments." They were those of a spiritual medium. As soon as Professor Agassiz found what was going on, he was not only angry and indignant, but declared himself insulted by those who brought him to such a place, thinking that *he* (Agassiz) could be humbugged like the rest of them, and he left more angry than any one had ever seen him before.

*Those identical electro-magnets I brought with me when coming to reside in New York, and have on more than one occasion loaned them to Professor Doremus.

Miners' Wages in Hungary.

The daily wage of a regular hand at the Hungarian mines is only 32 cents to 40 cents, and of a temporary hand 28 cents. Boys are paid from 12 cents to 24 cents a day, and women from 12 cents to 20 cents. In the coal mines the wages are rather higher; men are paid from 48 cents to 60 cents a day, boys 20 cents to 28 cents, and women 18 cents to 20 cents. The wages in the iron mines are lower than those in coal mines, because the iron mines are all situated in populous districts where living is cheap. In all small mines tools and blasting materials are given free to the men, but in large mines the men have to pay the cost price of the blasting materials and lights. The low rate of wages is astounding to the American mind, but when the cost of living is taken into account, the lot of the Hungarian miners is by no means so bad as appears at first sight. For instance, a very comfortable house can be obtained for $2 a month. Three rooms, such as could be obtained in a tenement house here at $8 to $10 a month, cost 60 cents a month there, and an attic can be obtained there at 20 cents a month. Wood and coal can be had on easy terms and in many cases gratuitously. Food and supplies are exceedingly cheap, and many mine owners sell their hands food at next to cost price. In many of the State mines a deduction from the wages of ¼ per cent is made for a music fund. All Hungarians are natural musicians, and Hungary is the home of true and unaffected music.

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