

other barbarian, clad in a pair of calico pantaloons of the latest cut, only extremely short at both ends. We judge the legs could not have been more than eight inches in length. He was a grim and gaunt barbarian with a mustache, and an eye that seemed to glow with eager anticipation. Like the spider in the fable, this attendant invited us into his parlor, and like the fly in the fable, we accepted his invitation. We found the tessellated marble floor of this apartment so hot that we could not rest our feet upon it, but the barbarian placed under them a wet towel, which felt good and comfortable.

Glancing at a thermometer which hung near, we found it marked full 140°. The barbarian turned down an hour glass, of the extreme accuracy of which we feel some doubts, and left us to watch it and the thermometer. Whether the labor of this watching was so severe, or whether it was because the room was so warm, we soon found ourselves dripping with perspiration from millions of pores. We tried to recall our physiology, and to speculate upon the source from which all this fluid was drawn, but found ourselves capable of nothing but watching the thermometer and the hour glass.

From this not unpleasant Inferno, barbarian No. 2 took us into a little room where we saw the last of our primitive raiment. Here we were placed prone and shampooed. That is, we were rubbed and scrubbed by the barbarian; were pulled and hauled and touselled and pumped upon by a hose in the hands of the barbarian; were soaped, brushed and kneaded; our limbs were stretched and twisted, and our head was rubbed until consecutive thought was an utterly impracticable achievement.

Pop! went an explosion like a Kentucky rifle, at which we jumped up in alarm. We were reassured by the barbarian, who explained how the thing was done. This he did experimentally on his own person. The hand is held so as to form a sort of cup, which is filled with suds. Brought suddenly down upon the flesh it makes a loud crack, but does not hurt much. Down we laid again, and the barbarian fired a successive volley, ending in general firing, all along the line of our spine. Then we were again drenched by a discharge of hot water from the hose, and plunged into a large vat of pure water at 70°. We found the power of consecutive thought at once fully restored by this plunge, and immediately analyzing our sensations, found them to be wholly Oriental.

We felt an intense longing for fleet horses, and tents in the desert; for flocks, and herds, and opium pipes, and harems and sherbet and coffee; for loose trousers, and shoes with pointed and turned up toes, and a turban. We tried a word or two of Arabic, but whether it was from our ill pronunciation, or whether the barbarian was such only in the matter of his skin and dress, we could not make him comprehend us.

The free use of towels having removed the moisture from our cuticle—that is, the rudimentary cuticle which the Anglo-American Turkish bath permits to remain—we began to resume delicacy and dress in the form of a linen wrap, which we folded about our person, and we were then led to the cooling and drying room, where we were placed in an easy chair with a support for our feet, and abandoned to rest and dreams. Opium and coffee are not served, which is considered an improvement upon the Oriental custom, but

a refreshing drink of hot lemonade is furnished in the first stage of the sweltering process.

From a period of blissful rest we were aroused to resume our every day dress and revisit the earth, which we were all the more ready to do from a feeling of intense hunger experienced at the moment.

Issuing from the establishment, we heard the bells striking six p. m., and could almost imagine the voice of the muezzin calling to prayer from distant minarets, and perfumes of "Araby the blest" blending with the less aromatic odors of our metropolitan atmosphere.

The Philosophy of Cataplasms.

The *Journal des Connaissances Medicales* publishes an article, by Dr. Herbert, on a subject which may not be uninteresting to families, viz., cataplasms, those especially which have mustard for their base. The seeds of the black kind, which, in a pulverized state, are used for poultices, owe their properties to a liquid, acid, and volatile substance, being nothing but essence of mustard. This, however, does not exist ready formed in the seed; it is generated by a kind of fermentation, caused by the action of an albuminoid body, called myrosine, which plays the part of leaven, on a peculiarly fermentescible compound, myronate of potash. This transformation which has been called *sinapisic*, can only take place by the intervention of water at a temperature higher than freezing point, and lower than seventy-five deg. centigrade, those being the usual conditions requisite for producing fermentation. This is a circumstance which is not commonly taken into account in practice. The generation of essence of mustard diminishes under temperature ranging between fifty deg. and seventy five deg. centigrade, and entirely ceases at the latter. Hence, boiling water, or even such that cannot be borne by the hand, will spoil both the poultice and the sinapized foot bath. Again, alcohol, acids, metallic salts, and any other agents having the power of stopping fermentation or retarding it, are detrimental. Besides, the two principles mentioned through whose joint action the essential oil of mustard is produced, the seeds of this plant contain various others, among which there is a fixed and inactive oil, having some of the properties of that of rapeseed, and which may easily be extracted from mustard-powder, either by strong pressure, or, better still, by acting upon it by lixiviation in sulphuret of carbon. When this oil is extracted, what remains is much more powerful, and will, moreover, keep indefinitely. Many years ago, M. Robinet attempted to bring this mustard-flour, deprived of its fixed oil, into general use; but prejudice and routine proved too strong for him, and it was not until this powder was gummed to paper, then cut into squares, and sold in elegant tin boxes, that it came into fashion. But what every family should keep in mind is this, that mustard poultices ought not to be made with hot but lukewarm water.—*The Druggist*—N. Y. Med. Journal.

Michael Faraday.

The following interesting sketch, taken from Dr. Bence Jones' "Life and Letters of Faraday," appears in the *Scientific American*: "Toward the end of the last century, in

an obscure part of London, over some stables in a yard, lived an honest blacksmith named James Faraday. He was the son of a stonemason and tiler, and was one of a family of ten children, all of whom were laboring men and women in the humblest walks of life.

"James had married the daughter of a farmer, and was a member of a peculiar religious sect called Sandemanian, after its founder, and was a thoroughly religious man. He had four children, Elizabeth, Robert, Michael, and Margaret. Michael was born in 1791. And when a little boy used to tend his baby sister in the stable yard, and sometimes was able to earn a penny by holding a horse or running an errand. When he got to be big enough to be trusted with parcels he was regularly installed as a newspaper boy, and on Sundays hurried through with his business so as to be at home in time 'to make himself neat and to go to church with his parents.' Robert chose the father's profession and was apprenticed to a blacksmith. He appears to have been a generous man, as he used occasionally to give his brother Michael money to go to chemical lectures or to buy apparatus for experiments; but we soon lose all track of him, and his fame never went beyond the sound of his anvil.

"We are not told why Michael was apprenticed to a book-binder rather than to some other mechanic, but can infer that he read the papers he carried and showed an early fondness for books, so that his father placed him at a trade where he could earn something and yet have an opportunity to read. The book-binder and stationer with whom Faraday learned his trade was a kind master, and evidently pleased with the fidelity and industry of his apprentice.

We find that Faraday, while binding books, took occasion to look at their contents, and among other works that fell into his hands was one by Mrs. Marcet, on chemistry. He had a great fancy for proving the accuracy of all the statements in the book by simple experiments, and spent all the pennies he could spare in procuring the necessary apparatus. An article on electricity, in the 'Encyclopedia Britannica,' particularly attracted his notice, and he set about to construct an electrical machine. His master was so much pleased with the success of this effort that he showed the apparatus to a member of the Royal Institution, who came to the shop to have some work done. This gentleman had some conversation with the apprentice, and finding him uncommonly bright and intelligent, invited him to go to hear Sir Humphry Davy lecture at the Royal Institution. This was a treat of the utmost importance to the young man. He wrote out full notes of the lecture with such drawings and illustrations as he could make, and afterwards sent them with a letter to Sir H. Davy. "The reply was immediate, kind, and favorable;" and some time afterward a grand carriage, with a servant in livery, drove to his humble lodgings with a note, asking him to call to see Sir H. Davy, and offering him the place of assistant, just vacant, at a salary of twenty-five shillings per week, with the use of two rooms at the top of the house. On March 1, 1813, Faraday was regularly appointed by the board of managers to be Davy's assistant. His days of bookbinding were thus brought to an end, and he became himself the maker of books for other people to bind and to prize most highly: