latter valley it spread into Ohio, and established wells in Trumbull county on some of the highest ground along the north-west edge of the coal measures in that State. The first borings, in the spring of 1860, were those of Mecca, twenty-one miles south-west of Erie. By the next November, between six and seven hundred wells had been already sunk in one small district, and twenty-five steam pumping engines were at work.

INFLUENCE OF FOOD UPON THE INTELLECT.

Very few well-informed persons dispute the fact that the nature of the food taken by man has an influence upon his brain or mental power. It is unquestionable that certain kinds of food are injurious to beasts, and produce or tend to induce disease; and this peculiarity has a proportionate evil effect upon the animal part of man. Other matter taken into the system for refreshment or luxury, such as drink or narcotics, has also some influence upon the character of those who partake of it. National traits and characteristics are thus developed, and we see Germans and Hollanders heavy, slow thinkers, solid rather than brilliant, and given to sluggishness rather than bodily activity. Cannot the cause of this be found in the quantity of beer, tobacco and highly seasoned cookery which is consumed by the people; and may we not trace some of the prominent traits of the French character to the quality of diet and drink they subsist on? Whatever conclusion we may arrive at (for the question is an open one and susceptible of much discussion), we may not venture to dispute the results of actual experiments on this subject, made by learned physicians; some account of their researches we append herewith:—

In the excellent work of Prof. Moleschott, of Zurich, *Lehre der Nahrungsmittel, fur das Volk*, the influence of diet on the intellect is dwelt upon at great length. "It is a well-known fact," says this philosopher, "that change of food has transformed the wild cat in to the domestic fireside-compani on from a carnivorous animal, with short intestines,, it has, by gradually becoming accustomed to other food, become transformed into another being enabled by a long intestinal canal to digest vegetable food, which in its natural state it never touches. Food, therefore, makes the most rapacious and perfidious animal in the world an inmate with man, agreeing with children, and rarely, except to a close observer, revealing its former guiltful character. Are we, then, to wonder that tribes of men become ardent, phlegmatic, strong or feeble, courageous or cowardly, thoughtful or unintelligent, according to the different kinds of aliments they take? If food is transformed into blood, blood into nerve and muscle, bone and brain, must not the ardor of the heart, the strength of the muscles, the firmness of the brain, the activity of the brain, be dependant upon the constituents of food?" Again, in treating of the diet of the artist and literary man, the author states that "a well-baked bread and lean meat, combined with young vegetables and such roots as are easy of digestion and contain a considerable proportion of sugar, form a wholesome diet for thinkers and poets; a large quantity of leguminous seeds, heavy bread, rich gravy, and greasy meat, create those irritable, morose, and almost always slender statesmen, who have permitted gloomy thoughts and gloomy imaginations to eclipse all happier views of life in them, or that they have come to consider rods and fetters as the most important promoters and protectors of civilization."

To the Reverend Professor Haughton of Trinity College, Dublin—a philosopher who has enlarged the boundaries of many departments of science—we are indebted for an admirable physiological investigation (published in the Dublin *Quarterly Journal of Medical Science*), the results of which have established the curious fact that the greatest or perhaps we should say the hardest thinker is the greatest eater.

Professor Haughton states that men employed in mere manual routine labor, require only a vegetable diet, whilst those who are engaged in pursuits requiring the constant use of the intellectual faculties must be supplied with food of a better kind—*i. e.*, mixed animal and vegetable aliments.

These interesting experiments of Professor Haughton open up a wide field of curious and interesting inquiry. Is vital activity a mere modification of chemical force, and is the explanation of all the phenomena of living beings to be found in the domains of chemistry and the various physical sciences? No doubt many of the changes which take place during the different stages in the life of an animal can be clearly traced to the unmodified action of the various physical agencies, but there are others which are not so easily explained, and which some physiologists refer to the operation of a force which they regard as distinct from all others, namely the vital. It should however, be remembered that this force, as it is called, never evidences its independent nature by any unaided manifestations of a material character. It has never been proved that any portion of matter, however small, has been caused to change its position in space by the sole agency of the vital power.

Mr. Grove suggests that the inorganic forces and animal force will yet be shown to be convertible into each other; but let this acute student of nature speak for himself:—

"Some difficulty in studying the correlations of vital with inorganic forces arising from the effects of sensation and consciousness, presenting a similar confusion to that alluded to when, in treating of heat, I ventured to suggest that observers are too apt to confound the sensations with the phenomena. Thus, to apply some of the considerations on force, given in the introductory portion of this essay, to cases where vitality or consciousness intervenes, where a weight is raised by the hand, there should, according to the doctrine of the non-creation of force, have been somewhere an expenditure equivalent to the amount of gravitation overcome in raising the weight. That there is expenditure we can prove, though in the present state of science we cannot measure it. Thus, prolong the effort, raise weights for an hour or two, the vital powers sink, food, *i. e.*, fresh chemical force, is required to supply the exhaustion. If this supply is withheld and the exertion is continued, we see the consumption of force in the supervening weakness and emaciation of the body."