

bore no marks of corrosion; the gold was untarnished, and they were once more restored to their proper place. I am, Sir, your obedient servant,

J. MORSS CHURCHILL.

Colchester, Sept. 14, 1842.

DR. COLLIER'S THEORY OF ANIMAL HEAT.

To the Editor of THE LANCET.

SIR,—I have waited patiently for nearly a month for Professor Liebig's acknowledgment of my claim to priority in developing the theory of intra-combustion, I will not say to the originality of that theory, because the seeds of it are as old as the science of medicine; and it is the purpose of my present paper to prove that these, like the bulb taken from the hand of the Egyptian mummy, have germinated in English soil to the rather lately excited astonishment of a gaping multitude. Did I not know that our youthful professor has all the time been in England, and were I not in possession of the fact of his knowing my public appeal, I might have passed over his silence altogether; and even now it is my desire to treat him with all the courtesy to which such a distinguished visitor is properly entitled. The path of science is rugged and steep, paved not with gold but with difficulties, and all that the wearied traveller can be robbed of, for the most part, is empty honour. Let journalism which guards that path, see that no part of such honours be filched from the living; and that the clothes of the many who have succumbed in the ascent, be not indecently stripped from the dead. I will not stop to record the language of panegyric in which modern journalists have indulged in their review of that part of the professor's theory, pronounced by them to be "gigantic, bold, stupendous, and original." I shall at once proceed to do justice to the illustrious worthies among the departed, who ought to come in for their share of the praise (if any be due), not forgetting altogether among the living what is due to myself. Briefly then, I say that the Crawfordian theory of animal heat is English; the nervous or voltaic theory of animal heat is English; and the theory of intra-combustion, so far as it has yet been developed in accordance with the present state of chemistry, is English. The theory, like most human inventions, was first anticipated by the poets, and the philosophers followed in their wake. So was it with the circulation of the blood, which Dantè sketched, before Harvey proved it by experiment. So was it also with attraction, which the same poet sang in verse, before Newton proved it in the dry path of inductive prose. But if we must limit ourselves to the laborious workmen of our own profession, first let me vindicate

Galen. Turn to his chapter on respiration—"The animal frame (says this author) is a circle, without beginning or end; the brain and heart are reciprocally indebted to each other, this for muscular energy, and that for vital heat; the heart fanned by the lungs is a lamp, the blood the oil which feeds the flame; and the quality of the oil, as a means of developing heat, will depend on the quality of the food." Next turn we to Haly Abbas—"The first change in the food takes place in mastication, it is there mixed with the phlegm of the mouth, and subsequently in the process of digestion heat is eliminated from it," &c. &c. Theor. iv. 3. Now for more recent authorities, not to mention Murray's opinions recorded in his *Materia Medica*; Spalding's well-known experiments; and Beaumont's observations on the case of St. Martin; also, Cuvier's observations on the more active digestion and consequent rapid elimination of caloric in birds: I will go to John Hunter at once, and thus fulfil so much of the intention of Hunterian orations.

"It has not yet been considered whether an animal has the power of producing heat equally in every part of the body; although, from what is generally advanced on the subject, we are led to suppose that every part has this power; or whether it is carried from one source of heat by the blood to every part: this may probably not easily be determined; but I am apt to suspect there is a principal source of heat, although it may not be in the blood itself, the blood being only affected by having its source near the source of heat. That this principle resides in the stomach is probable, or at least I am certain that affections of the stomach will produce either heat or cold." So also in p. 43 of the same work. (Hunter on the Blood, &c., vol. ii., p. 134.)

"That weakness, or a feeling of weakness, produces cold is evident; and that universal or constitutional cold arises from the stomach is also evident: for whenever we are made sick, an universal coldness takes place; and this is best proved by producing sickness on animals that we kill, or that die, while they are under affections of the stomach."

But if it be rejoined that this is only a glance at the theory, I must direct your readers to my paper of the 20th of August last, in which I referred to publication thereof in 1835, and to Dr. West's work on Pyrosis, where the treatment of disease is based on that theory; and I will content myself with asking what part of the professor's (so called) new theory of intra-combustion had not been published by myself, and subsequently by Dr. West in the works already referred to by the latter gentleman, and by your obedient servant,

G. F. COLLIER.

Sept. 12, 1842.

P.S.—By reference to Liebig's *Animal Chemistry* of 1842, it will be seen that he

adduces the same facts, derived from the same climates, the same race of men (the Esquimaux), the same illustration of the temperative power of the infant, and that he has the same inferences as those published by myself in 1835.

On the Curative Influence of the Climate of Pau, and the Mineral Waters of the Pyrénées, on Disease, &c. By A. TAYLOR, M.D. Parker. 12mo. Pp. 342.

To those who are seeking for health in distant countries the above work may prove interesting. The author naturally concentrates the virtues of an atmosphere of Eden in the spot to which he would attract the sick and the suffering from all quarters of the globe. We extract for the perusal of our readers the following observations on the climate of Pau, as compared with that of other resorts for invalids:—

“And first, with regard to the south east of France, viz., Provence and Languedoc. ‘Less rain falls here, I believe, than in any other part of Europe. It is no uncommon occurrence for a drought to continue, without intermission, at Montpellier, Aix, and Marseilles, during four or five months together, while in the winter it is considerably drier and colder than in the south-west. The *Bise* and *Mistral* winds exert a most deleterious influence on delicate people in general, but more especially on those whose lungs are implicated. We are aware how sensitive the pulmonary apparatus of phthisical patients is, and how injuriously cold acts upon it; in fact, a mild and balmy aerial fomentation (if I may so say) is by far the most efficacious palliative and check on the march of this desolating disorder.’

“Let us move still further to the east, and we have some of the features of Nice, so entirely opposite to Pau, graphically described by a resident physician, who very candidly records his opinion as to the injurious effects of its spring upon diseases, for which the climate of Pau, at all seasons, is uniformly suitable, namely, those of membranous and glandular irritation.

“Dr. Farr says, ‘Independently of the *Mistral*, from which Nice is more sheltered, from its topographical situation, than many other parts of Provence, the easterly wind sets in with the first moon in March, called by the natives the Blood-red Moon; it is severely felt by the invalid and those in delicate health, and even the strong feel and acknowledge its evil tendency. Last season the number of patients of all nations, labouring under affections of the chest, might have amounted to thirty; the great majority had greatly improved their state of health up to this period, and they were daily to be seen, like butterflies in the sun, riding, driving,

and walking over hill and dale. I besought those whom I attended, and many whom I did not, to quit Nice before the birth of this fatal moon; but they heeded not my counsel, and thought I had overrated the danger. They remained, and the day after this easterly wind began, of the thirty I only met one afterwards, and him I had often previously pronounced to have no disease of the lungs.’

“There can be no two climates more opposite in their meteorological properties than Pau and Nice, and, experimentally, no two where the action upon disease is so oppositely marked. For all diseases requiring a sedative to the nervous and circulatory systems, the climate of Pau is peculiarly adapted; while for others of an opposite type, that of Nice would seem in an equal degree to be beneficial.

“‘The grand objection’ (says Dr. Farr, page 10), ‘to Nice is its dryness, and the exciting and irritating nature of its atmosphere, but if in some diseases these are found to aggravate the malady, in others of an opposite tendency they are productive of good; so that the evil complained of in the one case is counterbalanced by the good produced on the other. It is the fault of either the patient or his medical adviser, if he comes to a climate ill calculated to ameliorate his condition; but it detracts nothing from the reputed character of the climate in diseases in which it is known to be beneficial; it simply leaves the patient thus misdirected, and ill-sent, in a worse condition than on his arrival. How often do these, however, who live and exercise their profession on the continent, see instances of patients being thus erroneously directed to many other climates besides Nice, and not to those alone, where air and climate are to effect everything, but even to those whose mineral waters are the therapeutic agents.’

“The diseases to which the native population of Nice is subject are of a more acute and inflammatory type than we find in those of Pau. Indeed, they are of a description little known in this place, and belong to a class of diseases, for the prevention and cure of which the climate of Pau is suited. Sir James Clark says, ‘that catarrhal affections and inflammations of the lungs rank among the most frequent diseases. The latter is especially common and violent in the spring, and is generally complicated with irritation of the digestive organs. ‘Gastric fever and chronic gastritis are very common diseases. Indeed, gastric irritation appears to be very prevalent, and almost all other diseases are complicated with more or less of it.’

“The following valuable observations by Sir James Clark may almost serve as a guide, as far as they go, to those diseases in the alleviation and cure of which the Pau climate exerts so decided an influence; for