PART SECOND.

REVIEWS.

1. Traité des Névralgies, ou Affections Douloureuses des Nerfs. Par F. L. S. Valleix, Médecin du Bureau Central des Hôpitaux de Paris, &c. 8vo. pp. 716. Paris, 1841. (A Treatise on Neuralgia, or Painful Affections of the Nerves.)

2. Tic Douloureux, Neuralgia Facialis, and other Nervous Affections; their seat, nature, and cause: with Cases illustrating successful methods of Treatment. By R. H. Allnatt, M.D., A.M. 12mo. pp. 184. London, John Churchill, 1841.

3. Du Traitement de la Sciatique et de quelques Névralgies, par l'Huile de Térébenthine. Par L. Martinet. Deuxième édition, revue et augmentée. 8vo. pp. 188. Paris, 1829. (On the Treatment of Sciatica, and some other forms of Neuralgia, by the Oil of Turpentine.)

The work of M. Valleix is obviously the result of much personal observation, and careful study of the best authorities; but, like many works from the pens of French physicians, the practical part is the least complete. Viewing the treatise, however, as a whole, it is deserving of great praise, and must be regarded as an important addition to medical literature. The subject discussed by Dr Allnatt is of far more limited extent, and bears fewer indications of experience and careful elaboration, yet it is nevertheless an interesting and practical little volume.

Neuralgia, in the common acceptation of the term, means pain in a nerve or nerves; and it is in this general sense that most authors employ the term; but M. Valleix excludes from the neuralgic all painful affections of internal organs, and those anomalous symptomatic nervous pains depending upon functional disorder of the viscera. In a practical treatise, it may be judicious to draw this distinction, as it tends to give clearer views as to the diagnosis, prognosis, and treatment of the individual cases with which we have to deal. Pain on pressure over the affected nerve, M. Valleix believes to be a constant symptom in neuralgia, an opinion from which many authors and practitioners dissent. His descriptions of the different forms of neuralgia, and the way in which their diagnosis is to be made
out, are minute and clear, and deserve the attention of practitioners.

In the treatment of neuralgic affections, M. Valleix must have met with more success than generally falls to the lot of other practitioners; for he states that three-fourths of the cases to be met with, admit of complete cure. This is the more remarkable, as he does not even notice the treatment by purgatives, now so often attended with success in this country, nor does he once speak of croton oil, which has been so prominently brought before the profession by Sir Charles Bell, as one of the most valuable therapeutic agents in neuralgia, an opinion which the experience of many tends every day to confirm. Croton oil is not that sovereign specific which some, elated by the success which has attended their employment of it, would have us to believe; but it is of infinitely greater value than many of the remedies enumerated by M. Valleix. Sir Charles Bell makes the following remarks on this subject:—"I do not offer the croton oil as a specific in this complaint; but its effects have been so remarkable as to afford a ground of argument. I ordered it at first in desperate circumstances, in the most severe case of pain in the cheek; and the effect being immediate, the relief perfect and permanent, I should have been to blame had I not followed the practice in similar cases. In very many, it had the same happy result. What then, may I ask, would be the conclusion of any inquiring mind when he found a peculiar purgative acting powerfully, but not more powerfully than other forms previously given, attended with immediate and permanent relief of symptoms? Mine, I confess, was, that it acted directly on that portion of the canal, the irritation of which, or, as Mr Abernethy would have said, "the discontented state of which" produced the remote pain. I have referred to a patient who had been subject to tic douloureux, and who had been more than once cured of his pain by croton oil, having died last autumn. There was no disease in the nerve, but ulceration was found in the mucous coat of the ileum. But then it is said in the report conveyed to me, that he had been too powerfully dosed with this medicine. In this last supposition, we have the important admission that croton oil, improperly used, will act on a portion of the mucous coat to the formation of an ulcer. Could we depend on this reasoning, it would explain how the better regulated administration of the medicine did, in many cases, affect a portion of the intestine to the removal of morbid irritation there. Reviewing my experience, I am borne out in believing that the disturbed function of particular parts of the intestinal canal gives rise to pains, differing in their apparent places according to the portion of the canal irritated. Here, I conceive, there is a wide field for inquiry. If the intestinal canal is estimated at seven times the..."
length of the body, and if it be also acknowledged that the dif-
ferent portions of this long tract of mucous membrane, perform
distinct offices, and are subject to different influences, there is
nothing to repel the idea, that these portions, being in a state of
disturbance and irritation, shall produce a variety of symptoms,
especially differing in their apparent locality. And this view is
countenanced by the effect of medicine. We can throw the
influence of evacuants on the different portions of the canal,
affect the stomach, the duodenum, the long intestine, the colon,
or the rectum. Thus is each portion of the intestine proved to
be distinct in office, and to possess distinct affinities. It is
on this principle that we ought to pursue the inquiry,—first, on
what part of the extended canal does this secret disturbance
fall; and secondly, what form or combination of medicine shall
especially touch or influence the part affected? We have an
instance in the effect of the croton oil. Let us not call it a spe-
cific, but seek for other remedies on a just and scientific prin-
ciple.” (Practical Essays. Edin. 1841, pp. 101—104.)

Charles Bell, then, believes, that the cause of tic exists prima-
rily in the intestinal canal, and only remotely in the fifth pair of
nerves. This is also the view of Dr Allnatt, upon which the
the treatment he recommends is based. With his remarks on
this subject we are not much inclined to find fault; because the
great doctrine which he advocates is a sound one. But it would
have been better to have enunciated his opinions with less of
dogmatism; for, assuredly, sooner or later, he will meet with
many cases of tic, and of other forms of neuralgia, which will
obstinately resist all the resources of his therapeutic armoury.
We know of not a few cases, in our own practice and that of
others, which, instead of being radically cured, have derived but
very transient benefit from the treatment which he advocates as
infallible. Such unguarded statements as those of Dr Allnatt,
when left uncon contradicted, greatly retard the science of thera-
peutics, by producing scepticism in the efficacy of all drugs in the
mind of the young and sanguine practitioner, and thereby mak-
ing him, if possessed of an imaginative mind, an easy convert
to homeopathy, or some other of the medical heresies most in
vogue, and which, in quick succession, seem to arise one after
another in Germany—that land of dreamy and wild speculations
in religion, and of pretty, but unstable hypotheses in medicine.—
Without farther comment, we extract the passage which has
suggested these remarks.

“Keeping in view,” says Dr Allnatt, “the principles I have endeavoured
to inculcate in the preceding pages, the indications to be attended to in the
treatment of tic douloureux, are—to relieve the irritation of the abdominal
viscera, and, in cases of long standing, the consequent hyperamia which may
have been induced. For this purpose, I have found the free use of aperients
of unfailing efficacy, and I give a decided preference over all others to a pill combining a small quantity of croton oil with stomachic aperients. In plethoric habits, and when the constitution has not materially suffered by protracted agony, the aperient plan should be steadily preserved in, and carried to its full extent; that is, the patient may be kept under the influence of purgatives until the pain has subsided. The diet, which of course must be carefully regulated, should consist of light and nutritious food; all indigestible aliment should be avoided, and irritating spirituous and fermented liquids absolutely prohibited. Exercise in the open air is particularly desirable, as it tends to the 'equalization of the circulation;' not, however, that exercise which consists in the luxurious rolling of a carriage, but brisk walking on foot until a glow is excited, or, what is still more desirable, horse exercise. By these means and these alone, I have succeeded in curing invertebrate cases of tic douloureux, in the course of six or eight days, which had withstood for months and years every other method of treatment.

"But, suppose a weak and delicate female, with anemia, to be the subject of tic douloureux, in whom the periodical functions of the uterus are irregularly performed, or in whom the disorder is complicated with hysteria or other affections connected with an irritable and mobile state of the system—in this case, purgatives must be resorted to with great caution, and in very small and divided doses; still they must be used, and alternated, as occasion may require, with ammonia, steel, the vegetable bitters, sedatives, &c. It is in these instances that quinine and the sesqui-oxide of iron produced such marked and decided relief.

"The question has been frequently asked, 'Can tic douloureux be permanently cured?' In contravention of the authority of our great names, I answer,—Yes! as permanently and effectually as any other disorder to which the human body is subject. I would in return ask of those who doubt this fact, if hysteria can be cured, continued fever, phrenitis, chronic hepatitis, spasms, convulsions, or any other disease or affection which may occur to the imagination at the moment? It is true it will be said, that we may, by appropriate remedies, cure any of these disorders; but can we ensure the patient immunity from future attacks to the end of his life? The same exciting cause, caeteris paribus, operating upon a frame peculiarly liable to a particular form of disorder, in other words operating upon the idiosyncrasy of an individual, may undoubtedly, at any future period produce the symptoms it has before occasioned; but this I maintain, without fear of contradiction, that by striking at the root of the evil, and not wasting opportunity in temporizing with inert and worse than useless topical applications, tic douloureux is an affection, which yields, I had almost said, with peculiar rapidity." Pp. 86—89.

The monograph of M. Martinet is very interesting, and, along with the testimony of Romberg and others, establishes a high reputation for turpentine in the treatment of sciatica and certain other forms of neuralgia. It consists chiefly of cases, in which the remedy was used, arranged in three classes; viz. cases cured, cases relieved, and cases in which there was no benefit produced; and a good analysis of them is given at the end of the work. As M. Martinet's work is inaccessible to most of our readers, we have translated some of the more important passages for their perusal. We find the following remarks upon the modus operandi of the substance.

"The essential oil of turpentine presents great differences in its mode of action, according to the dose in which it is employed. It also gives rise to certain peculiar phenomena, when administered in sciatica, crural and bra-
chial neuralgia; and these phenomena, as we shall have to remark by and by, are only observable in the affected member. Scruple doses, given in a convenient form, are speedily followed by these effects. In the majority of cases, the back part of the mouth, and the upper part of the oesophagus become the seat of a lively heat which is rapidly communicated to the other portions of the intestinal canal. At the end of a quarter, or at most of half an hour, this heat spreads over the loins, and the whole extent of the affected limbs, especially in the course of the painful nerves. In some individuals, a general sweating is produced, and in such cases the transpiration from the affected limb is not always greater than that from the opposite limb. The other phenomena observed from such a dose of the oil of turpentine as that above mentioned, are want of appetite, belching, a feeling of weight in the stomach, difficult digestion, diarrhoea, and, rarely, an itching over the whole body. There is sometimes an increase in the secretion of urine, which, when this is the case, acquires a violet odour; and, last of all, there is dysuria, accompanied with more or less heat: but these last mentioned effects are far from being constant, and, even when they do occur, continue at most only for a few days."

"The stimulant action of the oil is increased in proportion to the dose. Taken in a dose of from two drachms to an ounce, it produces nausea, vomiting, intestinal heat, tenesmus, and, in certain cases, slight gastroenteritis, accompanied by fever. The urinary passages generally participate in the stimulating effect produced upon the intestinal tube, and there are symptoms of irritation of the kidneys, more or less acute. Frequently, a feeling of heat and pain passes along the ureters, to the bladder and urethra, and along with these symptoms, there is generally dysuria, or even strangury. In some subjects, we also see mucous discharges following the incon siderate administration of this substance: but it must be remarked, that such untoward occurrences never happen in consequence of its use in moderate doses; and that they have only been observed in cases of epilepsy, tienia, and other severe and rebellious affections, requiring a dose of one or two ounces without any vehicle. It has several times happened in my own practice that patients have taken two drachms at once, without experiencing more than some colicky pains, vomiting, burning sensation in the stomach, looseness in the bowels, and, in rare instances, strangury; but all these symptoms of irritation were slight, and so transient as to require no treatment; indeed, generally it was sufficient to suspend the use of the linctus to see them disappear in three or four days."

The brain, in consequence of its sympathetic connexions with the stomach, sometimes experiences certain derangements during the use of this oil, which I have observed particularly in women, and nervous and irritable patients, viz. vertigo, a state of intoxication approaching to delirium, headache, more or less intense, accompanied with redness of the face, and which, as well as the other phenomena of which we are speaking, seem to depend in a great measure upon the strong and penetrating odour of this volatile oil." Pp. 45-48.

M. Martinet attaches great importance to the form of administration. He says:—

"It has been demonstrated to me by a great number of facts, that it is necessary to prescribe the oil of turpentine in a convenient form, to insure all the chances of success offered by this precious drug. On this account, its direct contact with the mucous membrane of the alimentary canal must be guarded against, so as to avoid the various unpleasant effects that might therefrom arise. With this end in view, the patient ought to be directed to take, half an hour after the turpentine, a soothing drink, or aromatic infusion. Honey, gum-arabic in powder, or calcined magnesia, are the substances most fit to be administered in conjunction with it; and although in the greater number of cases detailed in this memoir honey was used, I would nevertheless ob-
serve, that this mixture, alike disgusting and disagreeable, is so repugnant to some patients, that they cannot swallow it. To avoid this inconvenience, and prevent the vomiting which sometimes ensues, I now mask the acrid taste of the turpentine by an aromatic syrup, by an inert powder, or, better still, by calcined magnesia, a plan which has of late been followed with the balsam of copaiba. The following is one of the methods of preparation which has appeared to me most convenient. I composed the formula in 1822, along with M. Caventou, one of the most distinguished chemists of our time.

Take the white of one egg.

- Essence of turpentine. \( \frac{3}{4} \) ij.
- Syrup of peppermint. \( \frac{3}{2} \) ij.
- Syrup of orange flowers. ââ.

To be made into a linctus, of which three table-spoonfuls are to be taken per day.

It is sometimes necessary to add to this potion a certain quantity of laudanum, particularly when the stomach cannot support the presence of the turpentine. In this way vomiting may be prevented.” Pp. 76—78.

The cases in which turpentine is indicated are thus described by M. Martinet:

“It is chiefly in sciatic and crural neuralgia, that this medicine is most likely to succeed; but it may also be had recourse to with advantage in neuralgia affecting the superior and inferior extremities, and the face, of which I have given cases. The oil of turpentine is always indicated when the neuralgia does not depend upon an organic alteration, nor on a constitutional principle seated in the sciatic nerve, such as the virus of syphilis, which must be expelled by mercurial treatment. The chances of success are greatest when all the characters proper to neuralgia exist, such as acute pain, a tracing by it of the course of the nerves, and violent and quickly succeeding paroxysms; and this remark is applicable, be the disease chronic or acute, and whatever means have failed. Blessed be the medicine which can be regarded as an anchor of safety, when all the resources of art have been exhausted, and when the future seems to have nothing in store for the patient, but long and cruel suffering, or the thought more painful still, that he is labouring under an incurable malady!” Pp. 88, 89.

M. Martinet says, that in most instances he has accomplished either a complete cure, or a remarkable abatement of the symptoms, within a week, (p. 90); and in another place he remarks, “twelve days suffice, in the majority of cases, for the cure of neuralgia of the limbs; and commonly four or six are enough,” (p. 185.) Where some pain still remains, baths, frictions, and blisters to the part affected, are recommended, especially to the most superficial part of the nerve implicated. In this way a cure, otherwise imperfectly obtained by the turpentine, may be completed; as was the case in two instances related by Dr F. Home of Edinburgh, which M. Martinet quotes from the “Medical Facts and Experiments” of that author.1

The following analysis of M. Martinet’s cases we quote from his Memoir:

“In 70 patients, most of them affected with sciatica, and other neuralgias of the limbs, 58 were cured: viz. 3 by frictions, and all the rest by the in-

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1. 8vo, London, 1759.
ternal administration of the oil of turpentine; 10 (two of whom gave up the treatment too soon) only experienced temporary relief; and in 5 cases there was no amendment whatever. Two of the last-mentioned cases had a disease of the joint under which they sank two months afterwards; of these 71 neuralgis, (for one of the patients had 2), 40 were acute, and 31 chronic; of the 40 acute cases, 34 were cured, 5 were relieved, and 1 only remained unaffected; of the 31 chronic cases, 24 were cured, 3 relieved, and 4 derived no benefit; of the 71 neuralgis, 33 had previously resisted different treatment, and of these, 25 were completely cured, 4 relieved, and 4 others remained in the same state as before; of 58 cases completely cured, 34 were so in less than 6 days, 22 in less than 12 days, and 3 in from 25 to 45 days. Of these 58 cases, 48 were sciatica, 2 of which were treated by frictions: 3 were crural, 4 brachial, and 3 facial neuralgia. Of 10 cases which were only relieved, (and all of which were cases of sciatica), there were 2 in which the treatment was suspended on the second day. Finally, of the 5 cases in which the oil of turpentine completely failed, there were 4 of sciatica, and 1 of crural neuralgia. Two of these patients died of morbus coxa-rius. In 21 of the patients there was heat produced in the course of the nerve, and along the affected limb. The 2 others, having suspended the treatment, were only relieved. In 18 heat was observed in the alimentary canal, but especially in the stomach. Three were seized with vomiting, and in 2 this was occasioned by far too strong a dose, viz. 2 drachms (deux gross) at once. Three had diarrhoea and painful colic: and 1 had phlyctenae in the mouth. In 5 the quantity of urine was increased; 4 complained of dysuria or strangury, two of whom had taken the turpentine in too large a dose. In 10, general sweating was observed; in 2 instances alone the perspiration was confined to the painful limb. Lastly, one woman was, as it were, made drunk by the oil of turpentine, and two others experienced itching all over the body.” Pp. 185—189.

In the works of Valleix and Allnatt, we find no investigation of the affinity existing, especially in marshy districts, between agues and neuralgia, nor on the influence of anti-periodic remedies upon the latter. Many of the marked agues called inflammatory, might, with more correctness, be termed neuralgic. Periodicity in neuralgic affections is much more common than many suppose. Tie douloureux, sciatica, toothache, &c., and what are termed nervous headaches, if closely observed, will generally be found to assume the intermittent form, as has been clearly established by the researches of Strack,1 M‘Culloch,2 and others. The fifth pair of nerves is that most commonly affected with well-marked periodic neuralgia; and the different stages of the paroxysm are often very obvious. The attack commences with chilling of the surface, then follow neuralgic pains in the forehead and face, flushing, suffusion of the eyes, and watery discharge from the nostrils. When these symptoms have continued for about four, six, or eight hours, they almost entirely disappear, and the skin becomes moist. The types most commonly met with, are the quotidian and double tertian. This form of neuralgia occurs most commonly in marshy districts, while agues

1 Strack de Febre, continuâ remittente, 8vo. Franc. et Mogunt. 1789.
2 M‘Culloch (John, M.D.) on Remittent and Intermittent Diseases. 2 vols. 8vo. London, 1828.
prevail and abound most in spring, and during easterly winds. In this form of the disease, anti-periodic remedies prove of signal advantage. It is not only, however, when the intermittent or remittent character of the disease is thus clearly manifested, that these medicines are useful. We have seen the most satisfactory cures accomplished by the employment of Fowler's arsenical solution, and the sulphate of quinine, in cases not occurring in ague districts, and where it was difficult to trace periodicity. We strongly advise a trial of these medicines in all cases where the patient has been subjected to malaria. It is in this class of cases, also, that the sub-carbonate of iron is most likely to prove serviceable, though in many others it will accomplish a cure. The late Mr Hutchinson of Southwell, who first introduced this substance to the profession as a remedy in tic douloureux, used to give it in doses of from one drachm to one drachm and a half. ¹ Dr Elliotson has found that it may safely be given in larger quantities; ² but we do not think he has made out any superior therapeutic efficacy in his large doses, and would recommend practitioners, as to the dose, rather to follow the advice of Dr Hutchinson, who never found it necessary to give more than ninety grains in the twenty-four hours. From twenty to thirty-five grains three times a day, is, we think, the proper dose.

It would be tedious to do more than enumerate the other plans of treatment recommended in neuralgia. M. Valleix lauds as adjuvants the use of small blisters applied over the painful points in the course of the affected nerve, and by their use alone he has in many instances accomplished cures. M. Jobert speaks favourably of the actual cautery. Division of the nerve was practised so long ago as the time of Galen, and is mentioned by him. This cruel and useless operation has been a good deal in vogue in more recent times, and especially on the continent. A temporary cure is all that has ever been attained, even when a portion of the nerve was cut out. "In an instance," says Mr John Pearson, "when the painful affection was referred to one finger, the patient was relieved by the amputation of the part; but a similar disease soon attacked one of the fingers of the other hand:" and a few lines farther on, he adds, "I never saw any real benefit derived from the division of a branch of a nerve, in either the upper or lower extremities, unless in those cases where the agency of a mechanical cause, or some well-defined change of structure existed." Med.-Chirurg. Trans., vol. viii. p. 270. In a case related by Mr Denmark, of wound of the radial nerve, with symptoms resembling tic, the arm was amputated, and a cure accomplished.³

¹ Hutchinson (Benjamin), Cases of Neuralgia Spasmodica, or Tic Douloureux, successfully treated. 8vo. London, 1822.
² On the Subcarbonate of Iron. Med.-Chirurg. Transactions, vol. xiii. p. 232.
³ The particulars of the dissection of the arm, we subjoin. "I traced the radial nerve through the wounded parts. It seemed to be blended with, and intimately
Poultices made with creasote, creasote taken internally, tar plasters, and belladonna as an external application, are useful, both as palliatives and adjuvants. Aconite, acupuncture, and electricity, we have only space to name. Anodynes are allowable; but large doses of narcotics should be avoided. The pills of Méglion for a time enjoyed a great celebrity; and M. Valleix seems to have no small faith in them. Each pill contains a grain of oxide of zinc, and a grain of henbane. Mr Robarts' paper on the extract of cinchona, in our December Number, is valuable.

We have now given some idea of the works placed at the head of this article, and attempted to sketch the most successful methods of treating neuralgia. We have shown that some remedies possess a wonderful control over this dreadful malady, but that there are none which may not fail in the hands of even the most skilful.

Principles of General and Comparative Physiology. By W. B. Carpenter, M.D. Edin., Lecturer in the Bristol Medical School. Second edition, 8vo, pp. 577. London, 1841.

We gladly embrace the opportunity of the publication of a second edition of Dr Carpenter's work, to bring it before the notice of our readers, the more especially as its plan and execution are conformable to those which we have maintained ought to be followed in every physiological treatise, and for which we have already lifted up our testimony. As long as physiologists confine their attention to an examination of the structures and vital actions of man, so long will their doctrines be imperfect, inadequate, and fluctuating. There can be no doubt, that, notwithstanding the apparently endless dissimilarity observed in the external appearance and actions of the thousands of organic forms belonging to the vegetable and animal kingdoms, there is such a unity of structure and a unity of function pervading them all, that undoubtedly the organization of all living bodies is re-

attached to them, for the space of an inch, no doubt, the effect of previous inflammation. It had been wounded; and, at the place of the injury, was thickened to twice its natural diameter, and seemed as if contracted in its length. This contraction, I thought, partly accounted for the bent position of the arm, and the increased pain on attempting its extension; but, on farther examination, I was surprised to find, on dividing the fibres on the posterior part of the wounded nerve, that there was a small portion of the ball firmly imbedded in it, which had been driven off by grazing the bone. The presence of a solid extraneous body, with an unequal rugged surface, thus lodged in the centre of a nerve of such magnitude as the radial, will be readily admitted as sufficient to account for the thickened state of the neurilema," &c.—Mr Denmark, in Med.-Chirurg. Trans., vol. iv. p. 51.

1 This is a favourite remedy for tic among sailors.

2 Vide Review of Works on Comparative Anatomy, vol. for 1841, p. 354.
gulated by the same laws; and it is obviously incumbent upon every one who endeavours to ascertain these laws, to study their operation in the more simple as well as in the more complex organisms. How can a physiologist know whether his generalizations include all the facts of the case, or, in other words, be correct, if he restricts his investigations to so limited a field as the organism of man alone? Besides, as Cuvier remarks, we frequently find in the lower animals the more complex organs of man and the higher animals analysed to our hands by nature herself; and we are thus often enabled to ascertain what parts of an organ are essential, and what parts are merely accidental or superadded. We believe that many of the present erroneous physiological and pathological doctrines, to which some of our most talented writers so pertinaciously cling, can be clearly traced to this limited survey of the phenomena of organized bodies against which we are contending. We are strongly of opinion that general physiology will, in a few years, assume a new aspect. As the classification of the animal kingdom, or zoology, is already in a great measure, and will ultimately be entirely, founded upon their internal organization and functions, and as the general laws, which are gradually rising out of our rapidly accumulating information on these subjects, must be of great general interest, and will admit of important application to other branches of knowledge besides that of practical medicine, we are fully impressed with the belief that physiology, like chemistry, though at its origin a mere appendage and subsidiary to practical medicine, yet, by its own inherent qualities, will shortly assert its own independence to be considered a distinct science, and will continue to be linked with medicine only in the character of an indispensable and potent ally. When this time arrives, physiology shall continue, as it has done, to put more powerful means in our hands for detecting and curing diseases. Indeed, we anticipate that some of the greatest discoveries in practical medicine must come from this source. Until we have ascertained the laws which regulate the natural molecular movements by which nutrition and secretion are effected, how can we ever expect to ascertain the deviations from those laws by which the various morbid growths which we term tubercle, tumours, &c., are deposited. And where is a knowledge of those laws to be sought with more chance of success than in the lower organized animals and in plants, where the investigation is not embarrassed by the intervention of the action of other functions, as in the higher animals? Entertaining, as we do, a strong conviction of the truth and importance of these our views upon the just nature and aim of physiological investigation, we must conscientiously and earnestly recommend all those who wish to obtain clear, extended, and comprehensive ideas upon the great science of life, to take advantage of Dr Carpenter’s la-
bours, for there is no single work in the English language which we can in these respects compare to it. Since the first edition of this work was published, various important additions have been made to physiology, more especially in the anatomy of tissues, and in the process of organization in plants and animals. An excellent summary of all the new facts and observations, interspersed with some judicious remarks by the author, has been incorporated in this new edition, so that several pages of it have been entirely re-written. We are glad to see that the author has much extended his chapter on the special and comparative physiology of reproduction, more especially that which refers to animals, and has advanced some original and ingenious views on the analogies which exist between the processes of reproduction in different organized bodies, of which we have already published a summary, furnished us by the author, (Monthly Journal for 1841, p. 655).

This work is divided into three great divisions. The first consists of an extended introductory portion of 141 pages, containing a description of the primary tissues of plants and animals, and a general account of the organisms of the different classes and principal orders of plants and animals, and the analogies and affinities which exist among them. The next great division of the work is devoted to general physiology, and includes four very important objects of investigation, which we have read with much interest. 1. On the nature and causes of vital actions. 2. On vital stimuli. 3. On the laws of organic development. 4. General view of the functions. The third great division of the work embraces the details of special and general physiology, in which all the functions of organised bodies are examined individually.

In a work such as this, containing innumerable details of facts, it is impossible to expect that we can agree with the author on every point. We have marked out a few passages where we differ in opinion; but as these do not involve any question of importance, we shall here refer to only one of them. In the chapter on interstitial absorption, (p. 301,) it is stated that "it may be doubted to what extent these phenomena (of interstitial absorption) are occasioned by the lymphatics, or how far the veins partake in their production. In bony tissue, lymphatics have never yet been demonstrated; still, however, their existence cannot be altogether denied; but if they are really absent, the process of absorption, which is often very actively performed in the bones, is manifestly due to the veins." Now, we are of opinion, that the author should not have so summarily disposed of the statements of Cruikshank and Soemmerring, who state that they have injected these vessels in the bones. Breschet says, "Il n'est pas permis de douter de l'origine des vaisseaux lymphatiques dans
les os,"¹ and then adds that M. Bonamy has often injected the lymphatics in the interior of the long bones. No doubt Cruveilhier, in his late work on *Anatomie Descriptive*, tom. iii. p. 351, asserts that he has never been able to satisfy himself of the existence of the lymphatic vessels in the nervous tissue, in the muscular fibre, in the glands, in the fibrous, cartilaginous, and osseous tissues, yet we are decidedly of opinion, that we should be exceedingly cautious in attaching much importance to negative evidence, when opposed to the positive results of several competent observers. However that may be, we think our author would have found a better example to illustrate his position,—that interstitial absorption is at least partly due to the veins, in the case of the nervous system; for though it is affirmed by Fechmann and some others, that they have injected lymphatic vessels on the serous membranes covering the central organs of the nervous system, yet we are not aware that any modern anatomist of any authority has succeeded in demonstrating the presence of these vessels in the nervous texture itself. Though we differ in opinion from the author in a few of his details, yet, as we have already mentioned, these are not of any great importance, and are of such a nature, that we cannot in any case positively assert that he has decidedly fallen into error. We have no hesitation, however, in giving our sanction to all the general doctrines laid down by the author, some of which have been already advocated in this Journal, and have for many years been maintained by Dr Alison, Professor of the Institutes in Edinburgh, in opposition to the generality of the physiologists, both of this country and of the continent. We here more especially allude to the doctrines, that the properties of muscular contractility, of secretion, nutrition, and absorption, are inherent in the tissues in which they are manifested, and are not derived from the nervous system; and that certain movements of the nutritious juices through the tissue can take place independent of the action of the contractile solids, and in virtue of certain attractions and repulsions which go on between the juices and the tissues, and by which nutrition and secretion are effected.

One of Dr Carpenter’s mental characteristics, is evidently the extended, clear, and comprehensive view which he takes of any general question which he makes an object of his attention. We again recommend this work to our readers.

¹ *Le Système Lymphatique*, p. 40.
Relation Médicale de Campagnes et Voyages, de 1815 à 1840; suivie, &c. &c.
(Medical History of Campaigns and Travels, from 1815 to 1840; followed by Notices of Fractures of the Lower Extremities, the Physical Constitution of the Arabs, the Surgical Statistics of the General Officers wounded in the field of battle. By the Baron Larrey, Member of the Institute of France, &c. &c. &c.)
With plates. 8vo, pp. 412. Paris, J. B. Baillière, 1841.

The Baron Larrey has studied and practised Surgery under a greater variety of circumstances, than any man now living; and the volume before us is, on this account, diversified, entertaining, and instructive. Among other professional details, we have graphic accounts of many of those formidable wounds, which many of the French marshals and generals sustained during the revolutionary war, and whom Larrey had occasion to dress on the field of battle. It contains also observations on the treatment of fractures by the "appareil immobile," and other practical improvements to which he lays claim. With the professional matter, there is mingled a great deal of personal anecdote and adventure, which is greatly enlivened by the characteristic enthusiasm and devotion, which have always actuated this distinguished follower of Napoleon, and which comes forth, in the book now under review, with a peculiar raciness and freshness. He describes his adventure with the Prussian lancers at Waterloo, when he was taken prisoner, and mistaken for the emperor. They seemed quite at a loss what to do with their valuable prize, till it was found out that he was not Napoleon, when their disappointment and indignation ran so high, that he was ordered to be shot; but being fortunately recognised by a Prussian surgeon, he was dealt with more mercifully, and it was decided, that he should be blindfolded, by placing a sticking-plaster over his eyes!

The only other personal detail for which we can make room, is an account of his visit to the good town of Edinburgh. Though it contains some amusing little inaccuracies, attributable in a great measure to an imperfect acquaintance with our language, it will, we feel assured, prove interesting to our readers. It affords an excellent illustration of the good feeling with which the little attentions paid to the illustrious Baron, on his visit to this country, were given and received. The book, indeed, abounds with expressions of overflowing gratitude for the reception which he met from his professional brethren in this country.

"We devoted Sunday, the third day after our arrival in Edinburgh, to visit the schools for the orphans of merchants. The Lord Mayor, the governor, the directors of these schools, and the principal physicians, having learned that we wished to visit these establishments, were desirous to receive us with a certain degree of respect, and in consequence caused to be pre-
pared for us in the boys' school, 1 which is the largest and most beautiful, a splendid repast, where the individuals mentioned, along with some of the other magistrates, met to wait upon us. We were quite unaware of any intention to invite us to this entertainment. The Lord Mayor, in the name of his fellow-townsmen, invited us to this déjeuner. At the end of the repast, a cup made of mother-of-pearl, and mounted on a pedestal of gold, was presented, filled with excellent Constantia. The Lord Mayor, next to whom I was placed, used it first, and then offered it to me. Having tasted of the nectar it contained, I gave it to the gentleman sitting next me, and so the cup passed round the guests. With this cup in hand each drank a toast, first to the founder of the schools, and then to Larrey, the surgeon of Napoleon, and afterwards to several other individual's of the assembly, more or less remarkable. It is easy to conceive how sensible I felt of this mark of honour, and of interest so tender. That day was assuredly one of the brightest of my life. (Ce jour fut assurément un de plus beaux de ma vie.)" Pp. 86, 87.

"After having had marks of kindness and attention heaped upon us by all the medical men and magistrates of this remarkable town, we bid adieu to its noble and generous inhabitants, and it was not without sincere regret that we separated from them, especially from the physicians, who had given us so cordial a reception. We shall always preserve the remembrance of Doctors Thomson, Ballingall, Monro, and Cullen: the two last are sons of the celebrated surgeons whose name they bear. All these our honourable brethren gave us proofs, not equivocal, of a friendship truly fraternal." Pp. 88, 89.

We have this month so much matter pressing upon us, that we must deny ourselves the pleasure of giving more extracts, and now close this notice by quoting a passage from the introductory lecture, delivered to the students of military surgery in the University of Edinburgh, by Professor Sir George Ballingall, at the commencement of the present session. It shows us that the Baron's warm feelings towards Edinburgh have not cooled one whit, and also indicates the high esteem in which he holds the distinguished Edinburgh professor. Long may such feelings of amity and mutual good-will exist between professional men, and men of all classes, on both sides of the channel.

"To those instances of enthusiastic attachment on the part of the French soldiers towards distinguished surgeons, I am delighted to add another, occurring in our own day, and occurring to an individual whom I am proud to rank amongst my friends. Of all the dreadful scenes that occurred during Bonaparte's memorable retreat from Russia, the passage of the Berezina was the most terrific. The bridges broken down, and the enemy pressing in all directions caused the most dreadful havoc and confusion; nothing was to be heard but the voice of thousands trodden under foot by their stronger neighbours; nothing to be seen, but destruction and despair! On that fatal day Baron Larrey nearly fell a sacrifice to his anxiety to preserve some cases of surgical instruments. The professional respect in which he was held saved his life. No sooner was he recognised, than the French soldiers, regardless of their own safety, passed him along over their heads, from one to another, till he crossed the only crazy bridge remaining.

"I have, gentlemen, within these few weeks, had again the pleasure of seeing this venerable old man, I rejoice to say in full health and vigour,

1 George Heriot's Hospital, we presume.
an active member of the French Institute, and still devoting his energies to the improvement of military surgery. In proof of this he showed me, in his cabinet, some remarkable preparations illustrative of a paper which he has recently written, on the consecutive effects of injuries of the head, and to which I shall have again occasion to refer. He presented me also with an additional volume of his ‘Campagnes et Voyages,’ published within these few months, and containing, amongst other interesting matter, the cases of the numerous distinguished generals in the French service, whose wounds he has had occasion to treat; and an account of his visit to this country in 1826.

"After the last Emperor of France, and our own distinguished chief, the Duke of Wellington, I do not know of a more remarkable man of the present age than Larrey. A sharer in all the glorious achievements of the French army—a sharer also in its reverses, in Egypt, in Russia, and at Waterloo, (where he was wounded and a prisoner,)—the survivor of at least six and twenty campaigns, he lives to employ his maturer years in laying the results of his extended experience before his profession:—he lives to be proud of the compliment paid to him by his great master. On my recent visit to him in Paris, he presented my little boy with a copy of Napoleon's will, in which, amongst other items, is a bequest of a hundred thousand francs to the chief surgeon Larrey, accompanied with the observation, that he was the most virtuous man he had known,—‘c'est l'homme le plus virtueux que j'ai connu.'"