is confirmed in the latter appointment. Surgeon-Captain J. T. Calvert, Officiating Civil Surgeon of Mymensingh, is confirmed in that appointment, vice Surgeon-Major Dharmadas Basu, transferred.

NAVAL MEDICAL SERVICE.

The undermentioned Surgeons have been promoted to the rank of Staff-Surgeons in Her Majesty's Fleet:—Edward Bridges Townsend, Alexander Gascoigne Wildey, Patrick Brodie Handyside, M.B., Harold Rochester Osborne, James Macdonald Rogers, Chaworth Louis Nolan, M.B., Harold Frederic Dale Stephens, M.B., Edward Copley Ward, M.D., William Robert Minching Young, Herbert William Gibbs Doyne, Samuel Wellesley Johnson, M.B., George Albert Dreaper, Alexander Fleming Harper, Hubert William Austin Burke, Edward Robert Drummond Fasken, James Charles Francis Whicher, Alexander Gordon Andrews, Arthur Stanley Nance, and Evan St. Maur Nepean.

VOLUNTEER CORPS.

Artillery: 2nd Middlesex: Surgeon-Lieutenant A. Thorne to be Surgeon-Captain. 2nd Glamorganshire: Surgeon-Captain J. H. Rees, M.D., resigns his commission. *Rifle*: 1st Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment): Ernest Victor Eames, gent., to be Surgeon-Lieutenant. 2nd London: Surgeon-Lieutenant S. M. Copeman, M.D., to be Surgeon-Captain. 5th Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Lieutenant A. J. Meikle, M.B., resigns his commission.

CHOLERA INOCULATION.

The *Standard* of the 25th inst., *apropos* of the late report by Dr. Simpson, the health officer of Calcutta, had a long article on this subject setting forth the results of Professor Haffkine's work in India in this respect. As we have so recently referred to Dr. Simpson's report in THE LANCET there is no need to discuss it further now. Dr. Simpson has, in our opinion, made out a good case for continuing the prosecution of the experimental investigations undertaken with so much zeal by M. Haffkine. Some influential members of the medical profession in India do not at all accept, however, that Koch has yet thoroughly established his doctrine, and as cholera inoculations are based upon the assumption that the comma bacillus is the proved cause of cholera they naturally dispute the correctness of the inferences and conclusions derived from the inoculation method of treatment. The *Times of India* of the 7th inst. contains a communication from its correspondent in which reference is made to a recent visit of M. Haffkine to Poona in connexion with an outbreak of cholera at that station. Although a number of soldiers belonging to the regiments quartered there underwent the inoculation process we gather that a still larger number refrained from doing so. The operation, if quite free from danger to life, seems to be occasionally attended with painful results, and it is doubtful how long the immunity alleged to be conferred by it lasts while, it is urged, only a certain proportion of people take cholera at any time. It is quite probable, therefore, that these considerations had the effect of preventing a larger number of men from offering themselves for inoculation.

THE PASTEUR INSTITUTE FOR INDIA.

About Rs.70,000 have been subscribed in India for the purpose of the establishment of a Pasteur Institute, and a meeting of the central committee was to have taken place at Simla this month to discuss and settle several practical questions connected with the subject. The movement is a public one and the subscriptions have been quite spontaneous. The hill station, Kasauli, has been chosen as the site for the erection of a hospital and laboratory, and it is hoped that the Imperial and local Governments will aid, financially and otherwise, in promoting the work and in supplying the institute with skilled bacteriological and medical aid for the purpose. We may add that the *Pioneer Mail* of the 5th inst. reports the occurrence of a fatal case of hydrophobia at Meerut. It appears that there was an outbreak of rabies among several dogs at the station. A soldier of the 5th Dragoon Guards, who had been bitten, was on his way to the Paris Pasteur Institute. Surgeon-Lieutenant-Colonel Swayne, A.M.S., at Meerut, has made an application for a supply of the anti-rabic serum which the Italian experts Tizzoni and Centanni consider, as the result of their experimental investigations, to possess protective properties. As the serum can be dried into thin flakes and retains its

protective properties, according to these authorities, unimpaired for a long time, it is in this respect well adapted for use in India.

CHOLERA IN INDIA.

Cholera is still very prevalent in Bangalore, where the Dorset regiment recently lost three men from the disease. The outbreak in the Kolar Gold Fields has given rise altogether up to the latest reports to 600 cases and 400 deaths, and the disease still continues very prevalent. The natives are deserting the place and there is difficulty in obtaining the necessary labour to work the mines. There has been a severe outbreak at Manipur among the natives and many deaths have also occurred among the Ghorka troops stationed there.

DEATHS IN THE SERVICES.

Surgeon-Major Herbert Saunders, Army Medical Staff, at Murree, on the 18th instant, aged forty-seven years. The late officer had seen much service in Africa, and had also taken part in the late Chitral campaign. He was appointed Surgeon in 1880 and promoted to the rank of Surgeon-Major in 1892.

MEDICAL STAFF CORPS FOR SOUTH AFRICA.

A detachment of the Medical Staff Corps from Aldershot embarked with the 9th Lancers on board the P. and O. steamers at the Albert Docks for service in Natal.

Correspondence.

"Audi alteram partem."

"THE GENERAL MEDICAL COUNCIL: CRITICS AND CANDIDATES."

To the Editors of THE LANCET.

SIRS,—I am very unwilling again to trespass upon your space, but still more unwilling that the letter of Dr. Welsford should be left without reply. Dr. Welsford asserted at Carlisle that "the history of the Council was one long record of wasted opportunities," and in answer to this assertion I asked him to point out specifically what opportunities the Council had wasted and when and how it wasted them. He rejoins that "it is notoriously difficult to prove a negative except by showing the absence of a positive." I admit the difficulty, which I think is understated, but I fail to see the relevancy of the remark. A "wasted opportunity" is not a negative. "To waste" is an active verb; an "opportunity" depends upon the presence of circumstances which are favourable to the end proposed. Will not Dr. Welsford oblige me with so much as one example, even though, like Professor Horsley's paper at Carlisle, it be but "a little one," so that we may consider it together? If he will I should prefer to be supplied out of his abundance with one which has occurred since I became a member of the Council, and I should like a reference to the minute of the Council's proceedings on the occasion. If he will not, surely I shall do him no injustice by assuming that he cannot; and that he has been betrayed by the tempting rotundity of a phrase into saying more than he is able to substantiate.

I do not think I made any reference to the work of the Council during the whole thirty-seven years of its existence, but that I limited myself, by the use of the word "we," to what had been done during my own period of office. Of this I gave certain examples, and supplemented them by the general statement that we had "done our duty," a statement which, as it seems to me, leaves very little ground uncovered. Will Dr. Welsford point out any omission in this respect, explaining, of course, in what way and by what authority the neglected duty was imposed upon us? With regard to the first twenty-seven years, I may say that the record of the Council shows it to have been composed of men eminent in medicine, in surgery, in science, in philosophy, in literature—men whose names future generations will not willingly let die. To mention only those taken away by death there was Sir Benjamin Brodie, who was also President of the Royal Society, Joseph Henry Green, Sir George Paget, Sir Thomas Watson, Sir George Burrows, Sir James Alderson, Sir J. Risdon Bennett, Moncrieff Arnott, Cæsar Hawkins, Professor Rolleston, Sir William Gull,

Dr. Andrew Wood, James Syme, Rawdon Macnamara, Sir Dominic Corrigan, Sir James Clark, Sir Charles Hastings (the founder of the British Medical Association), Sir William Lawrence, Professor Sharpey, Dr. Parkes, Dr. Matthews Duncan, Sir Robert Christison, and Dr. Stokes. Is it not within the limits of possibility that these men, and others their congeners, who were assisted in the administration of a new Act of Parliament by eminent members of the legal profession, as well as by the results of appeals to the judicial bench, may have decided rightly and wisely as to the courses of action which it would be proper for them to adopt? We are none of us infallible, not even, as was said by a late Master of Trinity, the youngest of us; and I confess that the authority of Dr. Welsford does not seem to me to be sufficient to weigh down that of all the persons whom I have named above, and to convict all of them of the fatuity with which it is now thought proper and decorous that they should be charged.

Dr. Welsford advises us to read the Medical Acts, and he also tells us what are the powers which those Acts confer upon us. I think we have all read them (at least, I can speak for myself), but, unfortunately, our lawyers do not entirely agree with Dr. Welsford as an interpreter. I fear we should act unwisely either in neglecting their advice or in being guided by his; and it is certain that no vote of mine will be given in favour of such an experiment.

I am, Sirs, your obedient servant,

Harley-street, Aug. 24th, 1896.

R. BRUDENELL CARTER.

To the Editors of THE LANCET.

SIRS,—A portion of Mr. Carter's letter in THE LANCET of Aug. 22nd deals with my reply to his first communication and is intended as an answer to certain facts and statements which I brought forward on the 15th. In this respect it is, to my mind, singularly inadequate, and perhaps you will allow me to show why. Mr. Carter declares that my charge against him of having insulted the general body of medical practitioners (or, indeed, anyone else) is unjust, and he defies me to prove it. Now although Mr. Carter is evidently unable to see it, a registered medical practitioner in the United Kingdom is a person who has, on the faith of the contingent protection promised by the Legislature, worked hard for four or five years and spent much money in order to educate himself or herself, and who finally pays £5 to the General Medical Council in order to obtain the rights and privileges of being registered under the Medical Acts of 1858 and 1886. To the General Medical Council the Legislature by these Acts entrusted the extremely honourable duty of executing the provisions contained in them, including the regulation of qualified practice, the suppression of quackery, and the responsible care of the Register, and as such regulations are necessarily of vital importance to the whole body of practitioners in gaining their livelihood it is obvious how intimately the work of the Council concerns them, how numerous are its duties in regard to them, and how urgent the need that their views should find adequate representation in its deliberations. Mr. Carter, however, ignores these responsible relations of the Council to the practitioners and declares in the second paragraph of his first letter that the grant of direct representation he has always looked upon as "a foolish concession to agitators by ignorant politicians," and he gives us to understand that his colleagues in general practice whose work is regulated by the Council are far beneath students and the parents of students in their right to be heard. Indeed, he thinks it becoming to insinuate that the only material point of contact between the Council and the practitioners is the rare occasion when one of the latter comes under the jurisdiction of the former in "the character of an accused or convicted person," and in the enforcement of his argument against direct representation he tries to accentuate the injury by asking whether "suspected criminals" ought to have direct representation on juries or on the bench. I repeat that this whole paragraph, which is in reality founded on the long-established neglect by the Council of its duty towards the practitioner, does appear to me to be, both in its wording and its meaning, insulting, and I fail to see how it can be shown to be other than discourteous to the body of men to whom it refers.

It is now my duty to point out that Mr. Carter has in his second letter put into practice a very old artifice in dialectic—namely, that of slurring over without remark a matter in which the dialectician has been convicted of misrepresentation. It will be remembered that in his letter of

Aug. 8th he not only in his summary of the Medical Acts omitted all mention of Section 40 and the other allied sections, but he declared with all the emphasis obtainable from italics that "the Medical Acts not only contain no powers for the suppression of unqualified practice, but they expressly recognise it"; and, further, that, as regards this and like matters, "the General Medical Council as a corporate body is unable to take a single step with regard to them." I proved in my letter of Aug. 15th that in these sentences Mr. Carter's statements were doubly incorrect, for the Medical Act, 1858, contains sections (40, &c.) which are wholly directed to the suppression of unqualified practice, and that as regards the action of the Council as a corporate body I showed from the minutes of last year that Mr. Carter himself shared in the passing of a resolution empowering the Penal Committee of the Council to take the very step which he so forcibly declared to your readers (on Aug. 8th) the Council could not possibly take. But, Sirs, in writing to you again on Aug. 22nd he proceeds to discuss Section 40 and this action of the Council without the slightest reference to, or apology for, the fact of having told your readers but a fortnight before that neither the section nor the action existed or was possible of execution. If attempting to cover a serious error by ignoring its correction by an opponent be a mark of that "skill in dialectic" of which Mr. Carter says I have so little I cannot say I envy him his monopoly. From his reference to this part of the subject we now learn that "for many years and for valid reasons the Council declined to be a prosecuting body, but it has lately thought fit to take proceedings under Clause 40, &c." What does Mr. Carter mean by telling your readers without any explanation this week that the Council has lately decided to prosecute quacks when on Aug. 8th he said that the Council not only had no power to do so, as the Act gave none, but could not do such a thing because it was "a corporate body"? What, too, by the way, did he then mean by saying that because the Council was "a corporate body" it could not take "any step" toward furthering excellent objects of medical reform? Other "corporate bodies" we all know take very active steps to "influence public and parliamentary opinion," and if the members of the General Medical Council are to give good return to the profession which furnishes their honoraria they must realise the duties as well as the honours of their position and specially in this direction. Further, after Mr. Carter has explained how the Council can now do what, according to him, a fortnight ago it could not, he will, perhaps, reveal to us what "the reasons" were which caused the Council to abandon this part of its duty, and, at the same time, why after being "valid" for so many years the virtue of the "reasons" suddenly went out of them. Mr. Carter says that Section 40 "casts no duty of prosecuting upon the Council"; and he goes on to say: "The Council has no more power or duty in the matter than Professor Horsley himself or any other private citizen."

I fear it must by this time be apparent that Mr. Carter's knowledge and interpretation of the Medical Acts cannot be implicitly relied upon, and the specimens just quoted are not more correct than those already commented upon. In my first letter even I pointed out that "the Council (only) is endowed with the esteemed privilege of receiving the penalties obtained by such prosecutions." From this fact alone it is evident that Mr. Carter is wrong in saying that we outsiders are on equal terms with the Council in this matter. But, further, while of course Section 40 does not itself directly specify who is to prosecute, Mr. Carter omits to say that that section is not the proper place for such instructions, and that they are very clearly given in other sections of the Act, which provides that the Council is to do the work. As many (but without Mr. Carter's privileges and opportunities) probably share his want of familiarity with the provisions of the Act it may not be superfluous if I point out that inasmuch as (1) by Section 10 "the Council" is to "appoint so many clerks and servants as shall be necessary for the purposes of this Act"; (2) by Section 13 "all moneys" payable to the Council "shall be applied to defray the expenses of carrying this Act into execution"; (3) by Section 42 "any sum or sums of money arising from conviction and recovery of penalties as aforesaid shall be paid to the treasurer of the General Medical Council"; and (4) by Section 43 "all moneys received by any treasurer, &c., shall be applied for expenses of registration and of the execution of this Act"; it is perfectly clear that the Legislature entrusted the execution of the provisions of the Act (including the prosecution

of quacks under Section 40) to the Council primarily, and to this end gave the Council the penalties obtained thereby, and finally ordered the same to be applied by the Council to the purpose of execution of the provisions of the Act. Mr. Carter's misrepresentation of this very simple matter would have been almost incredible were we not in the Council of the Medical Defence Union made constantly aware of the very serious ignorance of the Medical Acts exhibited by the authorities of the General Medical Council.

As regards my refutation of Mr. Carter's assertion that the *Legislature* approved of quackery Mr. Carter now reaffirms his original most regrettable support of the quacks, and on two very remarkable grounds. First, it would appear, according to Mr. Carter, that if anyone wishes to fully understand any measure it is necessary that he should be born some time before the Act in question is passed. If this be so, then Mr. Carter's own particular electorate is in a very unfortunate case because their representative, having demonstrated in your columns that his knowledge of the Medical Acts is not what it might be, is also, by his own showing, precluded from ever understanding the Apothecaries Act (his own Act, we may say) because it was passed in 1815—that is, I believe, before Mr. Carter was of any "age" at all. His second method of confirming his assertion that the *Legislature* approves of quackery is to tell us that the "governing classes" have always encouraged it. But the "governing classes," who, by the way, are only evidenced in Mr. Carter's letter by a nameless Member of Parliament, and who are not different from other classes in the way of occasionally trying quackery, are not the *Legislature*, and no dialectical or other skill will ever prove them so to be. Indeed, Mr. Carter himself admits they are not, for he says "the opinion of the Legislature must be gathered from its enactments." Precisely so; but that was my contention, and not Mr. Carter's, and if we examine the enactments provided on this subject we find that he wholly misrepresented the position of the Legislature in his first letter, for the Apothecaries Act, the Medical Acts, the Dentists Act, the Veterinary Surgeons Act, and the Pharmacy Act have all been devised by the Legislature and passed for the express purpose of destroying unqualified practice, and there is not a single enactment approving of quackery. By his own standard, therefore, he is convicted of error, and since it is possible that some enterprising quack will quote Mr. Carter's unfortunate statement as being, in view of his position on the General Medical Council, one *ex cathedra*, I hope that the latter will, for the sake of his profession and of the truth about quackery, at once withdraw his mistaken conception of what the Legislature thinks or has done in this matter.

Now as to the word "balderdash." Mr. Carter is very proud of his use of what he calls a "good old English word," but the question is, How "old"? and unless his letter was really meant for our Norse ancestors it seems a little hard on us that Mr. Carter should address us in a nineteenth century journal in an archaic dialect. "Balderdash" in early *Scandinavian* undoubtedly meant "a confused noise," and so a "confused" or "mixed statement." But gradually it came to be applied to the sayings and arguments of persons who talked *nonsense*, and its present-day synonyms, according to the great authority of Roget are: "nonsense, jargon, gibberish, jabber, babble, hocus pocus, fustian, rant, bombast, rigmarole, twaddle, fudge, trash," and indeed it appears that "balderdash" also means a "tale told by an idiot, full of sound and fury signifying nothing." These are hard words, but after Mr. Carter's graceful explanation we rejoice to know that he did not really mean to speak so unkindly of Dr. Welsford, Dr. Drage, and myself, and above all that under no circumstances did he wish to convey to your readers that our criticisms of the General Medical Council merited the peculiarly disagreeable description contained in the last synonym I have quoted.

As regards the "throwing of mud and running away" of which I accused Mr. Carter I still think, with all deference to his greater literary experience, that since in his first letter he apparently told his opponents that their statements were all nonsense but did not attempt to prove such an abusive verdict, his conduct could be only adequately described in the terms I used. But granting that Mr. Carter did not intend to be uncivil and that he only used the term "balderdash" *en pleine innocence* and to indicate "a confused statement" I regret to have to demonstrate that the very confusion of which he complains is solely of his own invention. He says: "I had before me an alleged wastefulness

of opportunities the reality of which I did not admit but for which Dr. Welsford who believed in it offered one explanation, while Professor Horsley and Dr. Lovell Drage offered a different one. What was I to make of critics who were unable to agree among themselves?" As a comment on this I will ask what are we to make of a member of the General Medical Council who to gloss over his improper denomination of his opponents' ideas is obliged to invent an absolutely incorrect account of what they said and then to proceed to attribute to them a want of agreement which exists only in his (Mr. Carter's) imagination? To emphasise the injustice of his proceeding I must remind your readers that Mr. Carter in his first letter said he had read the candidates' addresses and documents generally. He must have known, therefore, that Dr. Drage and myself are in thorough accord with Dr. Welsford in thinking that the Council's wastefulness of opportunity is due in the main to the insufficiency of direct representation. From the report in the *Times*, which he professed to quote in his first letter, he knew that Dr. Drage and I simply supplemented Dr. Welsford's position by showing that the dangerous and improper powers accorded to the President by the Standing Orders were a further, and a prolific, source of failure on the part of the Council. Mr. Carter's statement that we "were unable to agree among ourselves" is, therefore, an unpardonable fiction originated by himself to cover his want of good taste in stigmatising without discussion our papers and observations as "balderdash." The said "balderdash" or "confusion of statement" (*à la* Mr. Carter) being therefore entirely a creature of his far too imaginative eloquence he will do well to at once put an end to its unfortunate existence.

In conclusion, Mr. Carter congratulates himself on being the "representative of the Society of Apothecaries." As a matter of fact he is not. Of the whole body of members and licentiates who compose the society he is elected by twenty-four individuals only—viz., the Court of Assistants, and therefore in truth he only represents those twenty-four persons, most of whom are on the Medical Register, but some of whom are not. Surely it is not fair that about twenty medical men out of the 20,000 in England should have the power of electing a representative to the Council, while the remaining 19,980 of their colleagues may only elect three representatives, and certainly it is not pleasant to read Mr. Carter's denunciation of direct representation when we know the real character of his own election.—I am, Sirs, yours faithfully,

Cavendish-square, Aug. 22nd, 1896.

VICTOR HORSLEY.

To the Editors of THE LANCET.

SIRS,—For the information of Mr. Brudenell Carter, who states that the General Medical Council "has no more power or duty in the matter—i.e., of taking proceedings under Section 40 of the Medical Act, 1858—than any private citizen," the words of Section 43 may be quoted. This section states that all moneys received by any treasurer arising from fees to be paid on registration, from the sale of Registers, from penalties or otherwise, shall be applied for expenses of registration and of the execution of this Act. If a private citizen receives money for the performance of any work it is his duty to do it; equally it is the duty of the General Medical Council to do the work which it is paid to do, and this is stated in Section 43 to consist of the execution of the Medical Act of 1858, not omitting Sections 29 and 40.

It is true, as Mr. Carter says, that the Council has not for many years done its duty in this respect, but we should be glad to learn from him what are the "valid reasons" which account for this dereliction of duty on the part of the Council. Mr. Carter fears that the "real head and front of his offending is to be found in his use of the word 'balderdash.'" He is under a misconception. The use of words of this kind in controversial writing unaccompanied by any attempt to refute the arguments of his opponents is scarcely a dignified, or in fact rational, proceeding on the part of a member of the Council, but cannot surprise those who are accustomed to the peculiar style of members of the Council when engaged in defending their favourite institution. Mr. Carter's real offence is to be found in his denial that the Council has any duties to perform when the Medical Act of 1858 makes a contrary assertion. Had Mr. Carter waited until the papers on the General Medical Council read at Carlisle had been published, instead of criticising the views of the writers on the strength of a *Times* abstract, he would not have been led into the error of imagining that any difference of opinion

on this matter exists between us. The papers read at Carlisle were in sequence and showed conclusively the existence of the gravest abuses in the constitution and performance of the General Medical Council.—I am, Sirs, your faithfully,

A. G. WELSFORD.

Cambridge-terrace, Dover, Aug. 22nd, 1896.

"METACHROMATISM IN DIPHTHERIA BACILLI."

To the Editors of THE LANCET.

SIRS,—Dr. Kanthack in an article published in THE LANCET of Aug. 22nd criticises somewhat severely my paper on the Influence of Glycerine in Culture Media on the Diphtheria Bacillus. He concludes from my paper that I do not know that the diphtheria bacillus shows metachromatism when stained with methylene blue, after growth on media that do not contain glycerine as well as on those that do. Such a conclusion is not only not warranted by my paper, but is exactly contrary to what I state. All that was claimed for glycerine-containing media was that in twenty-one instances marked metachromatism was shown invariably by the bacilli. I have, of course, in several instances seen it quite as marked with bacilli from growths on media containing no glycerine, and I have generally, but by no means invariably, found that some of the diphtheria bacilli from growths on such media show metachromatism. A further conclusion is drawn from my paper by Dr. Kanthack that I consider the Klebs-Löffler bacillus the only one that shows metachromatism, and he draws this conclusion simply because I do not mention the metachromatism of other bacilli. That bacilli very like the diphtheria bacillus are found in the throat and elsewhere, and that these bacilli sometimes show metachromatism, is well known. Whether those occurring in the throat will show metachromatism more often or less often when grown on glycerine-containing media I have not yet had an opportunity of finding out. If the examination of swabs from the throats of cases of suspected diphtheria is to be of any clinical value the examination must be completed within a short time. Dr. Kanthack apparently considers the search for the diphtheria bacillus as ordinarily carried out to be valueless. While acknowledging that there are several sources of error, as Dr. Kanthack has very clearly shown in his paper, I yet think that the actual errors occur sufficiently rarely to enable us to obtain information of real clinical and scientific value from such rapid examinations. I believe, too, that most observers will agree with me. Now at present in making these rapid examinations we are dependent for the recognition of the Klebs-Löffler bacillus on the appearance of the growth on the culture medium, on the size and shape of the bacilli, and on the manner in which they take up stains. All these criteria are very variable, besides not being absolutely distinctive, and the making of one of them invariable will "render the recognition of the Klebs-Löffler bacillus more speedy and more certain." The staining reaction of the bacilli after growth on media containing sufficient glycerine (and possibly on media containing sugar or salt) seems to be invariable and will thus give assistance in recognising the bacillus.

Although Dr. Kanthack's criticism on my paper is, as I think, unfair, his warning as to the imperfections of our present means of recognising the Klebs-Löffler bacillus may be necessary. When I wrote my paper I thought, no doubt wrongly, that these imperfections were so universally admitted that no warning from me was required.

I am, Sirs, yours faithfully,

Upper Berkeley-street, W.

ALFRED M. GOSSAGE.

"ON THE DOSAGE OF SOME OF THE VASOMOTOR DILATORS."

To the Editors of THE LANCET.

SIRS,—I am sorry that Dr. John Ogle should have experienced any difficulty with regard to the dose in which nitro-glycerine should be administered. Of course no one regards the British Pharmacopœia as an authority on such subjects, for we are told in the preface to that compilation that the doses indicated are not authoritatively enjoined, and that "the practitioner must rely on his own judgement and act on his own responsibility in graduating the doses of any therapeutic agents which he may wish to

administer to his patients." In the case of nitro-glycerine and other vasomotor dilators we aim not so much at giving a certain dose as at producing a definite pharmacological action. There are two points to be taken into consideration: first, the idiosyncrasy or susceptibility of the patient, and, secondly, the rapidity with which tolerance can be established. Taking the two extremes, I have known the characteristic nitro-glycerine headache produced by $\frac{1}{100}$ th of a grain of the drug, whilst, on the other hand, I have given 4.8 grains a day without inconvenience. A patient of mine took 1767 grains of the pure drug in 102 weeks, and another patient practically lived on it for three years. Women are as a rule more susceptible to the action of the drug than are men. I made some observations on women not suffering from angina pectoris with the view of determining their dose. I found that 10 per cent. complained of the medicine when minimum doses of the 1 per cent. solution were given, that on increasing the dose to two minims 32 per cent. complained, and that more than half suffered from headache after taking three minims. My rule is to begin with $\frac{1}{100}$ th of a grain in the case of women and $\frac{1}{200}$ th of a grain in the case of men, and to run up the dose until the patient is taking a grain three or four times a day. In cases of angina pectoris I always give the 1 per cent. solution and order the dose to be made up to a drachm with tincture of capsicum, spirits of chloroform, and peppermint water. The patient, for emergency work, carries a small bottle of this in each waistcoat pocket, as it is found by experience that the drug is absorbed much more rapidly when it is kept warm. I do not believe in the lethal action of the members of this group. In the only fatal case on record of poisoning by nitro-glycerine the patient took an ounce of the pure drug and even then did not die for four hours. A short time since a patient of mine swallowed a mouthful of nitrite of amyl in mistake for a cough linctus and experienced no inconvenience. There seems to be no particular reason why children should not be given nitro-glycerine tabellæ supposing that the ordinary chocolate drops are not available. For some time past, acting on the suggestion of Dr. P. M. Mikhalkine of Nijni-Novgorod, I have used nitro-glycerine with success in the treatment of neuralgia, taking care, however, always to give big doses.

I am, Sirs, yours faithfully,

Welbeck-street, W., Aug. 25th, 1896.

WILLIAM MURRELL.

To the Editors of THE LANCET.

SIRS,—In regard to Dr. Ogle's letter referring to the above subject in THE LANCET of Aug. 22nd, I am of opinion that the official maximum dose of both nitro-glycerine tablets and solution of nitro-glycerine is very much understated. I enclose you a copy of the letter from the medical practitioner to which Dr. Ogle refers. He states: "Enclosed is a box of five nitro-glycerine tablets of your making. I had ordered the tablets for a child six years old, one thrice daily. She had taken two dozen with no apparent effect of any kind. It appears that the other day she and a younger child about three years of age contrived to obtain the box and straightway consumed between them two dozen at one time. Supposing they each had a dozen they would have nearly one-eighth of a grain of nitro-glycerine. On neither of the children was any effect produced." The official dose of solution of nitro-glycerine is stated to be from "half to two minims." In the Extra Pharmacopœia I say "Gradually increase to ten minims, if necessary, every three or four hours in any aqueous vehicle," as I have known these doses administered. But to return to the tablets. In Dr. Kruger's "Handbook of Therapeutics" it is stated "one of my patients took a hundred of these tablets ($\frac{1}{100}$ th grain of nitro-glycerine in each) a day with great benefit." More recently a client of mine, a retired chemist, seventy years of age, writes that he had "used nitro-glycerine in various forms for the last twenty-five years," as he had been medically ordered to use it for pseudo-angina. He asked me to make him one pound of the tablets, containing a quarter of a grain of nitro-glycerine in each, as he said "I have to take so many before I can get relief. I am now taking tablets containing 10 per cent. ($\frac{1}{10}$ th grain in each) in addition to a solution of the same strength dissolved in spirit to make it soluble (Morson's 10 per cent. solution). So you will see I should always be taking some unless they were made strong; as I