example of the effect produced upon a body by placing it in a magnetic field.

Now a bar of iron when brought under the influence of an electromagnet becomes itself a magnet, possessing north and south poles and manifesting all the phenomena of magnetism. This manifestation of magnetism is generally believed to be due to a particular arrangement of the molecules of the bar of iron, in which the axes and similar poles of the molecules are made to point in the same direction. In the case of steel it is thought that the molecules, after being once arranged with their poles all pointing north and south, retain that position owing to a kind of permanent cohesion. Consequently, when soft iron, steel, or, indeed, any form of matter—magnetic or diamagnetic—is subjected to the influence of a magnet, the power of the magnet so far is of little consequence, and the only result that can occur as a direct effect of the magnetism is a change in the direction of the molecules, determined by their own individual character and in accordance with the force which is acting upon them. But, further, it is probable that the diamagnetic molecules in the living body are continuously rotating upon a definite axis, the axis of rotation in every case being determined by the relation which each form of matter has to the magnetic force. I venture to hold this opinion on the grounds that the electric and magnetic forces are very intimate with each other, and that the specific constitution and magnetic capacity, exercises would determine the character of the matter which each molecular germ withdraws from the nutrient plasma flowing over it. The character of the matter abstracted being thus determined by the polarity of the matter composing the germ, the importation of other matter of any kind into the blood corpuscles or into any tissue of the body, which is inconsistent with perfect health, would be productive of modifications of modification of matters of and of function, the natural tendency of which would be to destroy all germs, copies, &c., and destroy the specific constitution and magnetic capacity, exercises would determine the character of the matter which each molecular germ withdraws from the nutrient plasma flowing over it. Therefore, I have reason to believe in the natural body is the result of the particular mode in which certain forms of matter under the influence of an all-pervading force are converted into it. I cannot, therefore, perceive that there would be any modification of natural phenomena under the conditions to which you refer, other than those which are consistent with the maintenance of the phenomena of life in a state of perfect health.

In fact, it is clear that, under the known relations which exist between matter and the magnetic force, the only influence which magnetism can exercise upon the living body is to render the polarity of every atom engaged in the maintenance of life more marked, and therefore more capable of maintaining those phenomena which are naturally evolved during life by the material elements. And if this be so, then is it wonderful or perplexing that in the living being of a strong electro-magnet should be conscious of the changed conditions; for as we are not conscious of natural and healthy bodily processes, such as the passage of the blood through the arteries and veins, the digestion of food, and the formation of tissue, so are we conscious of influence from an external source, such as the electro-magnet in question, only to the extent to which natural functions of the body are affected or modified thereby. But when the body is subjected to the electric force as a matter of different condition of things exists, and the resulting phenomena must vary with the extent of the shock, whether it be in the form of static or dynamic charge. And this leads me on to reply very briefly to the note of Dr. McClure which appeared in the last issue of The Lancet.

In the first place I would remark that in discussing the nature of the conductive or the dielectric properties of matter a due recognition of the broad principle that all bodies are conductors of electricity will tend to render this rather abstract subject somewhat more easy of comprehension. It is a fact that every form of matter has its own specific power of conducting a current; and some bodies transmit the force with such great resistance that Faraday gave them the name of dielectrics, for they appear to convey the force from molecule to molecule more by induction than by conduction. In this respect the phenomena which they oppose to the passage of the current, the presence and force of the electric energy will be most clearly manifested by the production of heat and disruptive effects. In the animal body the blood is unquestionably the best conductor,—i.e., it is the substance which most strongly attracts the charge of electricity and transmits it to the earth. In this respect it performs the function of an ordinary light-conducting. But the other tissues, in proportion to their resistance, may be classified as dielectrics, for they tend to throw the energy outwards more or less at right angles to the direction of the current, and they are in such a degree liable to suffer from disruptive effects. In the case of copper I think we may not unjustly infer from the fact that in the proper understanding of these phenomena lies the solution of many physiological problems. But I go further than this, and express my conviction that this magneto-electric theory of life involves the principles by which almost all vital phenomena may be explained.

I am, Sirs, yours faithfully,

Richard C. Shuttle.

Reading, Sept. 21st, 1895.

**"DIPHTHERIA IN LONDON."**

To the Editors of The Lancet.

Sirs,—I should like to say a word with reference to the annotation under the above heading which appeared in The Lancet of Sept. 21st. During some investigations into an outbreak of scarlet fever I came upon some conditions and usages of ordinary elementary school life which appeared to me to be likely to have a distinct, and apparently previously unrecognised, influence on the spread of such diseases as scarlet fever and diphtheria. I found that the slates and pencils were used by the children quite indiscriminately, and that when it was necessary to rub out marks the children were taught by licking the tongue with the slate, and using saliva; and, moreover, that the slates were never washed. Taking into consideration the fact that the nasopharyngeal secretion in scarlet fever and diphtheria carries one of the specific germs which are responsible for the disease, it is easy to understand that the circumstances above mentioned would have a potent influence in spreading these diseases.

I am, Sirs, yours faithfully,

T. E. EBBEY YOUNG.

**"THE MANCHESTER MEDICAL CRICKET CLUB."**

To the Editors of The Lancet.

Sirs.—There is a slight inaccuracy in the article on the above subject in the number of The Lancet. This has been the fourth season since the club was constituted, and for the reasons given in a previous letter, the present season was played, which led to the formation of the club.

I am, Sirs, yours faithfully,

G. H. Broadbent.

Ardwick-Green, Manchester, Sept. 21st, 1895.

**"THE GRIEVANCES OF THE TELEGRAPH SERVICE CLERKS."**

To the Editors of The Lancet.

Sirs,—I have no desire to extend any further what would doubtless be an unprofitable controversy concerning the authority of the Comptroller of Expenditure in the Royal Kingdom Postal and Telegraph Service Benevolent Society's reports with reference to the health and mortality of telegraph clerks. Suffice it to say that after thirteen years'
service in the telegraph department I am convinced that the members of the society are a representative body. It will be for the statistics of the department to prove the accuracy of the evidence of the competent body from which I derived my figures. In the meantime it would, however, be well to draw your attention to the inaccuracy of your information concerning the "declaration of health" rule. This rule was certainly in force nine years ago, when I became a member of the society, and to the best of my belief its origin was coeval with the society. The point in my evidence which struck me as being most conclusive was that of the general average of men who were recommended to be returned to the employment of the general populace, and if consideration is had to those facts of initial health, low age, and free medical attendance, I proved by comparison to be greatly in excess of my evidence which struck me as being most conclusive was that of the general populace, and if consideration is had to believe, I proved by comparison to be greatly in excess of that of the general populace, and if consideration is had to the facts of initial health, low age, and free medical attendance it seems to me to point conclusively to some serious conditions which should be looked upon as very obvious and continuously undermining the constitution of the men. Thanking you for the space already allotted to this subject, I am, Sirs, yours faithfully.

West Brompton, Sept. 15th, 1895.

CHARLES H. GIBBON.

"COUNTRY PRACTITIONERS AND LOCUM-TENENTS." To the Editors of THE LANCET.

Sirs,—I can sympathise with all your correspondent states in his letter to THE LANCET on the 31st ult. concerning locum-tenents. When practising at Storey's Gate, Westminster, I employed four or five of these gentlemen (at three guineas per week, with travelling expenses), and I am sorry to say that I was singularly unfortunate with each of them. Without entering fully into details I found one and all lazy, neglectful to the patients under their care, careless in their work, and generally given to the charms of Bacchus. One man robbed me of an account of about £8 which he received from a patient on my behalf, and bolted, after being in charge but a few days, leaving me to settle a bill at a hotel for bottled ale, spirits, and other luxuries, my holiday being necessarily abruptly brought to an end by these and other delinquencies of this worthless man, whom I have not since seen. For more than five years I adopted the work of a locum-tenant, and in no house was I so unlucky as to meet with "an untidy woman to come in occasionally during the day to see if I required anything," as stated by "Locum-tenant" in THE LANCET of Sept. 14th. On the contrary, I found each of the residences well appointed, the board at the end of which I desired my meals, and the arrangements for a stranger excellently planned. Indeed, I always felt "in closer." On retiring from this employment in 1777 I had a first-class connexion, representing my numerous principals time after time, and I had constant occupation, which I now and ever shall remember with very great pleasure.

I am, Sirs, yours faithfully,

J. FRENCH BLAKE.

Bightstreet, Putney, S.W., Sept. 14th, 1895.

"GUARDIANS AND MEDICAL OFFICERS." To the Editors of THE LANCET.

Sirs,—I shall feel obliged if you will kindly publish the following case in your correspondent columns and give me your opinion on the same, and I also hope I may be favoured with an expression of opinion by some Poor-law medical officers. The medical officer of a certain union receives an order from the relieving officer to attend a young man. He finds him suffering from influenza and sore-throat with great difficulty of swallowing. On Aug. 1st he gave the patient the recommendation form for one pint of port wine; and on Aug. 5th another for two pounds of beef for beef-tea. After this an abscess formed at the root of one of the molar teeth and the jaws became fixed; with great difficulty the tooth was extracted, but the jaws remained fixed for many days. On the 18th a further supply of two pounds of beef was advised, and on the 23rd, he being obliged to live entirely on suction, a further supply of two pounds of beef and also two pounds of linseed meal, but delayed the beef, on the ground, I believe, that the order of the 18th was not presented until the 20th and it was therefore too soon to grant more; it was given the following day, the 24th. The 26th was a fast day, and I attended as guardian and called attention to the fact. The same thing had occurred before in the case of an old woman with bronchial pneumonia for whom two pounds of beef and half a pint of linseed meal was ordered, and she was not called on to attend the medical officer, and I have communicated the case to the relieving officer, who has since informed me that the medical officer was grossly guiltless, and indeed refused because the relieving officer said they could buy that themselves in the village. I must now state that for many years I was medical officer to the influence of the county. Having the quantity required and not the relieving officer. As the law now stands it appears that a relieving officer can give an order to the medical officer and compel his attendance, and at the same time control his medical practice. This, I think, should be altered, and any recommendation of the medical officer would be carried out. The following case is brought to the public notice, and the arrangements for a stranger excellently planned. Indeed, I always felt "in closer." On retiring from this employment in 1777 I had a first-class connexion, representing my numerous principals time after time, and I had constant occupation, which I now and ever shall remember with very great pleasure.

I am, Sirs, yours faithfully,

J. FRENCH BLAKE.

Highstreet, Putney, S.W., Sept. 14th, 1895.

"THE DEARTH OF MAGISTRATES." To the Editors of THE LANCET.

Sirs,—Much inconvenience is caused in our neighbourhood owing to the fewness of the local magistrates. To a population of nearly 8000 we have three "resident" magistrates. It sounds like a joke, but only one of the three resides in the place, and he is often away ill. Another lives about a mile and a half away, and the third lives in London, nearly fifty miles away. The last-named comes down nearly every Saturday till Monday when his house is not let, and pays a regular visit in addition for the shooting. It is easy to imagine the result when it is necessary to certify a case by him. On another occasion I had occasion to fight with the police from morning till evening, when we caught the London magistrate on his way from the train. On another occasion no magistrate could be obtained and the patient could not be certified at all. The last Government was very busy in converting labouring men into magistrates—why should this one not do something to remedy the crying evil by appointing men of education—such as professional men, gentlemen farmers, &c.—without regard to county interest? I am, Sirs, yours truly.

Sept. 21st, 1895.

INCONVENIENCED.

"ROUGH NOTES ON REMEDIES." To the Editors of THE LANCET.

Sirs,—I am extremely glad to see some more so-called "Rough Notes" by Dr. Murray of Newcastle-on-Tyne in