Argyll and Sutherland Brigade Bearer Company, to be Captain (dated March 5th, 1904). The London Companies: Lieutenant-Colonel and Honorary Colonel J. E. Squire resigns his commission, with permission to retain his rank and to wear the prescribed uniform (dated March 5th, 1904). The Manchester Companies: The undermentioned gentlemen to be Lieutenants: Wilfred Edwin Rothwell (dated March 5th, 1904), and Alfred Francis Thompson (dated March 5th, 1904).

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

Sussex and Kent: Captain C. J. Jacomb-Hood is appointed to command under paragraph 55A Volunteer Regulations, vice Major J. Turton, appointed Senior Medical Officer, Sussex and Kent Volunteer Infantry Brigade (dated Feb. 3rd, 1904).

THE REPORT ON THE HEALTH OF THE NAVY FOR 1902.

Some excellent reading will be found in the present volume in an article by Deputy Inspector-General Theodore J. Preston, R.N. (retired), under the heading of a "Report on Journals of Medical Officers examined at the Public Record Office, extending from 1793 to 1856." Unfortunately, as it happens, the medical officers of those times had a distaste for clerical work but this did not arise from the want of any interesting material. The extracts are, speaking generally, very short and the information is very scanty but what there is is curious and often quaint and interesting. Taken as a whole, Deputy Inspector-General Preston's paper gives a survey of the state and progress of the naval medical service within the dates specified. As a sample there is a very brief, and therefore disappointing, reference to Admiral Nelson's gunshot wound and amputation of the right arm in the journal of the *Theseus*, July 24th and 25th, 1797, and subsequently on August 20th in the journal of the *Seahorse*. In this connexion it will be remembered that THE LANCET of March 5th (p. 684) contains an interesting communication on "Nelson as a Patient." The notes and extracts from journals touch on all sorts of subjects, such as the constitution and *personnel* of the medical service, medical, surgical, and sanitary matters, epidemic and endemic diseases, food, clothing, and water-supply.

MEDICAL OFFICERS OF THE GUARDS.

A Royal Warrant has been issued to the effect that "All regulations authorising the transfer of an officer of our Royal Army Medical Corps to our regiments of Foot Guards shall be cancelled. Medical officers who have already been gazetted to our regiments of Foot Guards shall elect, within such time as may be prescribed by our Army Council, whether they will remain therein or be transferred to our Royal Army Medical Corps. Medical officers who elect to remain in our regiments of Foot Guards shall be eligible for promotion under Article 383A of the Pay Warrant up to, but not beyond, the rank of Surgeon-Lieutenant-Colonel. Those who elect to be transferred to our Royal Army Medical Corps shall take rank and seniority therein as follows:—A Brigade-Surgeon-Lieutenant-Colonel—as a Lieutenant-Colonel selected for increased pay with seniority from the date of promotion to his present rank. A Surgeon-Lieutenant-Colonel—as a Lieutenant-Colonel not selected for increased pay with seniority from the date of promotion to his present rank. A Surgeon-Major—as a Major, with seniority from the date of his original promotion to the rank of Surgeon-Major or Major."

THE ARMY ESTIMATES.

Mr. Arnold-Forster must have found himself in an unusual and somewhat difficult position on the occasion of his introducing the Army Estimates in the House of Commons. The present is a period of transition, indeed, almost of revolution, so far as the army and the War Office are concerned. The War Minister spoke warily, but nevertheless favourably, of the reports of the War Office Reconstruction Committee and it seems nearly certain that, so far as all the main principles are concerned, the committee's recommendations will be adopted by the Government, although strongly opposed by Sir Henry Campbell-Bannerman. Mr. Arnold-Forster added nothing to our knowledge, however, about the intentions of the Government regarding the position of the Army Medical Service under the new scheme. The Army Estimates show a reduction of some £8,000,000, attributable mainly to the expenditure on the Boer war having come to an end and, on less satisfactory grounds, to a reduction in the strength of the Foot Guards and recruiting generally.

RUSSIAN ENGINEERS' SPLENDID CONTRIBUTION TO THE RED CROSS SOCIETY.

The directors of the Putiloff Engineering Works of St. Petersburg, the Krupps of Russia, are placing a sanitary infirmary train at the disposal of the field forces in connexion with the war in the Far East. The cost of this train, says the *Novoe Vremya*, will be over 100,000 roubles (£10,000). It will consist of an engine, a tender, and ten wagons and is at the present moment being rapidly got ready in the special model factory of the firm. The latest improvements have been introduced into the fittings of the wagons for removing the seriously wounded to the smallest detail and everything in connexion therewith answers to the latest requirements of science and the exactions of clinical practice and experience. For the medical staff, dispensary, kitchen, &c., special wagons are fitted and all is arranged to yield the greatest comfort and practical use.

RUSSIAN MILITARY HOSPITAL TRAIN.

On Feb. 24th, says the *Novoe Vremya*, the Russian Empress inspected the military sanitary train No. 13 for the seat of war, consisting of 13 wagons. Of these two are reception wagons for diagnosing cases, four are fitted with "Krüger" frames for the seriously wounded, two are for the slightly wounded, and one is for officers. In one wagon there is the kitchen and there is one set apart for the servants. The train was fitted up in the Alexandrovsk factory of Nikolaevsk in five days. A senior medical officer, five sisters of mercy, and 30 field medical officers from the Nikolaevsk Military Hospital will go with the train.

Correspondence.

"Audi alteram partem."

ON PARACENTESIS AND THE USE OF THE ASPIRATOR IN PNEUMOTHORAX.

To the Editors of THE LANCET.

SIRS,—In a short article on the above subject which appeared in a recent issue of THE LANCET several important questions are raised upon which, as my name is there referred to, I should like to make some comment.

Strange as it may seem, pneumothorax is not always attended by urgent symptoms. The urgent symptoms are not merely mechanical in origin but depend chiefly upon the embarrassment and physiological disturbance in both the respiration and the circulation in the lungs, for though the mechanical conditions remain the same the urgent symptoms gradually subside if the lungs and heart have time to adjust themselves to the altered conditions. The greater the disturbance the more severe the embarrassment and the more severe the symptoms. Thus the paradox is explained that the symptoms of pneumothorax are the more severe the more healthy the patient has previously been. *Per contra*, in phthisis, for example, pneumothorax is not altogether uncommonly discovered by accident, as there may be no symptoms to mark its occurrence, for it makes but little difference to the condition of respiration whether the one lung be useless because it is tuberculous or because it is collapsed. Yet even in persons apparently healthy pneumothorax may be latent—i.e., it may occur without marked symptoms.

In traumatic pneumothorax, with which especially the article referred to dealt, the symptoms are almost invariably severe, but then the diagnosis is not so easy. Rupture of the diaphragm may permit the passage of some of the abdominal viscera, the intestines, of course, chiefly, into the pleural cavity and will give rise to the same mechanical conditions and similar symptoms as pneumothorax. The diagnosis could only be made by careful physical examination of the chest and abdomen but usually the patients are too ill to stand much investigation.

When pneumothorax occurs not only is the one lung completely collapsed, but owing to the displacement of the mediastinum and heart the other lung, too, is partly collapsed, so that the total respiratory capacity may be reduced to about one-third of the normal. With large pleuritic effusion the mechanical conditions may be the same and yet no urgent symptom be present. The difference is due to the fact that in pneumothorax the disturbance is

so sudden, while in pleuritic effusion it takes place gradually, so that the rest of the lung has time to adjust itself to the change of conditions.

Again, we know that the great danger in pneumothorax is in the first few hours. Some patients die at once—from shock as it were; others die after some few hours of intense suffering. But the longer life is maintained the greater is the chance that the urgency of the symptoms may subside. With each hour of continued life the prospects improve. After the first 24 hours the dangers to life are not so much those of dyspnoea as of the complications which are likely to arise, chiefly serous or purulent effusions.

When pneumothorax occurs the lung on the affected side contracts by virtue of its own elasticity and theoretically the contraction may continue till the one lung is completely collapsed and lies like a flattened pancake round its root, while the contraction of the other lung will draw the mediastinum far over into the non-affected side. However, in those cases in which the air is admitted to the pleura by a free incision through the chest walls we see that this does not in fact occur. On the contrary, owing to the cough and expiratory efforts the lung on the incised side is kept moderately expanded or may even nearly reach the chest walls and in these circumstances we know that no urgent symptoms arise. Otherwise the opening of the pleura would be a very serious affair. Hence it would be quite justifiable in cases where life was in danger from the severity of the symptoms to relieve them by laying the side freely open, thus giving the air in the pleura free vent and permitting the lung partially to re-expand.

Hesitation would rightly be felt before resorting to this heroic expedient on account of the risk of an empyema resulting and preference would be given in the first place to paracentesis. The object of paracentesis is to give the mechanical relief required, but it often happens that the relief is only temporary. The symptoms soon become urgent again. A second paracentesis has to be performed. It may be also a third or fourth. As a rule the relief becomes greater each time and more lasting and in the end the symptoms lose all urgency until perhaps after some days effusion forms and dyspnoea returns, but even then the dyspnoea is of gradual onset and the symptoms are not urgent. Where one paracentesis is not sufficient the cause is to be found in the fact that the opening in the lung is still patent. When it has closed no more air will enter the pleura and the relief given by paracentesis will be permanent till fluid forms. This shows at once the undesirability of employing the aspirator. The suction employed will stretch the lung and put a strain on the weak spot which may have just closed. This would then be reopened and air would reaccumulate in the pleura immediately the needle was removed. Beside this there is the risk of the suction of the aspirator drawing into the pleura some infective secretion from the lung and thus increasing materially the risk of empyema. For these two reasons the aspirator should never be used in simple pneumothorax; it is unnecessary and, more than that, dangerous. If repeated paracentesis fail it would be safer to proceed to incision. Practical experience shows, however, that incision hardly ever becomes necessary and simple paracentesis, repeated if required, is almost always sufficient.—I am, Sirs, yours faithfully,

SAMUEL WEST, M.D. Oxon., F.R.C.P. Lond.,
Physician to, and Lecturer on Medicine at, St. Bartholomew's Hospital.

Wimpole-street, W., March 5th, 1904.

MALIGNANT GROWTHS AND NORMAL REPRODUCTIVE TISSUES.

To the Editors of THE LANCET.

SIRS,—Professor J. B. Farmer and Mr. F. Cavers, B.Sc. Lond., lecturer in biology at the Technical School, Plymouth, inform me that parthenogenesis is known in plant tissues that have undergone a “reducing division.” That the phenomenon of self-fertilisation may prove to be connected with the powers of a metastatic growth to mimic the primary is speculation and may merit observation. The heterotypical cell divisions observed by Professor Farmer and his colleagues and Dr. E. F. Bashford and Dr. J. A. Murray (and which can be seen without difficulty in sarcomata and carcinomata by appropriate methods of fixation and staining) indicate that there is a structural change

common to all malignant (atypical) neoplasms at one period of their existence. This is not known in innocent (typical) tumours. I submit that there is also clear microscopic evidence of the transition of sarcomatous forms of cells to those of epithelial forms. In support I mention two instances of growths in which such cell transitions are obvious to me in a careful examination of several sections. The one was a sarcoma of the breast in a woman, aged 52 years, under the care of Mr. C. Whipple at the South Devon Hospital. There were many intracystic growths the columnar cells of which in places were continuous and passed by gradual transitions into large sarcomatous elements. It was the “adenocystosarcoma” of Erichsen, Beck, and Raymond Johnson. Again in a huge diffuse melanotic sarcoma of the liver in a woman, aged 52 years, under the care of Mr. W. L. Woolcombe, the spaces between the hepatic cells were stuffed with rounded pigmented cells of varying sizes. A pigmented mole over the seventh right intercostal space showed pigmented cells in the cutis similar to the smaller ones seen in the liver. I regard the cells in the liver as showing transition from small endothelial to large sarcomatous elements (I place pigmented moles of this nature under the group of endotheliomata on the same grounds that Raymond Johnson and Lawrence place “parotid tumours” under this heading, and remembering the faculty of the liver of intercepting and nourishing new growth I look on the mole as primary). Similarly, H. D. Rolleston and O. Grünbaum note on a perithelioma of the cheek “striking features are the transition from cells of a sarcomatous type to cells exactly resembling columnar epithelium” (this was despite the use of selective “epithelial” stains).

This second link in the chain of atypical growths is not a true metaplasia (defined by S. G. Shattock and C. A. Ballance, quoting Virchow, as the transformation of one normal tissue to another). It is a feature, to my mind, to which attention has been insufficiently directed and appears analogous to those powers by which epithelial and sarcomatous tissue are formed from “indifferent” tissue (e.g., in carcino-sarcoma, in cylindroma carcinomatode, in adeno-sarcoma—the group of tumours excellently designated by H. Snow and C. P. White as blastomata.² It approaches in nature true heterology (Virchow). What bearing has it, if any, on the nature of the mitoses? Special observations of such growths are necessary before the question can be answered, but it appears to indicate a previous “sexual” change, thus allowing the succeeding generations of cells to be atypical, under certain stimuli. The heterotype mitoses may be merely terminal phases in the “life cycle of cancer cells” (Bashford) or of sexual cells (Farmer), as in plants and animals. May it not be that cancer is an exhibition of sexual and asexual phases in its life cycle, dependent on environment and intrinsic potentialities, as is the case with protozoa (e.g., malaria), to a colony of which it is compared? The sexual stage may be reinforced by parthenogenesis, nuclear conjugation, &c. We are as yet unaware of the forces (? chemical) which must determine and limit orderly cell growth and which are presumably neutralised in malignant tumours.³ In a knowledge of these may lie the secret of prevention and remedy.

I am, Sirs, yours faithfully,

F. BUSHNELL, M.D. Lond., D.P.H. Cantab.,
Honorary Pathologist in Charge of the Clinical Laboratory,
Feb. 27th, 1904. South Devon Hospital, Plymouth.

“FILARIA PERSTANS.”

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 5th Dr. H. C. Bastian contributes a paper on the anatomical characters of the so-called filaria perstans and on the mode of infection thereby, part of this being a reply to my paper of Feb. 13th, where I discussed the suggestion that this filaria belonged to the genus tylenchus. There are several points in Dr. Bastian's paper I am sorry to say I cannot again agree with, and as they are of some importance I make this an excuse for again taking up the subject. Dr. Bastian states that I have supposed the figures of tylenchus obtusus in his former article were embryonic forms; this, however, is not the case. What I stated was “that the author had fallen

¹ Transactions of the Pathological Society of London, vol. liv., p. 353; vol. xlviii., 1896, p. 259; THE LANCET, May 31st, 1902, p. 1562.

² THE LANCET, Feb. 15th, 1902.

³ Adami: Yale Medical Journal, 1901.