and will also be subject to the general regulations applicable to Army Reserve officers so far as such regulations do not conflict with those laid down in this Warrant. The sum of £5 will be allowed towards the provision of uniform. We wish that we could consider that the Royal Warrant, the nature and terms of which are here set forth, is altogether calculated to fulfil its object in view, which is really one of national importance, especially in the case of war, for which eventuality all the arrangements for the expansion of the medical service in this respect require to be thoroughly thought out beforehand.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Edinburgh (City): Surgeon-Lieutenant A. M. McIntosh to be Surgeon-Captain (dated Sept. 21st, 1906).

Rifle: 2nd Volunteer Battalion, the Northumberland Fusiliers: Surgeon-Lieutenant Colonel and Honorary Surgeon-Colonel A. Wilson is borne as supernumerary whilst holding the appointment of Brigade-Surgeon Lieutenant-Colonel, Senior Medical Officer, Tyne Volunteer Infantry Brigade (dated June 1st, 1906). 2nd Volunteer Battalion, the Prince Albert's (Somersetshire Light Infantry): Surgeon-Captain J. G. Bain resigns his commission (dated Nov. 14th, 1906). 1st (City of Bristol) Volunteer Battalion, the Gloucestershire Regiment: Supernumerary Surgeon-Major A. W. Prichard (Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, Portland Volunteer Infantry Brigade) to be Surgeon-Lieutenant-Colonel (dated Nov. 9th, 1906). 3rd Volunteer Battalion, the Duke of Wellington's (West Riding Regiment): Surgeon-Lieutenant A. Waugh to be Surgeon-Captain (dated Nov. 2nd, 1906). 3rd Volunteer Battalion, the South Staffordshire Regiment: Surgeon-Major C. A. MacMunn is seconded whilst holding the appointment of Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, Staffordshire Volunteer Infantry Brigade (dated June 1st, 1906). 1st Volunteer Battalion, Princess Charlotte of Wales's (Royal Berkshire Regiment): Surgeon-Lieutenant W. M. Parham to be Surgeon-Captain (dated Oct. 28th, 1906). 1st Volunteer Battalion, the King's Own (Yorkshire Light Infantry): Surgeon-Major E. Lee is seconded whilst holding the appointment of Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, Humber Volunteer Infantry Brigade (dated June 1st, 1906). 1st Volunteer Battalion, the King's (Shropshire Light Infantry): Surgeon-Major and Honorary Surgeon-Lieutenant-Colonel W. H. Packer, to be Surgeon-Lieutenant-Colonel (dated Oct. 20th, 1906). 1st Volunteer Battalion, the Durham Light Infantry: Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel J. W. Blandford is borne as supernumerary whilst holding the appointment of Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, Tees Volunteer Infantry Brigade (dated June 1st, 1906).

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The annual competition for the Maclure Challenge Shield took place on Dec. 1st. 17 squads competed representing the Imperial Yeomanry, Infantry and Royal Army Medical Corps of the Volunteers of the London district and Eastern Command. The subjects were Ambulance Drill, Roller Bandaging, Hospital Duties, and the Sanitation of Camps, the competition being confined to those non-commissioned officers and men who had already obtained the Army Ambulance certificate. The shield was won by the first squad of 1st Cadet Battalion of the King's Royal Rifles which made 522 marks out a possible 600. The second squad of the same corps made 498 marks and gained the second place. The Senior Medical Officer's Cup was won by Sergeant F. W. B. Carter of the same corps, with 142 marks out of 160. Surgeon-Lieutenant-Colonel R. R. Sleman, in the unavoidable absence of Surgeon-Colonel P. B. Giles, Senior Medical Officer, thanked the large staff of examiners present and announced that Lieutenant-General W. H. Douglas, C.B., Adjutant General, would inspect the school and present the prizes on Dec. 12th.

THE MORAL WELFARE OF THE SOLDIER.

We have always advocated elementary military training with rifle shooting in our schools, not only because it is calculated to impress boys with a sense of the duty which they owe to their country in case of need, but because it is, as we believe, good for them mentally, morally, and hygienically. We may infer from what he has said that Mr. Haldane is very much of the same opinion and that he might have had this, among other things, in mind in stating a little time ago that the army problem had to be studied in its social and non-military as well as its military aspects. If so Mr. Birrell did not apparently concur in that but in the opposite view, for, politically speaking, he withdrew any seeming assent which he may have previously given to the introduction of rifle practice in schools. We are not by any means alone in holding that the feeling of responsibility and comradeship and the alertness of mind and habits of intelligent obedience acquired by the young in undergoing an elementary course of military training are very favourable aids to the spiritual and moral welfare of the future man, and the promotion of which so far as the British soldier is concerned is now engaging the attention of a War Office Advisory Committee.

FEVER AT PESHAWAR.

It is reported from India that there has been quite an unusual amount of sickness among troops in the Peshawar division. The proposed manœuvres have had, therefore, to be abandoned. The sickness is stated to be caused largely by an outbreak of malarial fever of a severe type with which army medical officers were familiar, for it was at one time of frequent occurrence in that command but until the present occasion has not been so prevalent of late years.

A new water bottle has been invented by Major Faichnie, R.A.M.C., which the War Office has accepted for test by the Experimental Committee.

A senior medical officers' class in bacteriology and tropical diseases for six officers only is to be held at Haslar Hospital, beginning on Dec. 5th.

Correspondence.

"Audi alteram partem."

THE STUDY OF THE STREPTOCOCCI PATHOGENIC IN MAN.

To the Editors of THE LANCET.

SIRS,—Some reply seems demanded by the letter from Dr. F. J. Poynton and Dr. A. Paine in the correspondence column of THE LANCET of Dec. 1st, p. 1539, criticising a recent contribution which you published for us. We therefore ask your leave to offer a few short remarks, though it is not our wish to enter here upon any controversy as to the bacteriology of rheumatism. In our article on the pathogenic streptococci we dealt with acute rheumatism at no great length because it was only a corner of the field which we had endeavoured to cover. The space at our disposal was quite insufficient for the adequate discussion of so important a matter. We confined ourselves to a brief statement of our own observations with a few words of criticism on the "diplococcus rheumaticus."

As regards malignant endocarditis Dr. Poynton and Dr. Paine have put into our mouths a general statement which a reference to our article will show that we never made. In referring to the *commonest* form of malignant endocarditis, chronic in course and insidious in onset, we stated that *our observations* tended to show that these cases have nothing to do with rheumatism, &c. We did not intend to suggest that malignant endocarditis never has anything to do with active rheumatism. We are well aware that it sometimes has a direct connexion, but it happened that this was not so in the particular series of cases we examined; where a rheumatic history was present it was more or less remote. The head and front of our offending seems to be that we have identified the examples of the "diplococcus rheumaticus" which have come into our hands with certain common saprophytic streptococci of the gut or mouth. Since our paper was published we have received from Dr. Forbes a streptococcus which he had just isolated from a necropsy on a case of rheumatic fever at the Great Ormond-street Hospital. This, too, proves identical in its reactions with one of the commoner intestinal streptococci found by Houston.

The position of Dr. Poynton and Dr Paine hinges largely upon the specificity of their diplococcus. In common with many other bacteriologists we do not consider this specificity proven. No characters have ever been published by which the diplococcus can be recognised, so that we have been in complete ignorance as to its distribution in nature. The sole

character relied on has been the production of a non-suppurative polyarthritis and endocarditis in rabbits. Now animal experiment, uncontrolled by other means of research, may be a very dangerous guide. Even the specificity of these "specific" effects upon the rabbit is unproven. There is at least a certain amount of evidence (e.g., the experiments of Menzer and of Cole) that arthritis, endocarditis, and pericarditis of more or less "rheumatic" character may be produced in rabbits by the injection of streptococci from totally non-rheumatic sources, even from the normal throat. We cannot find that Dr. Poynton and Dr. Paine have controlled their results by any extended experiments of this sort. In those in which they used streptococcus pyogenes the rabbits naturally died from acute septicæmia.

Should it be confirmed that the "diplococcus rheumaticus" is identical with one or more of the common saprophytic cocci of the alimentary canal we believe that a name indicative of such a source would be preferable to one implying a specific connexion with a disease where such specificity is at least doubtful. The bacteriology of rheumatic fever has been so ably and so fairly dealt with by Dr. Balloch in the recently issued second volume of Allbutt's "System of Medicine" that there is no occasion to discuss it further here. We are in perfect agreement with the conclusions to which Dr. Balloch has been led. We regret that our reference to the decease of the culture sent us by Dr. Paine should have given offence. Streptococci not rarely die in the post and we intended no suggestion that it was not alive when sent off.

We are, Sirs, yours faithfully,

F. W. ANDREWES,
THOMAS J. HORDER.

St. Bartholomew's Hospital, Dec. 3rd, 1906.

THE BACTERIOLOGY OF ASEPTIC WOUNDS.

To the Editors of THE LANCET.

SIRS,—In the debate at the Medical Society on Oct. 22nd, 1906, I said that I had difficulty in following the reasoning of Mr. L. S. Dudgeon and Mr. Percy Sargent regarding the bacteriology of aseptic wounds. I urged that if the staphylococcus albus was regarded by them as necessary to healing it should be found in all cases. In reply, Mr. Sargent suggested that my difficulty arose from the extreme simplicity of the views advanced, and, if I understood him aright, he held that although staphylococci were not always found it did not follow that they were not always present.

With the whole paper before me in THE LANCET of Nov. 17th I should like to be allowed to draw attention to certain points which seem to require explanation. The authors have confirmed the observations of Professor Welch and others that a white staphylococcus shows a very great facility for getting into wounds, and they seem to consider its presence useful, if not essential, to healing. Professor Welch taught that this coccus was harmful although its powers for mischief were small, and his teaching seems to me to be the more in accord with the evidence. I cannot understand from the paper read at the Medical Society how far Mr. Dudgeon and Mr. Sargent agree with Professor Welch on this point. They speak of the staphylococcus albus as an organism of very low virulence. Again, they describe an aseptic wound as one "which heals by first intention, exhibits no naked-eye evidences of inflammation, and causes no constitutional disturbance." But in all the cases in which the wounds were described as aseptic there was "a pyrexia of from 99° to 100° F. for two or three days after the operation." This phenomenon, which surely was a constitutional disturbance, was attributed to the presence of the staphylococcus albus, and thus that organism seemed to induce one of the indications of septic action as defined by the authors.

I have from time to time combated the idea that micro-organisms are essential to inflammation, in which view I am definitely supported by the teaching of Lord Lister. Recently I argued that there is no hard-and-fast line between inflammation and physiological action or between various forms of inflammation.[1] In this I followed the teaching of Professor Adami, and since my paper was written he has published a most interesting and instructive account of all the most recent researches connected with the inflammatory process, in which he stated that "the attempt to mark off sharply the inflammations caused by mechanical and chemical noxæ from those produced by bacteria and their products must be given up."[2] It seems to me that the facts brought forward by Mr. Dudgeon and Mr. Sargent fall perfectly into line with this view. They have shown that a white staphylococcus—an organism of very low virulence—when injected into the peritoneal cavity induces an exudation rich in leucocytes. This is clearly an effect of irritation. Experimentally it has been shown that when this exudation has been produced the animal is able to survive the injection of a dose of colon bacilli which would inevitably prove fatal without the preliminary action of the staphylococci.

The explanation given by Mr. Dudgeon and Mr. Sargent, as I understand, is that the staphylococcus albus exercises a protective action as regards the peritoneum. Thus far their point is proved in the laboratory. But at the bedside we know that, in a case of gangrenous appendicitis, for example, there frequently is an exudation rich in leucocytes induced, I have no doubt, by a staphylococcus. Up to a certain point the patient is fairly safe with this fluid in the peritoneal sac. But if operative interference is delayed and pyogenic bacteria enter the belly cavity, these are mixed with the fluid and distributed all over the peritoneum, causing a widespread suppurative peritonitis. It is obvious that as these last changes take place the serum exuded in response to the milder irritant is not in any way useful to the animal economy or protective to the peritoneum. On the other hand, if a pyogenic organism enters the peritoneal cavity alone, adhesions and a localised abscess probably develop, in which case the *protective power* of suppuration, which Professor Welch laid much stress upon, is illustrated.

A very important point brought out by Mr. Dudgeon and Mr. Sargent in their interesting and instructive investigations is that the micro-organisms which most readily gain access to the tissues and which it is most difficult to keep out of wounds are among the least pathogenic. That their presence is desirable or useful seems to me, however, quite unproved, unless it be in the sense that, when means of communication were primitive, the scouts of an invading force might be considered useful to the inhabitants of an invaded territory by warning them and giving them time to prepare for a more serious attack. But that these scouts could be considered friendly or welcome can hardly be maintained, and in the same way it seems to me that staphylococci are undesirable in a wound. Hence every care should be taken to exclude all micro-organisms and the tables published by Mr. Dudgeon and Mr. Sargent seem to show that their exclusion was most effectually accomplished when chemical germicides were judiciously used.—I am, Sirs, yours faithfully,

Portman-street, W., Nov. 24th, 1906. JOHN D. MALCOLM

[1] Inflammation and Peritonitis considered as Physiological Processes, Transactions of the Royal Medical and Chirurgical Society, vol. lxxxix.

[2] Allbutt and Rolleston's System of Medicine, vol i., p. 806.

WARDS FOR THE OBSERVATION AND TREATMENT OF TEMPORARY MENTAL DISORDER IN GENERAL HOSPITALS.

To the Editors of THE LANCET.

SIRS,—In your leading article on this subject in THE LANCET of Dec. 1st, p. 1525, you refer with appreciation to the work achieved in the mental wards of the infirmaries of London. I have the figures for 1905 before me, showing that out of 7322 cases admitted, 2877 were discharged cured and 3583 were sent to asylums. I emphatically endorse your view, that treatment is needed in the early stages of the disease, during which it is perfectly obvious to the patients and their friends that the mental balance is disturbed, but in which period no efficient help is forthcoming. The present system of preliminary detention in infirmaries saves nearly 3000 cases annually from being unnecessarily stigmatised as lunatics, but, together with the grandiose and enormously expensive scheme of the London County Council, which would brand all its detained cases as lunatics, it has no provision for dealing with mental disease until the symptoms are sufficiently obvious to render certication the only safe procedure. Your suggestion meets a