prevent tetanus. Ragged wounds especially must be trimmed and cleaned. M. Dalimier reported that he had successfully treated with autovaccines prepared at the Institut Pasteur certain cases of pus-infected wounds that had proved refractory to every other treatment. M. F. Debat said that he had used Jacquet's biokinetic method in the treatment of frost-bites, and that by this means soldiers carried to his service who were incapable of walking, whose feet were cedematous and ulcerated, were completely cured in eight days. M. Jousseau proposed the use of tobacco smoke against body lice. Another method is to place the clothing infested with these parasites on an ant-hill. The ants will make short work of the parasites. M. Quénu showed that gaseous gangrene does not appear to be a clinical morbid entity, but constituted the last stage of all gangrene of wounds. It is therefore important to deal with such wounds energetically from the very onset of the gangrene, even when the general aspect is benign. Trimming the wound is the first measure. Injections of oxygenated water or of oxygen have not established their value and can be recommended only as adjuvants to trimming. This process should be practised without general anaesthesia, and should be followed by disinfection of the wound. In 12 new cases in which M. Quénu has used this method he has had no occasion to resort to amputation. M. Belbèze showed that colloidal gold finds a therapeutic indication in the surgery of war whenever serious infections are found, whether operative or not, generalised or localised, and in extended suppurating wounds. M. Lannos and M. Chavanne have shown that gun deafness may be related to lesions of cerebral origin or to psychic troubles, or that it may attack the labyrinth itself and be accompanied by fracture of the cranium or of the petrous bone, by ruptures of the tympanum, or again may present no other manifestation than a concussion of the labyrinth. M. Darier pointed out that, speaking generally, serums are indicated in acute infections with fulminant and febrile manifestations, while vaccines are more suitable in atonic, chronic, and well-localised conditions, in the treatment of ocular tuberculoses. Before the Société de Chirurgie M. Michaux related his method of treating penetrating wounds of the chest in the surgery of war. From the author's observations it is clear that hæmothorax following on penetrating wounds of the chest from gunshot and other wounds of warfare presents itself under two different aspects: the one serious, in which death ensues in a few days, the other of less grave prognosis and susceptible of cure by good drainage and postero-inferior thoracotomy. M. Sencert dealt with the treatment of penetrating wounds of the abdomen in ambulances at the front. In view of the impossibility of interfering under satisfactory circumstances and with adequately sterilised material, the author says that one should content oneself in such cases with immediate and absolute immobilisation, withholding all food. Cure will result in those cases in which a clot obliterates the bleeding vessel or in which adhesion closes a perforated coil of intestine. It is physically impossible for the surgical personnel of the ambulance, when in less than a day the necessary surgical attention has to be given to from 250 to 300 wounded, to devote the greater part of the time to doing a few laparotomies. Out of 66 wounded abdomens that M. Sencert has seen treated in this way, of which it was possible to

follow up 58 completely, 45 died and 13 were cured. M. Auvray has done since the end of August 25 trepannings for gunshot wounds of the cranium. Nine cases were of wounds relating exclusively to the cranial vault, and 16 cases in which the cranial walls, the meninges, and the brain were involved.

Jan. 30th.

Correspondence.

"Audi alteram partem."

FLOUR PRICES AND BREAD MANUFACTURE.

To the Editor of THE LANCET.

SIR,—With reference to the article in THE LANCET of Jan. 30th on the Dearer Loaf I should like to point out that, assuming a continued increase in the price of wheat, our consideration ought to be given not only to the material from which the loaf is made, but also to the actual method of its manufacture. In this connexion aeration of the dough, as distinct from raising it by yeast, is worthy of our serious attention. It is a well-known fact that in the raising of dough by fermentation a considerable loss of nutritive material takes place. This loss has been estimated by different observers at from 2'1 to 4'2 per cent., and is mostly represented by the production of alcohol which, since the finished loaf rarely contains more than 0'3 per cent. of this substance, is practically entirely wasted. Graham estimated that 300,000 gallons of alcohol were lost yearly in London in this way. With regard to the loss of bread, Liebig calculated that by using fermentation for the raising of the dough in Germany sufficient bread was lost daily to provide the then German army with their daily bread ration. If we consider a population of 40,000,000 and assume that it requires half a pound of bread per head per diem, and that the loss of material by the fermentation process of dough raising is 1 per cent., we shall find that if we use aeration for the dough raising we shall be able to make in the latter case enough bread from the same quantity of flour to feed an extra 400,000 individuals at the same rate of consumption per diem. There are many methods of aeration, all of them technically quite simple. There are no facts tending to show that aerated bread is less digestible or less nutritious than ordinary bread, and the process of aeration is applicable to all kinds of flour. To many palates aerated bread has a less appetising taste than ordinary bread, but, *inter arma silet gustus*.

I am, Sir, yours faithfully,

F. W. TUNNICLIFFE.

Harley-street, W., Feb. 2nd, 1915.

TUBERCULIN TREATMENT OF PULMONARY TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—It is gratifying to find from Dr. N. D. Bardswell's article on the Value of Tuberculin, published in THE LANCET of Jan. 9th, that he has joined the small band of protagonists of the method.

The outstanding, and indeed the only unchallengeable, figures of his article are, of course, those referring to the bacillary findings, which are

tantamount to a statement that, no matter how rigidly controlled such figures may be, it is impossible to evade the fact that tuberculin, judged even from the immediate results of a few months' treatment, is of considerable therapeutic value—a fact which, by the way, suggests that, in the majority of cases at least, a trial of this treatment is not only justifiable but definitely indicated. The tables of general results, which admittedly do not point the same moral, are unfortunately inadmissible as scientific evidence. In the first place it is generally recognised that clinical examination alone is insufficient evidence on which to found definite statements as to arrest, and that the gross, unstandardised changes on which are based such elastic terms as "much improved," "improved," &c., are to be found in the majority of cases (tuberculin-treated or not) suddenly translated from normal to sanatorium existence; this, apart from the fact that within a few weeks of dismissal these judgments might have to be entirely altered. Moreover, Dr. Bardswell, whilst attempting to mix incompatibles—to wit, "arrests" and "much improveds"—has omitted to state (1) whether in all cases the diagnosis of T.B. + was made on identical methods of examination of sputum; (2) what the average stay in the sanatorium was in each group; and (3) the average duration of specific treatment in the tuberculin groups. More important still, he does not indicate what was the method of selection of tuberculin cases, and whether the selection and treatment were carried out invariably by the same person. If, as one part of the article seems to suggest, selection was made by actual trial injections, then a percentage of early and favourable cases must have been omitted from the tables, because the sensitive reaction of many such cases is notorious; if, on the other hand, selection depended on clinical signs or temperature or general condition on admission (and this so generally poor), then a percentage of advanced or slightly febrile cases must have been omitted, cases which are recognised to improve most astonishingly during a course of tuberculin. The question of administration, either by the same individual or at least by a series of unbiassed observers using identical methods, is the more crying that many of the recent reports "on the value of tuberculin" have really merited the title of reports "on the value of tuberculin when given tentatively" or "experimentally," or "grudgingly," or "in an amateur fashion." There is one other point which deserves notice, although perhaps it is a minor one, and it is that the dangers noted after reactions—i.e., extension of disease, increased activity, pleurisy and pneumothorax—are, unfortunately, as the Registrar-General will testify, the dangers of the disease itself. At the same time, one can cordially agree with Dr. Bardswell in his appeal for a more scientific and critical spirit in the investigation of the value of tuberculin, always keeping in remembrance that critical investigation ought, in point of time, to follow scientific observation, because even in the kingdom of therapeutics the critic does not of necessity constitute the artist.

I am, Sir, yours faithfully,

EDWARD G. GLOVER.

Salterley Grange Sanatorium, Jan. 18th, 1915.

* * We had Dr. Bardswell's communication some time before its appearance, and take the responsibility for its tardy publication.—ED. L.

AORTIC AND MITRAL REGURGITATION.

To the Editor of THE LANCET.

SIR,—In an annotation in your issue of Jan. 30th (p. 244) you mention the proceedings of the Société Médicale des Hôpitaux of Paris, at a recent meeting of which society cases of aortic incompetency, occurring in soldiers returned from active service, were recorded. There can be no doubt as to the diagnosis in these cases, as the French physicians are such expert auscultators. But it would be of much interest to learn whether in those cases with aortic regurgitation who had successfully borne the exertions of severe fighting there was any evidence of mitral incompetence also.

I have before this pointed out the advantages which accrue to a patient who, having aortic regurgitant disease, has in addition mitral regurgitation. Dyspnoea is less urgent, and they perform muscular feats which are quite beyond those who only have aortic incompetence. And when one considers the close proximity of one segment of the aortic valve with the lower or right flap of the mitral valve, it is difficult to know why a rheumatic poison which attacks an aortic valve does not extend its ravages to the mitral. I believe in a great number of cases this extension of endocarditis does take place, for the fibrous tissue of the two adjoining flaps is confluent. But in many cases this injury is limited to one valve only, the aortic, and in these I should have expected that dyspnoea would have been a disabling condition. I hope shortly to record some cases tending to confirm this point.

I am, Sir, yours faithfully,

Seymour-street, W., Feb. 1st, 1915.

SEYMOUR TAYLOR.

FAITH AND ASTIGMATISM.

To the Editor of THE LANCET.

SIR,—Dr. S. Johnson Taylor's letter under the above heading in your issue of Jan. 30th is typical of the position taken up by those who, having no faith themselves, cannot realise there may be something in the claims of those who have faith, and he is therefore prepared to put down the results obtained by the latter to the effect of "black magic" acting on those whom he classes under the heading of that blessed word "neurotic," and considers that as a sufficient explanation. I am quite sure those of us who do believe in prescribing very low cylinders for constant wear do not consider only the refraction as being the sole cause of insomnia; at any rate, it is my habit as a result of some years' experience in general practice to make inquiries on such details as constipation, digestion, &c.

As Dr. Taylor says, "the proof of the pudding," &c., may I quote the following case? Several years ago a patient, not a "neurotic," consulted an ophthalmic surgeon of repute; he was given a prescription 0.50 D. cyl. axis vertical each eye, and told that he had very slight astigmatism, and it was doubtful if it caused his symptoms (depression, headaches), so the glasses might be worn for three months, and then if no relief was obtained they could be left off (judging from your correspondent's letter one would imagine he was speaking). Naturally, the surgeon having doubt, the symptoms did not disappear. After the lapse of some years another surgeon was consulted. He found that the astigmatism was 0.50 D. in one and 0.75 D. in the other eye. Glasses of this strength