

LIVERPOOL.

The epidemic of arsenical poisoning has every appearance of subsiding, as only 8 new cases have been admitted to the Mill Road Infirmary in the last week, mostly of a mild type. Great activity has been displayed by the city health authorities in withdrawing all suspected beer.

SALFORD.

Dr. Charles H. Tattersall, Medical Officer of Health, Salford, writes: My attention has been called to the fact that in the Notes on the Arsenical Poisoning Cases in Salford, published in the BRITISH MEDICAL JOURNAL of December 1st, I had in no way acknowledged the intimation stated to have been given me by Dr. Kelynack as to the presence of arsenic in inverted sugar.

I was unaware until to-day that the verbal intimation had been left at my office, although I knew Dr. Kelynack had called on me on the 23rd ult., when he failed to see me, as I was absent pursuing the inquiries which resulted from Professor Delépine's discovery on the 22nd of the presence of arsenic in a sample of glucose.

Although Dr. Kelynack's information reached me too late to be of use, I would have acknowledged the trouble he had taken to inform me what Mr. Kirkby had found had I been acquainted with the nature of the statement he had made to my clerk in my absence.

DARLSTON, SOUTH STAFFORDSHIRE.

DR. VINCENT J. MAGRANE writes under date December 11th: Since writing my previous note in the BRITISH MEDICAL JOURNAL of December 8th, page 1684, one of the brewers in the neighbourhood who owned two of the houses from which some of my patients drew their supply of beer, has had some analysed, and, finding arsenic present, has had 12,000 gallons destroyed. He has published this fact in the local press. I may add that I have not had any fresh cases during the last fortnight, thus proving that the scare has had a beneficial effect in inducing brewers to recall and destroy their ales.

THE DETECTION OF ARSENIC IN BEER.

MR. CHARLES ESTCOURT, F.C.S., F.I.C., Public Analyst to the City of Manchester, writes: There is no doubt that substances enter into the composition of modern beer which interfere with the usual methods of analysis for the detection of arsenic. This must have forcibly struck every chemist who has analysed beer for the presence of arsenic, as very many have, in beers brewed from arsenical glucose, and failed to detect it.

Two of the nostrums used in the brewing of modern ales are finings, which are "cut" with sulphurous acid, and bisulphites of lime and magnesia, etc. These are both used as preservatives either in washing the barrels or by adding direct to the beer. If chemists had been acquainted with the presence of these in beer, much less difficulty would have been felt in dealing with arsenical beer.

Both these compounds will prevent the discovery of arsenic in beer by the "Marsh" test, and by the "Reinsch" also, for unless in the "Reinsch" test the beer is boiled some time with acid before putting in the copper, the sulphurous acid in the beer may produce the blackening.

Beers brewed from malt, hops, and glucose may be used direct in the "Marsh" apparatus, and if arsenic is present it will be detected. I have tried the experiment with beer before racking when sulphurous acid had not been added.

Thus it is not organic matter alone which makes arsenic in beer so difficult of detection. This I proved by taking a beer absolutely free and adding to it a known quantity of arsenious acid. In the Marsh apparatus I got out practically all I had introduced. To another portion of the same beer, with arsenic in such proportion as gave a large deposit in the heated tube, I added a very small quantity of a bisulphite of calcium, and got no deposit of arsenic on the heated tube, only sulphur appearing there. The arsenic was obtained from the flame at the end of the tube when received on porcelain.

The difficulty I had in connection with the twelve samples of Manchester beer is now explained. I had to do the samples in a day. I did take twelve working hours, and knowing nothing of the presence of sulphite I found no arsenic. I may say I had only about eleven ounces per sample, and in the small quantities I used for experiments the trace of arsenic was probably lost in the preparation of the beer for the Marsh test.

I may premise that I tried a series of experiments with the original beer which did not succeed in the small quantities I was compelled to use. Any test to succeed must deal with not less than 100 c.c.m., and this should be charred only to intumescence with acid, then diluted and filtered, and the filtrate evaporated. I did this process in flasks, but found the medical officer here was doing the process in porcelain basins, which I now adopt. If one omits to evaporate the filtrate, sulphurous acid may easily be present (carbonaceous matter and sulphuric acid) and spoil the experiment.

Mr. F. WALLIS STODDART, F.I.C., F.C.S., Public Analyst, Bristol, writes: The various accounts of poisoning with arsenical beer that have lately appeared in the columns of the BRITISH MEDICAL JOURNAL contain no reference to the fact that the arsenic present in crude sulphuric acid, and presumably also in glucose manufactured therefrom, exists largely, if not entirely, in the higher state of oxidation as arsenic acid. It would be of great interest if those of your correspondents who have had an opportunity of examining the suspected beer and brewing materials would state whether the methods used for analysis were such as would deter-

mine the whole of the arsenic in whichever form it may have been present. It is well known that processes which satisfactorily separate all arsenic present as arsenious acid are not equally successful with arsenic acid: and failure to recognise the latter would, of course, furnish a reasonable explanation of one of the most perplexing features of the outbreak, namely, the minuteness of the doses credited with the production of such serious results. The discrepancies which occur in the published records of cases, and the not unimportant points of difference between those records as a whole and the textbook descriptions of chronic arsenical poisoning might also find an explanation in some specific action of arsenic acid, the toxicology of which appears to be by no means thoroughly worked out.

CONTRACT MEDICAL PRACTICE.

CLUB PATIENTS AND THE WAGE LIMIT.

THE Portsmouth *Evening News* of November 28th gave a report of the initiation of Messrs. J. H. A. Majendie, M.P., R. Lucas, M.P., H. K. Pink, ex-Mayor, and Councillor E. S. Springings as financial members of Court "St. Ives" (8,741) A.O.F., and we have received a letter from a correspondent in Portsmouth complaining of such an abuse of the club system. "Surely," he writes, "this is a *reductio ad absurdum* of the club system, when men of wealth and position can command the service of the club doctor for 3s. 6d. per annum. Had these gentlemen been elected honorary members, as distinguished from financial, no adverse criticism could be made."

There is reason to believe that this is not an isolated case, and that in many instances throughout the country men like the above have been elected as financial members of friendly societies.

It is useless to argue that such members would not be likely to ask for the services of the club doctor. The obvious answer is, Why then do they become financial members? It is well known that all these societies admit honorary members, who pay an annual subscription, but are not entitled to club benefits, so that there is no reason to elect such men in any other capacity, unless there is some ultimate view of utilising the club benefits. It will be seen, therefore, that there is every reason in the world for medical men to insist on the principle of a wage limit. Nothing short of this will be of any good in protecting the profession from the exploitations of wealthy men who are not ashamed to avail themselves of a cheap medical service, which was never intended for any but working men, and those who in time of sickness might find it hard to pay the ordinary charges of a medical practitioner.

CONTRACT MEDICAL WORK IN GLASGOW AND WEST OF SCOTLAND.

M.B. C.M. writes: It seems the curse of contract work increases and threatens more and more to invade our profession. Long have the lower units been partially submerged by its flood, but it is not to stop there. The masses are the basis of all power in the State, and granted that they become thoroughly saturated with the advantages of co-operation, and with selfishness closing their eyes to any glimmering of doing unjustly, are they likely to confine their operations to their present victims? As an old worker in the lower ranks, and as a club doctor, I know that our ordinary fees, small as they are, are cut down 50 per cent. more for work done by contract. If English doctors are fighting against 3s. or 4s., why should the clubs, then, be able to point the finger at Scotland, and say medical attendance can be got there for 2s. 6d. per annum? This is a mighty saving for the people, and are the middle classes beyond the range of being inoculated with the same craving? At present they are in ignorance, but a little organisation may complete the system. If the principle of contract work is good enough for the general practitioner, is it not also good for the consultant? What I wish particularly to write about is to request the local Branch of the Association to call a meeting of the profession, not merely the members, but all practitioners, contract workers and others, and especially others, to consider the question and to appoint a committee with a paid secretary if considered necessary. This is a matter that deserves the consideration of those who do not hold clubs. For a club doctor to take an active part in such work means he is "spotted." I appeal to our professors not to be above taking an active part in this matter. We get plenty of good counsel before leaving our *alma mater*, but we have not long left it till we are face to face with the question of contract work, and of this we know nothing and so blunder. Many of us can look back to an initial blunder where a little instruction given before leaving our college would have enabled us to steer a better course. Why should teachers be above anything which affects the professional welfare of their students? How can our teachers expect us to carry out all their instructions at a rate of 2s. 6d. a man per annum? What of good honest work and the dignity of the profession? We are an unorganised body dealing with an organised, and in the latter there is much ignorance, tyranny, and socialism, and much judging of medical men from its own lower level. I hope we will get assistance from those not yet affected. Even a discussion on the question would do good. Otherwise,

"Vain
The struggle, vain, against the coiling strain."