deaths were equal to an annual rate of 2·6 per 1000, which was 0·2 below the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of diarrhoea, which had been 48 and 31 in the preceding two weeks, further declined last week to 24, of which 13 occurred in Glasgow, 3 in Edinburgh, and 3 in Aberdeen. The 18 deaths from whooping-cough were within one of the number in the previous week, and included 10 in Glasgow, 4 in Dundee, and 2 in Leith. The 10 deaths referred to "fever" showed an increase upon the numbers in recent weeks; 6 were returned in Glasgow and 2 in Aberdeen. The fatal cases of diphtheria also exceeded the numbers in recent weeks, and included 3 in Glasgow, 3 in Leith, and 2 in Edinburgh. The deaths from measles and scarlet fever, on the other hand, showed a further decline from recent weekly numbers. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 48 and 55 in the previous two weeks, were last week 54, and 21 below the number returned in the corresponding week of last year. The causes of 39, or more than 9 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·4, 25·1, and 26·6 per 1000 in the preceding three weeks, declined to 18·6 in the week ending Sept. 7th. During the first ten weeks of the current quarter the death-rate in the city averaged 22·7 per 1000, the mean rate during the same period being 16·8 in London and 15·6 in Edinburgh. The 126 deaths in Dublin showed a decline of 54 from the number in the previous week; they included 11 which were referred to diarrhoea, 2 to whooping-cough, 1 to "fever," 1 to measles, and not one either to small-pox or diphtheria. Thus the deaths from these principal zymotic diseases, which had ranged in the preceding five weeks from 15 to 34, declined again last week to 15; they were equal to an annual rate of 2·2 per 1000, the rate from the same diseases being 2·1 in London and 1·4 in Edinburgh. The deaths referred to diarrhoea, which had increased in the previous five weeks from 8 to 26, declined again last week to 11. The deaths from "fever" also showed a marked decline. The deaths, both of infants and of elderly persons, showed a considerable decline from the numbers in recent weeks. Six inquest cases and 3 deaths from violence were registered; and 29, or nearly a quarter, of the deaths occurred in public institutions. The causes of 13, or more than 10 per cent., of the deaths in the city were not certified.

THE SERVICES.

THE *London Gazette* of the 6th inst. contains the official account, by Major-General Sir F. Grenfell, K.C.B., of the battle fought at Toski, and which ended in the total defeat of the Dervishes. Speaking of the services rendered by the medical staff, the Sirdar says: "When the reconnaissance developed into a general action, Surgeon-Major Hayes quickly returned to camp, arranged an increase of eighty beds on the seventy already organised, improvised a bearer column, and all wounded received first field dressings as they fell, and seriously wounded men were conveyed to hospital by stretcher parties and camels. This rapid organisation reflects great credit on Surgeon-Major Hayes, and the following officers of his department:—Surgeon Morse, S.M.O., 1st column; Surgeon Lewis, Extemporised Bearer Column; Surgeon Pinching, S.M.O., 2nd column, and I have every reason to be satisfied with all his arrangements for Egyptian wounded. In addition to the care of Egyptian wounded, Surgeon-Major Hayes had arranged for a large number of Dervish sick and wounded, and has worked night and day to alleviate their sufferings. He is a most able, active, and energetic officer."

ARMY MEDICAL STAFF.—Brigade Surgeon Caleb Sherar Wills, C.B., has been granted retired pay (dated Aug. 24th, 1889); Surgeon James Perceval Myles has been seconded for service with the Egyptian Army (dated Aug. 4th, 1889).

INDIA OFFICE.—The Queen has approved of the following admissions to the Indian Medical Service (dated March 30th, 1889):—To be Surgeons: Bengal—Fairlie Russell Ozzard, Adam Rivers Steele Anderson, John Telfer Calvert, Edgar Jennings, Theodore Mayo Stiles, and Arthur

Gervase Hendly. Bombay—William Symonds Percival Ricketts, Charles Malcolm Moore, George William Jenney, and Charles Tilson Hudson.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon Wm. Coates resigns his commission (dated Sept. 4th, 1889).

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon James D'Arcy Harvey has been placed on the Retired List of his rank, at his own request; Surgeon Arthur William Egerton Brydges Barrett has been allowed to withdraw from Her Majesty's Naval Service with a gratuity.

The following gentlemen have been appointed Surgeons in Her Majesty's Fleet (dated Aug. 22nd):—George Allan, M.B.; William J. Maillard, M.B.; Percy V. Jackson; Oswald M. Jones; Nicholas C. Riddles; Alfred H. L. Cox; Erington F. S. McKay; and Alexander Maclean, M.B. The following appointments have also been made:—Surgeon Charles W. Hamilton to the *Wye*; Surgeon T. J. Crowley, M.D., to the *Boscawen*; Surgeon William E. Beal to the *Sultan*; Surgeon George K. Bell, to Chatham Hospital, temporarily; Fleet Surgeon Henry N. M. Sedgwick to the *Duke of Wellington*; Fleet Surgeon Henry A. Close to the *Northumberland*, vice Sedgwick; Staff Surgeon Richard J. Barry to the *Phaton*; Surgeon W. Slaughter, B.A., M.B., to the *Ajax*; and Surgeon Reginald T. A. Levinge to the *Hotspur*.

VOLUNTEER CORPS.—*Artillery*: 2nd Volunteer (Essex) Brigade, Eastern Division, Royal Artillery: Harold Gurney, Gent., to be Acting Surgeon (dated Sept. 4th, 1889).—1st Banff: Acting Surgeon F. W. Grant, M.D., to be Surgeon (dated Sept. 4th, 1889).—*Rifle*: 1st Volunteer Battalion, the Royal Warwickshire Regiment: Acting Surgeon E. L. Freer to be Surgeon (dated Sept. 4th, 1889).—3rd Volunteer Battalion, the Lancashire Fusiliers: Acting Surgeon W. E. Husband to be Surgeon (dated Sept. 4th, 1889).—1st Volunteer Battalion, the Duke of Wellington's (West Riding Regiment): Acting Surgeon J. Martin to be Surgeon (dated Sept. 4th, 1889).—1st Volunteer Battalion, the Sherwood Foresters (Derbyshire Regiment) Acting Surgeon E. Vaudrey, M.B., to be Surgeon (dated Sept. 7, 1889).

Correspondence.

"Audi alteram partem."

CHLOROFORM AS AN ANÆSTHETIC.

To the Editors of THE LANCET.

SIRS,—I wish to criticise a few of Mr. Horsfall's remarks in his letter in favour of chloroform as an anæsthetic.

He says: "How rarely do we hear of a death *under* it; *from* it almost never." In the medical journals for the last ten years there are reported one hundred and twenty (if not more) cases of death under chloroform. Many of these are very imperfectly described, but in at least forty-nine cases the patients were in good general health at the time of administration, and required an anæsthetic merely for the performance of some minor operation—e.g., extraction of teeth (eleven cases of death), reduction of dislocations (nine cases), eye operations, fistulæ, and so on. In some fifty-nine cases death occurred before the commencement of the operation, and so was clearly due to the chloroform alone. In about twenty of the cases it is noted that chloroform had been successfully given on previous occasions; in one, as many as eight different times before the fatal administration. It is evident from the foregoing that chloroform is uncertain in its action; that not only do people die while *under* chloroform, but also *from* it—frequently, too, even when it is used by skilful hands. Of course, it is possible to retort that "it was not properly given," which may be correct. This will not alter the fact that these accidents prove chloroform to be a powerful agent, very difficult to administer properly—indeed, so difficult and dangerous that it is scarcely suitable for a routine anæsthetic, when a drug less powerful for evil can replace it.

Mr. Horsfall emphasises the objections to ether, without noticing the means of overcoming them. Its "nauseous flavour" and "the sense of suffocation" can be entirely done away with by the use of nitrous oxide, and its inhalation made more agreeable than even that of chloroform,

while the patient quickly becomes unconscious without the struggling so common with chloroform. I have not yet found a single patient who has once inhaled ether preceded by nitrous oxide complain of suffocation or object to take it again on the ground of its unpleasantness.

The readiness with which chloroform affects the heart, the smallness of a fatal dose, and especially the ease and suddenness with which such a dose can be inhaled almost by a couple of deep inspirations, will make its safe exhibition always a difficult task to invariably accomplish. Without having had so many years' experience, I have given chloroform successfully nearly as many times as Mr. Horsfall, and have gradually come to believe it to be a less safe anæsthetic than ether.

I am, Sirs, yours obediently,

ALEXANDER WILSON,

Administrator of Anæsthetics to the Manchester Royal
Sept. 3rd, 1889. Infirmity and Victoria Dental Hospital.

NOTIFICATION OF INFECTIOUS DISEASES.

To the Editors of THE LANCET.

SIRS,—Your leading article of August 31st on this subject, coming as it does after the passing of the obnoxious Bill, is as oil and wine to those who have taken part in opposing that measure. We appear to be worsted, but I am one of those who do not consider the game by any means played out yet. Something has been gained by our agitation in the fact that the dual system is not enforced over the whole country, and Mr. Walter McLaren, M.P., says that at his request (which was certainly most opportune) the chief clause has been altered so that the medical man has not (as intended) to state the name of the person whom he considers primarily liable, but only the name, address, and disease of the patient. Of course the effect on the householder will be the same, but we shall not be quite such *common* informers.

And now I wish to vindicate myself (and my statistics on this subject) from the attack of Professor Corfield, who, in *The Times* of August 28th, besides saying other unpleasant things, wrote as follows:—

"Mr. Biddle alludes to statistics prepared from the Registrar-General's reports, and concludes from them 'that the dual system is on the average destructive of life.' I would refer those who are anxious to ascertain the value of conclusions drawn by him from statistical tables to the controversy which took place between him and Dr. Whitelegge, the medical officer of health for Nottingham (now medical officer of health for the Western Division of Yorkshire), in the *British Medical Journal*, in March, April, and May of the present year. They will there find that Mr. Biddle argued that a reduction in the number of deaths from 1000 to 950 was equal to a reduction of from 50 to 0 if the population were equal; in other words, that 'the good effected would be the same' with a reduction of 5 per cent. of the deaths as with the abolition of the death-rate, and they will readily understand that Dr. Whitelegge did not consider such an argument worthy of a reply."

In the first place, I beg to say that I did not expect any reply from Dr. Whitelegge, since he had already expressed a resolve to write no more, and in the last letter from which Professor Corfield "quotes" I was merely availing myself of the usual right of terminating the discussion which I had begun. Secondly, I was treating of the death-rates from preventable diseases, in which zero is by no means an absurdly impossible limit. Year after year the death-rate from small-pox is *nil* in several of even the large towns, and in some does not average 0.005 per 1000 for ten years together.

But in order that your readers may judge fairly betwixt us, I will ask you to be kind enough to reproduce the passages in two of my letters from which Professor Corfield may be supposed to quote (or rather *misquote*). The first¹ is as follows:—

"The principle of expressing the increase or decrease in the effect of any disease upon a community by the *ratio* between death-rates at given epochs, as by Dr. Whitelegge's system of percentages, is far from satisfactory, inasmuch as where the death-rate has been low slight vicissitudes produce too great an effect upon the estimate; and where, on the contrary, the death-rate has been high, a considerable change is apt to pass almost unnoticed. Thus, for instance,

in the case of small-pox, it seems altogether unfair to regard a reduction in the average number of deaths in a town from 40 to 20 as no more than equivalent to a reduction from 4 to 2 or 2 to 1. It is far more just to take the *difference* between the average death-rates at two epochs, and thus obtain the actual yearly saving (or loss) of life per 1000 of the population, in the latter period as compared with the former."

The second letter² runs thus:—

"When Dr. Whitelegge attempts to invalidate the method adopted by me of taking the difference rather than the ratio between the death-rates of two epochs in order to estimate increase or decrease, which method I adopted because it shows the actual saving or loss of life per 1000 of the population, and when he says, 'To take another illustration, a reduction from 1000 to 950 would be equivalent to a reduction from 100 to 50 or from 50 to 0,' I beg to observe that such would not be the case, unless the populations compared were equal. But given this equality, the good effected would, so far as the evidence goes, be the same in all three instances, however different in potency might be the salutary influences brought to bear; and if the deaths in the first town went on decreasing by fifty each year until they reached zero, I should say that they did so by equal annual decrements, and, if the average population remained the same, at an equal annual rate.

"At the same time, there cannot be reduction of a death-rate which is already *nil*, nor is it fair to compare towns or groups of towns whose average death-rates did not, at the earlier of the two given epochs, afford pretty equal scope for reduction. I am ready to grant, therefore, that the ratio would serve as an estimate almost equally with the difference, if the commencing death-rates were on a par; but Dr. Whitelegge has disregarded this proviso.

"Now the two sub-groups of towns which I selected for comparison in my last letter, had (to commence with) death-rates almost identical, not only from zymotic diseases as a whole, but from these as differentiated into notifiable and non-notifiable. The advantages as regards number of towns (in the group), average population, and density were all on the side of the dual-notification group; and yet, whereas in 1871-76 the average death-rate of this group from notifiable diseases was only 2.55, as against 2.64 in the non-notification group, there was in 1881-86 a reversal of the relations, the death-rates from notifiable diseases being respectively 1.05 and 1.01."

On reviewing these passages I see no reason whatever for recantation on my part, but feel confident that recognised statisticians other than medical officers of health will agree with me that the effect produced upon a group death-rate by a reduction of 50 in the number of deaths in a particular town of that group would be precisely the same whether the previous number of deaths in that town were 1000 or only 50. In fact, it is easy to see that in either case 50 lives would be saved to the country, neither more nor less, in a population of given extent. If Dr. Whitelegge and Professor Corfield mean that it is always or even generally easier to reduce a high death-rate than a low one, I should like to know how this can be asserted with the evidence before our eyes of London and Manchester. The former, without any system of notification to control its teeming millions, has declined considerably in its death-rate, which for four years has been under 20 per 1000, and last year was only 18½; whilst the latter, with all the advantage (?) of the dual system, has become a public scandal, owing to the height at which its death-rate keeps, rarely falling below 27.

I am, Sirs, your obedient servant,

Kingston-on-Thames, Sept. 2nd, 1889.

D. BIDDLE.

To the Editors of THE LANCET.

SIRS,—Allow me to heartily thank you, on my own part and that of many others, for your able endeavours to prevent the medical profession from passing under the degrading yoke of the dual clauses of Mr. Ritchie's Bill. The profession have not been fairly dealt with in the matter of this Bill; for, to hurry it through committee of the House in the last week of the session, when the Government knew that every medical member was absent and all other opponents of the dual system also, except one, is not consonant with the principle of fair and just legislation, and such a proceeding merits the strong condemnation which

¹ Brit. Med. Jour., April 27th, 1889.

² Ibid., May 18th, 1889.