of 1881 and 1882. The lowest rates in these towns last week were 14·7 in Bristol, 15·5 in Portsmouth, and 16·8 in Cardiff. The rates ranged upwards in the other towns to 24·1 in Newcastle-upon-Tyne, 25·5 in Liverpool, 25·8 in Sheffield, and 28·4 in Blackburn. The deaths referred to the principal zymotic diseases in the twenty-eight towns were 401, and showed an increase upon recent weekly numbers; they included 139 from measles, 73 from scarlet fever, 61 from whooping-cough, 58 from diarrhoea, 34 from "fever" (principally enteric), 28 from diphtheria, and 8 from small-pox. The lowest death-rates from these diseases were recorded last week in Oldham and Leicester, and the highest in Newcastle-upon-Tyne and Liverpool. Measles was proportionally most fatal in Sheffield, Newcastle-upon-Tyne, and Liverpool; whooping-cough in Cardiff and Portsmouth; scarlet fever in Leeds and Sheffield; and "fever" in Brighton. The 28 deaths from diphtheria in the twenty-eight towns included 22 in London and 4 in Birmingham. Small-pox caused 4 deaths in Newcastle-upon-Tyne, 3 in London, and one in Liverpool. The number of small-pox patients in the metropolitan asylum hospitals, which had been 77, 73, and 70 on the three preceding Saturdays, was 72 at the end of last week; 11 new cases of small-pox were admitted to these hospitals during last week, against 10 and 8 in the two preceding weeks. The Highbate Small-pox Hospital contained 5 patients on Saturday last, no new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had steadily declined from 402 to 246 in the four preceding weeks, further fell to 226 last week, and were 28 below the corrected weekly average. The causes of 78, or 24 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Derby, and in three other smaller towns. The proportions of uncertified deaths were largest in Salford, Sheffield, Hull, and Cardiff.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 28·5 and 24·9 per 1000 in the two preceding weeks, rose again to 26·9 in the week ending the 9th inst.; this rate exceeded by no less than 7·4 the mean rate last week in the twenty-eight English towns. The rates in the Scotch towns ranged from 11·9 and 17·6 in Perth and Leith, to 33·8 in Glasgow and 35·3 in Paisley. The deaths in the eight towns included 108 which were referred to the principal zymotic diseases, showing a further decline from the high numbers in recent weeks; 38, however, resulted from measles, 27 from whooping-cough, and 12 from diphtheria. The 38 fatal cases of measles showed a further decline from recent weekly numbers, and included 29 in Glasgow, 4 in Greenock, and 3 in Leith. The deaths from whooping-cough, which had been 40 and 39 in the two previous weeks, declined to 27 last week, of which 15 occurred in Glasgow and 7 in Dundee. The 12 deaths referred to diphtheria included 5 in Glasgow and 4 in Dundee. Eight of the 10 fatal cases of scarlet fever occurred in Glasgow; and the 9 deaths referred to "fever" included 7 in Glasgow and 2 in Edinburgh. The 12 deaths from diarrhoea, including 8 from Glasgow, were 18 below the number in the corresponding week of last year. The 112 deaths referred to acute diseases of the respiratory organs in the eight towns showed an increase of 12 upon the number in the previous week, and were 5 above the number in the corresponding week of last year. The causes of 92, or more than 14 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 27·5 and 31·8 per 1000 in the two preceding weeks, declined again to 28·3 in the week ending the 9th inst. During the nine weeks ending last Saturday the death-rate in the city averaged, however, no less than 32·4 per 1000; whereas the mean rate in the same period did not exceed 19·7 in London and 20·0 in Edinburgh. The 190 deaths in Dublin last week showed a decline of 23 from the high number in the previous week, and included 6 from whooping-cough, 4 from measles, 2 from "fever," one each from diphtheria and diarrhoea, and not one either from scarlet fever or small-pox. Thus 14 deaths resulted from these principal zymotic diseases, against 21 in each of the

two previous weeks; they were equal to an annual rate of 2·1 per 1000, the rate from the same diseases being 2·6 in London and 1·8 in Edinburgh. The fatal cases of whooping-cough, which had been 10 and 8 in the two previous weeks, further declined to 6 last week; and the deaths from "fever," which had been 9 in each of the two previous weeks, fell to 2 last week, a lower number than had been recorded in any previous week of this year. The 4 fatal cases of measles, however, exceeded the number in any recent week. The deaths of elderly persons showed a marked decline last week, while those of infants were more numerous. The causes of 25, or more than 13 per cent., of the deaths registered were not certified.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—Brigade Surgeon John Tulloch, M.D., to be Deputy Surgeon-General, vice J. L. Jameson, granted retired pay. Surgeon-Major James Inkson, M.D., to be Brigade Surgeon, vice W. S. Oliver, M.D., granted retired pay. Surgeon-Major James Jameson, M.D., to be Brigade Surgeon, vice J. Tulloch, M.D.

BOMBAY MEDICAL ESTABLISHMENT.—Brigade Surgeon John Pinkerton, M.D., to be Deputy Surgeon-General.

ARTILLERY VOLUNTEERS.—2nd Devonshire: Surgeon Joseph May is granted the honorary rank of Surgeon-Major.

RIFLE VOLUNTEERS.—3rd Volunteer Battalion, the Essex Regiment: Charles William Bass, Gent., to be Acting Surgeon.

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Robert Whichecord Beaumont has been placed on the retired list from the 6th inst., with permission to assume the rank and title of Retired Deputy Inspector-General of Hospitals and Fleets.—Fleet Surgeon Michael Walstell Cowan, M.D., has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets in Her Majesty's Fleet.—Staff Surgeon Henry Scott Lauder has been promoted to be Fleet Surgeon in Her Majesty's Fleet, with seniority of May 31st, 1883.

The following appointments have been made:—Ahmuty Irwin, M.D., C.B., Inspector-General of Hospitals and Fleet, to Haslar Hospital, vice Morgan, placed on the retired list. Surgeon George Michael Cuffe to the *Vernon* (complement incomplete).

Correspondence.

"Audi alteram partem."

ANTISEPTIC INHALATION AND PHTHISIS.

To the Editor of THE LANCET.

SIR,—My absence in San Remo must plead my excuse, if any be necessary, for not having sooner noticed the letter of Dr. Robert Lee, inserted in THE LANCET of the 12th of May, having reference to my communication on Antiseptic Inhalation, published in a previous number of the journal.

Dr. Lee states in his letter that he "endeavoured to point out, in a communication to the British Medical Association at the meeting at Bath, the fact that the vapourising or volatilising of the essential oils, the phenol compounds and similar substances, is only effected by vapourising the water with which they are mixed." I have now referred to the proceedings of the meeting in question, and the only reference I can find to the subject of inhalation is contained in the following paragraph of a paper by Dr. Lee on Whooping-cough:—"It must be allowed that at present we possess no specific remedy against this disease; and though I am strongly in favour of the use of the inhalation of the vapour of some of the hydrocarbons obtained from coal distillation, from having had more success with that plan of treatment than with any other, I beg to reserve any further remarks upon this subject for the present." I find, however, that some months subsequently Dr. Lee described at a meeting of the Medical Society of London, held on January 27th, 1879, a steam draft inhaler, for which he claims certain advantages. My communication dealt only with antiseptic inhalation as ordi-

narly practised—that is to say, by means of the various forms of oral and naso-oral inhalers, which are manufactured and used by thousands, and its object was to prove whether this mode of inhalation was efficient or not. I showed by experiment, what certainly was not generally known, or the method would not have been so extensively employed, that the greater portion of the more powerful antiseptics used was retained by the sponge, so little being unaccounted for that the conclusion seemed warranted that this method of inhalation was very inefficient, if not without value. I purposely refrained from discussing other modes of inhalation, as by spray or steam; these I hope to refer to later on, but I think it questionable how far a steam inhaler is likely to prove beneficial in certain diseases, not of the throat, but of the lungs themselves, even although, as in the case of Dr. Lee's steam draft inhaler, the temperature can, it is affirmed, be regulated from 75° to 120° F.

I remain, Sir, yours obediently,
June 13th, 1883. ARTHUR HILL HASSALL, M.D. Lond.

INTERNATIONAL EXHIBITION AT NICE.

To the Editor of THE LANCET.

SIR,—Following the example of so many other cities, the mayor and municipality at Nice have resolved on opening an International Exhibition in that city in December next. The Society of Medicine at once seized the opportunity to point out the importance of devoting a portion of the building to a Medical and Sanitary Exhibition, and you will see by the catalogue how earnestly they seek that it shall be as complete and as practically useful as possible. All of us who have lived on the Continent know how far from perfect are the hygienic and sanitary arrangements of our neighbours on the other side of the Channel, and the Riviera has had in these respects more even than its fair share of blame. If you, Sir, and other members of the profession will lend your influence and help to promote its success, the Medical and Sanitary Exhibition at Nice may be the starting-point of far better things than exist at present, and we may then send our patients south in search of health with no more of those misgivings as to imperfect drainage, untrapped closets, and ill-ventilated houses, which make us sometimes hesitate whether an English winter, with its damp and cold and darkness, may not, after all, be safer than the cloudless sky and brilliant sunshine of the Mediterranean. The agents for England are Messrs. Johnson, Castle-street, Holborn, E.C., to whom all applications for space must be made, and from whom all information can be obtained. I shall also be most happy to answer any inquiries on the subject.

I am, Sir, yours faithfully,
Bolton-row, Mayfair, W., June 11th, 1883. CHARLES WEST.

"IS SCARLATINA EVOLVED FROM DIPHTHERIA?"

To the Editor of THE LANCET.

SIR,—As Dr. Clement Dukes's explanation of the facts noted by Dr. Meredith is insufficient to account for at least one of the classes of cases into which those involving the above question may be divided, I may be permitted to refer to a paper in vol. xvii. of St. Bartholomew's Hospital Reports, 1881, in which the subject is discussed and a case recorded. When a person contracts diphtheria after exposure to scarlatinal infection, Dr. Dukes assumes that he has been protected from the latter by a previous attack. When scarlatina follows upon exposure to diphtheria Dr. Dukes assumes the diphtheria patient to be a *fomes* of scarlet fever, protected from the propagation of the virus in his own body by the action of some previous attack of the disease, but capable of conveying it to others not so protected. With regard to the latter class of cases, to which those of Dr. Meredith belong, it is expressly stated in that gentleman's paper that no scarlet fever had occurred in the neighbourhood for many months and that he had taken care to ascertain the probable absence of its operation on his patients. In a brief search through a few English periodicals, I found but one case of this kind recorded, but there were several in which a membranous pharyngitis or diphtheria had followed the exposure to scarlatinal poison of persons who had never suffered from the latter disease. And the conclusion I arrived at from

these and from the cases under my own observation was, that a person who had never had scarlet fever might by exposure to its infection suffer from membranous pharyngitis in the entire absence of the ordinary symptoms of the fever.

I am, Sir, yours truly,
June 4th, 1883. DAVID A. KING.

To the Editor of THE LANCET.

SIR,—A short time since I was requested to visit a gentleman who was ill with throat affection. Upon examination it was found to be diphtheria of an acute character, the whole of the fauces being lined with the dense parchment-like membrane so characteristic of this malady. Iron with quinine and chlorate of potash were administered, a supporting diet ordered, with port wine, and the usual antiseptic appliances used. At the expiration of about a week the membrane became completely detached and the rash of scarlatina became manifest throughout the whole surface of the body. This passed through its usual course, followed by desquamation of the cuticle. The same treatment was continued throughout, and in due time the patient became convalescent, although the nervous system was for some period depressed from the influence of the poison that had been set up. The case was a severe one, the age being twenty and the health, in general, good. I have been induced to forward the above as, in last week's LANCET, the question was asked, "Is scarlatina evolved from diphtheria?"

I remain, Sir, yours truly,
SPENCER J. SMYTH, M.D., &c.
Forest Hill, S.E., June 2nd, 1883.

ON SUGAR-TESTING.

To the Editor of THE LANCET.

SIR,—Dr. Oliver's communication of last week on this subject induces me to mention some observations on the picrate of potash test for grape sugar made by Mr. Gibson, a friend who frequently works along with me, and myself.

That this test is affected by something in the urine other than grape sugar is evident from the following fact. When we mix eighty minims of a solution of glucose with thirty of liquor potassæ and ten of picric acid solution, the mixture is of a pale yellow colour, and if we allow it to stand for an hour or so it becomes a little deeper, but remains yellow. If it be boiled it assumes a reddish tinge, at 70° C, or it may be 50° C if the temperature be raised somewhat slowly. When we mix normal urine, on the other hand, with the test fluids in the same proportions, the mixture becomes instantly, or in a few seconds, red without the application of heat. In a minute or so the depth of colour may be such as to indicate one-eighth of a grain of sugar to the ounce, while in half an hour in the cold, or at once if raised to 50° C, it generally corresponds to a quarter of a grain to the ounce.

When experimenting on the so-called indican (Heller's uroxanthine) we incidentally noticed that urines containing much of this body, or bodies, reduced the alkaline picric test to a considerable extent, although they had no action on the copper test till the indican was decomposed by acids and oxidising agents. Horses' urine generally contains a considerable proportion of indican, and in five instances in which we examined it we found it to indicate half a grain to one grain and three-quarters to the ounce by the picrate test. In only one case was there a slight reaction with Fehling, and this was not that which showed the maximum of sugar by the other test. The specimen which gave one grain and three-quarters to the ounce indicated at 50° C. three-quarters of a grain to the ounce, and one-quarter of a grain in the cold. We always found the result obtained by the picrate of potash test to be in proportion to the depth of colour produced by boiling with hydrochloric acid, and subsequently treating with solution of hypochlorite of lime, that is apparently in proportion to the amount of indican present. In human urine containing a considerable proportion of indican, easily recognised by becoming of a deep blue on boiling with hydrochloric acid, and forming a characteristic copper-like scum on the surface after standing twenty-four hours, we have also found the colouration with the test to be such as frequently to indicate one grain and a half of sugar to the ounce when no result was obtained with Fehling. We have seen such urines produce