derive their supply from the chalk—the mortality from fever was less than in 1897, but we must expect on the rising of the springs after the late heavy rains that during the next three months there will be a corresponding rise in the fever death-rate. For instance, in the December quarter the death-rate

	Source of supply.	Death-rate from fever, Jan. 1st to Oct. 1st, 1898.	Death-rate from fever, Jan. 1st to Oct. 1st, 1897.
GREAT BRITAIN:—			
Belfast	Moor.	1667	955
Dublin	Mountain lake.	420	290
Norwich	Chalk.	197	182
Salford	Sandstone and moor.	190	210
Glasgow	Moor.	184	188
Liverpool	"	172	146
Birmingham... ..	Wells, red sandstone.	168	130
Sheffield	Moor.	160	182
Manchester	"	133	110
Hull	Chalk.	114	159
Portsmouth	"	112	185
Bradford... ..	Moor.	90	82
Leeds	"	89	94
Leicester... ..	Upland.	68	122
London	Chalk and river.	67	79
Brighton	Chalk.	66	123
Bristol	"	56	56
Croydon	"	24	75
FRANCE:—			
Havre	Chalk.	509	277
Rheims	"	270	137
Paris... ..	Well and river.	62	71
Lille	Chalk.	55	27
GERMANY:—			
Metz... ..	Chalk.	136	250
Cologne	River.	68	69
Hamburg	"	39	42
Berlin	Sand.	38	37
Nuremberg	River.	35	18
Dresden	"	24	22
Altona	"	18	52
Munich	"	12	55
Frankfort-on-Main	"	12	37
BELGIUM:—			
Malines	Shallow well.	440	351
rugues	"	433	200
amur	"	399	434
Brussels	Moor.	110	161
ntwerp... ..	River.	71	112
Liege	Limestone.	66	102
HOLLAND:—			
Rotterdam	Sand.	102	69
Amsterdam	"	82	18
The Hague	"	41	42
DENMARK:—			
Copenhagen	Sand.	56	45
SWEDEN:—			
Stockholm	Mountain.	75	41
Göthenburg	"	9	131
AUSTRIA:—			
Lenz... ..	Chalk.	385	290
Budapest	Wells and river.	168	132
Prague	Limestone.	159	202
Brunn	"	147	69
Vienna	River.	46	35

from fever in Croydon went up to 64 per 1,000,000, which is more than two and a half times the other three quarters. Water which has been exposed to air and light for a

considerable time and then efficiently filtered is improved in quality, consequently London, Paris, Berlin, Copenhagen, Cologne, Hamburg, Nuremberg, Dresden, Altona, and Vienna have had a very low fever death-rate. On the other hand in the limestone districts of Lenz, Rheims, Metz, Prague, and where the water is obtained from shallow wells, as in the highly cultivated districts about Malines, Bruges, and Namur, the mortality has been excessive owing to pollution of sub-soil water. Antwerp is a good illustration of a town whose supply which is derived from a highly polluted stream (a tributary of the Scheldt) has after treatment by passing through spongy iron and sand filters become a good wholesome water, with a corresponding low fever death-rate.

Great Britain cannot pride herself on being the leader of sanitary progress. Taking 100 per 1,000,000 living as a standard for fever mortality, I find that 13 out of the 22 towns were in excess, whilst on the Continent only 17 out of 51 towns exceeded that figure—a fact not creditable to the Health Department of the Government. In Germany sanitation has progressed by leaps and bounds, with the result of a marked improvement in the death-rate from preventable disease. The Imperial Government has not been hampered by any motives of vote-catching or consideration for the scruples of the conscientious objector.

The reckless manner in which the Local Government Board have in the past sanctioned sewage-farms and cemeteries upon permeable and water-bearing strata from which increasing populations are either at the present time or will in the near future draw their water-supply must inevitably tend to increase the severity of the constantly recurrent outbreaks of preventable disease. Every local authority or water company should be compelled by law to send a monthly chemical and bacteriological analysis of every source, if more than one, of their supply to the Local Government Board who should report the results annually to Parliament and also to the councils within their area of supply. Some sources of supply now in use would be condemned and preventable disease diminished.

I am, Sirs, your obedient servant,

Carshalton, Jan. 15th, 1899.

A. H. SMEE, L.C.C.

AN ALCOHOL BATH FOR BURNS.

To the Editors of THE LANCET.

SIRS,—Dr. Theodore Zangger's article in THE LANCET of Jan. 28th describing the use of rectified spirit as a lotion in certain inflammatory conditions where the skin is unbroken is of interest and, I think, of importance. Dr. Zangger's explanation of the benefit resulting is that it is due to a penetration of the skin by the alcohol vapour which is thus supposed to reach and destroy the organisms which are the cause of the localised inflammation. Whether alcohol either as liquid or vapour can destroy the vitality of a septic organism without at the same time also coagulating the protoplasm of the leucocyte or the proteids of the plasma in which it lies is to be very much doubted. One is inclined to attribute the benefit of such a dressing largely, if not entirely, to its frigorific effect. The author, moreover, makes a special point of the necessity for apertures in the protective covering of the dressing.

I have for some time entertained the belief, or rather the hope, that alcohol might have a more useful application in the treatment of burns. The idea suggested itself to me in connexion with a very trivial circumstance. Being in a small hill station in India I burnt the tip of my finger severely. Whisky was the only application at hand and immersing my finger in a vessel of it I was surprised to find a speedy relief from pain. The finger was kept in the spirit for an hour or so and next day the patch of burnt skin separated itself and the cure was complete.

The mortality from burns seems to be very much what it was ten years ago and there seems to have been no material change in methods of treatment, yet the infant who has been burnt or scalded remains a perennial spectacle at all our hospitals. There are certain considerations which make it appear that a more or less continuous bath of alcohol would be an appropriate treatment for a burn. Alcohol is a powerful germicide. We may expect that the suppuration following a severe burn would be kept within aseptic limits and sapræmia avoided. Alcohol coagulates the proteids of serous exudation and should therefore coat a burnt surface with a firm pellicle. It will also coagulate the protoplasm of exposed and injured nerve fibrils with the result that almost all the pain originating at the injured surface should be

abolished. The protoplasm of the exuberant granulations which characterise the healing of burns should be similarly coagulated. The absorption of alcohol into the circulation should be of great service in counteracting the shock which results from the injury. This absorption should become less and less as the protective film of coagulated proteids became denser.

Whether the alcohol bath might be of service in a cellulitis where sloughing has occurred, in a septic cellulitis after incisions have been made, or in a bad crush, say of the hand, where sepsis-bearing materials have been ground into the lacerated tissues, one would not like to venture a decided opinion. The continuous boracic bath for bad "smashes" of the hand and forearm adopted some years ago by Mr. Clutton has proved the means of saving many a money-earning digit. The utility of a bath of rectified spirit, pure or diluted one-quarter, one-third, or one-half, could be easily ascertained in such cases as burns of the hand and arm by the use of an ordinary arm bath. If any dressing at all be applied this might consist of fine linen wrapped lightly round the limb; the injured part should, however, have been previously immersed for some time in the alcohol. That the last state may not be worse than the first no fire or flame should be allowed in the room. The bath should be covered over as closely as possible to prevent the loss or deterioration of the spirit. This communication is, I much regret to say, decidedly theoretical in nature, but it is made in the hope that surgeons who have the opportunities will test the value of any suggestions which it may contain.

I am, Sirs, yours faithfully,

WILFRED WATKINS-PITCHFORD, F.R.C.S. Eng.

Edgbaston, Jan. 30th, 1899.

"IRRIGATION IN SUPPURATIVE OTITIS MEDIA."

To the Editors of THE LANCET.

SIRS,—I am pleased to see that Dr. Milligan recognises the importance of providing free drainage through the membrana tympani. In the absence of actual bone disease—and by bone disease I do not mean infection of the mastoid cells—the enlargement of a perforation is a more rational proceeding than to drill the bone. In my observation irrigation does not lead to a sodden condition of the parts nor does it favour the growth of granulations, but if it did I should disregard such temporary drawbacks if I were still able to disinfect the middle-ear and adjoining cavities.

I should not have troubled you with my remarks had I not been under the impression that even specialists were often unsuccessful in their treatment of this disease—an impression that is shared by many medical men. How often are patients told by their medical attendant that there is no cure for this disease. When Professor Macewen challenged the Section of Otology at the 1895 meeting of the British Medical Association held in London with their failure in this disease no one, to my surprise, accepted the challenge and since then the mastoid operation has been in favour in some quarters. But if the exponents of the dry treatment can cure these cases let them join with me in protesting against unnecessary mutilation. I have not yet seen any record of cases that encourages one to believe in dry treatment by itself, and though the opinion of Dr. Goldstein and Dr. Milligan must carry weight I feel that whenever our object is to cure poisoned tissues we shall be wise to encourage free discharge by hot antiseptic douches or irrigation. The results of irrigation in this disease I have proved to be most satisfactory and, after all, one must judge of a system by its results. If medical men generally would give attention to these cases extension of disease to the bone would become more and more rare and the only reasonable excuse for the mastoid operation would disappear.

I am, Sirs, yours faithfully,

Jan. 28th, 1899.

F. FAULDER WHITE.

STOCKPORT AND DISTRICT MEDICAL SOCIETY AND THE ST. JOHN AMBULANCE ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—We enclose you copies of three resolutions passed unanimously by the Stockport and District Medical Society on Jan. 25th and ask you to insert them in your next issue. These resolutions were brought forward owing to a charge of

£5 5s. being made by the local centre for the examination, &c., of classes under the St. John Ambulance Association whereas the head office charged only £1 13s. 6d. and £1 14s. for the same examinations, and as no explanation could be given of the reason of the extra charge by the head office or would be given by the local centre, and as the public discussion of this matter was damaging to an association which has for its object the welfare of the public generally, the members of this society, many of whom are lecturers, deemed it a subject worthy of their consideration and hoped that by passing these resolutions they might bring about a reorganisation of the local centre and a restoration of public confidence in the work of the St. John Ambulance Association here.

We are, Sirs, yours faithfully,

E. A. GOULDEN, M.B. Vict.,

HENRY E. SMEETH, M.D. Dub.,

} Hon. Secs.

Jan. 26th, 1899.

[RESOLUTIONS.]

That in the opinion of this society—

1. The charges made by the local centre of the St. John Ambulance Association for providing examiners for First Aid and other classes should not exceed those of the head office in London for exactly the same work.

2. The Stockport and District Medical Society should be represented upon the committee of the local centre by at least three of its members, nominated by the society.

3. That copies of these resolutions be sent to Lord Egerton of Tatton, President of the Stockport centre; the local honorary secretary; the chief secretary of the St. John Ambulance Association, St. John's-gate, London; His Worship the Mayor of Stockport; the Chairman of the Watch Committee; the local press; the medical journals; the Stockport Board of Guardians; and A. H. Sykes, Esq., J.P.

THE PROPOSED SCHOOL OF TROPICAL MEDICINE.

To the Editors of THE LANCET.

SIRS,—I wish to add my testimony to the value of the opportunities afforded by the Albert Docks Hospital for the study of diseases peculiar to the tropics. Through the courtesy of Dr. Manson I have paid several visits to the wards and clinical laboratory of this institution and have been shown not only cases of the tropical eye lesions in which I am specially interested but also various forms of malarial fever, cases of beri-beri, hepatic abscess, dysentery, and guinea-worm. On each occasion I noticed several gentlemen occupied in preparing slides of malarial blood, studying the movements of the amœba coli in hepatic pus, &c., in the little clinical laboratory under Dr. Manson's guidance. The conversion of this hospital into a teaching institution will, I am convinced, supply a long-felt want by equipping civil medical practitioners proceeding to our colonies and dependencies with the same armamentarium of practical knowledge so long furnished to army medical officers at Netley. I believe a great School of Tropical Medicine—second only to the splendid Army School at Netley of which we are all so justly proud—is in process of formation at the Albert Docks; and I feel sure none will congratulate the members of the Colonial Medical Service more heartily on the fact than their *confrères* of the Royal Army Medical Corps. I trust that the last has been heard of the opposition of the medical staff of the Seamen's Hospital, Greenwich, to the scheme, and I for one have not abandoned the hope that Dr. John Anderson's unfailing tact, wide experience of tropical disease, and tried capacity for communicating his knowledge to others may yet be devoted to the organisation and development of the new school.

I am, Sirs, yours faithfully,

M. T. YARR, Major R.A.M.C.

Marlborough-mansions, S.W., Jan. 28th, 1899.

OUR BOARD SCHOOLS.

To the Editors of THE LANCET.

SIRS,—The preliminary financial statement which Sir Charles Elliott, the chairman of the Finance Committee of the London School Board, made not very long ago was not by any means exhilarating reading for the London ratepayer. The expenditure has been steadily increasing and threatens to go up by leaps and bounds unless the long-suffering ratepayer interposes some check and makes it plainly manifest that the limits of his forbearance have been reached. Years ago when it was first of all determined to introduce compulsory education into this country, with its system of school boards and board schools, the scheme was