

means his employers. We notice the statement only to refute the charge of designing to injure anyone connected with Saltburn. Our object in calling attention to the "insalubrity" of Saltburn was to incite its authorities to improve the sanitary condition of the place while there is yet time and opportunity, that they may be saved from one of those sweeping epidemics which neglect of sanitary measures infallibly produces, and which would most seriously compromise the character of their beautiful "health-resort."

We are content to take Mr. MacNay's own division of the subject, and will proceed to consider it *seriatim*. There is no denial that the sole supply of water is from the brook or "burn" which runs into the sea at this point. An analysis of the water made in 1864, even though it be confirmed in 1866, can hardly be satisfactory to the drinkers of it who are aware of the following facts, which we have ascertained to be of undoubted authenticity. Just above the spot where the supply of water is taken from the brook are situated the kennel of the Cleveland hounds and the stables of the huntsman's stud. If there is not actually a drain from these leading into the brook, it is absolutely impossible, from the position of the kennel on the bank of the stream, and from the physical conformation of the locality, for the liquid manure of the establishment to find its way in any other direction than towards the stream. A short distance above this there is an undoubted drain leading from Rushpool Hall, and conveying the refuse of that establishment, in part at least, into the brook. Again, a quarter of a mile higher up stands Marske Mill, placed on the stream, with adjacent cow-yards, pigstyes, and stables, and a privy which is within a couple of feet of the water, and from which the ordure passes directly into it. Two miles up the stream are two villages, and five miles distant is the town of Guisbro', and these, one and all, assist in polluting the stream from which the inhabitants of Saltburn take their supply of water.

Mr. MacNay allows that the position of Saltburn "would render defective drainage highly culpable," and proceeds to speak of the size of the drain-pipes. Granted that the pipes are what they should be, the question still remains unanswered as to the outfall of the main sewers. We find that the outlet of the main sewers is blocked by a "filter-bed," which leaves a stream of muddy sewage of an undoubtedly excrementitious character to run on into the sea. The sewer is not carried below low-water mark, but pours its contents into a little stream at the foot of the cliffs, which permeates the extensive sands, and has to traverse a great breadth of them at low-water, when the stench on hot days becomes intolerable. We give the authorities credit for attempting to ventilate their sewers, but one four-inch pipe at the head of the system is insufficient ventilation for extensive sewers of fifteen inches diameter.

We are ready to give the Saltburn Company every praise for the manner in which they have laid out the ornamental "glen" which forms a part of their property; but with regard to the building of houses we cannot but regret, notwithstanding the secretary's views, that long rows of houses are being built, which, according to his own statement, have but twelve feet of back road intervening, and which there is no denying do in many cases possess "cellar-kitchens"—i. e., kitchens the roofs of which are on the level of, or but little above, the pavement.

With regard to the prevalence of fever, Mr. MacNay triumphantly quotes the Registrar's return, and informs us that in 1865 there were but seven deaths (two from diarrhoea), and in 1866 to the end of August, seven deaths (one from typhoid fever and one from diarrhoea). We are happy to learn that the death-rate has been so low, but this is no proof that disease has not prevailed, though fortunately not of a fatal type. From information other than that which Mr. MacNay has obtained, we know that typhoid fever *has* prevailed to a considerable extent during the last two years, and from the concurrent testimony of several medical practitioners we state advisedly that

over thirty cases, some of them severe, have occurred. The laudatory quotations given by Mr. MacNay were, we believe, written two years since. Possibly the writer may see reason now to alter his views, and we would strongly advise the Company, in its own interests, to be guided by medical opinion in matters which concern the health of the community. If, like Brighton and other places, Saltburn will at once put its house in order, there need be no fear of lack of health and prosperity.

## Correspondence.

"Audi alteram partem."

### SALTBURN - BY - THE - SEA.

To the Editor of THE LANCET.

SIR,—Under this title, in your number of September 29th, you inserted an anonymous article respecting Saltburn-by-the-Sea, and in your issue of October 13th I see a paper purporting to be the sentiments of seventy-eight residents at Saltburn, respecting the water, &c. I say *purporting*, because if you could know as well as I do the origin of that document, and the pretexts used in canvassing for signatures, you would attach very little value to it. I might reasonably take objection to the publishing of these articles without name or without notice to those whom they are designed to injure; but as every truthful representation of the place can but lead to its prosperity, I will only regret the appearance of the articles in question, so far as my reply to them may not in all cases be read by those who have believed the allegations, but knowing that your pages are equally open to this reply as to the statements in question, to which I proceed to take objection.

The two articles being substantially to the same effect, I shall treat them as one, their origin being one under a double guise. The allegations appear to be classed under "*water-supply, defective drainage, narrow streets, prevalence of fever, and the ravages of disease.*"

Ist, as to water, they say: "The water we have to use is quite unsuitable for domestic purposes." In reply to this I give you the following analysis and remarks from probably the highest authority in the north of England. The samples upon which these reports are made were taken from the Zetland Hotel when the water was in its usual or normal state, and I shall be only too glad to hear of any other competent party repeating the process. I may add that the water consistent with this analysis is almost invariably brilliant in the glass, and agreeable to drink.

"College of Medicine, Newcastle-on-Tyne.  
Assay Office and Laboratory,  
28th November, 1864.

*Certificate of analysis of water taken from the cistern at the  
Zetland Hotel, Saltburn-by-the-Sea.*

Contents of imperial gallon.	Grains.
Chloride of sodium ... ..	4.87
Sulphate of soda ... ..	1.46
Sulphate of lime ... ..	7.75
Carbonate of lime ... ..	7.60
Carbonate of magnesia... ..	6.65
Silica ... ..	0.90
Organic matter ... ..	1.33
	30.56

"The water contains neither ammonia nor nitrates, and the organic matter is of vegetable origin. The quantity of solid matter in the gallon is below the average, and we consider this water well adapted for domestic purposes.

(Signed) "RICHARDSON AND BROWELL."

"17, Framlington-place, Newcastle-on-Tyne,  
Nov. 23th, 1864.

"DEAR SIR,—I have the pleasure to enclose certificate of analysis of the water from Saltburn Hotel, which I am glad to say is so well suited for the purposes of the hotel. It is not a soft water, but is an excellent drinking water.

I am, yours very truly,

(Signed) "THOMAS RICHARDSON.

"Thomas MacNay, Esq."

Subsequently, on examining a sample of water from the same source, they reported as follows:—

"We have also examined the water from the Zetland Hotel, and need only remark that it continues of good quality.

(Signed) "RICHARDSON AND MARRECO.

"June 11th, 1866."

"*Narrow streets.*"—The streets and drives are of widths varying from fifty to eighty feet wide, with the exception of two short cross streets not exceeding eight cottages in length, and in every case the houses have a through back road of not less than twelve feet; but these dimensions give no idea of the prodigality with which space is left open to the public, and that where land is highly valuable, not "*valueless*," as stated in your article.

"*Drainage.*"—The position of Saltburn-by-the-Sea, upon a bold headland 150 feet above the beach on the one side, and a wooded ravine up which the spring-tides flow on the other, would render defective drainage highly culpable. What is the fact? The whole area set out for building-ground, whether already built upon or not, is fully sewered to the depth of from nine to twelve feet with glazed pipes. The main sewers are fifteen inches in diameter. This size is greatly in excess of present requirements. In no case is the fall less than one in seventy, usually a great deal more. Advantage is taken of a lofty tower for a pipe to carry off the gases, and there is ample opportunity of flushing the sewers whenever required, the water-supply being on the town constantly; and I may add incidentally that sea water is regularly pumped up to the hotel, and may be laid on to other houses as required. The owners of houses having drains acting with the main sewers are required to have them properly trapped.

"*Prevalence of fever and ravages of disease.*"—How far the statements have sufficiently foreshadowed the figures which I am about to produce I will not pretend to say; nevertheless I give them as I find them for the years 1865 and 1866, being the periods respecting which these charges are made.

"Register: Saltburn, situated in the district of Marske."—I find, in all, that seven deaths were registered for the year 1865, as follows:—Male, one day old; convulsions. Male, four months; diarrhoea. Male, five months; croup. Female, sixty-four years; heart-disease and diarrhoea. Male, four months; chest affection. Female, five months; diarrhoea. Female, fifty-four years; visitation of God. In 1866, to the 31st day of August (being the last entry), seven deaths: namely—Female, five years old; typhoid fever. Female, five weeks; congestion of lungs. Female, ten weeks; marasmus. Male, ten months; disease of brain and symptoms of effusion. Male, fifty-six years; heart-disease. Male, seventy-five years; apoplexy. Male, one month; diarrhoea.

Now, Sir, you will fairly ask, What is the number of the population to which these returns refer? The place having attracted attention only since 1861, I have no census returns to give you. It is, however, not so large but that, by taking the number of houses and the character of their occupation, I can make a very approximate estimate; and this I take for the average of 1865 at 500, and for 1866 at 700, with probably a maximum during the bathing season in the latter year of about 1400. Everyone can read these figures as well as I can, and they will come to their own conclusions how far they indicate the "*ravages of disease*" or a remarkable seaside "*insalubrity*." No doubt one case of death from fever has taken place, and three infants, in the two years, appear to have died from diarrhoea whilst yet at their mothers' breasts; and I presume that even those who find it so difficult to make a case against the purity of the water will easily venture to urge that it is chargeable with these deaths.

I cannot better conclude than by giving you the following extract from the published opinion of a medical resident:—"It must be granted that Saltburn is a place of more than ordinary excellence as a seaside resort. It has already become famous even at this early stage of its career, and the more it is known the more it is liked. The voices of those who have visited it are unanimous in its praise; and it requires only time and further experience to cause it to be frequented in the winter as well as in the summer."

The same authority states: "This town in short, although quite in its infancy, is already furnished with all the common requirements of civilized life, and, possessing as it does natural qualities and characteristics of so unusual an order, must quickly grow into a vigorous and lasting maturity. Its natural advantages are such as to make it at once a most attractive and favourite resort. The foresight that has desecrated so favoured a spot, and the enterprise that has seized upon it and

brought it to its present condition, will still be engaged in developing and expanding its resources; and there can be very little doubt that in a short time hence Saltburn-by-the-Sea is destined to become one of the most celebrated marine watering-places in the British Isles."

I am, Sir, your obedient servant,

J. E. MACNAY.

For the Chairman and Committee of the Saltburn Improvement Company.  
Darlington, Oct. 17th, 1866.

To the Editor of THE LANCET.

SIR,—You have been making some remarks lately on the sanitary state of Saltburn-by-the-Sea. I have been a visitor there for some weeks past, and can testify from personal observation to the correctness of the remarks made by you, and to the truthfulness of the memorial which you have published. I may state also that I have accidentally come across the answer to that memorial. I fear that if the investigation promised in that answer be carried on in the spirit in which it is too evident the answer has been written, it will not be of much use.

The Saltburn Improvement Company have already done much to set visitors against the place, and seem determined to go on as they have begun. They are, in my opinion, doing their best to ruin what ought to be, and might be, one of the most, if not the most, beautiful seaside places in England.

I can state also that other visitors to whom I have spoken on the subject have entirely coincided with me in this opinion.

I am, Sir, your obedient servant,

T. CARTERET MAULE,

Saltburn-by-the-Sea, Oct. 15th, 1866.

Rector of Cheam, Surrey.

## VOLUNTEER SURGEONS IN BELGIUM.

To the Editor of THE LANCET.

SIR,—I joined the Volunteer movement from its commencement in 1859, and received my commission as battalion surgeon in December of that year. Tempted by the invitation of the Belgians, I arrived in their capital on the morning of the 12th instant, and at once reported myself, through our divisional commander, to Colonel Loyd Lindsay, as ready for duty. I attended each day such parades as were ordered, and fully expected to be included in those special invitations which other officers of my rank received. Judge, then, of my surprise on finding that not only lieutenant-colonels and majors were invited to the palace at Laeken, but, at a second dinner given by the King, even captains had the honour of dining with his Majesty; while, with the exception of Surgeon Ward, who (from early application, I presume, certainly not from seniority) had been nominated to the staff, no medical officer was considered worthy of the distinction.

If this, Sir, is a recognition of a medical officer's position in the service, then, I think, the sooner he resigns his commission the better.

In thus making public my complaint, I would not be thought to reflect for one moment on the hospitality of the King of the Belgians, but rather to call attention to Colonel Lindsay's neglect in failing to secure equality of privilege for equality of rank to those who attended the late festivities at Brussels.

I am, Sir, yours obediently,

JOHN T. GRIFFITH, M.D., F.R.C.S.,

Battalion Surgeon 1st Surrey Rifles.

Talfourd House, Camberwell, Oct. 20th, 1866.

\*\* Dr. Griffith certainly has just ground for complaint, and has shown a commendable spirit in vindicating the rights of Volunteer surgeons. When will those rights be properly acknowledged? The first Napoleon characterised the services of the celebrated Larrey in the spirit and with the acumen of a great general. We cannot expect his example to be followed by those who are totally unacquainted with the exigencies and disasters of real warfare. Common civility might, however, have dictated to the Commander-in-Chief of a Volunteer army at least a small appreciation of the non-combatant arm of his forces.

THE Hospital for Sick Children, Kingsholm, Gloucester, is nearly completed, and is to be opened at Easter. The following gentlemen constitute the medical staff:—Dr. T. Evans, consulting-physician; Dr. B. Washbourn; Mr. Caleb Barrett, and Mr. Ryves William Graves.