The causes of six, or more than 4 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES

ROYAL NAVAL VOLUNTEER RESERVE.

THE undermentioned gentlemen have been appointed surgeons, viz.:—Marcus Sinclair Paterson and Reginald John Edward Hanson (dated Dec. 23rd, 1903).

2ND LIFE GUARDS.

Surgeon-Captain J. H. Power, from Royal Horse Guards, to be Surgeon-Major (dated Dec. 21st, 1903).

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel J. F. Williamson, C M G., to be Colonel to complete establishment (dated Dec. 20th, 1903).

Major H. Carr and Lieutenant M. C. Beatty are nominated for service in the Bombay Command, vice Lieutenant-Colonel Birrell and Captain MacDougall, whose tour has expired. Captain J. M. Outhbert, attached to Agra Station Hospital, is ordered to assume the medical charge of the 17th Infantry (the Loyal Regiment). Lieutenant E. S. Worthington, attached to Agra Station Hospital, is ordered to Jhansi for duty.

INDIAN MEDICAL SERVICE.

The King has approved of the following promotions made by the Government of India:—Majors to be Lieutenant-Colonels: *Bengal Establishment*: James John Pratt and Robert Shore. *Madras Establishment*: William Burney Bannermann and Henry Thomson. *Bombay Establishment*: Carrapiet John Sarkies.

The King has also approved of the retirement from the service of the undermentioned officers: Lieutenant-Colonel Henry Augustus Fitzroy Nailer (dated Oct. 20th, 1903), Lieutenant-Colonel William Keith Hatch (dated Nov. 15th, 1903), and Lieutenant-Colonel Daniel Francis Barry (dated Dec. 16th, 1903).

MEDICINE AND SANITATION IN MOROCCO.

We learn from recent articles in the *Archives de Médecine Navale* that Dr. Raynaud, the chief sanitary official in Algeria, has embodied the observations that he made during several visits to Morocco in an octavo volume of 205 pages, with plates and a map, which has been published under the auspices of the Governor-General of Algeria. The work is divided into three parts which are devoted respectively to hygiene, medicine, and climatology. The first part comprises four chapters under the following headings: 1. General Hygiene, including ethnology, slavery, marriage, burial, clothing, cosmetics, food, dwellings, physical exercises, and monastic establishments. 2. Public Hygiene, including mosques, baths, markets, conservancy, slaughter-houses, sewers, drinking water, cemeteries, prisons, and pilgrimages (Moslem to Mecca and Christian to Jerusalem). 3. Public Assistance, including hospitals and benevolent institutions (in Morocco this branch of civil polity is entirely in the hands of the foreign population). 4. Causes of Depopulation, including famine, epidemics, alcohol, tobacco, *kif* (Indian hemp), opium, and aphrodisiacs. The second part of Dr. Raynaud's book contains seven chapters on the following subjects: 1. Present State of Medicine in Morocco, including medical schools and curricula, text-books, diplomas, *tobibs*, *santons*, talismans and amulets, precious stones and their medicinal properties, and general notions regarding the science of medicine. 2. External Pathology, including surgical instruments, anaesthesia, hypnosis, minor surgery, ophthalmology, and obstetrics. 3. Internal Pathology. 4. Syphilis and Cutaneous Diseases. 5. Therapeutics, including organo-therapy and native drugs. 6. Veterinary Surgery. 7. Arab Medicine.

THE CARE OF SOLDIERS' TEETH.

Mr. A. F. A. Howe, L.D.S.R.C.S., who read a paper before the October meeting of the Southern Counties Branch of the British Dental Association on the Dental Requirements of the Army, has had his observations reprinted in pamphlet form. It contains, perhaps, nothing that is new, but it is nevertheless a powerful plea for a more adequate

recognition of the services of the dentist in the army. The old policy of doing nothing for a soldier's teeth till they ache and then extracting them is not an economical procedure. During the late war reserve men were rejected in consequence of loss of teeth and at the seat of war many men were temporarily disabled and many had to be invalided home in consequence of some defect of the teeth. Then again recruits are rejected who might be saved to the army if the services of a dentist were called in. In the post office and prison service a candidate otherwise fit is accepted provisionally subject to his or her teeth being made serviceable, and the same rule ought to be made with regard to recruits, though in this case the expenses would have to be borne by the army. The matter is one of very great importance and should receive greater attention than has hitherto been given to it.

THE ROYAL NAVAL HOSPITAL, PLYMOUTH.

The Civil Lord of the Admiralty, who is on a visit of inspection at Devonport, on Dec. 17th, 1903, paid a visit to the Royal Naval Hospital where he was received by Inspector-General T. Bolster, Deputy Inspector-General T. D. Gimlette, Fleet-Surgeon W. Eames, and Fleet-Surgeon D. J. P. McNabb. Various departments were inspected, including the Trafalgar block, in which temporary arrangements were made a short time ago for the accommodation of probationer sick-berth stewards and where, it is understood, extensive alterations will be carried out to facilitate the efficient training of probationers. The lunatic ward and general wards were also visited. A scheme for renovating the greater part of the hospital is now being carried out.

DEATHS IN THE SERVICES.

Surgeon-Colonel Sir George Thomson, K.C.B., on Dec. 23rd, in his sixty-first year. He entered the Indian Medical Service in 1865 and was attached to the 4th Sikhs and 1st Punjab Cavalry. In 1878-79 he served in the Afghan war (mentioned in despatches), was principal medical officer with the Chitral Relief Force on the line of communications in 1895 (mentioned in despatches, C.B.) and in 1897-98 he acted as principal medical officer of the Tirah Expeditionary Force (mentioned in despatches and K.C.B.).

Correspondence.

"Audi alteram partem."

THE FEES AND EXPENSES OF PUBLIC VACCINATORS IN RURAL DISTRICTS.

To the Editors of THE LANCET.

SIRS.—The article by your correspondent on vaccination fees¹ is in no way too strong. I have worked out the figures of payment in my own district for the last four years and they are as follow:—

Year.	Number of vaccinations per year.	Number of visits paid to secure vaccination.	Mileage to secure vaccination.	Average fee per visit.	Average fee per mile.
1900 ...	70	200	800	2s. 0d.	6d.
1901 ...	54	150	600	2s. 4d.	7d.
1902 ...	54	180	720	1s. 9½d.	5½d.
1903 (three quarters)	45	150	600	2s. 2¾d.	6¾d.

The fees paid to me are the minimum fixed by the Local Government Board—viz., 1s. each child who is not vaccinated by the end of the fourth month and 5s. for each successful vaccination. When we consider that a large proportion of my cases lie many miles from my home, that they must be visited at least twice and many of them more than that, and that the visits must be made by appointment, it will appear how ridiculously inadequate the fees are. The Local Government Board is, I believe, aware of this hardship but it makes no attempt to protect the interests of the public vaccinator unless the public vaccinator appeals to

¹ THE LANCET, Dec. 19th, 1903, p. 1759.

it on the establishment of a "contract" with his board of guardians. I am, Sirs, yours faithfully.
Rugby, Dec. 21st, 1903. J. HUTCHINSON.

To the Editors of THE LANCET.

SIRS,—The article on this subject from a correspondent in THE LANCET of Dec. 19th puts the matter very clearly, but there is one point not mentioned by him, or in your annotation in the same issue, which I think in fairness to public vaccinators ought to have received some comment. It is this. Persons (mostly young women) get vaccinated at a surgery and instead of coming for inspection at the appointed time, either do not come at all or else send, generally late in the evening, to say that they are ill and want to be seen at once. Of course, such messages have to be attended to only to find the healthy reaction usual eight to ten days after inoculation and the sole cause of complaint. In the rush of work those who had not returned for inspection could not always be visited and in some instances, owing to wrong addresses having been given, they could not be found. These vaccinations and visits are not paid for.

I once had to attend a patient right through a sharp attack of pneumonia contracted six days after I had vaccinated. When I sent my account it was promptly brought back by the father who told me more plainly than politely that he would not pay; that as I had put the disease in his child it was my duty to get it out; and that if he had thought the illness due to anything else other than the vaccination I should have been the last person he would have had for a medical attendant. As the vaccination had not taken I got nothing except a lot of trouble, expense, and two night calls, to say nothing of the abuse.

I am, Sirs, yours faithfully,
Dec. 21st, 1903. A SEMI-RURAL P. V.

To the Editors of THE LANCET.

SIRS,—Public vaccinators must one and all be grateful to your correspondent who in THE LANCET of Dec. 19th has given such a telling array of facts and figures against the menaced reduction in the present hardly enough earned fees for public vaccination. That the recent "big bills" which guardians have been called upon to pay have been entirely due to revaccinations necessitated by the small-pox scare is strikingly shown by the following figures from a certain union :—

Year.	Primary vaccinations.	Revaccinations.
1900	1018	0
1901	964	1
1902	1028	55
1903	1089	3794

At the present time there are practically no revaccinations and the average of primary vaccinations continues pretty much as it was during the previous four years, so that while the revaccinations have risen from zero to 3794 and have again sunk to zero the primary vaccinations have maintained their average. To base a claim for reduction of the fee for primary vaccination upon the altogether abnormal and temporary increase of the numbers of revaccinations would therefore be most unjust. The two classes of cases are upon an entirely different footing, as the following will show :—

Primary Vaccinations.	Revaccinations.
1. The parent must be notified of intention to visit.	1. No notification required.
2. The patient must be vaccinated and inspected at home.	2. The patient may be vaccinated at surgery.
3. Patients must be vaccinated upon day of notification and between the hours of 9 A.M. and 4 P.M.	3. May be done any day and at any time.
4. Must be certified.	4. No certificate required.
5. Cases occur singly as a rule and often far apart.	5. Often occur in groups and close together.

Comparisons are sometimes made between the fees of the private practitioner and those of the public vaccinator, but it is often forgotten that the work entailed upon each is altogether different. Here are a few of the differences :—

Private Practitioner.	Public Vaccinator.
1. Has no register to keep.	1. Must keep strict record of every case in register of 16 columns for each case.

2. Has no official clerical work.	2. Has all sorts of "forms," "notices," "returns," and statistics to make up.
3. Has no unclaimable work. Can charge for every visit, for all medicines, &c.	3. Has a great deal of unremunerative work, such as fruitless visits, unsuccessful cases, postponement certificates, after-attendance upon cases, supply of dressings, supply of medicines, &c.
4. Can vaccinate and inspect at surgery at any time.	4. Must vaccinate and inspect all primary vaccinations at their homes between 9 A.M. and 4 P.M.
5. Is not responsible for certification of case.	5. Is responsible for certification.
6. Is under no compulsion <i>re</i> asepsis and after-treatment, or as regards number of marks.	6. Is under compulsion <i>re</i> all of these.
7. Is not under Government inspection.	7. Is under Government inspection.

It is also contended that the vaccination work of the public vaccinator is more efficiently done than that of the private practitioner, and it is a well-known fact that the great majority of "insusceptible" certificates are filled up by the latter.

Another point which ought to be borne in mind is the unpopularity of the work of the public vaccinator and the undoubted loss of practice that is involved in the conscientious performance of his public duty and the vast amount of time that this takes up—time, too, which he can ill spare from his ordinary visiting work. The amount of the latter, in consequence of his inability to attend to it and the unpopularity of his vaccination work, he soon finds diminishing. I therefore hold that any reduction in the present minimum scale of fees would be unjustifiable.

I am, Sirs, yours faithfully,
Dec. 21st, 1903. DELTA.

THE LUNG REFLEX OF ABRAMS.

To the Editors of THE LANCET.

SIRS,—In a former letter (Nov. 7th, p. 1322) I endeavoured to show that pulmonary suction or "tension" (which is much the same thing) depends essentially upon the action of the inspiratory muscles. Dr. Auld in his reply (Nov. 21st, p. 1462) adversely criticises my conclusion. While admitting that the muscles of inspiration take part in the initial establishment of pulmonary tension soon after birth, he denies the action of these muscles in maintaining it throughout life; he denies, to use his own words, "that such action is thereafter maintained and perpetuated to a similar purpose" because "the conditions are reversed and the inspiratory muscles instead of endeavouring to establish a pulmonary suction are in reality directed rather against it." I can put no other interpretation upon these words than that Dr. Auld at the time he wrote them meant to imply that the inspiratory muscles, once pulmonary suction is fairly established, do not contribute to the maintenance of what we may call the normal average suction, and that he had overlooked the fact which I pointed out in my next letter (Nov. 28th, p. 1531)—namely, that even in ordinary quiet breathing the effect of the action of the inspiratory muscles is to make the mean size of the chest, and therefore pulmonary suction, greater than they are when breathing ceases in expiration and consequently that these muscles take a life-long, *moment by moment*, part in the maintenance of normal average suction. Now how does Dr. Auld meet this argument in his last letter (Dec. 5th, p. 1614)? He is surprised that I should "deem it necessary to insist on such an elementary fact as that the inspiratory muscles augment pulmonary suction." The elementary fact I insisted on was the fact, overlooked by Dr. Auld, that so long as breathing lasts the mean of the chest is greater than when the inspiratory muscles cease to act and that therefore the *e* muscles constitute a constant factor in the maintenance of normal suction.

Dr. Auld proceeds to repeat his statements to the effect (1) that after the initial establishment of pulmonary suction (or tension) the inspiratory muscles are "directed against this resistance," whereas (2) this is not the case during the initial stretching of the child's lungs. I submit, Sirs, that the first of these propositions is irrelevant and that the second is untrue. 1. Pulmonary tension cannot exist except by the action of forces "directed against" it. It is impossible for the lungs to be stretched by any other means. How, I would ask, can Dr. Auld use this elemental fact to