

PUBLIC HEALTH

AND POOR-LAW MEDICAL SERVICES.

THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

SIR,—Dr. Whitelegge reminds me of that ancient warrior (I forget his name and nation) who maintained the formidable appearance of his army by propping up his dead men with stakes or spears at their back. Again and again have I shown the unfairness of treating the single and dual systems of notification as if they were on an equal footing; yet Dr. Whitelegge persists in ignoring the fundamental differences which divide them.¹ Again and again have I pointed out that the population of Group III has been increasingly under the influence of the dual system without deriving any corresponding benefit, but the reverse; yet Dr. Whitelegge accuses me of passing over in silence the objection he raised to this group, and intimates that I have made notification responsible for high mortality in years preceding its introduction.

By reference to Table C of my recent statistics, published in the JOURNAL of March 23rd, it will be seen that the fourteen towns of Group III, in the first four years of the period, 1877-87, that is, when only a few of them were under the dual system, had an average zymotic death-rate which exceeded that of Group I by only 40 per million; but in the last four years of the period, as the influence of the dual system upon Group III became complete, the same fourteen towns had an average zymotic death-rate exceeding that of Group I, by 290 per million. This state of things reached its climax in 1887, when, notwithstanding the high death-rate from small-pox in Sheffield, which thus greatly handicapped Group I, the towns which were under the dual system, actually lost 206 per million more persons by notifiable diseases than died of the same diseases in the towns under no system. This is the more remarkable when we bear in mind that at least six of the eleven towns in Group I are ports, subject more immediately to the incursion of undeveloped infectious diseases from abroad; whilst Group III, out of fourteen towns counts only five ports. And it is still more remarkable, when we further bear in mind that Group I is far more populous, and far more densely populated, than Group III. For not only does Group I contain three times as many people as Group III, but it contains them in an area little more than twice the size. In 1881, Group III had on the average less than 27 persons to an acre, whilst Group I had more than 40.

Dr. Whitelegge is mistaken in supposing that I did not (for the purposes of argument) accept his percentages as to scarlet fever in the twenty towns, taken separately. He could not expect me to accept his group percentages, involving as they did an evident

error, which he himself afterwards corrected. Nor should I have considered it requisite to deal with them, after pointing out that the favourable appearance, exhibited on the side of notification, was due to the admixture of towns under the single system (which I acknowledge to work well).

Moreover, the two epochs which Dr. Whitelegge contrasts, 1875-81 and 1882-88, are separated by a quite arbitrary partition. He only deals with seven dual-notification towns, and at the beginning of 1882 three of these were as yet (and for some time) under no system of notification. The case of Sunderland, which Dr. Whitelegge makes much of, Dr. Mumby had the grace to leave out of account, as having been under the system too short a time; but if after having had a high death-rate under no system of notification, Sunderland maintain its low death-rate under the dual system, the fact will be worth recording as the exception which proves the rule.

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 1,000 of the population, in the latter period as compared with the former. In accordance with this view, the accompanying table takes all those dual notification towns (except Sunderland) for which the Registrar-General gives the subdivided death-rates in the years anterior to the introduction of the dual system, and after exhibiting their gains and losses in 1881-86 as contrasted with 1871-76, further compares them with certain towns of about equal aggregate population, which have all along had no system of notification.

The four non-notification towns have on the average a larger and a denser population than the six dual notification towns, so that no small advantage is given to the latter. Yet, strange to say, the proportionate saving of life in regard to notifiable diseases has been greatest where they have not been notified, having been 1.63, as against 1.50 per 1,000.

Any superiority enjoyed by the dual notification towns, from a reduction in the death-rate due to zymotic diseases, has been in regard to those which are non-notifiable. This has been such as to render the saving of life in regard to zymotic diseases generally precisely equal in the two sub-groups of towns; but it is obvious that an investigation of only partial extent, and selecting some of the worst towns under no system of notification, does not in the least affect the results previously obtained in the more extensive inquiry.—I am, etc.,

D. BIDDLE.

Kingston-on-Thames, April 13th.

Table showing the Annual Saving of Life per 1,000 of the Population by Diminution of Zymotic Diseases in six large Towns which have come under the Dual System of Notification, and in four large Towns (of approximately equal aggregate Population) which have all along been under no System of Notification; the Saving of Life being indicated by the Difference between the average Death-rates in the six Years 1881-86 and those respectively in the similar six Years of the previous Decade, 1871-76 (when Notification was as yet nowhere enforced). N.B.—The Sign (—) signifies, on the contrary, Loss of Life.

Large Towns.	Area in Statute Acres.	Population in 1881.	Number of Persons to an Acre.	Difference between average Death-rates in 1881-86 and 1871-76 respectively.									
				Small-pox.	Scarlet Fever.	Diphtheria.	Fever.	Measles.	Whooping-cough.	Diarrhoea.	Notifiable Diseases.	Non-Notifiable Diseases.	Total Zymotic.
Six Dual Notification Towns...	27,084	1,028,440	38.0	0.54	0.66	-0.06	0.36	-0.00	0.08	0.73	1.50	0.80	2.30
Manchester ...	4,293	341,173	79.5	0.25	0.68	-0.02	0.48	0.00	0.10	0.98	1.39	1.08	2.47
Salford ...	5,170	177,762	34.4	0.78	0.48	0.02	0.33	0.43	0.25	0.77	1.61	1.45	3.06
Newcastle-on-Tyne ...	5,371	145,811	27.1	0.92	0.67	0.00	0.30	-0.42	-0.02	0.55	1.89	0.11	2.00
Portsmouth ...	4,320	128,372	29.7	0.87	0.65	-0.48	0.10	-0.17	-0.03	0.08	1.14	-0.12	1.02
Leicester ...	3,200	123,146	38.5	0.57	0.17	0.02	0.43	0.08	0.02	1.18	1.19	1.28	2.47
Oldham ...	4,730	112,176	23.7	0.15	1.42	-0.03	0.37	-0.07	0.05	0.40	1.91	0.38	2.29
Four Non-notification Towns...	21,638	1,239,872	57.3	0.63	0.64	-0.00	0.36	-0.11	0.13	0.64	1.63	0.66	2.30
Liverpool ...	5,210	554,073	106.5	0.75	0.67	-0.05	0.37	-0.17	0.18	0.72	1.74	0.73	2.47
Birmingham...	8,400	402,314	47.9	0.53	0.70	0.07	0.35	-0.07	0.17	0.75	1.65	0.55	2.50
Bristol ...	4,632	207,522	44.8	0.33	0.55	-0.02	0.32	0.02	-0.05	0.35	1.18	0.29	1.47
Wolverhampton ...	3,396	75,963	22.4	1.12	0.38	0.02	0.50	-0.27	0.20	0.28	2.02	0.21	2.23

¹ The introduction to my original Statistics of Notification, published in the JOURNAL of July 21st, 1888, placed the two systems in strong contrast.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

SOUTH SHIELDS (Population, 68,000).—*Decreasing Death-rates among Zymotic Diseases: Improved Sanitation: Increase of Heart Disease.*—Dr. Campbell Munro writes that "the year 1887 was characterised sanitarially in South Shields by a gross death-rate somewhat above the average of the past years of the present decade, although considerably under the average of the years of the last decade; while the infantile mortality rate (139) was just equal to the low average of the preceding years of the present decade. Scarlet fever was exceedingly prevalent and widely scattered in the latter half of the year, and but for the energetic resort to hospital isolation, which was adopted in about five-sixths of the cases coming to the knowledge of the Health Department, would probably have risen to the epidemic proportions which have characterised some former years." The coincident prevalence of this disease and measles caused the zymotic death-rate to exceed the average, and a larger number of cases of infectious disease were dealt with than in any previous year. Dr. Munro reviews at some length the vital statistics of the last seventeen years, and shows a decline of 4.246 per 1,000 in the mean annual death-rate of the town in the present decade, as compared with the one preceding it. Of the seven principal zymotics, small-pox shows the largest decrease (98 per cent.). "Fever" has fallen 73 per cent., scarlet fever 57 per cent., diarrhoea 48 per cent., whooping-cough 42 per cent., diphtheria 37 per cent., and measles only 3 per cent. The mortality rate from heart disease is the only one which shows an upward tendency in the present decade, the recorded increase amounting to no less than 33 per cent. Dr. Munro remarks that no explanation of increased precision in diagnosis can account for this very rapid rise.

ST. ASAPH RURAL (Population, 16,043).—*Scarlet Fever Prevalence preceding one of Diphtheria.*—It is satisfactory to note, in Dr. J. Lloyd Roberts's annual report for 1888, that the deaths were fewer than during the previous year, and fewer than in any previous record. At no particular age, save in the advanced years of life, were deaths adversely out of proportion to the commonly accepted standards. In the classified causes of death, also, not one had a marked increase. The deaths from phthisis and pneumonia were below the average in this district. No zymotic disease was attended with undue fatality, the death-rate from these causes amounting only to 0.9 per 1,000. In reference to certain cases of scarlet fever that occurred at Cwm, Dr. Roberts calls attention to the inquiry that was made some months ago by Dr. Parsons, on behalf of the Local Government Board, respecting a prevalence of diphtheria at Llanasa and Whitford. These places are on the same plateau of carboniferous limestone as Cwm. No origin was assigned for the series of cases at Llanasa, but it is noted in the report that there had been scarlet fever of a mild type in the locality immediately before the outbreak of diphtheria. In view of this fact, Dr. Roberts observes that, "in many previous annual reports to the St. Asaph Authority, a similar sequence of events has been recorded; particularly where diphtheria in one locality has been followed by scarlet fever in another, and in which the subjective sources of contagion were absent, but the objective sources, as by water carriage or wind currents, evident. It is not quite sought to connect the Cwm scarlet fever with the Llanasa diphtheria; for the chain of evidence is too slender, and as yet direct proof of such contagion as this would imply too imperfect. But again, the coincidence here recorded is to be borne in mind, both as pertaining to the history of contagion and the etiology of these diseases, and as particularising their environment."

BARTON REGIS RURAL (Population, 12,015).—*"Croup" objected to as the name of a Disease.*—Dr. Crossman's annual report presents no feature of special interest, except the very satisfactory character of the mortality statistics. Although both measles and scarlatina were very prevalent, only one death occurred from the former and two from the latter disease. These, together with two deaths from diphtheria, make up the total of zymotic fatalities. Croup and infantile diarrhoea are not included under this heading. Dr. Crossman remarks that it is much to be desired that the word "croup" be expunged from mortality statistics, since the same form of disease is not always indicated by that term. Eight deaths were registered as from "croup" during last year. The general death-rate amounted to 16.8 per 1,000.

HORSHAM (Population, 7,994).—*Hospital and Disinfecting Apparatus Needed.*—Mr. F. W. Kinneir's annual report for 1888 gives an account of good and careful work, which has had a due effect on the public health in so far that there was no spread in any case of epidemic sickness. It is satisfactory to find a decrease in the number of deaths, as compared with 1887, zymotic diseases being responsible for 7 deaths only. These included 2 from diphtheria, 2 from diarrhoea, 2 from croup, and 1 from enteric fever. The 2 cases of diarrhoea were both infants, and occurred—the one in June, the other in August. The medical officer again urgently pleads for the provision of some infectious hospital accommodation and a disinfecting apparatus.

DISEASED MEAT IN GLASGOW.

THE *Glasgow Herald* has intimated its intention of impartially and thoroughly investigating the quality of the butcher meat sold in Glasgow, and it has begun its labours by publishing two articles in its columns of a sufficiently startling character. In the first of these it is stated that a broad, general charge is made against the Glasgow Meat Market of being a receptacle for doubtful and diseased meat from every part of Scotland and many parts of Ireland, and that cattle and dead meat pass the official inspection in Glasgow which would be rejected anywhere else. Against such a state of matters, public officials, like Dr. J. B. Russell, Professor McCall, veterinary surgeons, and others, have long remonstrated in vain. Poor lean brutes, worth from 30s. to £3 apiece, are still landed from the Irish steamers and driven direct to the Cattle Market, to be sold as "mincers;" and tuberculous cows from our dairies are converted in the same way into collops and sausages if a policeman is satisfied that they are fit for human food. It is to be hoped that the mass of evidence to be collected by the *Herald* as to the nature of the poison of tuberculosis, and the terrible danger to the community from its dissemination will lead to a complete revolution in the mode of conducting business in the Glasgow Dead Meat Market, and prevent the poorer classes of Glasgow from being fed any longer on meat described by a butcher as "possibly a shade above carrion, but very little."

RENEWED OUTBREAK OF SMALL-POX IN DUNDEE.

THREE new cases of small-pox were reported to the sanitary authorities of Dundee on April 19th, one being that of a girl, 14 years of age, and two being lads aged 12 and 18 years respectively, all belonging to the same family, which numbers eleven persons. They were removed to hospital, and the house was disinfected. The latest previous case was on February 16th, and the hospital was about to be disinfected preparatory for use for scarlet fever patients.

FUNERAL REFORM.

At the April meeting of the Church of England Burial Reform Association, in the Church House, Westminster, it was decided to promote legislation in the following directions:

The codification and simplification of burial regulations; the placing of all cemeteries under public bodies; the abolition of all ecclesiastical burial fees where no service was rendered, saving in the cases where there are existing rights; and the prevention of overcrowding by the imposition of penalties.

As to the method of securing the introduction of this legislation, there was difference of opinion. A number, led by Sir Alexander Gordon, Bart., were in favour of adding clauses embodying the points named in Mr. Osborne Morgan's Bill, while others, among whom was Mr. Byron Reid, M.P., thought that it would be better to introduce an independent measure. The matter was postponed for further consideration at a meeting which is to be held at the Mansion House early next month. It was stated that the Government had granted an inquiry into the condition of London cemeteries.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, April 20th, 5,667 births and 3,547 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 9,555,406 persons. The annual rate of mortality in these towns, which had been 20.3 and 19.9 per 1,000 in the two preceding weeks, further declined to 19.4 during the week under notice. The rates in the several towns ranged from 12.0 in Brighton, 13.9 in Leicester, 14.2 in Birkenhead, and 16.6 in Norwich to 26.0 in Plymouth, 28.0 in Blackburn, 28.6 in Manchester, and 37.6 in Preston. The mean death-rate in the

twenty-seven provincial towns was 21.3 per 1,000, and exceeded by 4.2 the rate recorded in London, which was only 17.1 per 1,000. The 3,547 deaths registered during the week under notice in the twenty-eight towns included 440 which were referred to the principal zymotic diseases, against 464 and 436 in the two preceding weeks; of these, 177 resulted from measles, 133 from whooping-cough, 42 from diphtheria, 36 from scarlet fever, 33 from diarrhoea, 19 from "fever" (principally enteric), and not one from small-pox. These 440 deaths were equal to an annual rate of 2.4 per 1,000; in London the zymotic rate was 2.0, while in the twenty-seven provincial towns it averaged 1.7 per 1,000, and ranged from 0.4 in Sunderland and 0.5 in Derby to 6.5 in Blackburn, 6.8 in Bolton, and 8.0 in Preston. Measles caused the highest proportional fatality in Huddersfield, Blackburn, Preston, Bolton, and Manchester; scarlet fever in Sheffield and Blackburn; and whooping-cough in Oldham, Cardiff, Nottingham, Preston, and Plymouth. The 42 deaths from diphtheria in the twenty-eight towns included 22 in London, 6 in Salford, 4 in Bolton, and 3 in Manchester. No fatal case of small-pox was registered during the week under notice, either in London or in any of the twenty-seven provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, April 20th. These hospitals contained 527 scarlet fever patients on the same date, against 535 and 529 at the end of the two preceding weeks; there were 48 admissions during the week, against 37 and 52 in the two previous weeks. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 3.6 per 1,000 and was considerably below the average.

HEALTH OF SCOTCH TOWNS.

In the eight principal Scotch towns 806 births and 607 deaths were registered during the week ending Saturday, April 20th. The annual rate of mortality in these towns, which had been 21.8 and 23.0 per 1,000 in the two preceding weeks, further rose to 23.7 during the week under notice, and was as much as 4.3 per 1,000 above the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Greenock and Perth, and the highest in Glasgow and Paisley. The 607 deaths in these Scotch towns during the week included 107 which were referred to the principal zymotic diseases equal to an annual rate of 4.2 per 1,000, which was 1.8 above the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Aberdeen and Glasgow. The 299 deaths registered in Glasgow included 39 from whooping-cough, 23 from measles, 5 from diarrhoea, 3 from scarlet fever, 3 from diphtheria, and 3 from "fever." Five fatal cases of measles were recorded in Aberdeen, and 3 in Greenock. The death-rate from diseases of the respiratory organs in these towns was equal to 5.5 per 1,000, against 3.6 in London.

THE CUSTODY AND CHOICE OF DRUGS.

DR. WOODMAN, President of the South-Western Branch of the British Medical Association, is, and has been for twenty years, medical officer to the Exeter Union, and, acting in that capacity, he has supplied to inmates of the City Workhouse during the past twelve months 42 lbs. of a compound described in the returns as "tinctura chloroformi et morphine." Mr. Gould, the retiring governor of the board of guardians, alleged that the quantities of this drug which had been dispensed were excessive, as, in the previous year, only 15 lbs. were used; and this gentleman further ventured the strong opinion that enough of the compound had been used to poison half the population of Exeter. A special court was summoned recently at the workhouse, when Dr. Woodman was requested to attend and give an explanation. Dr. Woodman there explained that this tincture was a new preparation, and he thought it almost exactly met the wants at the workhouse. It was almost impossible to poison anybody with it, as it was a very mild preparation. Half an ounce contained only one grain of morphine, whereas two grains was considered a poisonous dose for an adult. One ounce of this mixture, therefore, undiluted would be sufficient to poison a person. Considering, however, that about two pints of water would be necessary to make it at all palatable, it would be understood that the quantity could not be easily swallowed by misadventure. On that ground he had not used any other sedative in the workhouse for some time past. Considering the number of old people sent there with chronic coughs, aches, and pains of all sorts, it was not surprising that so much of this medicine was used.

After hearing Dr. Woodman's explanation, a resolution was moved referring him to a decision arrived at by the court in February, 1883, requiring all dangerous drugs to be locked in a cupboard, and requesting that none of these drugs be left in any other charge than that of the medical officer, except in a diluted state.

To this request Dr. Woodman declined to accede, and said that if the resolution were carried he must look up the legal question, and see how far it interfered with his duties as medical officer. He protested against such interference after twenty years' service as medical officer without a single accident or mistake in the dispensing of drugs. He did not consider this a dangerous medicine. It was almost impossible to keep it locked up, as it might be required during the night. He had a man who held a certificate, and would be qualified to register as a druggist, and he considered it safe to leave with him a small quantity undiluted for dispensing purposes.

There followed upon this supplementary statement of Dr. Woodman some more discussion, and eventually the court divided, when seventeen guardians voted in favour of an amendment accepting the medical officer's explanation as satisfactory, and only six for the resolution.

PUBLIC VACCINATORS.

In reply to Dr. Woodward's inquiries, (1) there is no published or available list of public vaccinators, but in Churchill's *Medical Directory* it is usually recorded against the name of a practitioner if he holds office as a public vaccinator; (2) the Royal Commission on Vaccination has not yet been appointed.

MEDICAL STUDENTS IN AUSTRIA.—In the last winter semester the number of students in the University of Vienna was 6,371; of these, 3,185 (2,292 ordinary and 893 extraordinary) belonged to the medical faculty. The total number of students in all the Austrian universities last winter was 13,801; of these, 5,666 were students of medicine.

MEDICAL NEWS.

THE Princess of Wales has appointed Tuesday, May 7th, at 4 P.M., for laying the first stone of the new Hospital for Women.

A REUTER'S telegram from Gibraltar states that Surgeon M'Donnell, of H.M.S. *Agincourt*, died on Monday of enteric fever.

DR. JOHN MACPHERSON, Senior Assistant-Physician, Royal Asylum, Morningside, Edinburgh, has been appointed Medical Superintendent of the Stirling District Asylum, Larbert.

THE third Congress of Russian Naturalists and Physicians will be held at St. Petersburg, from December 28th, 1889, to January 7th, 1890. The medical members of the organising committee are Professors Dobrosławin, Paschutin, and Stebnizki.

IPSWICH CLINICAL SOCIETY.—The first meeting of this Society was held in the Board Room of the East Suffolk Hospital, Ipswich, on Wednesday, April 10th. An inaugural address was given by the President, after which the following cases illustrative of spinal disease were read, namely, a case of spinal myelitis following Pott's disease, by Dr. Casley; a case of spinal meningitis, by Mr. Hetherington; and a case of syphilitic sclerosis of the spinal cord, by Dr. Hollis. Dr. Goodhart then read an interesting paper on "The Use of Ice in the Treatment of Pneumonia," illustrated by numerous temperature charts. The paper was followed by a good discussion.

PRESENTATION.—A number of friends, desirous of showing their appreciation of the honour paid to Mr. H. B. Lingham, M.R.C.S., of Acton, by his election as County Alderman for Middlesex, recently presented him at a public meeting with an album and an address, signed by 250 subscribers, a silver salver, together with a purse of £300, "in token of their sincere and personal esteem and regard and their high appreciation of the long and disinterested services which he has rendered to Acton." Mrs. Lingham was on the same occasion the recipient of a handsome bracelet.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—On Wednesday, April 10th, a quarterly court of the directors of the Society was held at 53, Berners Street; the President, Sir James Paget, in the chair. Eight new members were elected, and the resignation of one accepted. Applications for grants were received from sixty-one widows, twelve orphans, and three orphans on the Copeland Fund, and a sum of £1,348 10s. was recommended for distribution among them at the next court. The expenses of the quarter were £31 8s. 6d. The resignation of Mr. Fuller, the Acting Treasurer, was received with great regret by the Directors. Dr. Potter was nominated for election at the annual general meeting to fill the vacancy. It was resolved that the following gentlemen—Dr. Broadbent, Dr. Braxton Hicks, Dr. Blandford, Dr. Lowne, and Mr. Butlin—be recommended for election as Directors to fill the vacancy caused by the nomination of Dr. Potter as Treasurer, and the places of the six senior Directors, who retire by rotation. The annual general meeting was fixed for May 28th, at 5 P.M.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination in Physiology only at a meeting of the Board of Examiners on April 17th, namely:—

H. Gillett and R. S. Whitford, of Charing Cross Hospital; G. R. Adcock and W. R. Knightley, of St. Bartholomew's Hospital; H. Francis and F. W. Lewis, St. Mary's Hospital; C. A. Kitching and Mr. C. Orme, of London Hospital; and C. F. Poole, of St. Thomas's Hospital.

Four hundred and thirty-seven candidates presented themselves in anatomy, of whom 280 passed, and 57 were referred. In Physiology, 468 candidates presented themselves, 245 passed, and 223 were referred.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The quarterly examinations in Edinburgh for the Triple Qualification took place in April, with the following results.

First Examination.—Of 39 candidates, the following 29 passed.

W. H. B. Vanes, Worcestershire; J. W. Lewis, Cardiganshire; T. Meiring, Cape of Good Hope; A. D. Evans, Carmarthen; H. A. Hadden, Wexford; T. F. Roche, Co. Cork; C. A. Brough, London; S. W. Thompstone, Lancashire; J. S. Martin, Co. Down; F. W. Marsden, Moscow, Russia; T. C. Ring, Cork; A. W. R. Quinlan, Bandon; J. Good, Co. Cork; J. Craig, Glasgow; H. E. Connor, Co. Derry; C. A. Macnab, Wishaw; A. W. Jagannadham, India; E. W. Longden, India; C. M. Coates, Bath; J. W.