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PART I.

ORIGINAL COMMUNICATIONS.

ART. X.—*The Dublin Tuberculosis Exhibition of 1907, and the Lessons to be learned from it.*^a By SIR ROBERT MATHESON, LL.D., Barrister-at-Law, Registrar-General for Ireland.

IT was in the summer of 1907 that the idea of having a Tuberculosis Exhibition, in connection with the Dublin International Exhibition, under the auspices of the Women's National Health Association of Ireland, presented itself to our august Vice-reine, the Countess of Aberdeen. The time, however, was very short to prepare for such an undertaking, as the International Exhibition was to close early in November, and the holiday season intervened, when many would necessarily be absent from Dublin. However, Her Excellency triumphed over all difficulties. She formed a Committee to take charge of the work, under her own personal direction, and soon all necessary preparations were in progress.

The Exhibition was held in the Village Hall and in the Industrial Hall of the Irish Industries Section of the International Exhibition at Ball's Bridge, Dublin.

EXHIBITS.

The exhibits were divided into four sections, viz. :—

1. *Statistical Section.*—This section was under the charge of

^a Lecture delivered at the Tuberculosis Exhibition in Cork on January 6th, 1908.

the Registrar-General. The exhibits included various maps, diagrams and tables, exhibiting the *status* of the disease in Ireland, prepared by the Registrar-General; also French and German maps bearing on the subject.

2. *Literary Section*.—This section was under the charge of Dr. Alfred Boyd. It was divided into two branches—Municipal and Poor Law Branch and Miscellaneous Branch. The exhibits in the Municipal and Poor Law Branch included valuable tables, diagrams and leaflets, giving information relating to English, Scotch and Irish cities, and to New York.

The objects shown in the Miscellaneous Branch were various photographs of institutions for the treatment of tuberculosis, publications, and statistical charts. There was also in this section a valuable historical exhibit, consisting of works of historical interest in connection with consumption, collected by Dr. T. P. C. Kirkpatrick.

3. *Pathological Section*.—Professor McWeeney's exhibits included a culture of human tubercle bacilli, lung showing tubercles and cavities, viscera of small animals showing effect of inoculation with human tubercle bacilli, water-colour drawings and diagrams, and lantern slides illustrating the disease. He also showed a valuable set of six German diagrams which were exhibited at the Berlin Conference, 1907. Several models of the sputum of consumptive persons were shown by Dr. C. L. Birmingham, of Westport, Co. Mayo. Professor Mettam's exhibits, from the Royal Veterinary College of Ireland, dealt with the subject of tuberculosis in the lower animals, and included illustrations of the disease in various animals.

4. *Appliances Section*.—This section consisted of appliances used in the treatment of consumption, models of sanatoriums, milk sterilisers, books, papers, &c. The outdoor department of this section exhibited châteaux, sun boxes, and a tent for the accommodation of consumptive patients. Contrast bedrooms were also shown in Model Labourer's Cottage No. 2, on the Village Green, illustrating an insanitary bedroom compared with one constructed in accordance with modern sanitary requirements.

OPENING OF THE EXHIBITION.

Previous to the formal opening of the Exhibition a meeting of the Consultative Committee and of delegates from public bodies throughout the country was held on the afternoon of the 11th of October, 1907, at which those in charge of the various sections gave an account of what had been done.

On the evening of the 11th of October, under the auspices of the Council of the Women's National Health Association of Ireland, a lecture was delivered by Professor William Osler, M.D., F.R.S., of Oxford.

Professor Osler pointed out, in the course of his lecture, that human efficiency had already overcome typhus and enteric fever and malaria, and now there remained the great scourge of tuberculosis to be contended with. He went on to say that in the past twenty-five years there had been an extraordinary increase in our knowledge of this disease. We know the germ and whence it comes—namely, from tuberculous patients and from the milk of the tuberculous cow. The important point is for us to avoid bad food, bad air, and bad drink, and so prevent the growth of the germ if it enter our bodies, either through the breath or swallowed with our food. He further stated that we have learned how to recognise the disease, how to prevent it, and how to cure it. Professor Osler then pointed out several means by which the combat against tuberculosis might be brought to a satisfactory conclusion, the principal being the re-organisation of the public health service, so that the authorities would have early notification of all cases of the disease, and be enabled to carry out measures with reference to disinfection, and to control the hovels in which the poor live. The lecturer advocated the building of cheap sanatoriums, which could be burned down every fifth or sixth year, and the provision of separate wards for the treatment of advanced cases. Tuberculosis in its early stages could be dealt with by the patients in their own homes, with proper advice from dispensaries and district nurses.

The Tuberculosis Exhibition, established under the auspices of the Countess of Aberdeen and the Council of the Women's

National Health Association of Ireland, was formally opened on the afternoon of the 12th of October, 1907, by His Excellency the Lord Lieutenant, and during the proceedings a message of sympathy with the movement was read from His Majesty the King.

THE LECTURES.

The ordinary lectures, of which there were twenty-one, were, with one exception, delivered in the Village Hall, Home Industries Section, of the International Exhibition, and were listened to with attention by large and appreciating audiences. They were arranged alternately for evening and afternoon, so that all classes of the community might be afforded an opportunity of benefiting by them. We may classify these lectures, according to the subjects treated of, as follows:—Statistical and General Aspects, Infection, Sanatoriums and Consumption Dispensaries, Surgical Treatment, Economic Aspect, Open-air Treatment and Healthy Breathing, Tuberculosis in the Lower Animals, Housing in connection with Tuberculosis, and Educational.

Statistical and General Aspects of the Disease.—These were dealt with by the Registrar-General, Sir Charles Cameron, C.B., and Dr. Lawson, of Banchory, N.B.

The Registrar-General referred to the ravages wrought by consumption in Ireland, and to the excessive death-rate from pulmonary tuberculosis in this country as compared with England and Scotland, and with Foreign States.

Sir Charles Cameron gave some statistics regarding consumptives and deaths from consumption in Dublin. He stated that the Irish have a tendency to contract the disease both at home and abroad. It was common to every period of life.

Dr. Lawson drew attention to the unenviable position which Ireland holds as regards consumption, and showed how very badly we are supplied with beds for the treatment of consumptive patients. He mentioned the extinction of leprosy in this country as an encouragement for the campaign against tuberculosis, advocating measures for the supply of pure milk and regulations against expectorating in public.

Infection.—Lectures on this subject were given by Dr. Birmingham, of Westport, and Surgeon Tobin.

Dr. Birmingham stated that the most common form of tuberculosis infection was the sputum or phlegm of a consumptive person. So long as the sputum remained moist there was no danger of infection, as the tubercle bacilli could not escape, but once the phlegm became dry the bacilli were freed and blown about to the common danger. Special care, therefore, should be taken to have the sputum of patients immediately destroyed.

Surgeon Tobin considered that, on account of the infectivity of tuberculosis, the prevention of the disease appealed to all classes. He was in favour of a milder Act, in respect of tuberculosis, than that at present in force for dealing with the other infectious diseases, as milder measures would be more likely to be completely adopted.

Sanatoriums and Consumption Dispensaries.—The advantages of sanatoriums and consumption dispensaries were pointed out by the following lecturers :—Professor McWeeney, Dr. Parsons, Dr. Hare, and Dr. Dunne.

Professor McWeeney gave an account of the campaign against consumption as it is waged in Germany. Presiding over the movement was the Central Committee for the Prevention of Tuberculosis. This Committee, aided by funds and machinery with which to fight the plague, by the Workmen's Insurance System, contributed towards the establishment and up-keep of sanatoriums, &c. Consumption dispensaries are also established in Germany, and Professor McWeeney considered that such dispensaries for the treatment of consumption would be most useful in Ireland.

Dr. Parsons, who is Consulting Physician to Newcastle Sanatorium, having given some account of foreign sanatoriums, went on to say that they could not tell how many cases were cured at Newcastle, as a patient could rarely be kept there long enough to have a complete cure effected. But the patients are taught how to live ; the disease is arrested ; and if they can follow up the treatment, as received at the sanatorium, on their return home, they often do remarkably

well. They should be visited in their homes and encouraged to pursue the treatment which they have been taught in the sanatorium.

Dr. Hare's lecture was mainly an answer to various objections which have been advanced from time to time against the use of sanatoriums for the treatment of consumption. He showed that there was no reason to fear infection in such institutions, owing to the manner in which they are conducted, and pointed out that fresh air has been proved to be a most important factor in the cure of the disease.

Dr. Dunne showed the urgent need there is for sanatoriums and tuberculosis dispensaries for the poor in Ireland. In sanatoriums pulmonary consumption should be treated in a separate building from other forms of tuberculosis, and incipient cases should be kept from contact with advanced cases. A patient well trained in a sanatorium knew how to preserve his own health and how to protect others, and exercised a saving influence on the surroundings to which he was restored. By means of dispensaries for the treatment of the disease patients could be visited in their own homes by the trained nurses attached to the institution, cases of tuberculosis would be recognised in their early stages, and the patients would thus stand a far better chance of complete cure.

Surgical Treatment.—Surgeon Lentaigne and Surgeon M'Ardle were the lecturers on this aspect of the question.

Surgeon Lentaigne took as his subject "Tuberculosis of the Bones and Joints," and pointed out that the various manifestations of the disease should receive attention, not only so far as it affected the lungs. In his opinion the improvement in the treatment of tuberculous bones and joints was even more marked than in the treatment of pulmonary tuberculosis.

Surgeon M'Ardle dealt with "The Serum Aspect of the Surgical Treatment of Tuberculosis." He referred to the serum treatment for small-pox and diphtheria, and expressed his opinion that consumption was on the high road to being stamped out by a similar method.

Economic Aspect.—This was treated of by Professor Lindsay,

of Belfast, and Mr. P. J. O'Neill, Chairman of the Dublin County Council.

Professor Lindsay stated that the Irish climate is probably only a small factor as regards the prevalence of phthisis in this country. The disease will be stamped out in proportion as the social level is raised and the people educated in true views of life and healthy habits of living. The lecturer calculated that the loss entailed annually on Ireland by tuberculosis was not less than a million of money, and therefore it would be cheaper in the end to spend what is necessary in the prevention, treatment and cure of the disease.

Mr. O'Neill spoke on the duty of public bodies in Ireland with regard to the campaign against tuberculosis. He considered that local authorities should do all in their power to follow up the recommendations which had been formulated during the medical conference of the past few weeks—viz., compulsory notification, inspection of food, schools, and school children; and the provision of hospitals and sanatoriums.

Open-air Treatment and Healthy Breathing.—These subjects were dealt with by Mr. George Fletcher, F.G.S.; Professor W. H. Thompson, and Dr. Smyth, of Altadore Sanatorium.

Mr. Fletcher showed the importance of breathing pure air, and of obtaining it in our houses by proper ventilation. He also stated that few people know how to breathe properly. The breaths should be long, in order to completely fill the lungs, and they should be taken through the nose.

Professor Thompson stated that open-air exercise and good food were the main essentials for good, sound breathing and proper vitality. If the chest were not filled with fresh air in breathing, harm, instead of good, would be done. The air we breathe is purified in its passage through the nostrils and freed from microbes and dust particles before it reaches the lungs.

Dr. Smyth discussed the subject of the climate of Ireland, having regard to the open-air treatment of consumption. He thought Ireland could compare favourably with other countries

from this point of view. At Nordrach, in the Black Forest, where such excellent results are obtained from the open-air treatment, the climate is no better, and in many respects worse, than that of Ireland.

Tuberculosis in the Lower Animals.—Professor Mettam, Principal of the Royal Veterinary College of Ireland, delivered two lectures on this subject. He stated that the ox was most commonly affected by the disease, and the pig was second in order of the lower animals which suffer from it, but all animals are capable of being infected by tuberculosis. It is most important, in his opinion, that all cases of open tuberculosis be destroyed, and that there should be one central slaughter-house, so that the inspection of meat would be thorough and complete. There should also be a central receiving place for milk, where it could be pasteurised and ensured to be free from disease.

Housing in connection with Tuberculosis.—The late Professor Antony Roche and Surgeon-Colonel Edgar Flinn were the lecturers on this subject.

Professor Roche considered that any money that could be spared for fighting the disease in this country would be better used by improving the housing accommodation than by building sanatoriums, as at present the overcrowded dwellings were appalling.

Surgeon-Colonel Flinn, in the course of his lecture, said that the first step in the campaign must be to get the houses of the labouring classes into a clean and sanitary condition. The sanitary authorities could help by giving special attention to the administration of the Public Health Acts, and by seeing that the regulations regarding dairies, &c., were more generally adopted.

Educational.—Professor Culverwell dealt with this aspect of the question in his lecture—"How School Teachers can aid in the Fight against Tuberculosis." He pointed out that consumption is the result of human carelessness, and people must be made to realise this and to grasp the idea of the benefits arising from fresh air and cleanliness. Teachers could do much by impressing on the children habits of cleanliness and

good health, and managers of schools should see that the buildings are thoroughly disinfected every week. The means of preventing consumption in the young will be the means of making them efficient in every walk of life.

CONFERENCE ON DISTRICT NURSING.

A Conference was held on the 7th of November on the question of district nursing as it affects tuberculosis, at which Her Excellency the Countess of Aberdeen presided.

Miss Guy, Lady Superintendent, Royal Hospital for Consumption, Edinburgh, gave an account of the working of the Hospital as such, and as a consumption dispensary, explaining the plan adopted of house-to-house supervision and relief. This duty was undertaken by nurses carefully trained in modern open-air methods, working generally under the direction of the physicians attached to the dispensary.

Her Excellency expressed a hope that a consumption hospital similar to that which Miss Guy represented would soon be established in Dublin.

Mr. Walker, of the Congested Districts Board, gave an account of the work done by Lady Dudley's nurses in the West of Ireland, and illustrated their methods of work by means of lantern slides. These nurses had been responsible for serving 45,000 people.

Miss Fitzgerald Kenny, Inspector of Boarded-out Children in Ireland, showed how district nurses could aid in the work of stamping out tuberculosis. If consumption dispensaries were established in Ireland the need for these nurses would be imperative. Miss Kenny also gave an account of the working of such a system in Paris, and referred to its satisfactory results.

The Most Rev. Dr. Donnelly, Bishop of Canea, in proposing a vote of thanks, pointed out that an appeal had been made by the Women's National Health Association, through Her Excellency the Countess of Aberdeen, to the several hospitals of the city, asking them to set aside one day in the week as a dispensary day for tuberculous patients.

CLOSING MEETING.

The closing meeting in connection with the Exhibition was held, under the presidency of His Excellency the Lord Lieutenant, on the 8th of November, in the Theatre of the Royal Dublin Society's Building, Kildare Street, at which two special lectures were delivered by Sir Shirley F. Murphy, Medical Officer of Health, London County Council, and Dr. Chalmers, Medical Officer of Health, Glasgow, on "The Control of Milk and Food Supplies, and Certain Conditions affecting Tuberculosis." Sir Shirley Murphy pointed out that much of the work of preventing the disease depended upon the public bodies in town and country, and referred to the striking decline in the death-rate of London, which had been brought about mainly by the work of the local authorities. He then dealt with the importance of proper food and healthy surroundings, which would strengthen the resisting power of the people, and enable them, if attacked, to successfully shake off the disease. He further alluded to the onus which rested on public bodies of excluding suspected milk from their districts, and advocated the periodical veterinary inspection of all cows, the branding of animals showing signs of tuberculosis, and the establishment of public slaughter-houses.

Dr. Chalmers stated that nomadic races were not inclined to consumption, and that it was not till the Arabs became town-dwellers that they suffered to any extent from the disease. The larger the town, the heavier was the death-rate from phthisis, and in towns where poverty and ignorance were greatest the disease was most prevalent. As regards the question of infection through milk, the lecturer expressed his opinion that the Dairies Order, which dealt with the conditions under which milk was produced, was the aspect of the subject which most urgently demanded attention. Cleanliness in milk production was an absolute necessity, and local authorities should make full use of the powers conferred on them by that Order to regulate the environment of cows, by attending to the sanitation of byres and cowsheds.

THE PRINCIPAL LESSONS TO BE LEARNED FROM THE TUBERCULOSIS EXHIBITION.

Let us now consider the lessons which are to be learned from the Tuberculosis Exhibition. Of what avail is it to have visited this Exhibition, to have inspected the diagrams, models, &c., set forth for our instruction, and to have attended lectures dealing with the terrible disease of tuberculosis, if we have not, at the same time, learned something by these means ?

1. *Tuberculosis—a terribly Fatal Disease in Ireland.*—The first lesson we have learned is that tuberculosis is the chief factor in the mortality of Ireland. The deaths from it far outnumber those from any other cause, and exceed the total of deaths from all the infective diseases put together. We have further seen that while in England and Scotland, during the past forty years, a remarkable decrease in the mortality from the disease has occurred, in Ireland there has been an increase ; and that, while in 1864 Ireland had the lowest mortality of the three kingdoms, in 1905 she occupied the highest place. We further ascertained that in the age periods 15–45, forming the backbone of our population, the mortality is proportionately much greater for tuberculosis than in England and Scotland. It has also been demonstrated to us that, viewing the statistics of tuberculosis in the civilised countries of the world, so far as obtainable, Ireland occupies, as regards mortality from the disease, a very unfavourable position.

2. *Tuberculosis—a highly Infectious Disease.*—The next point we have ascertained is that tuberculosis is in a high degree infectious. The lectures have taught us of the great danger that exists from the sputum of consumptive patients, and how frequently other members of a family become infected from one sufferer. They have also shown us that the infection can be transmitted from the lower animals, mainly through the medium of milk or of meat.

3. *Tuberculosis—a Preventable Disease.*—The third lesson we have learned is that tuberculosis is a preventable disease, and we have been shown how it can be prevented. In the first

place, by strict attention to cleanliness of the person and of our surroundings, and by admitting plenty of fresh air into our dwellings ; secondly, by improving the houses and raising the social level of the poor, and by having arrangements made for the inspection of meat and milk, so as to preclude the possibility of infected food being used ; and, thirdly, by having special consumption dispensaries, where the very poorest would get that advice and instruction so necessary if the disease is to be checked at its inception.

4. *Tuberculosis—a Curable Disease.*—Lastly, tuberculosis is a curable disease, *when taken in its early stages*. Medical advice should be obtained on the appearance of the first symptoms, and it is in this respect we have learned how very necessary sanatoriums and special hospitals are for the proper treatment of the disease. Tuberculosis is, as a rule, tedious to treat, and consequently the complete cure of a patient is a matter of some length of time. If sanatoriums be provided for the poor, as we hope they will be, then patients sent to them from the consumptive dispensaries, when the disease is first noticed, stand a very good chance of a complete cure.

Now that the crusade against this dreadful scourge of our country has been organised so successfully, by one who has ever been foremost in works of philanthropy in our land, Her Excellency the Countess of Aberdeen, let us see that we take our share of responsibility in the matter, by prosecuting with vigour the effort to minimise the ravages of this terrible malady. The outlook is hopeful. What has been done in the cases of leprosy and typhus can, we may reasonably expect, be done as regards tuberculosis. We have found that this disease is more prevalent the lower we descend in the social scale, and that the persons most affected by it are those who, from lack of means, are least able to cope with it. It rests with us, then, to stretch out a helping hand to our poorer fellow-countrymen, and do all in our power to bring this campaign to a successful issue.