

SIR ROBERT PHILIP: A PIONEER IN THE CAMPAIGN AGAINST TUBERCULOSIS

by

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ROBERT WILLIAM PHILIP was born on 29 December 1857. He came of a clerical family, his father and three paternal uncles being ministers of the Free Church. His father was the Rev. George Philip, D.D., of Aberdeen, minister of the Union Church in Govan at the time of the birth of his son. In 1866, Dr. Philip was called to St. John's Free Church, Edinburgh, which is now St. Columba's Free Church, at the east end of Johnston Terrace. His son's *curriculum vitae*, therefore, virtually began at the Royal High School of Edinburgh. After an outstanding career as a student, he graduated in arts and then with honours in medicine in 1882. He had, as he was to remark later, the luck to be born medically in the year when Robert Koch announced his discovery of the tubercle bacillus. He was resident house physician in the Royal Infirmary, Edinburgh, and then went to Leipzig and Vienna for a period of post-graduate study. While abroad, he saw the tubercle bacillus for the first time. Koch's discovery fascinated him irresistibly, and its wide implications kindled his imagination. Much thinking over the matter was to determine the principal activities of his life, and he returned to Edinburgh in 1883, resolved to devote special attention to the study of tuberculosis. But he met with scant encouragement. On hearing of his plan, a respected professor of the Medical Faculty remarked, 'Don't think of such a thing. Phthisis is worn to a very thin thread. The subject is exhausted.' Philip, however, was convinced that no apology was needed for engaging in the study of phthisis. The enormous annual mortality and the overpowering weight of unrecorded suffering directly attributable to pulmonary consumption urgently called for the utmost effort.

In 1887 he obtained the doctorate in medicine of the University of Edinburgh with gold medal for a thesis on an aetiological and therapeutic study of phthisis. In his thesis, he described the results of animal experiments with extracts of sputum from tuberculous patients. These results, he believed, pointed conclusively to the presence of a toxic principle or principles of considerable potency, depressant in character and affecting particularly the circulation by way of the neuro-muscular system. The conception of muscular intoxication was to dominate his later thought.

The discovery of the tubercle bacillus by Robert Koch in 1882 inaugurated a time of *Sturm und Drang*—the strife of critics and opposing doctrines. In the decade that followed, many distinguished physicians maintained that the organism was not the cause of the disease but merely a harmless concomitant. The world indeed was hardly prepared for the swift intimation that

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consumption, whose nature seemed popularly known and whose causation was regarded as ascertained, had been thoroughly misunderstood and that, in place of depending on a variety of ill-defined causes, it was due to a specific micro-organism recognized for the first time. Nevertheless, the medical world gradually discarded the hereditary and other theories, and became convinced of the true aetiology of the disease. Treatment, also had taken a new turn. Fresh cool air was no longer regarded as noxious and the doctrines of aëro-therapy were coming to be accepted and applied. Sanatoria were being opened in Germany, Switzerland, America, and elsewhere. But that was not enough. Someone like Philip was needed who combined organizing ability with a clear grasp of essential principles to make full use of the new knowledge.

In 1885, Philip was appointed a physician to the New Town Dispensary at 17 East Thistle Street; and here he applied his mind seriously to the implications of Koch's discovery as it regarded the treatment and the prevention of tuberculosis. The methods at the dispensary, as elsewhere, he found to be quite inadequate. The prevalence of tuberculosis was regarded as a matter of course and no public provision existed for dealing with it. Patients were received and excellently treated at the Royal Infirmary and other hospitals so long as it was possible to keep them. The general dispensaries of the city received and prescribed medically for those consumptive patients who presented themselves for treatment. Such treatment necessarily consisted largely in the prescription of some form of cough mixture. The duration of the patient's treatment depended on the continuance of the more aggressive symptoms and his faith in the prescriber or prescription. Consumptive patients, when too ill to come to the dispensary, were commonly relegated to the list of chronic or troublesome patients, visited occasionally by a frequently changing series of medical students whose conceptions of treatment, doubtless excellent as far as they went, did not extend very far. As a physician in the Royal Infirmary and at a large public dispensary, Philip frequently felt heartsick at the evident ineffectiveness of the assault made on so tremendous an evil. It was then that he began to perceive that the solution of this vast and far-reaching social problem could only be hoped for by a most carefully organized and co-ordinated plan of action.

Accordingly, in 1887, he approached certain civic and medical authorities with the proposal that the occasion of Queen Victoria's Jubilee might be suitably commemorated by the formation of a scheme and the building of a hospital for consumptive patients. However, a very wet blanket was thrown over the project. The reply was that stone and lime were out of the question, and that an undertaking of that sort could not be contemplated. Disappointed at this turn of affairs, but convinced that a well-directed movement towards the end in view would have the approval of those who might take the trouble to think about the matter, the promoters of the hospital movement began work on their own account. They engaged three rooms upstairs at 13 Bank Street and established in the heart of Edinburgh, the first dispensary for consumption in the world. Its object was to afford a centre towards which all poor persons suffering from tuberculosis might be directed. The scope of the institution was

a large one, and included the examination of patients and the investigation of social circumstances and environment, both at the dispensary and at the homes of the patients; instruction of the patients in the care of themselves and others; provision of medicines and, if necessary, food; and the selection of appropriate cases for hospital care, the early cases for treatment in a sanatorium, and late cases for care in some other institution.

The home visiting was an important feature of dispensary work, for by this means, the breeding grounds of tuberculosis could be raided and the tubercle bacillus hunted down. The activity of the physician was extended beyond the consulting room to the very hearth of the patient, where he would frequently find undetected cases of phthisis, and so forestall their arrival in the consulting room with full-blown disease.

The initial focus of all these efforts was the three rooms in Bank Street opened in November 1887. Within a few weeks of opening, the fears expressed regarding the success of the project were proved to be unsubstantial, the limited resources were taxed to the uttermost, and the waiting-room crowded to overflowing.

The next step was taken in 1891 by the acquisition of larger premises at 26 Lauriston Place. These were adapted so as to afford sufficient accommodation for a large out-patient department. There were two consulting rooms with a dark room for laryngoscopic examination, three waiting-rooms, a laboratory, a small dispensary for the supply of drugs and foods for those who required such help, and a house for the caretaker. This man was an old soldier, who trained many of the younger patients in suitable dumb-bell and other exercises. Important services were given by a Samaritan committee of some twenty ladies who, in co-operation with the medical officer, undertook the home visiting of bedridden cases and the distribution to really necessitous persons of invalid comforts. With the assistance of the numerous charitable and parochial organizations which existed in the city, these ladies were enabled to adapt the relief necessary to the particular case. They further occupied themselves with the question of suitable employment for tuberculous persons fit for some effort although unable to work for an entire day. These labours were frequently assisted by the kind offices of nurses from the Queen Victoria Jubilee Institute and other organizations.

Attendances at the dispensary varied from 30 to 87 in an afternoon, or about 17,000 per annum. The medical officer paid about 140 home visits a month.

It is interesting to note that in 1904, Philip reckoned that the expense of a tuberculosis service excluding the hospitals, would be about £1,000 a year. This sum would admit of the maintenance of the dispensary and a sufficient staff of medical assistants and nurses together with a clerk and caretaker. In 1906, there were three honorary physicians and one salaried medical officer, who received £60 per annum, and devoted a large amount of his time to the work.

The next step was taken in 1911, by the purchase of the former St. Cuthbert's United Free Church in Spittal Street. It was redesigned to contain a waiting-

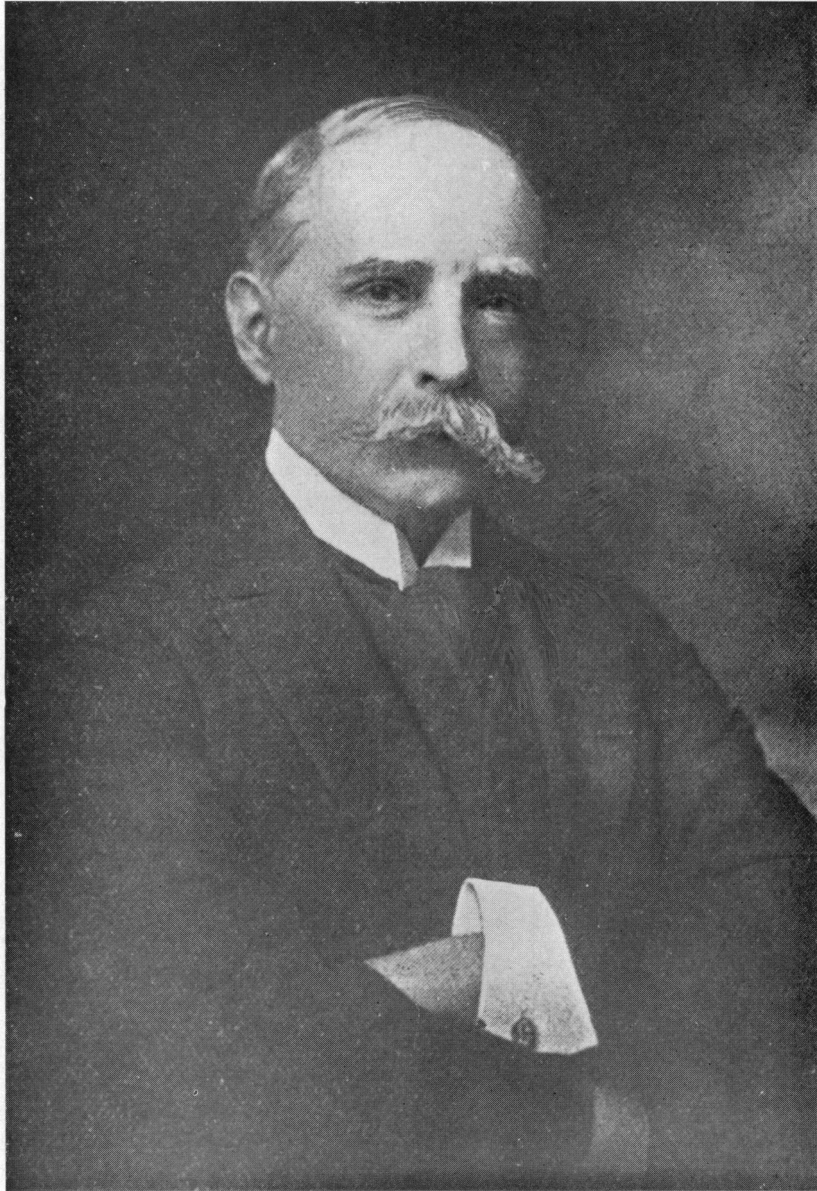


Fig. 1
SIR ROBERT PHILIP
(1857-1939)

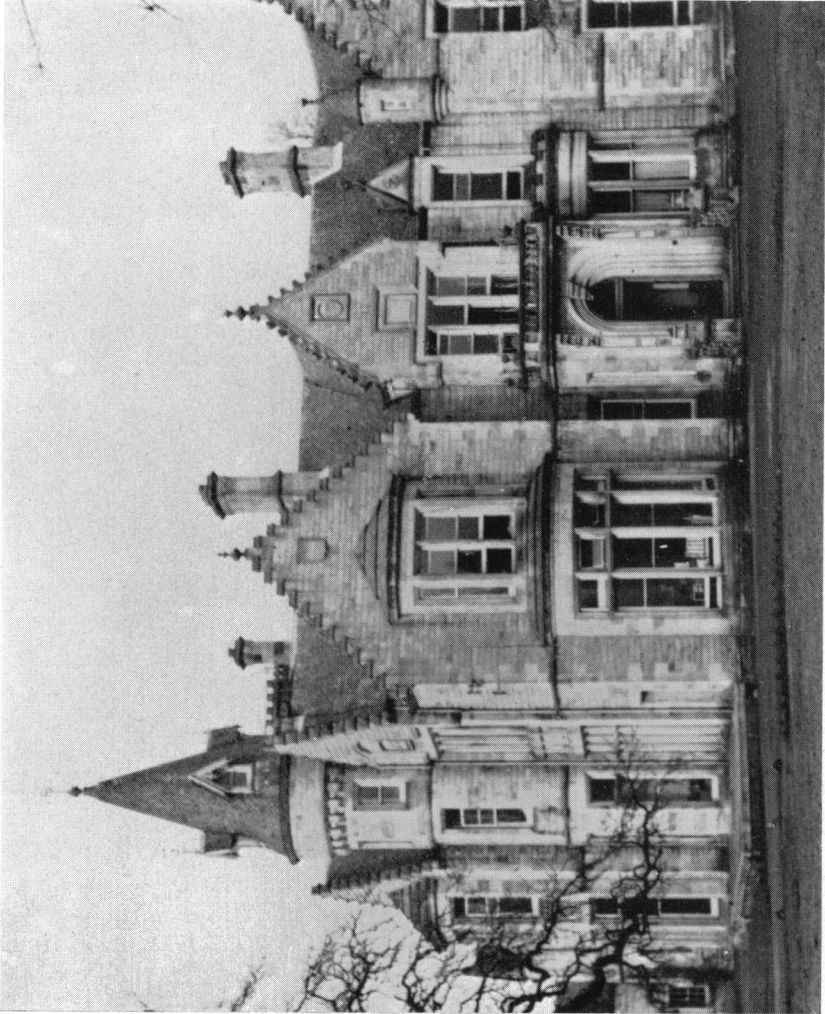


Fig. 2
Craigleith House, Edinburgh. Opened in August
1894 as the Victoria Hospital for Consumption

room, consulting rooms, museum, library, small laboratory and a lecture room. It was opened in 1913 and is still in use.

After the dispensary was safely under way, Philip turned his attention to the question of the hospital. The successive steps in the elaboration of the dispensary had served to prove in most forcible fashion the necessity for a hospital established especially for the treatment of patients on the open-air principle, where a selected number at least, from the mass of tubercular cases might be received for more closely supervised treatment. Since highly satisfactory results could be obtained by the adoption of fresh-air treatment in Edinburgh out-patient practice, and since recognized resorts for consumptive patients varied extremely in character, he believed that arrangements for open-air treatment could be made as effective in Scotland as in any part of the world. The hospital for open-air treatment should, of course, have an immediate relation to the centre from which the patients might come. After much consideration and more than one disappointment, the acting committee were fortunate in obtaining the lease of Craighleith House. This was a fine old property, a little more than a mile to the north-west of the west end of Princes Street, and easily accessible both by railway and car. The solid mansion built in the Adam style was charmingly situated in the midst of some seven and a half acres of prettily disposed grounds. It basked in the sun, facing due south, and without being overshadowed, was sheltered on various sides, more particularly on the east and north-east, by lofty trees. The property was suitably laid out with walks, which were to prove a great boon to the patients.

The Victoria Hospital for Consumption, the first of its kind in Scotland, was opened in August 1894, and at that time comprised domestic offices and nurses' hall in the basement; two three-bedded male wards, the house physician's sitting-room and bedroom, a dispensary and a bathroom on the ground floor; four wards for eight female patients, lady superintendent's sitting-room and bedroom, and a bathroom on the first floor; and in the attics, rooms for two nurses and three maids.

Important additions were made as funds became available, three pavilions and a laundry being added in 1903, when King Edward graciously consented to be patron of the hospital. Two more pavilions and the administrative block were built in 1907. In 1905 the average number of patients was 71.5 per annum.

Philip used not only fresh air in the treatment of tuberculosis; he was also interested in the application of the great principles of rest and movement in the management of the disease. He regarded the lung lesion as a relatively small part of the illness, and he believed that the gradual decline was not an expression of the lung disease, but was rather to be attributed to a systematic or constitutional intoxication, a topic which he had studied in his doctoral thesis. So long as the tuberculous process was active and there was evidence of systemic disturbance, rest was indicated. On the other hand, when the tuberculous lesion was being arrested, and the production of toxins correspondingly less abundant, the dystrophic muscles tended to recover themselves physiologically.

Nothing repaired muscular tissue so certainly as natural movement. This was the *motif* and guide in the institution of regular activity by which the physiological cure or 're-creation' could be assisted. However, the amount of activity had in every case to be determined with exactness, and on this account, such treatments could be more efficiently initiated in a hospital or farm colony, where the patients were more or less constantly under the eye of a trained observer. In the early days of the dispensary, he had drawn up a scheme of activities and had instituted classes for physical movement and respiratory exercises. The selected patients from the immense clientele used to come at fixed hours and enjoy regular training with regard to posture and healthy respiratory movements. In addition to this, measured walks of varying distance and gradient were prescribed. Thus, they had walks radiating from the dispensary round the Meadows, walks over the Bruntsfield Links, and walks in various directions on the slopes of Arthur's Seat. The results were eminently satisfactory. The patients did remarkably well and the experience led to a change in Philip's outlook in relation to the meaning of treatment of tuberculosis.

This scheme of physical treatment was further elaborated and systematized at the Royal Victoria Hospital, and here, after the initial complete rest on admission, patients were categorized according to the amount of activity for which they were fitted. Patients wore various-coloured badges, according to the type of work which they were permitted to do. Most of the work was utilitarian, such as sewing, setting tables, sweeping, scrubbing, sawing, raking, gathering leaves. Indeed, in 1904 a tuberculosis colony had taken practical shape at the Royal Victoria Hospital. The major portion of the non-medical staff of the hospital, including gardeners, engineer, carpenter, bath attendants and maid servants, were recovered tuberculous patients, who, by working in the hospital, were enabled to maintain themselves, but whose chances of cure would have been prejudiced by an immediate return to their previous employment. In fact, they were there to work out their own salvation.

However, one in every four patients required to lead a protected and supervised existence for some time after discharge from hospital, and it was for this class of persons that the farm colony was conceived. It was to be a kind of post-graduate school suited to the requirements of a certain number of individuals who needed more prolonged surveillance and direction than was convenient at the hospital. The farm colony was to occupy itself especially with the application of the principle of movement in the treatment of tuberculosis. Philip's hope and expectation was that the farm colony would succeed, through the longer residence and fresh interest, in rendering permanent for a still larger number, the satisfactory recovery which is normally achieved by the hospital scheme of graduated activity.

Consequently, in 1909, Springfield at Polton, near Lasswade, seven miles south of Edinburgh, was opened as a farm colony for the training of men in suitable open-air occupations.

There still remained the problem of patients with advanced tuberculosis living in the contracted dwellings of the poor where, perhaps, an entire family

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shared a room, and whose circumstances therefore, did not permit of their isolation. Such patients constituted the greatest source of infection. For them, Philip made a plea when he was starting the Victoria Hospital. It was somewhat slowly taken up, but in 1906, arrangements were completed with the Corporation of the City of Edinburgh, to segregate advanced and incurable cases of tuberculosis at the City Hospital, where the tuberculosis wards would be an asylum for such cases admittedly dying, and would meet the interests both of the dying and the living.

The completed tuberculosis scheme was now in operation. The dispensary was the centre of all anti-tuberculosis endeavour in the city, to which patients and inquirers regarding tuberculous matters might be referred, and from which advice and information could be distributed. It was a bureau or clearing house for the receipt and dissemination of intelligence in respect of the vast amount of tuberculous material in the district, the connecting link or nodus of the entire system of anti-tuberculosis activity, and a base for further operations. The dispensary was also the centre of supervision of such patients as might safely be treated at home; as regards the others, it directed the early cases to the sanatorium and ultimately to the farm colony, and the gravely ill to the hospital for advanced cases.

The success of the 'Edinburgh Scheme', as it came to be known, was recognized when a Departmental Committee formed in 1912 to inquire into the prevention and cure of tuberculosis, recommended the creation of a network of similar anti-tuberculosis schemes throughout the country. A consequence of the adoption of these recommendations was that in 1914, the dispensary and hospital were transferred to the Corporation of the City of Edinburgh. The war retarded further development, but in 1916, a Provisional Order brought into being a new body called the Royal Victoria Hospital Tuberculosis Trust, and confirmed this Trust in the possession of substantial funds.

The new Trust occupied itself with two tasks; firstly, the promotion of the study of tuberculosis and allied diseases; and secondly, the supervision of anti-tuberculosis work as far as this was not dealt with by official bodies. The former of these aims was realized when the Trust raised funds and provided £18,000 for the foundation of a Chair of tuberculosis in the University of Edinburgh.

This was the first Chair of tuberculosis in any University and Sir Robert Philip was unanimously elected by the University Court as its first occupant. He was an admirable and lucid lecturer, and from the rostrum, he could continue with even greater authority, to expound the principles on which his work was based. Here, particularly, he displayed his comprehensive grasp of medical art and science.

The study of tuberculosis [he said] is well calculated to make a man think regarding the meaning and course of all disease. In the variability of its expression, in the methods of diagnosis and prognosis and in the far-reaching questions of prevention and treatment, tuberculosis affords a fine object lesson in medicine. Its teaching is not limited to tuberculosis. It is luminous with principles which give just proportion to the facts of disease, and inspire fresh effort towards the realization of the ideals of health.

A course of thirty formal lectures, clinical teaching at the sanatorium and farm colony, and an examination in the subject were made a compulsory part of the medical curriculum.

The second object of the Trust was to help in the eradication of phtthisis in ways that lay beyond the ambit of the health authorities. In the beginning of the campaign, voluntary effort had pioneered the way. Later, the State assumed responsibility for the prevention and treatment of tuberculosis. But, even so, the struggle against the disease was too extensive to be overtaken by the regular army, and there were operations in which the efforts of the regular forces might be effectively reinforced by volunteer activity.

The first step in attaining this second aim was taken in 1919, when the Trust bought the small property of Southfield on the south-eastern outskirts of the city. In this place, Philip planned a sanatorium-colony where tuberculosis at all stages and at all ages from infancy to advanced life could be observed side by side. Only thus could the natural history of the disease be appreciated. This institution was to be closely linked with the formal teaching given from the Chair. Southfield was opened in 1922, and included shelters, a school for children and a laboratory. He believed that a well-equipped laboratory in close relationship to tuberculosis clinical material is a primary need if valuable opportunities for the advance of knowledge are not to be lost. In 1930, a new building containing two wards for children was added. Here, he was able to observe the changes which occur from week to week, and month to month, and year to year in the young child who has become tuberculous. He believed that if child life were watched with sufficient care and with sufficient suspicion in respect of tuberculosis, the physician would be able to anticipate and prevent most of the doleful harvest. The wards went some way to satisfy the need of careful study, both clinical and pathological, of the course of tuberculous infection in the child, so that mere suspicion might be changed into scientific diagnosis.

He now turned his attention to another matter which had caused concern in Edinburgh, namely the production of a clean supply of milk. In the early nineteen-twenties, it was estimated that fully 50 per cent of milch-cows were tuberculous, and that at least 2 per cent were discharging tubercle bacilli in their milk. Not only this, but the methods of collecting and distributing this food were filthy, and the final result was a whited sepulchre. The war had delayed official action, but in the meantime, Philip determined to demonstrate to farmers and to the public, that a pure, sound, tubercle-free milk could be produced on a commercial basis, and that healthy, tubercle-free herds could be reared. In 1921, therefore, he leased Gracemount Farm, and built up a herd of healthy cattle. They were kept under physiological conditions, the dairy workers were instructed in the need for, and the meaning of cleanliness, and there was instituted a simple and efficient method of aseptic handling through scrupulous purification of personnel and sterilization of apparatus at every point. The work at Gracemount became well known, and it doubtless helped to stimulate the vast improvement in the quality of the milk supplies in this country.

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Philip's conception of the principles of the campaign against the ravages of tuberculosis was now beginning to attract widespread attention. His friend, Professor Albert Calmette of the Pasteur Institute at Lille, began in 1900, to apply these principles in France, and he established the Emile Roux Anti-tuberculous Dispensary in that year. Similar arrangements were made in America in 1904. The German movement was somewhat different in conception, the clinics there having the character of out-patient departments, and restricting their operations to the medical treatment of the individual applicant. However, a strong movement was developing in favour of establishing dispensaries on the Edinburgh model. The first dispensary in England was opened in 1909 by the charitable enterprise of a group of interested people. The main-spring of this group was Miss Edith McGaw, an Australian, who was later to become Lady Philip. In 1912, the King of Italy received Philip in private audience, and discussed with him his co-ordinated scheme for the eradication of tuberculosis.

Philip was keenly interested in research, and was one of the earliest workers in the laboratory of the Royal College of Physicians. For fourteen years, from 1923 to 1937, he was curator of this important organization, and its success was due in some measure, to the skill and foresight with which he guided its policy.

His eminence was in later years recognized by many universities and other learned bodies, both at home and abroad, and in 1913 he received the accolade of knighthood. Philip's portrait appeared on one of a series of Belgian Charity and Red Cross stamps issued in 1956—the first occasion upon which a doctor practising in Britain had been honoured. He died in Edinburgh on 25 January 1939.

What manner of man was it who accomplished all these things? Physically, he was short in stature, alert, and active; and he retained his freshness even in advanced life. He was carefully and, for more recent times, noticeably well-dressed, even if his style had an old-fashioned air. He was a scholar of wide and classical culture, and was fluent in German and French. In France, he had many friends, and he had a natural affinity with the French. He had a genial and charming personality, and possessed open and patrician manners. He excelled in conversation and after-dinner speaking, and had a fund of experiences to draw upon. He was an admirable host, and many medical and other visitors from abroad would carry home with them agreeable memories of his cordial welcome and dignified and bountiful hospitality. Like many busy people, he appreciated the value of holidays, which he spent abroad, usually at his favourite Pontresina.

He was orderly in procedure and meticulous in performance. He had a firm faith in the value of his work, and inspired a feeling of optimism and progress in his colleagues and assistants. He brought out the best in them, because he expected nothing short of the highest standard. Although he was a hard task-master, he was generous in appreciation, and backed with determination his men, when they applied for posts for which he thought them suitable. He was an effective public speaker. He had a free flow of language, and presented his

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thoughts with incomparable vigour and clarity. During the period of his active life, he was able to keep abreast with the headlong progress of scientific knowledge—no small accomplishment.

He was one of the most eminent physicians and notable citizens that Edinburgh has produced. By his labours, he greatly alleviated the miseries and promoted the welfare of men. His achievements are his best memorial. His motto might well have been that one which he used in the course of his doctoral thesis: 'Age quod agis'. Whatever lies in thy power, do while do it thou canst.

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