CHAPTER X

THE ROYAL INFIRMARY IN THE NINETEENTH CENTURY, 1800-1870

THE FEVER EPIDEMICS, 1817 TO 1848—CHOLERA IN 1832 AND 1848—THE PHYSICIANS AND CLINICAL TEACHING—PROPOSED CHAIR OF CLINICAL MEDICINE—APPOINTMENT OF PATHOLOGISTS TO THE INFIRMARY, 1839 — EARLY SPECIALISATION — THE CONVALESCENT HOUSE AT CORSTORPHINE, 1867—THE FINANCIAL PROBLEM.

WITH the advent of the nineteenth century progressive developments both in town and country were of such a nature as to have an important influence on the immediate future of the hospital. The perennial burden associated with finance and the constant difficulty of making both ends meet—the balancing of the annual budget—were increased rather than diminished. The New Town was rapidly extending in all directions—north, south, east and west. The people, no longer confined within the old walled town, numbered in 1800 along with Leith, 100,000 souls. The lofty tenements of the Old Town, now vacated by the wealthier classes, became even more congested than formerly with the families of the poor and all that that implied. Better intercommunication with the country districts, as the result of improvement in the roads and accelerated means of transport, widened the area from which patients, attracted by the reputation of the Infirmary, sought advice and treatment from its medical and surgical staff. In the medical school, also, the progress of which has been detailed in the previous chapter, there was a steady increase in the number of students : in 1805-06 the matriculation roll in medicine contained 703 names and, five years later, as many as 934, an exceptional figure. All these circumstances naturally had their repercussion on such facilities as the Infirmary could provide.

In the meantime, to aggravate the situation, the managers

were obliged to face the grave responsibility of coping with a series of epidemics of relapsing and typhus fevers which broke out amongst the poor of the city. The first of these commenced in 1817 and recurrences took place at intervals till 1846-48.[1] The soil had been favourably prepared for the development of typhus fever in the years immediately preceding the first of these outbreaks. The Napoleonic campaigns, in which Britain was involved, had interfered with the prosperity of the country. There was increasing unemployment, a rise in the price of foodstuffs with consequent ill-nourishment and a lowering of the vitality of those least able to bear the strain. In addition, the bad harvest in Scotland in 1816 increased the impoverishment of the people and, over and above, was the overcrowding in the badly ventilated, ill-lit and insanitary dwellings of the poor, conditions which favoured the spread of typhus fever.

As no " Fever Hospital " existed in the city in those days, the onus of treatment of infectious fevers fell upon the Infirmary which in normal times provided at least two wards for that purpose. It is a matter of interest to note that even during an epidemic of fever it was observed that, with the segregation of these patients in separate wards, infection was not carried to the other patients living under the same roof. With the outbreak of the epidemic in 1817 three additional wards were opened, yet these were insufficient to deal with the emergency. Accordingly the Lord Provost and a number of influential citizens approached the Government with a view to utilising Queensberry House Barracks, then unoccupied.[2] This old and somewhat gloomy mansion, standing near the foot of the Canongate and on the south side of the thoroughfare, shortly after its erection in 1681 had passed into the hands of the Dukes of Queensberry who used it as their town residence. It was eventually sold in 1801, by "Old Q," William Douglas, Duke of Queensberry, and purchased by the Government as barracks. Permission for its use having been granted to the managers of the Infirmary they undertook the administration

[1] Epidemics of 1817-20 ; 1826-29 ; 1837 ; 1842-43 and 1846-48.
[2] Minute, Royal Infirmary, 17th January 1818.

of the house as a fever hospital, trusting that the public would respond in such a way as to provide the necessary increased expenditure. The unused wooden beds which it contained were exchanged for iron bedsteads and bedding transferred from Greenlaw Barracks—the Glencorse Barracks of today—and wards were opened capable of accommodating from sixty to eighty patients. A matron, an apothecary and a nursing staff were appointed and Benjamin Welsh, a graduate of medicine in 1818, became superintendent at a salary of £40 per annum.[1] James Hamilton, senior, and Thomas Spens, physicians-in-ordinary to the Royal Infirmary, acted as visiting physicians to Queensberry House and two physicians'-clerks were selected as residents. One of these, Robert Christison—later Sir Robert—who suffered from more than one attack of relapsing fever, has recorded in his autobiography a graphic account of his symptoms. Permission was given by the Magistrates of the City to make a collection at the doors of the churches, and the County Conveners were asked to stimulate interest in procuring contributions for the upkeep of the hospital.

The epidemic of typhus of 1817 was not of a virulent character and few deaths occurred: the patients admitted into Queensberry House during the twelve months, 1st March 1818 to 28th February 1819, numbered 1676, of whom 1605 recovered and 71 died, a low mortality rate of slightly more than 4 per cent. The expenditure incurred during the year 1818 in maintaining the Infirmary and the Annexe was £8376, a sum considerably in excess of any previous annual outlay which the managers had required to meet.

Although the first epidemic abated in 1820-21, Queensberry House continued to be used for fever patients till the autumn of 1823. When in 1825 the Government desired to sell the buildings, the managers as a precautionary measure leased the premises for ten years at a rent of £80 per annum. It was fortunate that they had made such provision, as a second epidemic, on an even larger scale than the previous one,

[1] Benjamin Welsh, brother of Dr John Welsh of Haddington, was the uncle of Mrs Thomas Carlyle; after succeeding his brother in the practice at Haddington he died a comparatively young man.

prevailed during 1826-29. Consequently the Barracks were again opened and 150 beds were kept constantly occupied to supplement those used in the Infirmary for a similar purpose.

With the outbreak of the third epidemic in 1837, the Infirmary was again called upon to make provision to deal with it. The lease of Queensberry House having then expired the necessary accommodation was obtained in the Infirmary, nine wards being appropriated for the purpose, containing approximately 140 beds. This arrangement had been made feasible through the transference of the surgical patients, in 1832, to the old High School building purchased in 1829. In addition to these wards the house, previously used as the Lock Hospital and containing thirty beds, was temporarily handed over to the Fever Board of the city which provided the necessary funds for its maintenance. The patients under treatment with typhus fever from 1st October 1837 to 30th September 1838 numbered 2244 and between the latter date and the end of December a further 527 patients were treated.[1]

It is unnecessary to enter into the details of the two subsequent epidemics of 1842-43 and 1846-48: it is sufficient to state that they were on a larger scale than the previous outbreaks and that the resources of the Infirmary, both as regards the provision of accommodation and the funds required to meet the increased expenditure, were taxed to the utmost limit. In addition to the buildings previously fitted up for the reception of these cases, tents were borrowed from the Ordnance Store at Edinburgh Castle and from the Archers' Hall and were pitched in the vicinity of the Infirmary: even the chapel was requisitioned for a similar purpose, "the force of the objections which might otherwise have existed to this step being materially diminished by the inability of the great proportion of the patients to attend Divine Service."[2] During the years 1841 to 1848, inclusive, no fewer than 17,542 patients suffering from infectious fevers were under treatment in the Royal Infirmary. A striking feature in connection with the two last epidemics was the great proportion of Irish among

[1] Minute, Royal Infirmary, January 1839.
[2] Report of Managers, 3rd January 1848 and 1st January 1849.

the sufferers. The disease apparently first broke out among " the wandering Irish " ; and, in the report of the Committee of the Court of Contributors appointed in January 1849, the opinion was expressed that more stringent measures ought to be adopted to prevent the exposure of the community to the injurious effects following the importation of the numerous paupers and vagrants from Ireland.

When in the autumn of 1831 grave apprehension was felt in Edinburgh regarding a probable visitation of cholera early in the following year, a Board of Health was set up by authority of the Privy Council [1] upon which three members of the Board of the Infirmary were invited to sit.[2] By the end of June 1832, six hundred deaths from cholera had occurred in the city. Every precaution was taken by the physicians to prevent the admission of suspicious cases into the Infirmary and, when such presented themselves, they were at once transferred to one of the district hospitals opened for that purpose by the Board of Health. One of these was Queensberry House and, another, a house situated at Fountainbridge.[3] Application was also made by the same Board for the use of old Surgeons' Hall, recently vacated by the Surgeons ; and in a minute of the Town Council of 4th January 1832, the following statement occurs :—" The College of Surgeons at the earnest solicitation of the Board of Health granted to that body the use of the old building and, conditionally, that of another house of which they are proprietors for the important purpose of providing accommodation for cholera patients, if such accommodation should be required." The Hall was opened temporarily as the Drummond Street Cholera Hospital. When a second epidemic of Asiatic cholera visited the city in 1848, the managers, having resolved that these cases should not be admitted into the Infirmary, placed at the disposal of the Board of Health the old Surgeons' Hall which they had in the interval bought and used as a Fever Hospital,

[1] *Edinburgh, 1329-1929*, p. 15. Oliver & Boyd, Edinburgh, 1929.
[2] Minute, Royal Infirmary, 31st October 1831.
[3] Since 1853 Queensberry House has been used as a House of Refuge for the Destitute.

on the express understanding, however, that, although supplying the beds and bedding and providing the nurses, the funds of the Royal Infirmary were not to be made liable for any of the expense incurred in maintaining patients suffering from cholera.

It is evident, therefore, that the Infirmary was used as a fever hospital to an extent greatly beyond the original intention. Although in certain large cities—London, Manchester, Dublin —separate hospitals were maintained for that specific purpose, neither in Edinburgh nor in Leith had any similar provision been made. The Infirmary had found it increasingly difficult to provide the funds for the accommodation of the ordinary medical and surgical cases during the periods when serious epidemics prevailed, consequently the opinion was expressed that a separate fever hospital ought to be established and that the community, benefiting by such a safeguard, should be responsible for maintaining it. But many years were to elapse before this laudable object was attained. In 1881, the Town Council became responsible for the treatment of epidemics of infectious fever and acquired part of the buildings of the Royal Infirmary for that purpose, after the hospital had been transferred to its present position in Lauriston Place.

In the early part of the nineteenth century circumstances arose which made it desirable to change the term of service of the physicians-in-ordinary, to increase their number and to rearrange the distribution of the medical beds. It will be recalled that in 1751, with a view to terminating the defective system of attendance by rotation, two physicians were elected by the managers without placing any limit upon the period of their appointment, an arrangement which still remained in force more than seventy years later. When in 1823 James Hamilton, senior, appointed physician in 1775, and to whose services in Queensberry House reference has been made, resigned his post, the first important alteration was effected. The principle of a time limit was introduced and the term of service restricted to seven years : this was later extended to ten years, with re-election renewable at the pleasure of the

Board.[1] This arrangement remained as the basis of service till comparatively recent times when physicians (and surgeons) were appointed for five years with eligibility for re-election at the discretion of the managers for a second and a third term of similar duration, the whole period of office not to exceed fifteen years.[2] With the increase in the population of the city and a consequent unavoidable multiplication in the number of patients attending the Infirmary, it became imperative to reinforce the medical staff by adding to its number. Accordingly a third physician-in-ordinary was appointed in 1827 and a fourth in the following year.[3]

As narrated in Chapter IX (p. 139), permission was granted in 1829 to the ordinary physicians to give clinical lectures and, after the surgical patients had been transferred to the High School building in November 1832, a redistribution of the beds was made in the medical hospital and clinical teaching by the extra-academical members of the staff was rearranged. The medical cases were subdivided into three groups of equal proportions, the two senior or "permanent" physicians, as they are described in the minutes, being placed in charge of one-third of the patients, while the remaining third was in the care of the two junior physicians, each attending the hospital alternately for a period of twelve months. The delivery of clinical lectures by the senior of the two permanent physicians was optional, but was obligatory upon his colleague.

In 1854 the physicians-in-ordinary, like the professors of medicine in the eighteenth century, united to give a combined course of instruction, an arrangement mainly due to the influence of William—later, Sir William—Tennant Gairdner, after his appointment as physician to the Infirmary in 1853. Impressed with the wisdom of obtaining the services of every capable teacher, as a matter of principle, he persuaded the managers to allow his two junior colleagues, Alexander Keiller and James Warburton Begbie, to share in a combined clinical course, the students to attend with a joint-admission card.

[1] Minutes, Royal Infirmary, 16th February 1824 and 20th January 1840.
[2] Minute, Royal Infirmary, 18th January 1897.
[3] Minutes, Royal Infirmary, 12th November 1827 and 14th July 1828.

As Keiller was specialising in gynæcology he taught the diseases of women, while Gairdner and Warburton Begbie lectured on the medical cases. Years later, when addressing the members of the Royal Medical Society in 1893, on "Edinburgh in the 'Fifties," Gairdner said: "In the history of the Edinburgh School and Royal Infirmary I trust it will be recorded, that when, being already a lecturer in the practice of physic and a hospital physician, the privilege of clinical teaching fell to my lot, I was anxious then, as at all times since then, to share it with others, so that all the members of the staff should, as far possible, be partakers in the good work."[1]

Sir William Gairdner, in the same address, described a remarkable acoustic peculiarity which was constantly noticed on the stair, situated in the angle between one of the wings and the body of the old Infirmary and which led from the waiting-room on the first floor upwards to the three floors above, on each of which was situated one of his wards. The peculiarity was a loud booming sound or echo, much more pronounced in the lowest flight than in either of the other two, though to the eye all were precisely alike. The phenomenon elicited by an emphatic stamp of the foot upon one of the stone steps was identical in its musical pitch with the "amphoric echo" heard on auscultating the chest over a large cavity in the lung, and was therefore invaluable as an illustration of physical diagnosis. This particular part of the Infirmary received the nick-name of "Gairdner's Corner." "This was long before the day when Helmholtz's resonators were brought into play as illustrations of physiological acoustics, and perhaps, therefore, the familiarity with the phenomenon of 'Gairdner's Corner' had a certain educating value to successive classes of students."

Among the physicians-in-ordinary during this period were men whose special qualifications for the post left no room for doubt and whose long and valuable services added considerably to the reputation of the hospital. James Hamilton, senior—thus designated to distinguish him from his namesake, the

[1] *Life of Sir William Gairdner, K.C.B., M.D.*, by George Alexander Gibson, M.D., p. 449. Glasgow: James Maclehose & Son. 1912.

professor of midwifery—and Thomas Spens were for many years the senior physicians. Hamilton, a link between the eighteenth and nineteenth centuries, appointed physician in 1775, resigned in December 1823 at the age of seventy-four, after forty-eight years of continuous service. To mark their appreciation of his work the managers invited him to sit for his portrait to Mr John Watson—later Sir John Watson-Gordon.[1] The picture still hangs on the walls of the Board Room of the Infirmary. With an implicit faith in the therapeutic value of blood-letting and purging, his pill of aloes and colocynth, which remains to the present day associated with his name, was a favourite prescription. On a page of one of Hamilton's old case books, preserved in the Royal Infirmary, appears the following terse record of one of his patients: "February 1778; male; aloes pill with relief of the pain of belly and headache"! A handsome and picturesque figure in the quaint costume of the period he retained a preference for the three-cornered hat which earned him the soubriquet of "cocky" Hamilton. He died in 1835. Thomas Spens, his colleague, was physician-in-ordinary for forty years, from 1802 to 1842. "Tall, slender, modest, almost shy, extremely kindly and a thorough gentleman in manner and disposition, he was a sound and successful practitioner, free from prejudice and hobbies, and always open to correction by experience." When he became the senior physician on Hamilton's retirement, the managers in recognition of his services and to compensate him for the pecuniary loss he had sustained by the withdrawal of a Government allowance, granted him a salary of £100 per annum, a sum regularly paid to him till his retirement.[2] When president of the College of Physicians in 1803-04 he took his seat on the Board of Management in terms of the Charter, although one of the active staff of the Infirmary.

On the retirement of Hamilton, after so many years in office, it was perhaps natural that some restriction in the period

[1] Minute, Royal Infirmary, 16th February 1824. James Hamilton was also painted by Sir Henry Raeburn.

[2] Minute, Royal Infirmary, 16th February 1824.

JAMES HAMILTON, Senior
Physician to the Royal Infirmary, 1775-1823
(*Reproduced from John Kay's "Original Portraits"*)

of service should be introduced, and the next physician, appointed under the new regulation, was James Buchan, selected from amongst other candidates with greater claims to recognition. A graduate of Edinburgh of 1792, he had been in charge of the French Plague Hospital in Egypt during Napoleon's campaign: "a little, fair-complexioned, near-sighted, soft-speaking, quiet, slow, hesitating man, several years on the wrong side of fifty," he resigned his appointment in 1827. Another former physician to the Forces, a successful candidate when the staff of physicians was increased to four, was Thomas Shortt, a graduate of 1815. He had been on duty at St Helena at the time of the death of Napoleon and was officially present at the *post-mortem* examination. Described as the beau-ideal of the successful, fashionable physician, "he arrived at the hospital in carriage and pair, or in a smart cabriolet with a high-stepping horse and a 'tiger' hanging on behind, or even on occasions riding on horseback with the tiger at a respectful distance in the rear."

A man of very different calibre was Robert Christison—later Sir Robert Christison, Baronet—a university professor for fifty-five years, in the chair of forensic medicine from 1822-32 and professor of materia medica from 1832-1877: he gave his services to the Infirmary during thirty years of that long period, first as a physician-in-ordinary and afterwards as a clinical professor and manager. Although occupying the chair of forensic medicine when appointed to the staff of the hospital in 1827, his professorial position did not entitle him to act as one of the clinical professors, the subject not being then obligatory upon medical students.[1] Of erect and commanding presence, endowed with an athletic frame which permitted his enjoyment of mountaineering among the Bens and Glens of his native land, he retained to the end of a long life the physical energy to satisfy this ruling passion. A man of strong force of character, with some of the qualities of a great soldier, he exercised a powerful influence upon his

[1] With his appointment to the chair of materia medica, in 1832, Christison resigned his post as physician-in-ordinary, but continued to serve the hospital as one of the professors of medicine.

colleagues on the Senatus Academicus and on the Board of the Royal Infirmary. Persevering in research and accurate in observation, Christison as a physician and toxicologist gained a European reputation, and as a medical jurist he was engaged on behalf of the Crown in all the important criminal trials for poisoning. " When he was lecturing on curare, the arrow poison of the South American Indians, he used to come to the University a quarter of an hour before the class met to practise with the blowpipe, so that during the lecture he might demonstrate how the natives made use of it. A target having been placed on one side of the classroom he stepped down on the other side, inserted the arrow, took aim and in a moment it was quivering in the bull's eye, and he returned to his desk amidst the rapturous applause of his class." He died in January 1882 at the age of eighty-four, and at his public funeral the solemn procession proceeded along the crowded streets from his home in Moray Place to his interment in the New Calton Burying-Ground.

Amongst Sir Robert's colleagues on the staff of the Infirmary was William Pulteney Alison, a grandson of John Gregory the physician, and the elder brother of Sir Archibald Alison the historian. As professor in the University for thirty-five years—1820-55—and the holder of three chairs in succession, forensic medicine, the institutes of medicine, and the practice of physic, he may be appropriately named a chair collector. As clinical physician in the wards of the Infirmary and in dispensary practice, he deservedly earned the appellation of " Beloved Physician." In his work amongst the poor of the city during the fever epidemics he became impressed with the fact that there was a direct connection between destitution and epidemic diseases ; and, as a result of his efforts, he was finally successful in securing amendment in the Poor Law of Scotland. Of Alison, Christison has written that " he dispensed his bottles on much the same principle as he gave away his sixpences to the crowd of beggars round his door in Heriot Row, as he left his home in the morning. Suffering humanity was ever too much for Alison : it was impossible for him to refrain from an

immediate and often unwise demonstration of practical sympathy."

Instruction in clinical medicine was constantly hampered by the excessive number of students ; this state of affairs in the hospital gave rise to repeated criticism, it was unsatisfactory for the patients, inconvenient to the physicians in attendance and not conducive to the best type of teaching. The matriculation roll in the faculty of medicine during the decade 1823-24 to 1832-34 reached the high figure of 8564, the largest number in one year of the period reaching 935, the lowest 807, with an annual average of 856 ; and the annual income of the Infirmary derived from the sale of hospital tickets, while varying somewhat from year to year, reached in 1832-33 the substantial sum of £2613. At the end of the decade, in 1833, the qualifying period of medical study was prolonged from three years to four, and practical anatomy, with attendance at lectures on clinical surgery, midwifery and forensic medicine, was made compulsory. It is significant that a period ensued during which there was a notable decline in the number of medical students.

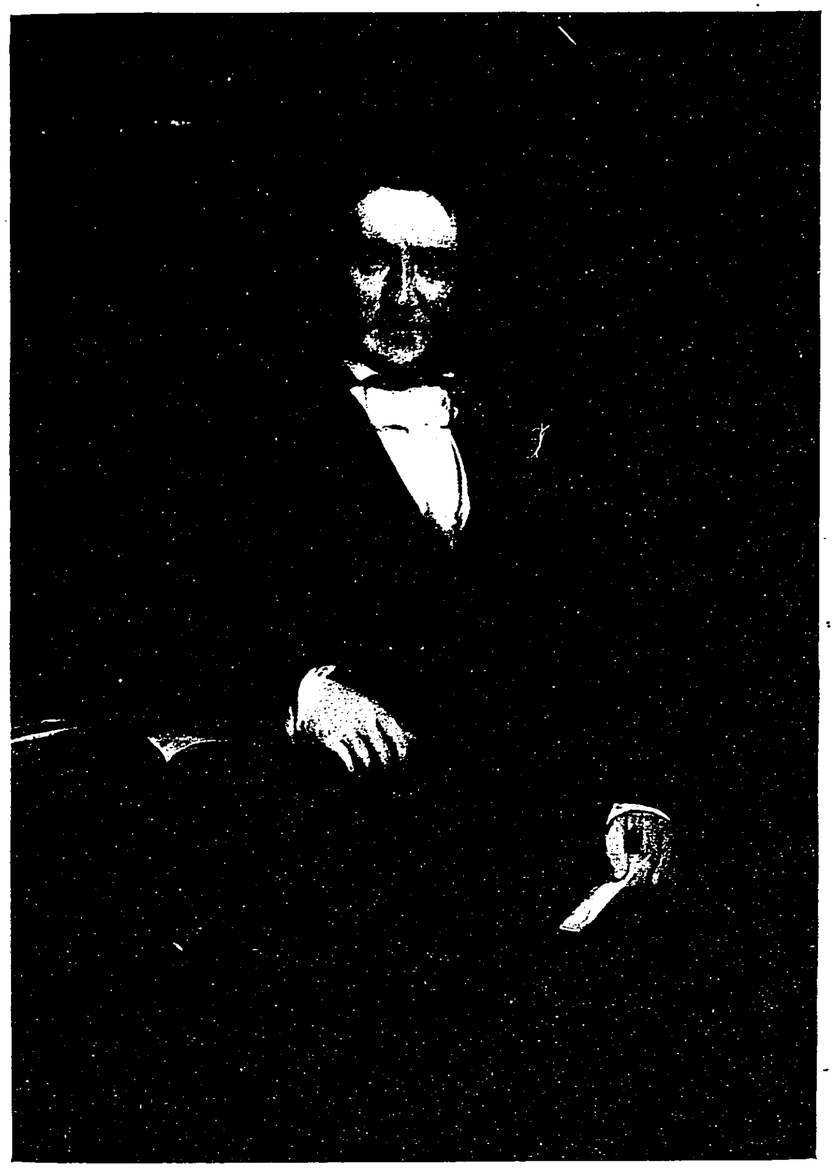
To avoid the evil of overcrowding an arrangement was made by which four of the professors of medicine should participate annually in the duties of clinical physicians and four wards were appropriated for their use, two of the professors attending at the same time and teaching for a period of three months.[1] But twenty years later, in 1848, the managers, being still doubtful of the efficiency of the system of clinical teaching, raised the question of the desirability of establishing a professorship of clinical medicine on the lines already adopted in clinical surgery.[2] As the professors of medicine were under no compulsion to lecture in the Infirmary, some of them indeed declining to do so, the existing arrangement on a purely voluntary basis did not promote efficiency. The teaching of clinical surgery, on the other hand, by an individual professor had proved a successful experiment and

[1] Minute, Royal Infirmary, 13th November 1826.
[2] Minutes, Royal Infirmary, 20th November 1848 and 9th April 1849.

there was every reason to believe that, with a suitable endowment, a corresponding chair in medicine would attract a number of well-qualified candidates. It was not the intention of the managers, in the event of the establishment of this chair, that those professors, who might consider it essential for the efficient teaching of their respective branches of medical science, should be deprived of the opportunity of giving clinical instruction in the hospital. But the proposal failed to obtain the concurrence of the medical faculty, and neither in 1849 nor again in 1851 when the matter was reopened was any positive step taken; and it was not till 1913 that a chair of clinical medicine was instituted.

Counter proposals, however, were made by the clinical professors for increasing the resources of the hospital and providing facilities for the special study of particular forms of disease. Thus it was thought desirable that wards should be set apart for diseases of the skin, for the diseases of women and infants and for such mental cases as were admitted into the Infirmary and, further, that beds for patients suffering from diseases of the eye should be instituted. Specialism in medicine was beginning to obtain a foothold in the hospital. The special wards suggested were to be assigned alternately to the care of the professors of medicine and the extra-academical teachers of clinical medicine.[1] More use was also to be made of the medical out-patient department. General agreement was reached upon certain of these proposals: beds for the treatment of diseases of the eye were to be reserved in the New Surgical Hospital shortly to be opened and, on 11th March 1850, an extra-physician for the diseases of women and infants was appointed, James Young Simpson being then elected to the staff of the Royal Infirmary. This appointment entitled him, if called upon, to give lectures upon the patients under his charge. It was further minuted that "no patient shall be placed in that ward until she has been made aware by the Treasurer-Superintendent or Matron that she will be under the charge of the said physician and may be more peculiarly the subject of attention to the

[1] Minute, Royal Infirmary, November 1849.



SIR JAMES YOUNG SIMPSON, Bt.
Professor of Midwifery, 1840-1870

(Reproduced by kind permission of Professor R. W. Johnstone, from a portrait ascribed to Sir John Watson Gordon, P.R.S.A., R.A.)

Lecturer and the students than she might be in a general ward."

Sir James Young Simpson's appointment to the Infirmary was not made in virtue of his office as professor of midwifery but as a personal tribute to his outstanding position in the medical profession. Elected in 1840 to the chair in the University, at the age of twenty-eight, this remarkable man on joining the staff of the hospital had already attained a world-wide reputation which attracted to Edinburgh not only patients but men of science from all parts of the globe. One of his colleagues in the Senatus, calling to see him while engaged in his practice at 52 Queen Street, thus describes the busy scene: "The two reception rooms were as usual full of patients, more were seated in the lobby, female faces stared from all the windows in vacant expectancy, and a lady was ringing the door-bell. But the doctor brushed through the crowd to join me and left them all kicking their heels at their leisure for the next two hours." His love of study, his thirst for knowledge and indomitable perseverance combined with an extraordinary power of concentration and an accurate and retentive memory, enabled him to accomplish what few other men were capable of doing. He could never be idle, and in archæological and historical research he found a source of recreation which occupied his hours of leisure. As one of the combative giants in that period of the history of the Edinburgh School, he found time also to take part in many a bitter controversy. He died on 6th May 1870, within a month of his sixtieth birthday and, notwithstanding the national desire that he should be interred in Westminster Abbey, he was buried in the Warriston Cemetery, Edinburgh, beside five of his children who had predeceased him, his funeral being one of the most memorable ever witnessed in Scotland.

James Matthews Duncan, an Aberdonian both by birth and education and intimately associated with Simpson in his experiments on chloroform anæsthesia, was appointed to the Infirmary in 1861, as a second extra-physician for diseases of women, thus becoming a colleague of Simpson. "The

massive head, the rugged and impressive features with the firm mouth and square chin indicated great resolution of character and capacity for continuous work." He did much to place obstetrics on a sure scientific basis of ascertained facts. He regarded teaching, in which he was eminently successful, as a "daily intellectual gymnastic," to quote his own words, "as it taught him both his own ignorance and his knowledge and was an invaluable incitement to study." Regarded by many as the natural successor of Simpson in the chair of midwifery he failed in his object and, in 1877, in response to an invitation from St Bartholomew's Hospital, he proceeded to London to become the foremost exponent of the specialty in the metropolis.

A few years prior to the events just recorded—in 1839—the office of pathologist to the Royal Infirmary was created. The Board were then endeavouring to place the internal management of the hospital on a more satisfactory basis and the various steps taken to establish better supervision in the house will be told in a subsequent chapter on administration. But one of the early methods adopted was the appointment of a graduate in medicine in the dual office of Superintendent and Pathologist with residence in the hospital, although the duties, which the double position entailed, did not debar him from undertaking other work outside the Infirmary. The explanation of this somewhat unusual combination of offices is probably to be found in the fact that the Board had at their disposal a young man of great ability in John Reid, who had been giving very efficient service in the position of Special Clerk, thus gaining considerable practical knowledge of all the departments in the house.

In the past, the Board of Management had kept a close control over the regulations in force relative to the examination of the bodies of patients dying in the hospital. As early as 1742, an instruction was issued that "no body was to be opened unless the managers were first informed that some singularity in the symptoms of the disease during life had made it necessary and useful to do so"; and permission to

examine the body had to be given by five members of the Board.[1] An unusual incident was brought to their notice in 1759, when one of the surgeons, during his period of attendance at the hospital, examined a body in the operating theatre instead of in the mortuary, bringing with him several persons who had no hospital tickets. Having acted in contravention of the rules the surgeon was dismissed from further service in the Infirmary. In the statutes printed in 1778 it was definitely laid down that no physician or surgeon was permitted to perform a *post-mortem* examination without a licence signed by at least three of the managers.

The dual post of Superintendent and Pathologist was continued for five years, when further administrative changes were made dissociating the two offices.[2] The Infirmary has always been fortunate in the men selected as pathologists who, without exception, have attained eminence in the profession, the position serving either as a valuable stepping-stone to future promotion in the Infirmary or to advancement elsewhere. John Reid, a graduate of 1830, who was the first to hold the double appointment, was like James Young Simpson a native of Bathgate. He had been demonstrator of anatomy with Robert Knox and, in his early days in Edinburgh, as the intimate friend of John Goodsir, the anatomist, of Edward Forbes, the naturalist, and John Hughes Bennett, clinician and physiologist, he became along with them one of "The Brotherhood of the Friends of Truth," a small coterie that met nightly in the attic storey of 21 Lothian Street, the lodging of the Goodsir brothers. Reid brought to his duties at the Infirmary a love of science and a great desire to learn the truth. As the result of his experience during the fever epidemics he was able to describe the pathological changes found in typhoid fever, thus assisting in differentiating that disease from typhus. While acting as pathologist he lectured on physiology in the extra-academical school and, when a vacancy occurred in 1841 in the Chandos Chair at St Andrews, he was appointed professor of anatomy and medicine. His experimental observations on the functions

[1] Minute, 19th January 1742.

[2] Chapter XII, p. 204.

of the eighth cranial nerves, observations which will repay study today, extended his reputation amongst physiologists. Reid died in 1849 at the early age of forty. His successor at the Infirmary was Thomas Beavill Peacock, a graduate of 1842, elected to the staff of St Thomas's Hospital, London, in 1849, and afterwards becoming full physician to that Institution.

With the separation of the double office in 1843, John Hughes Bennett became pathologist to the Infirmary, retaining the appointment till his election to the chair of institutes of medicine in the University in 1848, when he became clinical physician in the hospital. A firm believer in the value of coordinating the teaching of physiology and clinical medicine, he was the last of the occupants of that chair to act as a "professor of medicine" in the Infirmary. "Vivid and telling as a clinical lecturer he was at his best at the bedside." His successor as pathologist was (Sir) William Tennant Gairdner, "a tall, slender youth, whose grave and thoughtful aspect was heightened by the use of spectacles." In his work as pathologist he laid the foundation of his great attainments as a physician. Promoted to the latter office in 1853 he lectured on medicine in the extra-academical school till 1862, when he was called to the chair of practice of physic at Glasgow. Daniel Rutherford Haldane, following in the footsteps of Gairdner as pathologist, gave thirty-four years of service to the Royal Infirmary; nine as pathologist, fifteen as physician-in-ordinary and ten as a manager. The sixth in the succession (Sir) Thomas Grainger Stewart, appointed pathologist in 1862, was for twenty-four years professor of medicine in the University. His students will recall the tall and dignified figure and the gift of language which enabled him to paint the descriptive word-pictures of disease, leaving an indelible impression on their minds.

The duration of the period of residence of patients undergoing treatment in hospital is a subject which must always cause some concern to those interested in its management: it bears a very close relation to the number of those on the waiting

list desiring admission, as the more rapid the "turn over" in the wards, the more quickly the beds are vacated and new cases admitted. Little or no attention appears to have been directed to this question in the Infirmary till the year 1850 when, for the first time, reference was made to it in the annual report of the managers. It was stated that the average time spent in hospital by each patient was 36 days, there being no differentiation, however, between the medical cases, the surgical and those suffering from infectious fever. Obviously the period of residence must vary in these different groups. In the year 1853-54, a more detailed return was given, the two main departments of medicine and surgery being differentiated and special returns recorded of the patients in the fever and Lock wards. As a rule the average duration of residence in the fever wards was shorter than elsewhere in the hospital, while in the Lock wards the period greatly exceeded that in the rest of the surgical department.

One illustration may be given in the figures published in the report for the year 1854-55 :—

	Average Residence in Days.
Fever wards	30·2
Ordinary medical wards	35·3
Medical hospital generally	34·9
Ordinary surgical wards	42·0
Lock hospital	66·0
Surgical hospital generally	43·3

For many years the period of residence in the ordinary surgical wards exceeded that in the ordinary medical wards. It was not till 1880 that the position was reversed when, for the first time, the average stay in the surgical hospital was less than in the medical department. In 1854-55, convalescence after injuries and operations was still considerably retarded by complications such as long-continued suppuration and gangrene, complications which debilitated the patients and necessitated the frequent dressing of wounds. It was still the period "Before the Dawn," and the genius of Lister—house surgeon with James Syme in that year—had not yet revolutionised the practice of surgery. A comparison of the

figures in the table above quoted with those given in 1934-35 will reveal at a glance how different the position has become :—

	Average Residence in Days.
Medical wards . . .	24·47
Surgical wards . . .	12·87

It was found on inquiry that the period of residence in the Royal Infirmary exceeded that in certain other institutions, such as the Glasgow Royal Infirmary, the General Hospital, Birmingham, and the Greenock Infirmary. This was attributed by the medical staff in Edinburgh mainly to four causes : (1) That the rules governing admission to the hospital were more liberally interpreted ; (2) that amongst the class of patients admitted the proportion of those with chronic organic disease was high ; (3) that there was an absence of any facility to enable the staff to keep the patients under observation outside the hospital ; and (4) that the number of patients attracted to the Royal Infirmary of Edinburgh from a distance necessitated detention for a longer period than would otherwise be required if their homes were within easy access. A weekly report of all those under treatment for more than forty days was insisted upon and every means adopted to make residence as short as possible, compatible with restoration to health.

One possible avenue of relief presented itself through the assistance furnished by certain benevolent persons who, combining as a committee, made arrangements to establish a few convalescent houses in the city : by using these as intermediate stations between the hospital and the home, an opportunity was provided to enable the patients to reach a more complete stage of recovery before their final discharge. In this lay the germ of the future Convalescent House of the Royal Infirmary. These houses first became available about 1857 and, although a decrease took place in the length of the period of residence in the Infirmary without any temporary fluctuations, it was somewhat difficult to assess the actual part they played in bringing about the reduction.

In July 1864, a welcome offer was made by an anonymous benefactor to build and present to the Infirmary a Convalescent House, on the understanding that the managers undertook to maintain it. A suitable site comprising five acres of ground was obtained at Corstorphine, then a small village lying about two miles to the west of Edinburgh. Sheltered from the north by Corstorphine Hill, with an open southern frontage and with the Pentland Hills forming a distant background, the situation was ideal for the purpose in view. The plans of the house were prepared by Kinnear and Peddie, the architects, and the building was erected at the cost of £12,000, including the provision of the feu-duty ; accommodation was found for nearly fifty patients. The House was formally opened in July 1867, when the name of the donor, William Seton Brown, was disclosed. A housekeeper, at a salary of £40, a gardener and a gatekeeper were engaged, and the minister of Corstorphine accepted the duties of chaplain. The care of the patients was placed in the hands of Thomas Annandale, junior assistant surgeon to the Infirmary.

In 1893, through a bequest of £13,000 from Mr James Nasmyth, the eminent engineer, two wings were added to the original building, thus giving the additional accommodation of forty beds. The Convalescent House, to which patients more or less able to look after themselves are sent for a statutory period of three weeks, undoubtedly relieves the pressure on the beds in the Infirmary. During the year 1934-35, as many as 1533 were in residence, the daily average number of beds occupied being 69·18, a number somewhat smaller than in previous years. The cost of upkeep was £3912, a sum which included the conveyance of patients from and to the Infirmary.

The main problem which besets the managers of the Infirmary today is more or less identical with that which faced their predecessors nearly a hundred years ago ; and the remedies suggested and gravely considered for its solution are of a very similar nature. In both generations the same fundamental cause has existed, the eternal difficulty in

making both ends meet—in balancing the annual expenditure with the revenue. Through many years the chief burthen of complaint reiterated in the annual reports, becoming almost monotonous in the regularity with which it was stated, is the tale of the deficit of receipts over expenditure. Occasionally, but at long intervals, a ray of sunshine has illuminated the shadows and dispersed the gloom, when the accounts balanced, or when the receipts placed a few pounds on the credit side.

For a number of years the annual contributions had been quite inadequate to meet the current expenditure, especially during the epidemics of fever and, without a steady increase from that source, it might become necessary to reduce the number of patients admitted to the hospital, a step which the managers were very unwilling to adopt, as it would react adversely on the interests of the hospital and medical school. During the period 1st October 1840 to 30th September 1848 the annual *average* deficit of ordinary revenue over expenditure was more than £1700. With the exception of three years during that time an annual deficit existed even after applying the legacies and donations which properly belonged to Capital. Moreover, in 1842, it had been deemed necessary again to encroach upon accumulated Capital by selling Stock in order to liquidate debt which was due to the Royal Bank of Scotland. The following figures are quoted as an example of the financial position during one year of the period under review: annual receipts from all sources other than legacies and donations, £9323; expenditure, £10,980; deficit, £1657; when the legacies and donations which amounted to £1562 were applied to meet the deficiency, a sum of £95 still remained as a debit balance.

In the report of the Committee of the Court of Contributors, 1850-51, a very instructive analysis threw some light not only on the sum derived from annual subscriptions but also, in the case of Edinburgh at any rate, on the number of persons subscribing. Subscriptions were then raised under two heads, those made through district collectors and those by means of Church-door collections: they were recorded from three areas, Edinburgh, Leith and Newhaven, and the Counties of

Scotland. The Church-door collections obviously could not be analysed as regards the number of individuals subscribing, but they realised the sum of £1512, of which Edinburgh contributed £1374, Leith and Newhaven £60, and the Country Parishes £78. In Edinburgh the subscriptions received by the collectors amounted to £1641 and were obtained from 4064 citizens. As the population of the city, revealed by a recent census, numbered 160,000 persons, only one-fortieth of the total contributed through that channel to the funds of the Infirmary. When the sum given by each of these individuals was submitted to analysis it was found that more than two-thirds of the subscribers gave less than one pound each. From Leith and Newhaven the collectors received £277, and from the Country Parishes £632: hence the sum received from the three areas amounted to £2550, which, added to the Church-door collections, gave a total sum of £4062. As the number of patients treated in the Infirmary during the same year was 4637—from the city, 3367, from Leith and Newhaven, 340, and from the country districts, 930[1]—the conclusion previously reached that the hospital was not receiving from the public the financial support that its claims undoubtedly deserved, seemed to be justified. If it were to remain "an open door" to those really qualified for the charity, increased liberality was certainly required.

In May 1856, six medical and nine surgical wards—in all, 144 beds—were closed as a precautionary measure, the state of the annual contributions making no other course possible.[2] It was fortunate that owing to a more healthy condition of the community less demand was being made upon the accommodation in the hospital, and in no instance was a case of acute illness denied admission nor any requiring active remedial treatment. The public had been repeatedly warned that this drastic step might become necessary if financial assistance was not forthcoming and, without sufficient support, the responsibility no longer rested with the managers. On

[1] The number 930 included 30 patients from England and Ireland.

[2] In the following autumn forty beds were restored to facilitate clinical teaching.

the principle that the coat should be cut according to the cloth there seemed to be no other course than to close some of the wards, until the finances permitted of their reopening.

The situation thus created raised the further question as to the desirability of utilising the vacant beds by admitting a class of patients who could afford to pay a small board for their maintenance. It seemed reasonable to argue, and with some truth, that the normal resources of the hospital were being wasted by declining to receive paying patients when accommodation remained unused through lack of funds. But doubt being expressed as to how far it was practicable to combine under one roof a charitable institution and one in which payment was exacted, the managers decided against their introduction. Yet in the eighteenth century the two systems had worked smoothly side by side for many years when payment had been received for the maintenance of soldiers and sailors, domestic servants, the insane and the lying-in woman; and even in 1856, the Parochial Boards were annually contributing a considerable sum for the care of pauper patients, and the managers were then considering the propriety of exacting a still higher remuneration from these Boards both in the towns and country districts.

An application for Government Grants and the adoption of a measure of compulsory local assessment also came under consideration. Although it was felt that the Infirmary conferred more good upon the community generally than any other institution of a similar kind, and therefore had strong claims to national support, considerable doubt was expressed as to whether any such appeal to Government would prove successful, or indeed ought to be made. The Infirmary was essentially a charitable Institution, hitherto supported by the voluntary contributions of the public, a means of support which it was hoped the hospital would continue to receive so as to maintain its full efficiency. Local taxation, if instituted, would probably terminate the voluntary and charitable contributions of the public and forfeit their interest in its support. It would eventually increase the cost of maintenance of the hospital by depriving it of the gratuitous services of its medical

and surgical staff, for which payment would require to be made, and it would lose the assistance of a body of efficient managers voluntarily conducting its affairs. Moreover, the admission of patients would be restricted to those living in the city and suburbs and lead to the exclusion of those residing outside these boundaries, thus destroying the national character of the Royal Infirmary.

Such were the views then held and the decisions reached by the managers on the important question of hospital policy: times and circumstances have changed, but the problem of the maintenance and of the efficiency of the Infirmary is none the less real today.