

Townsend (R. M.)

SOME MEDICAL PILGRIMAGES ABROAD.

AN INTRODUCTORY

TO THE

SUMMER COURSE OF LECTURES

OF THE

JEFFERSON MEDICAL COLLEGE,

DELIVERED MARCH 30, 1874.

BY

Box 15.

RALPH M. TOWNSEND, M.D.,

LECTURER ON MINOR SURGERY.

PUBLISHED BY THE CLASS.

PHILADELPHIA:

P. MADEIRA, SURGICAL INSTRUMENT MAKER,

115 SOUTH TENTH STREET, BELOW CHESTNUT.

1874.



Tomb of Paracelsus.

(From a Sketch by Dr. R. M. TOWNSEND.)

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CORRESPONDENCE.

JEFFERSON MEDICAL COLLEGE,

March 31, 1874.

At a meeting of the Summer Class, it was unanimously

Resolved, That a Committee of three be appointed to present the compliments of the Class to Dr. Ralph M. Townsend, and request a copy of his Introductory Address for publication.

THOS. D. INGRAM, *President*.

DANIEL F. GLEASON, *Secretary*.

DR. R. M. TOWNSEND:—

DEAR SIR: We, the undersigned, a Committee appointed by the Summer Class of 1874, take great pleasure in expressing the unanimous desire of the Class for a copy of your Introductory for publication. The possession of it in printed form will not only afford us pleasant perusals, but will also add to the literature of medicine.

Yours, respectfully,

E. L. B. GODFREY,

A. PARISH,

JOS. E. SMITH.

Messrs. GODFREY, PARISH, and SMITH:—

GENTLEMEN: I thank you for your complimentary note, and cheerfully place my manuscript at your disposal.

Sincerely yours,

RALPH M. TOWNSEND.

1322 Walnut Street, Philadelphia,

April 6, 1874.

INTRODUCTORY.

Out of the old fieldes, as men saith,
Cometh all this new corn fro' year to year;
And out of old books, in good faith,
Cometh all this new science that men lere.

CHAUCER.

GENTLEMEN :

It is my eminently agreeable duty, this morning, to bid you welcome to the ninth annual course of summer lectures of this school.

It has occurred to me that in no pleasanter and more profitable way could we pass our introductory time, than by the recital of some pilgrimages, beyond the Atlantic, to the graves of our medical fathers. Their names will constantly be brought before you, either in connection with drug or ailment, anatomical part or surgical procedure, and, it may be, you will feel a kind of mental hunger to know more concerning them than can drop from the lecturer's lips in his otherwise busy hour. Moreover, the patient lessons of their lives, coupled with the good they wrought, constitute a precious legacy, which, having been faithfully held in trust for us, should by us be religiously guarded for posterity.

We cannot visit all the shrines of these old medical pioneers, because the field is so vast that our time would sooner end than our way. But, we can look into an old cathedral here, and stroll through a grassy graveyard there, and, as we read their names, and tread softly above their dust, both prove the vigor of our youth by our reverence

for age, and improve our better nature by growing in closer companionship with such glorious professional ancestry.

St. Augustine's, the court church of Vienna, contains the tomb of Van Swieten, whose "Commentaries on the Aphorisms on the Diagnosis and Cure of Disease of Boerhaave," his illustrious master, is still a standard work. Van Swieten was born at Leyden, in 1700, where he afterwards became professor of medicine. Driven from his native city by religious persecution, he found a refuge in the Austrian capital, where his abilities raised him to the rank of a baron, made him Superintendent of the Imperial Library, President of the Medical Faculty, and first physician to Austria's greatest empress. He was contemporary with Albinus, Hoffman, Meckel, Gaubius, and Haller. The church wherein he rests is rich with monumental work of master hands, like Zauner and Canova: it contains the ashes of long and imperial lines; and its walls are centuries old—antedating the days of Harvey, Sydenham, Paré, and Vesalius.

By rail, ten hours' ride westward from Vienna, skirting the banks of the "blue Danube" and the base of the Tyrol-ese Alps, brings us to the beautiful Austrian town of Salzburg. In the "platzl," near a bridge spanning a gray glacier stream, stands a line of tall and weather-beaten houses. High up on the front of one of them is an ancient painting of the head of a monkish looking man, bearing this inscription, in Latin, underneath:—

Philippus Theophrastus Paracelsus, who inhabited this house,
and died here, 1541.

Entering a narrow court, around which the building is constructed, we perceive that the great bombastic's office must have been on the second floor, as the only apartment on the ground floor of these old houses was occupied by the *concierge*. There is no sign of the mansion's former celebrated inhabitant. A washerwoman plies her vocation

at the office window, a canary bird's song usurps the sound of the patient's inquiry in the court, and the little room of the *concierge* is occupied by a bald-headed watchmaker. For aught we know, the time-piece of Paracelsus may be one of the row of old watches hanging in the dusty window, truer to its times and its mechanism than was its alarm-and-bell-sounding possessor. But it must not be ours to judge him. When the virtues of opium and mercury opened themselves to him (he was the first to introduce them into general use), he might for the time have thought that life's elixir had run into his hands. He died poor and neglected in this Salzburg house; and, if his life witnessed him false to his profession and his age, the pangs of poverty, doubtless, united with those of conscience, and blotted out even the remembrance of the most brilliant of charlatanry's successes. In the vestibule of the church of St. Sebastian, at the end of the *Lintzer-strasse*, not far from where he lived, Paracelsus lies buried. His monument stands in a niche by the side of a latticed window. On its shaft is painted another of those monk-like faces, similar to the one we have seen upon his house, only this one shows the hands crossed upon the breast, as if confessing, or at prayer. A priest inside the church was saying mass, and the organ played soft and low, as I sketched his tomb; and many of those who went to and fro from church, especially those of the poorer class who might have been laboring under some sickness, knelt before the monument and said a short prayer. Such is the force of superstition, and the lasting power of the name he wrought, that many, annually, pilgrimage to this tomb, in order to avail themselves of the healing power that a prayer before it is supposed to evoke. The inscription on the monument is in Latin, in three parts, and reads:—

Here is the portrait and bones of Philip Theophrastus Paracelsus, who obtained so great worldly fame from chemical gold, and who shall lie here until he is again clothed in his own flesh.—JOB 19, 26.

The Bible verse to which the latter part of this inscription bears reference, reads: "And though after my skin worms destroy this body, yet in my flesh shall I see God." Lower down upon the tablet a second inscription reads:—

Taken from his tomb and placed here at the repairing of the church in 1752.

And finally we have—

Here lies Philip Theophrastus, a distinguished teacher of medicine, who cured by his wonderful art those terrible ills, lepra, gout, dropsy, and other incurable affections of the body, and gave his goods to be distributed to the poor. On the 24th day of September of the year 1541 he exchanged life for death. Peace to the living: eternal rest to the dead.

And now we will away yet westward to Paris, and in its outlying cemeteries note where rest the remains of medical masters. The great surgeon and anatomist Velpeau, whose "Traité de l'Art des Accouchements" was translated by the late Professor Meigs of this College, lies buried at Montmartre, whither he was followed by distinguished men from all parts of the world. Orfila, the accomplished writer and lecturer on toxicology and legal medicine, and the principal founder of the *Musée Orfila*, in Paris; Boyer, consulting surgeon to the first Napoleon, Louis XVIII., Charles X., and Louis Philippe; and the distinguished surgeon, Lisfranc, all rest in *Montparnasse*.

In the most famous of all cemeteries, *Père Lachaise*, whose every winding walk is rich in the dust of illustrious men, lie Geoffroy-Saint-Hilaire, the celebrated zoologist and founder of scientific anatomy; Amussat, who devised torsion as a method of arrest in hemorrhage; Dupuytren, the great surgeon-chief of old *Hôtel-Dieu*; and Napoleon's illustrious military surgeon, Baron Larrey.

Dupuytren's monument stands, gray and massive, behind a row of trees

"Which a full age have felt the breeze,
And half that time, at least, have made
A long cathedral aisle of shade."

The base of the monument is surrounded by Doric facings, and capped by a commanding granite shaft. On the latter is cut, in clear, bold letters, **DUPUYTREN**; and below this, on the base, is a coat of arms—curious enough to delight the most ardent student of heraldry—along with the respective dates and places of the surgeon's birth and death.

Larrey's monument consists of a pyramid, like Egypt's in miniature. It bears this inscription:—

À

LARREY

L'homme le plus vertueux que j'aie connu.

NAPOLEON I.

Concession à perpétuité par la ville de Paris.

To look at this monument is to see an icy, Polish river, on whose banks the remnant of a great army of invasion are huddled in disordered ranks. All that lies between the freezing, starving men, and death—or worse, captivity—is a frail wooden bridge, that, even now, is bending with incumbent weight. Suddenly, the bullets of Cossack and Russian whizz through the mass, making it, with selfish vigor, press women and children under foot, and strive for the bridge. But, while the panic is at its height, the frantic soldiery recognize a genial presence in their midst, who has followed them with *saving* hand in tropic heat, arctic cold, conflagration, and the roar of battle; a presence that they love so well that before, they refused to march without it in their hour of victory, and now, they will not desert it, even in the pressing time of disastrous defeat. Until Larrey has been saved the suffering men cease all exertion for self. They pass him from man to man, and give him safe passage across the bridge. An instant after it breaks, and hundreds whom hunger and cold had spared are carried into captivity, or sink beneath the waters. What would you give for the warmth of grateful feeling

that must fill that grand old surgeon, as he plies his saving knife, all that bitter cold night, on the snow, and under fire of the enemy's baffled cannon!

As we pass through Paris we see crowds lining the *boulevards*, gazing respectfully and silently upon a procession composed of glittering soldiery, dirge-playing bands, and some of the best intellects of Europe. Paris, charmed with his simpleness and worth, pays homage to the remains of one to whom surgery, while it wore him out, imparted its glory. Member of the French Academies of Medicine and Science—Grand Officer of the Legion of Honor, and Senator—it seemed but yesterday that nations showered their congratulations upon him, above whom now wave the funeral plumes, when his fertile genius had relieved the sufferings and saved the life of the hero of Caprera.

The procession that we see follows Nélaton to Père Lachaise.

This city of Paris, that has done so much for science, is not forgetful of its illustrious dead. They are remembered in painting, dome, and sculptured grandeur. About its wonderful public charities we may see remembrances in bronze and marble of such eminent physicians as Dubois, Alibert, and Trousseau; and such great surgeons and anatomists as Paré, Bichat, Jobert, Cazenave, Velpeau, Civiale, and Dupuytren.

Twelve hours from the bright French Capital, by rail and boat, brings us to the mighty metropolis of Britain, where rest many illustrious medical men.

In the old church of St. Martin's-in-the-Fields—name redolent of birds and grass, but standing in the centre of London—a few of his oldest friends, in 1793, laid away the body of John Hunter, giving his dust companionship with that of Robert Boyle, the chemist, and Sir Theodore Mayerne, physician to Charles I. and James I.

From this church, in 1859, the remains of the great master of organic science were removed to beneath the north aisle of Westminster Abbey. There we read, after raising the dusty matting that covers it, this inscription, let, in letters of brass, into the pavement:—

The Royal College of Surgeons of England have placed this tablet over the grave of Hunter, to record their admiration of his genius as a gifted interpreter of the Divine power and wisdom at work in the laws of organic life, and their grateful veneration for his services to mankind as the founder of Scientific Surgery. Born 1728 : died 1793.

In the dim light of the Cathedral we look back a century and more, and see the Glasgow cabinet-maker ride horse-back into London. We follow him at work in his brother's dissecting room, at Chelsea Hospital under Cheselden, at St. Bartholomew's under Pott, and as staff-surgeon in Bellisle and Portugal. We see him returning to London, scant of means, but full of scientific ardor; and, as a result of his labors, elected a fellow of the Royal Society, and surgeon to St. George's Hospital. And thus, as we trace him step by step through his long and brilliant career of work and thought, the refulgence of his later glory, like a burst of sunlight through the Abbey windows, grandly illumining the richness of its interior, envelops us.

“Hunter's researches covered the whole range of the animal kingdom, and were conducted with such untiring zeal, that he dissected upwards of five hundred different species, exclusive of dissections of different individuals, and of a large number of plants. The results were carefully arranged and stored in that noble collection which he formed, of the magnitude of which we may gain some idea, that, at his death, it contained upwards of ten thousand preparations, illustrative of the phenomena of nature.”* But this, although great, was not his greatest

* Buckle's History of Civilization.

achievement. His profoundest labors were those of thought. Wrapped in the magnitude of his inner self he evolved instruments, operations, and theories. He viewed pathology as though he had walked the wards of a mineral hospital, listened to the language of every drooping plant, and heard the wail of past complaint from every living thing. He announced, what even we in these days of high brain pressure can hardly grasp, "the magnificent theory that the science of pathology did not mean the laws of disease in man alone, or even in animals, or even in the whole organic kingdom; but it meant the laws of disease and of malformation in the entire material world, organic and inorganic."

Buckle ranks Hunter, as a philosopher, with Adam Smith; and, as a master of organic science, with Aristotle, Harvey, and Bichat.

In the same aisle with Hunter, a massive allegorical carving commemorates Hugh Chamberlain, a noted London *accoucheur*, who practised in the latter part of the seventeenth century; and a bust, and various emblematical devices, do honor to Richard Mead, physician to George II., a voluminous medical writer, and the friend of Pope, Newton, and Boerhaave.

William Hunter rests in a vault of St. James's Church, Westminster. As physician to the Queen, surgeon-accoucheur to the Middlesex and British Lying-in Hospitals, professor of Anatomy in the Academy of Arts, and president of the Royal College of Physicians, he, like his brother, achieved enduring reputation. He was the first to describe varicose aneurism, and the *membrana decidua reflexa*; and his "Anatomy of the Human Gravid Uterus" was one of the most splendid medical works of the age in which he lived. At his death (1783) he bequeathed the magnificent museum he had collected to his alma mater, the University of Glasgow. The bequest included a sum

of forty thousand dollars for the erection of a building for the reception of the collection. The museum, to-day, is valued at six hundred and fifty thousand dollars, and is yearly increasing in contents and value.

The "English Hippocrates," Sydenham, rests from his labors in the Church of St. James, Piccadilly; Arbuthnot and Akenside bear him silent company.

Arbuthnot was a Scotchman who, like many of his countrymen, came to settle in London. He was physician-in-ordinary to Queen Anne, and a medical writer of ability. His chief productions, however, were of a combined satirical and political character. He was intimate with Pope, Swift, Gray, Prior, and Bolingbroke. Swift said of him, "he has more wit than we all have, and his humanity is equal to his wit."

Akenside, the son of a butcher, became physician to a queen. About 1760, while physician to St. Thomas's Hospital, he wrote, in elegant Latin, a treatise on "Dysentery;" "which," says Johnson, "entitled him to the same height of place among the scholars, as he possessed before among the wits."

John Armstrong, best remembered by his "Satirical Essay for Abridging the Study of Physic," and a didactic poem on the "Art of Preserving Health," lies in St. Paul's, Covent Garden.

St. Paul's Cathedral, dear to every Englishman on account of its architectural grandeur, and as the place of sepulchre of Nelson and Wellington, contains, among other monuments, columns to Howard the philanthropist, Dr. William Babington, and Sir Astley Cooper.

Howard's was the first monument erected in St. Paul's. He died at Cherson, on the Black Sea, in 1790, while searching out the cause of the plague, and "taking the gauge and dimensions of misery, depression, and contempt." Babington's tablet and statue bear date of 1833. He

lectured on chemistry at Guy's Hospital, and was one of the founders and president of the Geological Society.

Sir Astley Cooper's grave is marked by a commanding statue of him. On its pedestal is inscribed:—

Sir Astley Paston Cooper, Bart.,
K.C.H., F.R.S., D.C.L.

Member of the National Institution of France, Sergeant-Surgeon to their late Majesties George IV., William IV., to her present Majesty Queen Victoria, and for a period of forty-two years Surgeon to Guy's Hospital.

Born 1768 : died 1842.

Animated by a fervent attachment to the science and practice of his profession, it was the study of his life to augment and simplify the resources of surgery ; and by a most assiduous, benevolent, and successful application of his time and talents to this noble department of the healing art, not his country alone, but the world became indebted to his exertions, and familiar with his fame. As a memorial of his excellence, and their admiration, his contemporaries and pupils have erected this monument to perpetuate his name and example.

A few miles north of London is the country church of Willesden, and there, last October, were laid away in a vault in the churchyard, the remains of Sir Henry Holland. Beyond his immediate family and ordinary spectators from the village, there was no attendance of visitors at the church. This seemed curious, especially after witnessing the funeral of Nélaton, who (such an impression) had avoided fashionable life with as much earnestness as Sir Henry had courted it. There also seemed to be some professional respect wanting in the absolute non-attendance of medical men. The published writings of the deceased baronet placed his professional and scientific knowledge beyond dispute. From the commencement of the century, he had lived an intelligent and omnipresent spectator, through seventy-two of the most exciting and eventful years of the world's history: he had seen the political and social aspect of most civilized nations in both hemispheres transformed three or four times over, including the fall of empires, monarchies, and republics. he had crossed the

Atlantic sixteen or seventeen times; travelled over more than twenty-six thousand miles of this continent; made four expeditions to the East, three tours in Russia, two in Iceland, several in Sweden, Norway, Spain, Portugal, Italy, and Greece; voyages to the Canary Isles, the West Indies, Madeira, and, to use his own words, "other excursions which it would be useless to enumerate." He had associated in every capital in Europe with all that is, or was, most eminent for rank, birth, genius, wit, learning, and accomplishment. He could call every leading statesman of this country and its presidents, for the last half century, his friends; and in his professional capacity, besides a long list of royal and princely patients, he had the honor and responsibility of prescribing for six Prime Ministers of England, besides Chancellors of the Exchequer, Secretaries of State, Presidents of the Council, Chief Justices, and Lord Chancellors.

We now leave the great metropolis still further behind, and run fifty miles away through the fields and woods of Essex, to the green and quiet churchyard of the little parish of Hempstead. Here rests the discoverer of the circulation of the blood. We should rather fancy his monument jutting forth in some busy city, at the intersection of great arteries of travel. It hardly needs the chiseller's art, on the modest monument that crowns his grave, to tell us of his fame:—

"The circling streams, once thought but pools of blood,
(Whether life's fuel or the body's food)
From dark oblivion Harvey's name shall save."

Pettigrew writes (1849) that Harvey's coffin can still be seen in the vault, and that it is entirely of lead, mummy-like in shape, and has inscribed on the breast, in great letters, "Dr. William Harvey, June 3d, 1657." Prior to Harvey's time probably no one branch of the tree of knowledge had ever been so vigorously shaken as this of the

circulation. Realdo Colombo, the successor of Vesalius, and Michael Servetus, a Spanish anatomist and theologian, whose life was offered up at the stern altar of Calvinism, both nearly succeeded in extracting this precious kernel of discovery; but they passed away with the burr only half opened, and left the pouting fruit to drop into Harvey's eager hands. Even then he had to battle a quarter of a century before science would open her cautious ranks and let the new discovery in.

The Cathedral of St. Peter, in Gloucester, was originally one of the finest Benedictine Abbeys in the British kingdom. It is remarkable for combining in itself the architecture of successive ages, the Norman and Saxon, with some of the finest examples of the different styles of Gothic. But what will make it more attractive to us than all these, is that its nave contains a well-cut statue of Jenner, and the grandeur of its interior is softly illumined with colored light, falling upon it through a rich memorial window, to the same illustrious man. A little way from Gloucester, in the church of the market-town of Berkeley, Jenner and his wife, side by side, sleep their long sleep. The tower of the church, which is disjointed from the rest of the building and adjoins the yard of Jenner's former residence, is covered with a rich, green livery of vigorous ivy. Jenner plucked the root from which it sprang from the tomb of Strongbow at Tintern Abbey.* His fame, like the little scion he planted, now encircles the church's goodly tower.

Jenner, though known chiefly to us by his great discovery, was a hard and industrious worker in the field of natural history. He assisted his preceptor, John Hunter, in many experiments illustrative of the structure and functions of animals. He was also an accurate anatomist and pathologist, and made advanced investigations into the diseases of the lymphatic system. But it was the discovery

* Baron's Life of Jenner.

of vaccination that will forever place Jenner in the front rank of human benefactors. He, to-day, who would bring forth a remedy that would successfully combat the wastes of phthisis, or the ravages of carcinoma, would do no more for his race than did Jenner.

Prior to the discovery of vaccination, of all born, one in fourteen died of the smallpox; and inoculation, by spreading the disease, increased this ratio. In the Russian Empire, smallpox destroyed two million inhabitants in a single year, and in Thibet, on one occasion, the same dire pestilence made deserted the capital for three years. These data deal simply with the immediate deaths, and say nothing of the results from dread sequelæ.

When we think, therefore, of what Jenner's discovery hath wrought, we cannot but look back to him with that reverence which devout Christians should feel for the labors of the Evangelists.

Newton, grasping and unwinding like a skein the intangible light, and deducing his law of gravitation from the apple's fall: Watt, so handling steam as to make it draw a gossamer thread, or rend an oak: Franklin, bringing down the lightning; and Morse, sending it around the earth like a racer—these works, all God-like, are entwined with the traditions of our youth; but they are entitled to no higher place in the remembrance of mankind than the labors of Jenner among the kine.

Briefly will I give you the history of this great discovery. Jenner, while a student of medicine, heard a country girl say to his rural preceptor, "I cannot take the smallpox, for I have had the cow-pox." To unravel the meaning of that assertion, became the labor of Jenner's life. There was no book to enlighten him upon the subject, for the words dropped by the country maid, like some old tale of chivalry, were culled from an unwritten page. But having kindled the spark of discovery, he did not let it die for want

of vigorous fanning. Whether studying in London, riding along the Gloucester lanes, or corresponding with his friends, the subject always remained uppermost in Jenner's mind. He seemed to feel that it was his, in God's good providence, to stand between the living and the dead; and that, through him, one of the gates of death might be closed, and a plague be stayed. For over thirty years he labored in finding out, and experimenting upon, the eruptions of many inferior domestic animals; but especially the cow. The latter, he found, was subjected to a variety of spontaneous eruptions upon the teats, all of which were capable of communicating sores to the hands of the milkers; and that whatever sore was so produced was called, in the dairy, cow-pox. By analyzing and reducing these eruptions in the cow, he found out, not only the difference between true and spurious cow-pox, but the precise stage at which the true cow-pox pustule afforded its protecting power. Between May and June, 1796, he took matter from the hand of a milk-maid, who had been infected by her master's cows, and inserted it into the arm of a healthy boy. After the vaccination had run its course, smallpox matter, taken from a pustule, was carefully inserted by several incisions into the arm of the same boy. No disease followed; and the careful and successful repetitions of the experiment rendered the great discovery complete. All Jenner's trials and troubles were now fairly over. His waters of Marah were henceforth to lose their bitterness, and spring pure and sparkling from the rock.* He published his immortal discovery in 1798, and dedicated it to a brother member of his profession.

It may interest you to know that the first vaccinations in this country were performed by Dr. Waterhouse, of Boston, upon his own children, in 1799; and that three Presidents of the United States were afterwards associated

* Exodus xv. 23.

with him in his labors, viz., John Adams, Thomas Jefferson, and John Quincy Adams.

Nowhere, in our pilgrimaging, should we turn more willing feet than towards that beautiful capital—no less a medical Mecca than a modern Athens—the city of Edinburgh. Around it the history of medicine will ever be closely entwined. Its University was founded in 1582, during the reign of James VI. It was preceded by those of St. Andrews (1412), Glasgow (1454), and King's College, Aberdeen (1494). As a school of medicine the University of Edinburgh first rose in repute during the time of the first Monro, about 1720 to 1760.

The present University building was erected in 1789. To stand by the noble Doric columns of its portico, and look into its well-worn court, is as if we stood before one vast monument to the large and brilliant group of Scotch workers in the field of medicine: for nearly all of them, either as students or teachers, had been connected with this old college. Foremost among them was Sir Andrew Balfour, a student of Harvey, who introduced the dissection of the human body into Scotland, projected the first hospital in Edinburgh, and founded its Botanic Garden and College of Physicians. Of the latter he was first president. He died in 1694.

James Douglas, the preceptor of William Hunter, was the first, in 1730, to accurately and correctly describe the peritoneum. John Douglas, a celebrated lithotomist, wrote a work on stone, and a treatise on "The Utility of Bark in Mortification." We might insert here a translation of a curious old epitaph taken from the Houf, or common burial place of Dundee. It bears date of 1662.

"Here lies good Andrew Archbald, to his art
Chirurgion; to the poor he did impart
His helpful hand; still minding God who bids
The Christian throw his bread upon the floods.
He in his art most skilful was, and he

Excelled all others in that mysterie
 Of cutting of the stone ; for by his skill
 He many healed, but never one did kill.
 His loving wife, from his own wealth did raise
 This monument and writing to his praise."

But to resume our list of distinguished Scotchmen: Patrick Blair was the author of "Miscellaneous Observations in Physic, Anatomy, Surgery, and Botanic's," and he wrote the first complete work in the English language on the "Sexes of Plants." He died in 1728. Charles Alston, botanist, a student of Boerhaave, wrote a learned essay on Opium. The inscription on his tombstone in Greyfriars Churchyard, Edinburgh, reads—

Charles Alston, King's botanist in Scotland, fellow of the Royal College of Physicians, professor of medicine and of botany in the University of Edinburgh, died November 22, 1760. His merit as one of the distinguished founders of the medical school at Edinburgh, ought never to be forgotten by the city and the college.

Alexander Monro, primus, with an education culled from the flower of European capitals under the guidance of Cheselden, Hawksby, Chowel, Bouquet, Thibaut, and Boerhaave, born in London, 1697, was appointed professor of anatomy in the University of Edinburgh when he was but twenty-two years of age. With Alston, Sinclair, Rutherford, and Plumer, he built it up to be the most celebrated and frequented in Europe. His work on "Osteology," published while he was yet under thirty, was translated into the principal European languages.

Alexander Monro, secundus, studied under Albinus and Meckel. He was elected assistant to his father, the first Monro, at the age of twenty-three. He published three large folio volumes, magnificently illustrated, respectively, "On the Structure and Functions of the Nervous System ;" "Structure and Physiology of Fishes, compared with those of Man and other Animals;" and "A Description of all the Bursæ Mucosæ of the Human Body, with Remarks on the

Accidents and Diseases which affect these Several Sacks, and the Operations necessary for their Cure."

William Cullen, at different times professor of chemistry, materia medica, and theory and practice of medicine in the University of Edinburgh, has laid not only medicine but other sciences under lasting contribution to his ability. He expanded chemistry so as to lend its magnetic aid to the improvement of arts and manufactures; and he is supposed to have suggested the theory of lateral heat to his pupil Black. He was a successful lecturer, a thorough clinical teacher, and the author of that system of pathology known as solidism. By teaching that the nervous system is the sole primary seat of disease, he indirectly encouraged those minute researches which, in the next generation, gave rise to the capital discoveries of Bell, Shaw, Mayo, and Marshall Hall. The solid pathology was also the first affective barrier against that constant and indiscriminate venesection which had prevailed for many centuries. James Gregory succeeded Cullen, and for thirty-two years he conferred almost equal lustre upon the chair of practice of physic, as his illustrious predecessor.

John Brown, born in 1735, was the son of a day laborer. But this did not deter him from fostering his innate genius by study. His biographer tells us that at an age when most children are only beginning their letters he was far advanced in Latin. He came to Edinburgh at the age of 20, and while he studied medicine supported himself as a "quizzer," or, as they term it abroad, "grinder." His abilities recommended him to Cullen, to whom he was Latin secretary. He afterwards quarrelled with his great friend, and this stimulated his ambition to rival Cullen as the founder of a school of medicine. He devised, accordingly, what is known as the "Brunonian system," which consists in the administration of a course of stimulants, instead of the so-called antiphlogistic remedies, as a method of cure.

He had the merit of practising as he preached, for he died in London, in a fit of apoplexy, in 1788, brought on by a course of long intemperance.

The next fames that ring out upon us are those of the Bells. John Bell was an eminent surgeon, and, moreover, a man of distinguished, general, literary accomplishments. He was the author of works on "Wounds;" "Principles of Surgery;" and "Anatomy." The latter was in three volumes; the engravings of bones, muscles, and joints, illustrating the first volume, were drawn by the author. He died at Rome, in 1820, whither he had gone for the benefit of his health.

Charles Bell, an alumnus of the University of Edinburgh, built up his fame in London, whither he removed in 1804. There he published his "Anatomy of Expression," "System of Operative Surgery," and his world-famed discoveries regarding the nervous system.

Prior to Bell's discovery it was the general belief that all the nerves were alike, and that diverse nervous manifestations depended upon the number and not kinds of nerves. But even before he had left Edinburgh, a suspicion had grown upon the mind of Bell that this prevalent opinion was erroneous. He found that the nerves were distributed into different classes, to each of which belonged its proper function. He saw, for instance, that the two roots of a spinal nerve impart the different powers of motion and sensation. This discovery, as wonderful as that of the circulation of the blood, astonished the whole medical world: it was a revelation that had remained unknown till now, and when announced could not be controverted, although, after its full value became known, as is usual in such cases, attempts were made to deny Bell the merit of it. On the accession of William IV. to the throne, Bell, in company with Brewster and Leslie, was knighted. After remaining in London thirty-two years he returned

to his native city of Edinburgh to accept the appointment of Professor of Surgery in the University. He died suddenly in 1842, like John Hunter, by excitement brought on in regard to a medical bill.

To the Hunters, who were Scotchmen, we have already paid passing notice, and time now makes us close this review of distinguished medical Scots by simple mention of the Fordyces; Sir William Hamilton; Andrew Duncan, founder of the *Edinburgh Medical and Surgical Journal*; Andrew Duncan, Jr., editor of the first edition of the *Edinburgh Dispensatory*, the discoverer of cinchonin, and the first to introduce the science of medical jurisprudence into Great Britain; Sir Gilbert Blane, head of the British Navy Medical Board, who lessened the total amount of disease in the navy one-half by the introduction of lemon juice for the cure of scurvy; John Barclay, the author of our present system of anatomical nomenclature; James Currie, who threw much light on the medical uses of water; Mathew Baillie, nephew of the Hunters, an industrious laborer in the field of morbid anatomy; John Abernethy, the founder of the Physiological School of Surgery, and the first to tie the common iliac artery; Robert Watt, author of the *Bibliotheca Britannica*; Benjamin Bell, a distinguished surgical writer; John Abercrombie, the eminent pathologist and physician; John and Allen Burns, talented anatomists and surgical writers; John Reid, the physiologist; and Robert Liston, the unrivalled surgical operator.

Syme and Simpson were so lately gone, that their shadowy forms still seemed to linger round the college halls.

Out of this long list we shall find but few graves whereat to pilgrimage. Time is a ruthless old iconoclast in these northern climes; making

“Gravestones tell truth scarce forty years.”

Cullen lies buried in the churchyard of Kirk Newton, near Edinburgh. Black keeps Alston company in old Greyfriars Churchyard. Sir William Hamilton lies in one of the vaults of St. John's Chapel. In St. John's Churchyard is the grave of Syme. No monument or stone of any kind crowns it, but loving hands leave garlands there, and flowers bloom upon it. Across the path from Syme lies William Pulteney Alison, formerly professor of practice of medicine in the University of Edinburgh. A few steps beyond is the grave of a staff-surgeon. These graves are in a little walled inclosure, above which, like a sentinel, towers the old castle of Edinburgh.

Simpson's monument rises proudly from the crest of a terrace in the Edinburgh Cemetery. On its base is cut in enduring letters:—

“Nevertheless I live.”

Truly he lives! lives on earth blessed of women whom his kindly genius has made to escape the pangs of parturient pain; lives above as one who kept his earthly lamp always well-trimmed and burning, to guide alike the feet of his professional brothers and his fellow men.

Not “without reverent awe,” gentlemen, “have we put by the cypress branches and the amaranth blooms” that cover these old tombs.

We are aware that no touch of ours can add a bit of brightness to the many names mentioned this morning; rather do we hope for the reverse, and wish to shine by the reflected light which they throw down upon us from dim and dizzy distance. But, as their names are indelibly cut on the flint of this world, as they were the engineers to run the air-lines between the cardinal points of our science, and as they not only first cultivated the field of our profession but cleared it—even to its stumps of fallacy and its roots of obscurity—it is certainly ours, as students of medicine, to profit by the example they set us.

The obstacles to our path can be but sticks and stones compared to the blank rock wall, and tangled, pathless forest, that on all sides presented to them.

Therefore, shall it be said of us that in these days of almost royal roads to knowledge, we gave ourselves up to mental sloth—proved ourselves inferior in thought and work to those who preceded us—and that we let run into caves and marshy places the pure stream of scientific truth that flowed for us! Or, will we commence to-day, and by the exercise of that intellect which God has given us, so do our duty to ourselves as to make us worthy of the profession we have chosen, the days we live in, and the future we hope for!

Carlyle says that “genius is simply cultivating the capacity for taking infinite pains;” and surely this is better than cultivating the capacity for infinite carelessness. It is just as easy to study a line, as to skim a page; to dissect, as to mutilate; to listen, as to be listless; to labor, as to wait.

“In the elder days of Art,
Builders wrought with greatest care
Each minute and unseen part;
For the gods see everywhere.

“Let us do our work as well,
Both the unseen and the seen;
Make the house, where gods may dwell,
Beautiful, entire, and clean.

“Else our lives are incomplete,
Standing in these walls of Time,
Broken stairways, where the feet
Stumble as they seek to climb.”

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