Introductory lecture before the Anatomical Class of the University of Pennsylvania / by William E. Horner, M.D.

INTRODUCTORY LECTURE

BEFORE THE

ANATOMICAL CLASS

OF THE

UNIVERSITY OF PENNSYLVANIA.

BY WILLIAM E. HORNER, M.D.,
PROFESSOR OF ANATOMY.

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PHILADELPHIA, *Oct.* 27, 1848.

DEAR SIR—

At a meeting of the Medical Class of the University of Pennsylvania, held October 26th, Mr. R. A. F. Penrose, of Pennsylvania, in the Chair, and Mr. Lewis H. Steiner, of Maryland, acting as Secretary, it was

Resolved, That a committee of three be appointed to obtain for publication a copy of your very interesting Introductory Address, delivered at the commencement of the present session.

The undersigned would most respectfully add their own solicitations to those of the class.

Yours, &c.,

S. D. CARPENTER, of Ohio,
WILLIAM HUNT, of Philada.,
THOS. W. BELL, of Georgia,
Committee.

PROF. HORNER.

UNIVERSITY OF PENNSYLVANIA,
October 27, 1848.

GENTLEMEN—

According to the resolution of the Medical Class so politely conveyed in your note of this date, my recent Introductory is submitted for publication. I regret that it is not more deserving of the honor and distinction conferred upon it and upon myself by the proceedings of the Class.

With high regard and affection for yourselves and for your constituents,
I remain very sincerely your friend,

W. E. HORNER, M. D.,
Professor of Anatomy,

MESSRS. S. D. CARPENTER, WILLIAM HUNT,
AND THOMAS W. BELL, COMMITTEE, &c.

INTRODUCTORY LECTURE.

The desire of improvement is so natural to the human mind, that it may be honorably felt throughout life; and in the same spirit directed to the obtaining of greater proficiency in what is already acquired; to the advancing in details; and to the acquisition of ideas absolutely new. The leaving of our daily associations and habits of business is highly favorable to such results: old ideas are for the time forgotten, established routines are laid aside, and if remembered at all, are placed under a more critical examination of their merits and of their defects. The facility also with which, in the character of travelers, we reach the presence of men eminent in science, in arts, and in arms; by dispelling the halo which surrounds greatness when viewed at a distance, makes us better judges of what is really deserving of admiration and of respect. But belonging, as a physician does, to a progressive science, every year of the existence of which introduces contributions more or less important, he may expect always to be benefited by contact with the intelligent of his own profession.

Entertaining the above views and under the requirements of impaired health, it has been my fortune to revisit Europe after a lapse of twenty-seven years; and now just after my return it will probably be excused in me if with a mind occupied with such recent impressions, I should in the beginning of a course of Lectures, bring forward some of my recollections as not inapplicable to the present engagement.

Three of the great empires of Europe present us with the most striking examples of the state of medical science in that quarter of the world. They are the British Isles, France, and Germany; and though neither of them realizes all that we could hope for, yet each has its merits, and we may perhaps say its superiority, the one over the other, which justly claim our admiration. As

candid observers and as desiring to improve by what we see, it is to be admitted that there are certain points deserving of our imitation in the higher attention paid to them, and which attention is permanently secured in the organization and policy of the schools. Among these points are Organic Anatomy—the use of the Microscope in normal and in pathological investigations—Practical Chemistry, and above all others, the mature observation and treatment of disease in the living body, before a student is permitted to practice medicine in society and to graduate fully. This ascendency of Clinical study is remarkably conspicuous in the German Schools, where prolonged attention to it is required, and where cases are placed at the disposal of candidates. France is next to Germany in her regulations in this respect; and in England the advance upon our own system is but inconsiderable.

May the 10th brought me to London after a fair passage across the Atlantic in a fine sailing vessel, the American Eagle, Captain Chadwick, and having lost as little time as possible in mere personal arrangements, I began the examination of its medical institutions, and with the more pleasure, owing to my former acquaintance with them. On the 11th I therefore paid my visit to the Museum of the College of Surgeons in Lincoln's Inn Fields, which I did with feelings of the deepest devotion to the memory of its great founder, the celebrated John Hunter; and with the recollection that my own friend of early life and instructor, the first surgeon of our own country, the celebrated Dr. Physick, had as a pupil of Mr. Hunter, contributed by his address and dexterity, also to the splendid collection which was then before me. This collection has always been called *unique*, and well is the term deserved. Mr. Hunter's rule, as Dr. Physick repeatedly told me, was always to put up his preparations well, to dissect them carefully and lucidly, and to make everything a distinct exposition of some fact in human or in comparative anatomy. By the invariable observance of this principle, one might inspect from the beginning to the end of his cabinet and not find an article which was objectionably done. I recognized many of the wet pieces just as I had seen them twenty-seven years ago, and I understand that a great many of them have not been disturbed by a change of spirits of wine or of covering, since the time of Mr. Hunter's death, now fifty-five years to a day (Oct. 16, 1793).

Happily, this is a favorite institution with the Surgery of the British Empire, and is constantly receiving accessions in some form or other. It was therefore with increased pleasure that I saw not only the old pieces in such fine preservation; but found that the additions had been such as to augment it considerably on nearly all points. The most remarkable of these accessions is the cabinet of the late Sir Astley Cooper, which consists principally in the preparations that formed the subject of his labors after he had retired from public teaching. Sir Astley's published plates scarcely do justice to the originals, a circumstance which we have not often to complain of, as the rule most frequently works the other way. The collection of this college amounts now to about twenty-two thousand specimens, and has the advantage of a printed catalogue explaining each piece, and also of a synopsis describing each group of assimilated preparations. It was the labor of the life of the renowned founder of this Museum, to illustrate by elaborate preparations of the human body, the organs executing each of its functions, and to show what modifications each of these organs had in the lower orders of animal life. The illustration began at the lowest condition of organism, and then ascended by the intervening grades to the highest order, as man. The pieces are all grouped upon this principle, and as a terminating exposition every group has near it the morbid and the abnormal deviations from the standard type. Mr. Hunter looked, perhaps, rather too much for modifications of shape in different animals, to explain the great problem of life: the microscope was but little resorted to in his day, owing to its discrepancies and imperfections; and therefore it was not known that mere form of the larger kind is comparatively unimportant in producing functional action. The collection is certainly a most noble example of genius and of perseverance in its founder, and its fine preservation and extension are most honorable to the College of Surgeons to whom it belongs. Every anatomist must have his heart warmed and expanded and his resolutions ennobled as he looks from piece to piece. It is at present under the charge of Mr. Owen, so celebrated for his work on the teeth and on other points of Comparative Anatomy.

I saw much besides in London to gratify me in the Museum of the University of London—of King's College—of St. Thomas'

—of Guy's Hospital, and of others. Much also in the wards of the great hospitals to admire, and especially in Guy's. I formed most agreeable relations with some of the distinguished men of that great capital, as Mr. Lawrence the Surgeon, Dr. Carpenter the Physiologist—and Mr. Kiernan the Anatomist and Surgeon, whose labors have been so successfully directed to elucidate the minute anatomy of the Liver, and whose observations have now a classical value in our science. I am perhaps going a little beyond the point of a proper reserve in stating that the latter gentleman has the materials for a work on Cancer, which if they should ever be published, will do him an honor quite equal to his observations on the Liver, and will confer an immense benefit on his Profession; at least such is the opinion I have formed upon an inspection of his numerous preparations and of his drawings to illustrate them.

London is a very ample field for the pen, and I leave it reluctantly in this partial state to take a glance at Paris. The journey to Paris from the English capital is now readily accomplished, owing to a continuous line of rail-road only interrupted by the English Channel. It may, indeed, be done in twelve or thirteen hours if the connection be well kept up by suitable arrangements of time. The sympathy of the French republicans for the Americans is such, that the least possible inconvenience is inflicted in the inspection of luggage at the Custom House of Boulogne, being the very reverse of what we experienced upon landing at Hastings in England. Arriving in Paris with my mind filled with the accounts of the revolution of February, I was much pleased in taking a walk with a friend, two or three days afterwards, through some of the most excitable portions of the city, and where the streets were densely crowded, to find the people enjoying themselves in much good humor, and I remarked that whatever might be their internal sentiments, the external expression of them was in the highest degree favorable to social order.

In regard to the Medical Institutions of Paris, the changes introduced since my first visit were some of them of an improved kind, improved indeed much beyond their preceding state. Among them I may mention particularly the Dissecting Rooms at Claymart, which are much frequented by the Americans, owing

to their neatness and the excellence of the arrangements made for instruction. There is here the foundation for a fine Museum in an abundant series of preparations in osteology, exhibiting almost everything desirable to be known on the development and the perfection of the skeleton; some good wax injections of the blood-vessels; and a very beautiful series of lymphatic preparations, being among the best I have ever seen. Also many very fine dissections of the nerves. On the continent of Europe the wet preparations are, wherever I have seen them, of but moderate merit generally; the same is the case here. But if the scheme of this Museum be carried on, it will have, notwithstanding, a high distinction. The Dupuytren Museum, a new establishment to me, disappointed me much; it is devoted to collections in morbid anatomy and to models in wax of diseased structure. It has its value, but my previous ideas of it had assigned a merit like or somewhat near that of the College of Surgeons in London, and being disappointed in this, I could not recover from the impression. The Museum of the School of Medicine I found had been very much improved by additional preparations, some of them of a superior description. In visiting the principal hospitals, as the Hôtel Dieu, La Charité, St. Louis, the Neckar, and some others, I found that the service was executed in much the same style as formerly, though but few of the eminent men of that day were left, and a new set of prescribers had come in. The medical establishments of Paris are so numerous, that it would be easy to fill a volume of some size, as has been done, by an account of them; of the eminent men who devote their services to them; and of the regulations concerning medical education in France. The limits of an introductory, having still further objects in view, do not permit me to enter upon details, except those of a very partial reference; to such, therefore, as feel a special interest in these matters I cannot do better than refer to a work by a former graduate of this School, Dr. F. Campbell Stewart,* now of New York.

An event occurred on my visit to Paris, which had quite a stirring effect upon our young countrymen and others in attendance upon the Hospitals, I mean the fierce and sanguinary insurrection of the 23d, 24th, 25th and 26th of June. As a movement it was one of the most extraordinary that the present century, fruitful as

* The Hospitals and Surgeons of Paris, &c.

it is in events, has witnessed; and the disastrous consequences resulting from it filled the Hospitals to overflowing with wounded, so that it was necessary to turn out ordinary patients for their reception. This insurrection was got up by a conspiracy against social order more malignant probably in its intentions, than the famous conspiracy of Catiline against the Roman Commonwealth. The number of participators in it, either by action or collusion, will probably never be known. But the military positions planned by the insurgents and the obstinacy with which they fought for four days from behind barricades and from the windows of houses; also the number of them finally captured, all leave the inference that they amounted to from forty to fifty thousand men. Their arrangements, it appears, were settled on Thursday, June 22d, and their barricades erected in the course of that night; their positions were so taken that they were to carry by assault the two headquarters of the city, to wit the Hotel de Ville, and the Prefecture of the Police; these accomplished, a new government was to be proclaimed, as they thus had possession of the two principal points and the important archives. The national assembly then in session was to be declared as dissolved, and if necessary dispersed by force. For my own part I had no suspicion of the movement till near 12 o'clock on Friday, when Dr. Leidy and myself were almost caught in their lines as we were proceeding to hear a lecture on Physiology at the College of France, by a most talented and well informed teacher, Mr. Bernard. We were in a carriage not far from the Pantheon, one of the strongest insurgent positions, when our further progress was interrupted by the intelligence of the impossibility to pass owing to the barricades being up. We accordingly alighted and attempted to proceed on foot, when we found, on turning into a street, that we were behind an unfinished barricade which a party of military was advancing upon at quick step. It was carried in a moment without a fight. We then changed our direction, and in crossing the place of the School of Medicine were hailed by a friend, an English physician resident in Paris and well acquainted with its customs. He informed us of the general rising in that quarter, and that a large body of troops would be upon it in a little time, and that our best plan would be to leave there immediately, else we might have some trouble in getting out. I followed his advice, recrossed the River Seine towards the

Louvre, and sauntered along home, absorbed in observing the change which had in an hour or so come over this gay and populous capital: shops universally closed, business suspended, streets nearly deserted; almost the only occupants of them being the women grouped at the doors, and looking anxiously up and down the streets; members of the national guard emerging armed and in uniform from their domiciles, and passing rapidly on to the places of rendezvous for their companies; the brazen drums beating in every direction loudly and furiously the well known rappel of Paris, which calls every man to arms. In a short time the truth became diffused everywhere, that an insurrection of the most extensive and formidable kind had broken out, so as to threaten the permanency of the existing government, and as many supposed, the property and the lives of the citizens generally. The details of this great movement and of the efforts to suppress it have been so much before the public, that any coming from myself may be deemed irrelevant to our present engagement and moreover fatiguing; I shall therefore make but a few observations, for which I claim your indulgence. The crisis was such that in the course of the day the existing executive body resigned, and General Cavaignac made Commander-in-Chief with a sort of absolute power. The city was forthwith declared in a state of siege, all civil functions ceased and everything assumed the precision of a camp. The communications between the two sides of the river were closed, every street corner was closely watched by guards and detachments of troops; heavy patrols of infantry and of cavalry circulated in every direction. A close examination was made of the persons of all passengers, to ascertain whether they were conveying arms or ammunition; the entrance into certain streets was absolutely interdicted and the lines of promenade very much reduced in length. All windows were directed to be kept shut under the penalty or risk of being fired into, as their remaining open was considered indicative of some mischievous intention to the troops. All of these precautions, together with a vigorous assault upon the insurgents, wherever they had taken their positions, stayed their onward movement. On Sunday we had the satisfaction of learning that very important advantages had been gained by the troops, that many quarters of Paris had been completely subdued, that the Hotel de Ville, which is near the centre of the city, and had been a

principal point of attack by the insurgents, was freed from them by the gallantry of General Duvivier; that the insurrection had conncetrated itself in some two or three of the Faubourgs or suburbs of Paris, and that there was a prospect of the speedy termination of the whole affair. Hostilities, however, continued during the day, one deplorable event of which was the wounding mortally of the Archbishop of Paris, who went as a pacificator between the combatants. The night of Sunday was also spent in active warfare. On the morning of Monday a powerful barricade at the Place of the Bastile was demolished by artillery, and carried by storm, with several minor ones in its rear. The insurgents made a desperate defence from behind them and from the windows of the adjoining houses; the slaughter was frightful on both sides; but the government at length triumphed, and in doing so obtained the surrender and abandonment of all the points which had been possessed by the insurgents. In the afternoon the President of the National Assembly announced from the Chair that all uncertainty was at an end, that the insurrectionary districts had surrendered completely, and that the insurgents now worked in pulling down their own barricades.

Much of this deplorable struggle was muzzle to muzzle, and hence a very large proportion of the wounds were of an extremely severe character, as I afterwards saw in the hospitals. By an almost unprecedented fatality, out of ten generals of the army four were victims, to wit, Négrier, Breas, Duvivier and Damesme—Generals Bedeau, Lafontaine and Fouché were wounded—and Generals Lebreton, Perrot and Lamoricière were unhurt, but the latter had two horses killed under him in his attack upon the Faubourg du Temple. Many of the generals of the National Guard were also wounded. Generals Damesme and Duvivier I saw before their deaths at the great military hospital called Val de Grâce.

General Duvivier had been struck on the top of the foot near the ankle by a musket ball, which forced the leather of his boot forward like the finger of a glove, without penetrating it. He continued in command for some time afterwards, but finally had to yield, owing to excessive pain; the pain continued to augment to such a degree that it was necessary to calm him by the use of chloroform, so as to accomplish his removal to the hospital. Previous to its administration he said to Dr. Baudens, you know me

well, and therefore can tell whether I yield unnecessarily to feelings of pain; this is, however, beyond everything; relieve me if it be possible. The chloroform happily was successful. It was subsequently applied by the same surgeon, M. Baudens, also as it appears with great advantage. To an inquiring message from General Cavaignac, the day after his removal, he replied, I suffer all over as if I had been demolished with blows, so completely has the pain invaded me, but I do not suffer in my foot; my wound is the only spot which does not affect me. He finally went into a state of delirium, in which his mind was busied in the scenes which he had just gone through, or in those of the African war in which he had borne a distinguished part; from this state of excitement he fell into one of extreme prostration, which ended in death. As he lay ill at the hospital, before I knew who he was, and indeed as I cast the first glance at him the thought crossed my mind, there is some military man of the first order of genius and of conduct. By inquiry afterwards I learned his designation. General Damesme was in the same room, his thigh amputated high up, owing to a hopeless compound fracture of the thigh bone. His face was one of the most perfect formation, and his bearing and expression more striking than that of General Duvivier. He died in three or four weeks afterwards.

The incidents of a minor description connected with this grand rebellion are many of them of a most interesting kind, in illustrating the genius of the Parisians and the troops generally; my purpose, however, is with matters of a more medical character, and I shall therefore state what I saw in regard to the manner of treating the wounded in the different hospitals.

The Hotel Dieu is the most eminent of the French Hospitals for *Clinical Surgery*. I was therefore anxious to see the state and treatment of the wounded there; it was also immediately in the vicinity of some of the most sanguinary of the insurgent operations. Its wards were filled with the wounded, generally injured by musket balls, and having a very large proportion of extremely severe inflictions. Bones shattered to pieces; joints perforated; the great cavities opened; the face sadly torn; a few limbs amputated, which had occurred during or immediately after the action. The treatment I found to be very much the same as with us, in regard to local applications. It consisted, for the most part, of flaxseed poultices applied warm in the severer cases; those of

less severity received as a dressing dossils of lint spread with cerate. Some few cases had the cold water treatment, or that by irrigation, in allowing a small stream of water to keep well moistened some layers of linen laid over the wounds. The surgeons here are MM. Roux and Blandin. M. Roux was always distinguished for his neatness as a dresser and as an operator; such was his reputation in my former visit, and though now he had waxed somewhat old, I perceived that his steadiness of hand still continued. The closing of stumps by dressing them with sticking plaster, I found to be but little resorted to, the plan being to cover them with lint spread with cerate,—I mean by making the application to the raw surface itself, or by applying a poultice. In the larger wounds this was done very commodiously to the patient, by taking a number of smaller poultices, or of spread dossils of lint, and then laying them on in contiguity until the entire surface was covered. By this process much pain is obviated, both in the dressing and the undressing.

At the St. Louis Hospital, which was also in the midst of one of the insurrectionary foci, and where the number of wounded was very large, they being under the charge of M. Jobert, I found very much the same plan of treatment followed as at the Hotel Dieu, and probably in very much the same proportion. The variety of wounds was very great, going in all the grades from the contusion of a spent ball to the smashing to pieces of bones, and the perforation of the articular and of the great cavities. M. Jobert is also a good dresser and surgeon, and is the author of a work on gun-shot wounds,* as well as of some twenty or more memoirs and essays. To the numerous young men who followed his clinic, he appeared to be very solicitous of explaining the precise character of the wounds he was treating, and the grounds of his treatment.

In the Hospital Neckar, which is best known in this country by the service of M. Civiale, I found also a large body of wounded under the charge of M. Lenoir. This gentleman is a fine example of what had always struck me in the French hospitals, to wit: the cordiality of the prescriber with his patient, and the respect and affection with which everything done and said is received by the latter. To the boys and young men who were wounded, his first address was, *mon enfant*—my child—how are you to day?—for

* Stewart, p. 302.

the unmarried, his term was *mon garçon*—my boy—and it sometimes happened that mon garçon was a pretty old boy, judging from his wrinkles and the whiteness of his head; and for the old, and at the same time married, the appellation was *mon père*—my father. These compliments of language were, for the most part, attended with some soothing application of the hand about the face or person of the individual. The label attached to the bed of a French hospital always indicates the married or unmarried state of the patient, so that it is not difficult for the surgeon to adjust his terms of speech with that academic precision which makes the beauty of the French conversational intercourse. The dressing here was in a sort of transition stage, the wounds being the same; a larger proportion were dressed with cerate spread upon a pierced cloth (*linge fenêtre*); some few cases with bladders filled with cold water, and some with poultices of flaxseed meal. In some instances, fringed setons were carried through the wounds, for the purpose of conducting out the matter and extraneous objects. The cases of fracture, I thought, would have been better off in the use of longer splints, and the bandages were not in the most exemplary condition of neatness and entireness.

In the Val de Grace, which is the chief military hospital of Paris, and where Dr. Baudens is First Professor and First Surgeon, the wards were crowded with the wounded of every grade and description. This institution is devoted to the soldiers of the regular army, and as they had to do much of the most dangerous work in the insurrection, such as the storming of positions, the sapping and mining, the battering down, and so on, the larger proportion of bad wounds was with them. Dr. Baudens has vast experience in the treatment of gun-shot wounds, from a service in the African army for ten years, as Surgeon-in-Chief to the Ambulaire, or Field Hospital; and from having been employed on the most important expeditions from the first landing, in 1830, at Liddi Terruch, to 1840. He has about him all the air and carriage of an accomplished military surgeon, his demeanor being mixed up with great kindness and interest of manner. In this hospital, I perceived that the algid treatment of gun-shot wounds had an almost absolute empire, to the nearly total disappearance of hot poultices, and of cerate dressings. Charpie, or the untwisted thread of old linen, kept in some cases affused with

cold water, in other cases covered with pieces of ice, constituted the dressing of nearly all wounds. I have not yet learned the result of this exclusive treatment, but can scarcely doubt, that with the experience of M. Baudens it has been good. It was not, however, such as I myself should have chosen, at least without some comparative trials, as according to the experience of early life spent partly in a military vocation, I have no idea that anything is more soothing or more favorable to the early stages of a gun-shot wound than good poultices, renewed regularly every six or eight hours, until the inflammation has subsided, and the part is freely discharging pus. The service of this eminent surgeon for so long a time in a hot climate, may have given him a predilection for cold affusions and dressings, as poultices would there readily sour, and would, perhaps, be supplied with some difficulty.

It is, at any rate, an affair worthy of a candid and unprejudiced trial, to learn whether hot poultices, or cold affusions, and so on, are the best for gun-shot wounds.

With these remarks on a few specialties of English and of French medicine, I must take my leave of them, in order to bestow some attention upon what I saw and learned in Germany. I shall begin by saying that in America though we have so large a German population, yet there is a great deficiency of good information in regard to Germany. This great country representing in its totality almost the whole of Central Europe, and having two of the most noble rivers on earth for its drainage, the Rhine to the west, and the Danube to the east, presents an area of two hundred and fifty thousand square miles, and has a population of thirty-five or forty millions of inhabitants. In it there are eighteen thousand Students and twenty-four Universities; scattered for the most part along the Rhine or its tributary branches, or along the upper waters of the Danube. The Rhine, still classical in this connection, is yet more classical in belonging to the earliest and the liveliest recollections of an educated man. We all remember our introduction to it in the Commentaries of Julius Cæsar, and as we now see it collecting its primary streams from the distant glaciers of the Alps, and irrigating in its subsequently steady course, many of the most luxuriant landscapes to be found; so its historical associations are mixed up with every age, from that of an obscure and turbulent barbarism, to the most elaborate and enlightened efforts of the human under-

standing. It is impossible for the traveller to remember Germany without also thinking of this fine river, and it is not surprising that the Germans themselves in the fullness of their devotion and affection for it, call it frequently Father Rhine, or King Rhine. And well they may do so, in recollecting what has been so eloquently stated in a modern work;* to wit:—"Its historical connection with the most splendid period of the Roman Empire, with the chivalric exploits of the feudal ages, with the wars and negotiations of modern times, and with the coronation of emperors whose bones now repose on its banks. On whose borders also stand two of the grandest monuments of the noble architecture of the middle ages. Whose banks present every variety of wild and picturesque rocks, thick forests, fertile plains, and sloping vineyards winning a domain among the craggy fortresses of nature. Whose banks are ornamented with populous cities, flourishing towns and villages, castles and ruins, with which a thousand legends are connected. Whose cities, famous for commerce, science, and works of strength, are also famous as the seats of Roman colonies, and of ecclesiastical councils, and are associated with many of the most important events recorded in history."

With such claims to the consideration of the American man of letters, we are ignorant of Germany in regard to its language, and almost equally ignorant of its literary and scientific history. Our ideas of this interesting country are taken from what we see of its plain and sometimes repulsive peasantry, who land upon our shores; or from the cautious and economical dealer in merchandize, who tries his fortune among us and runs out a life of unvarying retirement and retrenchment;—and now and then we draw our conclusions from the speculations of some theoretical mind whose exaltation makes it transcend the limits of common sense and pass into the regions of absurdity.

There are, however, in the annals of this great country standards of excellence, in patriotism, in military achievements, in painting, in sculpture, science, literature, history, poetry, music, architecture, all of which, when marshaled together, give a claim to dignity and to renown of the most indisputable kind. Germany has, most unfortunately, been so much divided into small principalities, that she has been in every way cramped and cir-

* Conversations Lexicon, art. Rhine.

cumscribed; no kingdom is of sufficient extent and population, according to the ordinary course of the world, to furnish a galaxy of great men belonging exclusively to itself. Previous to the year 1806, when what is called the German Empire was dissolved, Germany was divided into several hundred independent states, having a very loose connection; but this number is now united into thirty-eight, including the four free cities of Lubeck, Frankfort on the Maine, Bremen, and Hamburg. These, however, are still too many; but the division has existed under different circumstances of coalition, since the death of Charlemagne in 814, or rather that of his son, Louis le Debonnaire, when the empire, consisting of France, Germany, a large part of Spain, and of Italy, was, in 843, by the treaty of Verdun, divided among the grandchildren of Charlemagne, and the Frankish Empire thus dissolved. In the middle ages kingdoms and baronies were almost innumerable. Each chieftain claimed absolutism on his own ground, and yielded respect very hesitatingly to the higher powers. Vestiges of this condition are seen in great numbers upon the lofty mountains and hills bordering the Rhine and the Danube; the best points being crowned by castles, each of which formed the stronghold of a chieftain designated now-a-days as a robber knight, from the unceremonious way in which he pillaged boats passing his dominions, or levied taxes upon them. Though in after times these warriors were brought by force into better order and under a more common headship, yet the reduction was never into a condition sufficiently general or national. Hence intestine wars of one power against another; alliances with extra Germanic States; and all the inconveniences resulting from such a condition.

The existing national division is felt most exquisitely by the German patriots and great men, and the strongest efforts are being made for consolidation. It is in fact the object of the present Diet at Frankfort to present to the world Germany as one country, and Germans as one nation. This has been accomplished at no very distant period for the British Empire and for France, and it is hoped may be also accomplished for Germany. The preliminary act occurred in the great Germanic Confederation of 1813 to overthrow Napoleon Buonaparte, and was crowned with complete success. The sentiment lost its activity in the minds of other monarchs, but was preserved by the King of Bavaria, Louis I.

He, to keep the Germans constantly in mind of what the nation once was, and still could be, collected around him men of talents in every walk, and patronized them. He also built, a few miles below Ratisbon, upon one of the lofty and historical heights of the Danube, a Pantheon, a noble structure in imitation of the Acropolis of Athens, and furnished it off in extraordinary splendor and taste. This building commemorates all that has been illustrious in German history, from the destruction of Varus and his legions by Arminius, to the dethronement of the celebrated Emperor of the French. Upon its walls of polished marble we find commemorative tablets in golden letters, or busts of white marble, of warriors, patriots, holy men, physicians, jurisconsults, poets, artists, &c. &c., each illustrating some fine point of German history. And it is especially remarkable for one feature, to wit: the impartiality of the selection. There is in perhaps three or four hundred tributes to greatness thus paid, not one upon which history has not pronounced its verdict of merit. Commonly in collections claiming to be national, there is such adulation to crowned heads and those near them, that the real history of the nation is but poorly told. In the palace of Versailles, for example, where so many thousand pictures are collected, the constant repetition of Louis XIV. as you go from one chamber to another, makes the idea irrepressible that the monarch, fond as he was of flattery, must have been sickened at the frequent sight of himself and of his courtiers. In Walhalla, on the contrary, the diadem of itself seems to have offered the least possible temptation to selection, but when its claims are genuine they have been admitted, as in the case of Charlemagne, Frederick II. of Prussia, Catharine II. of Russia, and a few others.

Another noble specimen of this German national feeling is in the rapid progress of the great Cathedral at Cologne. This work, begun six hundred years ago upon an expanded national sentiment, was from unavoidable causes suspended for three hundred years, and now, being resumed again, is in full advance towards completion. When finished, it will be the greatest, the most perfect, and the most exquisite specimen of Gothic architecture, that the world ever saw. An idea of its magnitude may be formed upon the statement that its foundations are forty-four feet deep from the surface; its length five hundred and eleven

feet; its breadth two hundred and thirty-one feet;* its choir is two hundred and eight feet in altitude, and its towers are to be five hundred feet high. The entire cost of this stupendous building will be about five millions of dollars; all Germany is interested in the completion of it, and societies are everywhere organized for collecting funds in its aid, besides the very liberal contributions made by most of the crowned heads of Europe. The conception of so magnificent and imposing a structure in the beginning of the thirteenth century, is proof sufficient that Germany was then very far from being in darkness, or in the dark ages as they are called; and that the successors at that period of Charlemagne had retained much of his intelligent and noble spirit.

This edifice is said to have furnished instruction for every religious building of a cotemporary period—to Strasburg near; to Burgos afar off; to Freiburg, Amiens, Beauvais; York in England—and, though unfinished, is to be considered as exemplifying the most perfect period of ecclesiastical Gothic. "So full of thought, that every detail has a meaning; so practical in adaptation, that every detail has a use; so true in structure, that if the walls were knocked away it would still stand firm on its piers like a tent; and with all these causes combined, so perfect in national beauty, that Boisserie has christened it 'the canon of German architectural law.'" †

The history of the world revolves in cycles, and we are now in the cycle of commerce, it is the existing motive power of civilized man. One of the afflictions, from Germany having so many principalities and kingdoms, with only two or three main routes of commere, is, that as these routes are frequently intersected by territorial limits, each authority demands its duties according to its own ideas and necessities, and some of the exactions are very exorbitant. Commerce has thus been impeded, harassed, and constantly vexed, notwithstanding the declaration of the Congress of Vienna, in 1815, that the navigation of all the German rivers should be free.‡ For example, the line of the Danube is intersected by the Custom houses of Würtemburg, Bavaria and Austria, and the boatmen of Ratisbon in Bavaria, can only go down the river to Vienna. A parallel case would be that of the city of St. Louis,

* See Murray's Handbook for Travellers.

† London Quarterly Review, Oct. 1846.

‡ Cyclop. Amer., art. Danube.

in Missouri, compelling all descending cargoes from the states above to be stopped there, or else to pay for the permission of passing on. The great Diet of the nation, assembled at Frankfort, has, for one of its leading acts, to settle all questions on such points, and will, probably, produce a system like our own in many respects. Here again Germany may assume a national attitude, and become one great people out of a number of small states. She will thus compose her own internal dissensions, and by her unity be able to match Russia on the north and France on the south. She will centralize her efforts, too, in all liberal studies, as Medicine, Jurisprudence, the Fine Arts, and in science generally.

I am aware that the most of the preceding observations are technically out of place in a medical lecture, yet they may be excused before an American audience, as they are intended to contribute, in some measure, to more correct information on German science; and will explain why I think that we shall be more gratified as additional facilities for intercourse may be opened.

The arrangements for medical education in Germany are, for the most part, in a state of great excellence; and as all measures are directed by the Governments respectively, a proper system is easily kept up. In this country, where everything is done against time, and with a sort of steam velocity, we may deduce some good examples and hints from the practice abroad. In Prussia, four years must be devoted to medical studies, and while they are in progress, some associate studies must be also pursued. They are physics, chemistry, mineralogy, botany, and zoology. At the expiration of the four years, the candidate must print and publicly defend, a dissertation in the Latin language; and undergo an examination on his studies as above, to which is added logic. On proof of competency he then receives the degree of Doctor of Medicine, which costs about one hundred and twenty-five dollars.* This degree is, however, not an authority to practice medicine, for if such be his intention, he has to undergo special examinations on medicine, on surgery, and on obstetrics, to perform operations and to treat cases of disease; all of which require several months, so that the duration of study may be placed at five years.

In the University of Munich, the diploma and right to practice

* The Medical Guide, &c. London, 1837.

medicine is conceded under the following regulations: The first two years are devoted to logic, metaphysics, moral and juridical philosophy, philology, history, mathematics, geography, natural history, ethnography, physics, organic chemistry, botany, mineralogy, and zoology. A satisfactory examination at the end of the two years gives admission to the courses of the medical faculty. The student then attends three annual courses of lectures on anatomy and physiology, with demonstrations; pharmacy, medical chemistry, external and internal pathology, therapeutics, materia medica, the clinical institutions, general and clinical surgery, surgical pathology, operations, obstetrics, forensic medicine, and veterinary medicine. The student undergoes an examination on all of these branches, and makes practical demonstrations in the anatomical theatre. These successfully passed, two years are devoted to practical study, or the Biennium Practicum, in the clinical hospitals. The duties connected with this position are, the registering of the medical and surgical cases committed to him or witnessed by him, and also notes on his obstetrical cases. These records being submitted to the medical faculty and approved, a final examination is held on all the branches of medicine, which is conducted both by written questions and viva voce. The candidate is required to deliver a lecture publicly and to defend for two hours, theses written and published by him in Latin or in German. An inaugural dissertation is also required. The whole time of study under such requisitions is seven years; i. e., two for preliminary studies, three for didactic in medicine, and finally, two years in practice. The expenses of graduating are about the same as in Prussia, near one hundred and twenty-five dollars, (£25 sterling, or 300 florins.)

The auxiliaries of education are in great abundance in Munich. The library has 400,000 different works. The Public Infirmary of three hundred beds is, for its arrangement, ventilation, nursing and general administration, I should say the most perfectly well kept hospital I saw in Europe; and is worthy of a visit if it were only for the purpose of learning how much neatness, good order, and comfort may be introduced into such establishments. There are also a Lying-in Hospital, a large Botanic Garden, Museums of Anatomy, Natural History, Mineralogy, &c. &c., Philosophical and Chemical apparatus, in fine, everything connected with the human

sciences, and I may say, too, in passing, with the Fine Arts, so that Munich, with a population of about ninety or one hundred thousand inhabitants, is one of the most attractive and elegant cities of Europe. It would afford me no small pleasure under other circumstances, to show you how this capital of Bavaria has, by the liberal spirit of its recently deposed monarch, become a gem of Central Germany, and is now in the relation to it which Athens had to ancient Greece. It would be impossible to walk through its magnificent palaces, and its equally magnificent institutions of every kind, without a glow of enthusiasm; and an acknowledgment of how much may be done in even a small monarchy, when its revenues are directed by a noble and a cultivated spirit.

A singular custom exists in the University of Munich, that each Professor is at liberty to give instruction in any branch of science attached to the faculty of which he is a member. He is under compulsion to teach his own branch; but the assumed branch is admitted in the certificate of study, when the candidate comes forward. The expenses of residence at Munich are very moderate. It is said that two hundred and fifty dollars (£50) a year will cover everything, including fire, books, and instruments.

Among the European capitals, that of Austria exhibits some of the most remarkable arrangements for the public health and for medical instruction. In one hospital about three thousand patients are on an average constantly attended from one year to another. There are about one hundred admissions daily, about eighty-five dismissals, and from twelve to twenty deaths. The entire number of patients received in a year amounts to about thirty-six thousand. About one thousand nurses are employed for the sick, besides various other appointments connected with the administration of this immense establishment, which is called the Allgemeine Krankenhaus or the Imperial Royal General Hospital. It owes its establishment to the Emperor Joseph II. in 1783, who suppressed several minor institutions, and with the funds accruing from them and a large contribution from his private purse, erected it, in one of the suburbs of Vienna. The city of Vienna itself is small but elegantly built, contains about one hundred thousand inhabitants, and is immediately surrounded by high and imposing fortifications. Beyond them is an extensive belt of

ground, called the Glacis, improved by shady walks, and surrounding the city; in some parts it is half a mile or more wide. Beyond this again are the suburbs, thirty-four in number, with an aggregate population of more than two hundred thousand. The city is the residence of the court, the aristocracy, and has the larger number of remarkable public buildings and institutions. In the suburbs reside the middle classes, the manufacturers, tradespeople, and operatives generally. The glacis, from its extent and circular direction, makes Vienna one of the most picturesque cities in the world, and is of inestimable value by its ready access from every point of the city and of the suburbs; and serves, as has been very properly remarked,* as the great lungs or breathing place of the numerous population within and around it. It is also a place for the military exercise of the garrison, always a very large one, being seldom less than fifteen thousand men of regular troops, besides the national guards. It is near the confines of this glacis, but beyond it, that the celebrated hospital exists, which has within its own circuit thirteen large squares or courts. The medical staff consists of one director, one vice-director, twelve principal physicians, twenty-four assistant physicians, and a large number of internists and of externists, that is, pupils who reside either within or without the limits of the hospital. With the exception of the externists, the medical staff resides within the hospital for the most part. Visits are paid twice a day by the principal physicians with their assistants.

The director is at the head of the establishment, and is in immediate connection with the government. He therefore receives its rescripts or instructions, sees to their execution, and reports the conduct of all officers and servants, being assisted in his duties by the vice-director. The hospital is divided into the medical and surgical, the lying-in institution, and the lunatic asylum. The chief or principal physicians and their assistants have their duties respectively assigned in their divisions, and are aided by the internists and the externists. All of the officers in this extensive system of organization are paid salaries, besides having their apartments, fire and lighting. The salaries are, however, small, the highest, that of the director,

* Austria, &c., by W. R. Wilde. Dublin, 1843.

being short of fifteen hundred dollars, and that of the principal physicians about six hundred and twenty each.

In Vienna the course of medical studies is regulated by the government, as in fact everything else is, and the requisite time amounts to five years. None are permitted to attend the lectures on medicine but such as have gone through a suitable course of literary and philosophical studies, and have obtained certificates of competency. These, of course, require several years of training; that accomplished, the student enters upon his medical studies and has to pursue them for five years. Each year is divided into two terms,* and the subjects of study assigned to each term in its place. The fourth and fifth year are spent in directing the student's attention to practical subjects, and in making him familiar with the treatment of disease. This routine is obligatory and cannot be set aside at the will of the student.

The advantage of this system is very great, and it would be most serviceable in our own country could it be introduced. It is certainly very embarrassing to a young student to pass immediately from the most elementary state of information, into lecture rooms where the most profound and complicated doctrines are taught; and while thus doing, to find himself engaged all at once with every department of medicine. An English writer† reprobates strongly the practice which exists in Great Britain on this subject, and informs us that little or no preparatory education is required by the different colleges and licensing bodies. The student is at perfect liberty to select his own branches, and to follow them out in the order that pleases him. As there are no intermediate tests of progress till his examination comes on after some years, so some of the branches have never cost an hour's study, and he depends principally upon the certificates of attendance, which are easily got, for obtaining permission to come forward. When the candidate does come forward the same writer informs us that it is almost a certainty that he will never be asked a question, except on anatomy, surgery, and a little physiology, in the chief licensing institutions of Great Britain. I do not profess to be a judge in a charge so serious as this. Probably institutions exist amenable to it; but I think there are

* Wilde, p. 40.

† Ibid., p. 41.

others making highly honorable exceptions. There is, however, no doubt, enough accuracy in it to show that remissness does exist to some extent. The continental schools are in a different position, and in the course of instruction at Vienna, students are at the end of each term examined by the Professors, not only on the subject of the lectures, but also in regard to the cliniques or cases treated before them.

The diversity of objects in Vienna, of deep interest to an American physician, is so great that a very curtailed account of them would, of itself, occupy the whole time of an introductory lecture; I shall, therefore, confine myself to the selection of a few only as the subject of remark.

Within the provisions connected with the General Hospital alluded to, there is an arrangement for treating the diseases of the Eyes, and for Clinical Instruction thereon; which has established for Vienna the reputation of being the first school in Europe for Ophthalmic Surgery. It is well, in fact, that this branch of surgery is on so able a footing, for there are few communities where the powers of vision seem to be more frequently assailed. One in walking along the streets is almost at once struck with the great number of individuals who wear spectacles—with the frequency of chronic opacity of the cornea,—of blindness or loss of one eye, and of cross sight. In a group of ten persons collected for any purpose, it is very common to see three or four representing the conditions stated. There are some physical causes which appear to contribute to this result; the quantity of solar light is very great, and comes with a distressing influence which I frequently felt; the sky is often absolutely cloudless from horizon to horizon, and attended with a burning heat such as we experience here in midsummer. The houses are built of a light colored stone or stuccoed so as to resemble it; this prevails both in the city and in the suburbs, and the quantity of light in the atmosphere is strongly reflected in every direction—the paving stones are also of a light colour. But as Vienna is also subject to long droughts like our own country, great quantities of fine dust are formed in the streets, and on the avenues of the glacis, which is driven about in every direction by the strong winds raised by the sweeping current of the Danube, and by the beautiful mountains, which erect themselves along the margin of its valley. I may also say that this disposition to

ophthalmic disease is probably augmented by the general and excessive use of the pipe or cigar. Every body, little and big, smokes, and it does not seem to be merely the occasional use of the indulgence, but with some it is almost as constant as the act of respiration itself. I first noticed in Heidelberg what I supposed to be this injurious influence of smoking on the eyes, where the proportion of diseased ones is probably greater than in Vienna. Being, however, doubtful of the accuracy of my first conclusions, I continued during my subsequent travels in Germany to repeat them, and with always a tendency to the same conviction from the numerous instances which were every day visible. As the state of the atmosphere makes so large an account in Vienna, that might be supposed the constantly instrumental cause—but a similar prevalence of ophthalmic disease exists in other German cities, where the atmosphere is not so objectionable. Moreover the frequent deviations of the face from the straight line, as the having of the left eyelid drooping—the left corner of the mouth permanently drawn up, and the teeth black, decayed and tumbling out at a premature age; all go to prove conclusively that however tobacco may be smoked as an occasional indulgence, when it becomes a function like that of respiration and almost as uniformly exercised, it is done at the great expense of the eyes, the lips, the teeth, and of the general health. As physiologists, gentlemen, we must admit these facts, though I may allow that they are not very favorable to conviviality or to self-indulgence, except under proper regulations.

The ophthalmic clinique of Vienna is, I say again, one of the most efficient and renowned in the world, and is so much incorporated with the science of ophthalmic surgery, wherever it is ably cultivated, that it merits a notice somewhat special. A century ago, 1745,* Pallucci, an Italian physician, was brought from Florence to Vienna by the celebrated Van Swieten, to whom was committed the trust of remodelling the School of Medicine of the University. Pallucci was a most able operator, and gave a decided preference to the depression of the cataract, for which purpose he invented an instrument now laid aside. He was the first to remove through an opening in the cornea, an opaque capsule of the lens, which he did with forceps. He died in 1797

* Wilde, p. 150.

at the age of 78. The next distinguished individual was Barth. The celebrated Empress Maria Theresa, having had a lady of her court relieved of a cataract by Baron Wenzel, the case being previously pronounced amaurosis, was so amazed at it that she established a chair of ophthalmic surgery in which Barth was placed. He was, in three years afterwards (1776), appointed oculist to her son Joseph II. Barth extracted cataract as a preferable operation, and had such proficiency in it as to require no assistant, but held the patient's eye himself, which he could do on either side, as he was ambidexter. Barth died in 1818. While in active practice he had as a pupil George Joseph Beer. In 1791 Beer published his first essay; in 1798 he commenced as a private teacher of ophthalmology, and continued as such with unrivalled reputation until 1815, when he was made Professor of the same in the Imperial General Hospital, and an attendance on his course became one of the obligations of the Austrian student. Beer has the merit of introducing a more perfect arrangement of ophthalmic pathology. Having written much on the subject, many of his hints were used by other writers, though not always with an acknowledgment of their source. He is said to have been endowed with a fine eye, capital talents and a very improved mind on literary and scientific subjects; besides which he had the advantage of superior attainments in human and also in comparative anatomy. His dissections of the eye are reported to have been of the most exquisite kind. It is upon this enlarged and comprehensive basis that the ophthalmic school of Austria has been founded mainly, and has radiated its influence into other parts of Europe and into America, by the training of the most eminent oculists of the past and of the present day.

The successor of Beer in this celebrated clinique is Dr. Anton Edlen Von Rosas, a Hungarian physician, a pupil of Beer, who makes his rounds daily at from 10 to 12 o'clock, and who is considered to be equal in skill to his illustrious predecessor. Under the actual arrangement which I witnessed, there appeared to be from twenty to thirty persons under treatment. The wards are well contrived, some of them having the walls of a green color and also the curtains. The windows are so arranged as to regulate the quantity of light admitted, and the beds are so constructed as to have the upper half easily raised. There are some other details which I pass over. The wards are kept supplied with cases of an inte-

resting character by selections of patients from the hospital at large. In this way there are probably from one hundred and fifty to two hundred patients annually treated.

United with the ophthalmic wards is a spacious operating room, and an ambulatorium for the reception of patients on regular prescribing days. The operating room is furnished with a bust of the Emperor Francis I., the founder of this clinique, and with well executed portraits of many of the most distinguished oculists, now dead, of Germany. The ambulatorium is managed by Dr. Blodig, the assistant of Dr. Rosas, who, in the operations he performed, and in the readiness with which he made out his diagnosis, manifested great talent and familiarity with his business. His prescriptions being over, he kindly showed us the collection of wax models of the diseases of the eye—the actual preparations in illustration of its anatomy, and the cabinet of ophthalmic instruments. The models are about thirty in number, and are most faithful in their representation as well as elegant in their finish. There were many admirable minute injections of the coats of the eye by Professor Hyrtl, and by Dr. Gruby, a microscopist of Paris, with whom I had the pleasure of forming an acquaintance. These pieces showed most satisfactorily the vascularity of the posterior capsule of the lens; the central artery of the vitreous humor which furnishes it; and also the vascularity of the membrana pupillaris. There are some exquisite dissections of the nerves of the orbit and of the face, by the same anatomists. In this cabinet we find several pathological specimens of the human eye in spirits, prepared by Beer. The collection of ophthalmic instruments is remarkable for its extent and variety; it contains nearly all the known modifications of knives, needles, forceps, scissors, &c., which have been invented since the earliest to the present date.

The characteristic of Dr. Rosas' course of lectures is said to be the instruction of the pupils in the *constitutional* treatment of eye diseases. He is not disposed to view the organ as one which stands apart, to be acted on locally and specifically by the various applications to it, but as furnishing an indication of the condition of the system generally. The regulations of the empire for medical graduation require this clinique to be followed for the first six months of the fifth year; if ophthalmic surgery is to be practiced as a specialty, one year besides the five of ordinary study,

must be devoted to this clinique; and, finally, the skill of the party must be ascertained by operations performed in the presence of the Professor.

This great hospital of Vienna has in connection, or contiguity with it, the Josephinum Anatomical Museum, which is contained in fifteen large saloons, filled with wax models from the Florentine school. The entire anatomy of the human body is there represented, as the collection consists of several hundred specimens. They are arranged handsomely in glass cases, and over each piece is a drawing in outline, with reference letters, whereby every part of the piece below may be conveniently studied. The collection, taken as a whole, is a most splendid one, and exhibits the munificence of the Austrian monarchy, where public education is concerned.

The pathological department of the hospital is on a scale both unique and remarkable. The number of deaths averages, I have mentioned, from twelve to twenty daily, and by law every corpse is the subject of pathological examination. The body being brought to the dead house, is placed upon a table and covered with a black cloth; by a piece of mechanism, the body is in connection with a bell, and this bell rings upon the slightest movement of the body. As assistants are near, they are informed by the tingling of the bell, should there be any returning animation. This caution being continued for forty-eight hours, the post mortem examination is then performed. The actual number of examinations is not equal to the total of deaths, but the aggregate is still beyond anything else in the world, and amounts now to about three thousand annually, done under the inspection of Dr. Rochitansky, and by his assistants, this being the special service with which the celebrated professor is charged. A very singular point is that the Professor is neither a prescriber in the hospital, nor is he even a practising physician. From eight to ten o'clock every morning is devoted to this business. There are two autopsic rooms, well lighted and well arranged. Each has in its middle a large yellow marble table, slightly concave towards the centre, like a superficial tray; with gutters or radiated channels leading to the centre, where there is a waste pipe to carry off water, blood, and any other fluid. The table is wide enough to receive two bodies head to foot. One assistant makes the dissection and au-

nounces its character, while another, seated at a rostrum to one side, records the statements. The records are preserved for comparison with the clinical notes taken in regard to the patient, when under treatment. As in both instances persons of the highest acumen and skill are engaged, it may be readily concluded how near such a proceeding must lead to an exact appreciation of symptoms. The advantage is so immense that, struck with it, I inquired whether there was an annual summary made out of the relation of symptoms to pathological appearances; on being answered in the negative, I must say that, notwithstanding my great admiration of all that I witnessed, I felt much disappointment at the omission. Such a publication proceeding from such a source, would throw into the shade everything else that has been done in morbid anatomy.

While speaking of this great and interesting school of pathology, I must notice one of its *attachés*, who is truly a most surprising character in his way, though simply a waiting man in the dissecting room. His name is Anton Dollney; he is sixty-six years of age, short of stature, with a large tumid red nose, and a lively cordial turn; his manners well formed, as those of the Viennese generally are. I was first struck with his mode of handling the bodies as they lay upon the table: it was done tenderly, as if they were something to be petted, and this was carried out as he opened the head, the thorax, and the abdomen, to get them ready for Professor Rochitansky. I also observed that he had that degree of intelligence on the subject, that he could often tell by the exterior appearance of a subject, and by the touch, what was going to be found by dissection. After this, availing myself of an opportunity to make his acquaintance, he frankly told his personal history: which was, that he had been twenty-three years in this dissecting house, that he had kept a register of dissections during that time —which he indeed brought out to exhibit—and that the sum of them to the end of the last year was forty-three thousand nine hundred and seventy-nine. It is probably the greatest amount ever witnessed by any one man.

If under such an aggregate of cases recorded in life and in death, a tabular exposition were made of symptoms during life with pathological conditions upon death, it would be inestimable. We should know with almost exact certainty what degree of

dependence was to be placed upon symptoms as a guide in treatment. That they are sometimes dormant, and on other occasions, extravagant and delusive, every experienced practitioner knows.

Such vast opportunities for pathological specimens have not been neglected, and we accordingly find under the charge of Professor Rochitansky a truly admirable collection, which is also in the great hospital. He was kind enough to undertake its explanation. The number of specimens in it is probably seven or eight thousand or more: the room is unfortunately so confined that they are placed under disadvantageous circumstances for being seen or well arranged. The diseases of the osseous system are especially numerous, and we find them of every class, caries, necrosis, osteo-sarcoma, hypertrophy, anchylosis, deformity, supernumerary pieces, &c. There are about forty specimens of deformed pelvis well worthy of attention; some of them are represented in the work of Professor Naégele of Heidelberg. There are from three to four hundred crania of persons who had been the inmates of the adjoining lunatic asylum, under various forms of insanity. Attached to the skull is the history of the case. There are many instances of syphilitic caries of the cranium, most of them of old date, which may prove the decline of virulence in the disease, or at least improved views of treatment. There were many skulls where the basis had been extensively destroyed, by tumors proceeding from the base of the brain. Cases of anchylosis at the articulation of the lower jaw; synostosis or ossification extending from the body of the upper to that of the lower jaw. The Vienna anatomists have observed that in fœtation, a thin lamina of bony matter is deposited on the internal or external surface of the cranium, and upon the bones of the face of the mother. I saw several instances of this, in one of which the pericranium was raised up from the cranium, and in a state of ossification. There are many remarkable cases of ossification of the serous membranes, as an entire pleura, an entire pericardium, entire ovarian cysts. A case where the pus coming from the thoracic vertebræ, in consequence of caries, had formed a cyst of large size in the thorax; extending itself down through the abdomen, and then emerging under Poupart's ligament, it had formed another cyst in the thigh as large as a man's head, so that the figure of the abscess resembled an hour-glass with the neck much elongated. There were some

very remarkable cases of hernia of the mucous coat of the bladder, forming a diverticulum as large as the bladder itself. I mention but a few instances of what may be seen on a visit to this celebrated collection, probably the best and most extensive of its kind in all Europe. Professor Rochitansky delivers lectures three times a week on his branch; as it was recess when I was in Vienna he was not engaged in this duty. We may all expect to enjoy the fruits of his valuable labors, as his work on Pathological Anatomy will no doubt have an American edition. In his private deportment he is a plain, unassuming man, and apparently on good terms with every one around him.

There is also a museum attached to the University of Vienna, in a different part of the city. Professor Hyrtl, now considered the best minute injector in Europe, was, unfortunately for myself, on a distant excursion, so that I lost the pleasure of seeing him; the anatomical cabinet was, however, politely explained to me by his assistant, Dr. Carl Langer. The collection is large, and especially abundant in wet preparations; they are not in good order, owing to the near prospect of their removal to the Josephinum. I saw many minute injections by celebrated men, Lieberkühn, Prochaska, Berres, and Hyrtl himself. Upon a careful examination the latter ought to be considered as excelling all his predecessors, and so far as I know, his cotemporaries also. He, by some process, the details of which are at present withheld, succeeds in filling up the finest capillaries with an injection which retains its place in them, and its rotundity; and all this without extravasation, thus supplying every requisite for an exact study of vascular arrangement. It is not, I conceive, difficult to distend capillaries with injecting matter, but in my own experience I have always found the due retention of the injected fluid a desideratum. There are many fine preparations of bones, human and animal, in complete skeletons and in parts.*

* The most remarkable, however, were an os femoris, tibia and innominatum disinterred from a common burying-ground about fifty years ago. The os femoris measures from the summit of the trochanter major to the lower end, two feet two inches, less one-fourth. The tibia, its upper epiphysis being absent, measures twenty-two inches and three eighths. The innominatum along the crista of the ilium, from the anterior superior to the posterior inferior spinous process, measures nineteen inches and one-fourth. The acetabulum is about twice the diameter of a common one, but not deeper. These bones are all lighter than one would suppose from their magnitude. The individual was probably not far from nine feet in height.

Returning from Vienna by the way of Berlin, I had there the pleasure of several interviews with the celebrated physiologist Müller, whose time is devoted to comparative anatomy and to physiology, in which he is sustained by a very extensive museum belonging to the University. Like most of the German literati he converses in English; I need scarcely say that his mind exhibited all the richness which one might expect from his productions. Among the numerous objects of interest in Berlin a new hospital, opened within a year past, afforded me great pleasure. It was built by the King of Prussia at an expense of five hundred thousand dollars, and under the express injunction that the best arrangements known at the present day, should be introduced into it. It is about three hundred feet long; with wings of about two hundred and fifty feet each, receding at right angles from its ends, so that the half of a hollow square is formed by it. This hospital is three stories high; on a large open space just out of Berlin; is remarkably well ventilated, and being intended for only three hundred patients, each one is allowed one thousand cubic feet of air. The specifications connected with it are so numerous that they could not be introduced on the present occasion.

From the time I have now occupied in regard to Germany, you will readily conclude that I viewed with the strongest interest the several features, social, literary, and scientific, of this great country. In reflecting on my visit, there is but the regret that I had to do in a few weeks, what ought to have taken several months; and might have employed, pleasurably and profitably to the understanding, several years. As these protracted gratifications were forbidden to myself by my time of life and the duties of my position, I have thought that in stimulating the curiosity of such of you as propose to complete your education by foreign travel and by foreign study, my narrative would at least be productive of some good; and that it may in its place serve to sustain the spirit of improvement in the standard of medical education in our country, which has been so strongly urged in the proceedings of our three National Medical Conventions lately held; and under the influence of which proceedings many of you are at this moment assembled, by the special sanction of your preceptors at home.