Navy are opposed to the titles; the report and recommendations of the Camperdown Commission cannot be met by reference to the feeling of those whose hostile evidence before the Commission was overridden by the decision of that Commission and their reported conclusions. The Parliamentary Bills Committee, having full knowledge of the strength and widespread character of the feeling now entertained by the Army Medical Service, and throughout the civil profession, respectfully but urgently beg the Secretary of State for War to give effect to the recommendations of Lord Camperdown's Commission.

The next, undated, is from fifty-eight students of the Belfast Medical School; and the last, also undated, from sixty students of St. Mary's Hospital Medical School; both almost identical in terms with those of the memorial from the Aberdeen and Dublin students. There are further appended memorials from the students of fifteen medical schools, couched in similar terms.

In this important Parliamentary Return we thus have memorials not only from the principal licensing medical corporations, but from the students of the chief medical schools in the three kingdoms, all, with one exception, setting forth the grievances of army medical officers, and the methods of redressing them, with great intelligence and unanimity. He would, indeed, be an impolitic Minister who could venture to disregard such a powerful consensus of opinion, more especially when he had no just or reasonable argument to oppose to it. The discordant exception which we notice with regret among these memorials is that from the Royal College of Surgeons of Edinburgh. No doubt the College meant to support the claims of army medical officers, but the remedy it proposes for the want of that due military status, title, and authority, without which they find they can neither carry out their duties nor socially exist in the service, shows an entire misapprehension of the points in contention. The College recommends relative rank, which Mr. Stanhope declared he abolished because it was useless and unmeaning; and couples it with the utterly unworkable proposal of "restricting their (medical officers') duties to those of a professional nature only." What is the use of talking of rank for those whom it would thus make mere civilian camp followers? To restrict a medical officer's duties as proposed is not only utterly impossible in any army, but is directly contrary to the great advances made in military medical organisation in our own and in foreign armies during the past thirty years. Such a proposal was indeed hinted in the hostile dissent on the Camperdown Commission, only, however, to be criticised as absurd and retrograde in the last degree. A soldier does not cease to be under discipline when he enters a military hospital, and would the College propose to take away the administration of the hospital from the medical officer, as in the bad old times of dual authority? The fact is the medical officer, no more than any other, cannot at once be military and civilian—he must be one or other; he cannot, if restricted to his "professional duties only," train, discipline, and command his military subordinates or administer his hospital, and if he ceases to do these things he simply ceases to be an officer. We strongly advise the Council of the College to study the history of the struggle which had been waged from Sidney Herbert's Commission downwards against dual authority and restricted functions in the Army Medical Service, evils which brought such misery to all concerned, and we feel certain they will quickly cancel their unfortunate proposal. The College has many of its Fellows and Licentiates holding commissions in the Medical Staff, all of whom would, we venture to say, repudiate the impossible and retrograde recommendation the Council has made.

NOTES

ON

SOME GERMAN UNIVERSITIES.

By WALTER K. SIBLEY, M.B., B.C.CANTAB.,
Assistant-Physician to the North-West London Hospital.

II.—THE UNIVERSITY OF BERLIN.

(Continued.)

The Pathological Institute.—Professor Rudolf Virchow.

THE Pathological Institute of Professor Virchow is situated in the grounds of the Charité Hospital. It was mainly constructed under the Professor's directions, and was opened in 1856. It is built in

a central block with two end wings, and consists of a basement, ground floor, and two stories.

In the basement are the huts and stalls for the animals used for experiments, with rooms for washing and dressing the corpses. On the ground floor in the left wing are the directors' rooms, together with the laboratory, the research laboratory, curator's room, and third assistant's room. In the middle part of the building are the first assistant's rooms, the second workroom in which the specimens are prepared, and a small *post-mortem* room; and in the right wing are the rooms for clinical necropsies and surgical operations on the dead body, and a room for putting up skeletons, etc. On the first floor, in the left wing, are the chemical laboratories; in the centre is the larger lecture room with seats for 140, and a room for microscopical work; in the right wing there is a larger room in which the demonstrations and histological courses are held. On the second floor is the museum, with the collection of pathological specimens collected and arranged by Virchow himself. This is not open for the ordinary students but only for very special work, and then only with special permission from the director. Since the addition of the pathological specimens from the old anatomical museum, the collection now contains more than 20,000 specimens. Virchow's famous anthropological collection of skulls is also here, awaiting appropriate place in the new museum. Attached to the institute is a small bacteriological laboratory, in itself one of the most perfectly arranged departments, consisting of four workrooms each for two men. These are fitted up with cupboards, gas, and water, a room for sterilisation and boiling of gelatine, etc., also a room for the thermostatic chambers, two photographic rooms, a store room, and a room for rats, mice, guinea-pigs, etc. This department is for men engaged in pathological work in the research laboratory who require to do any bacteriological work in connection with their pathological subjects, and not for pure bacteriological investigations. Attached to this department are the photographic rooms, both the Professor and his assistants being great adepts at photography.

The demonstrations on macroscopic and microscopic anatomy are given on Wednesdays and Saturdays from 8 to 11. The material used is taken from the necropsies of the previous days. The Professor discourses upon the preparations one by one, generally upon a few points at great length rather than upon a large number of smaller questions; illustrating his remarks with excellent drawings upon the black board, and giving a short description of the specimens as he proceeds. Each specimen is in turn then passed round, and his assistants prepare sections for the microscope, which are cut with a hand razor and double knife, and usually mounted unstained. Sections under the microscope follow the specimen itself round the tables at which the class sit. The tables are arranged in an irregular spiral, the microscopes travelling on lines which are sunk into the tables like a railway. From the arrangement of the tables the rails are continuous—that is, the microscopes started by the Professor at one end run the whole way round the class without being raised from the table, and thus follow one another in regular order as started.

On the other days the Professor gives regular courses of lectures on general and special pathology, illustrating them with specimens from the museum. Every Monday the Professor has a *post-mortem* course, in which he goes through all the steps in making necropsies. This is held in a special room with only limited accommodation, and so only a few students can attend at a time. In addition to these courses superintended by the Professor himself, there are various others given by the assistants. Thus, four times weekly, from 8 to 10 in the morning, Dr. O. Israel, the second assistant, takes the histological course. In this fresh tissues are examined according to Virchow's method—that is, sections are cut with a razor and double knife, and are examined, as a rule, without stains or reagents, except physiological salt solution, acetic acid, glycerine, iodine solution, sulphuric acid, and caustic soda. Each student prepares and mounts his own specimens. The necropsies are made by the assistants, of whom there are four, these being assisted by clerks. All the organs are kept from each necropsy until Virchow has seen them; he inspects them twice weekly—namely, on Tuesday and Friday afternoons. He then selects the important parts for the demonstrations, and after the course he picks out specimens to be preserved in the museum. The necropsies commence daily at 11 and are continued till 2 or 3 in the afternoon, the physician or surgeon of the case fixing the time when the necropsy is to be made.

The pathological laboratory proper or research laboratory is a

large room on the ground floor with places for 80 workers. In this the more advanced work is pursued, and usually by representatives of a great variety of nationalities. From a practical working point of view it is not well arranged, the light being defective and there is no arrangement for artificial light. During the winter months, therefore, the hours for work are short, and on dark days practically no microscopic work can be done. The other facilities for original work by advanced students, however, are immense, there being a superfluity of material. The superintendent of the chemical department is Professor Salkowski, who, besides delivering a regular course of lectures, gives daily instruction in physiological and pathological chemistry. There are four assistants—Drs. Jürgeus, O. Israel, R. Langerhans, and Hansemann. Dr. Jürgeus is Curator, Dr. Israel has written a manual of practical morbid anatomy, and the others have from time to time contributed various articles to Virchow's *Archives*.

Of Virchow's former pupils, the most famous are Professors von Recklinghausen (Strassburg), the late Professor Cohnheim, Professor Orth (Göttingen), Professor Ponfick (Breslau), and Professor Grawitz (Greifswald). Of these, Cohnheim started a school of his own, while von Recklinghausen has largely followed the lines of his master.

Professor Rudolph Virchow was born in the year 1821. He studied in the Friedrich Wilhelms Institute at Berlin, and then became Assistant Physician, and, in 1846, Prosecutor of the Charité Hospital. In 1849 he was appointed Professor of Pathology at Würzburg; in 1856 he was recalled to Berlin, and in 1873 he was elected a member of the Akademie der Wissenschaften. In 1846 he founded with B. Reinhardt the well-known *Archiv für pathologische Anatomie und Physiologie*. Shortly afterwards he published, in conjunction with Leubuscher, a weekly journal, *Die medicinische Reform*. In this work, which was an attempt at the unity of scientific medicine, he revealed his true scientific spirit. Since 1851, Virchow has edited, now in conjunction with Aug. Hirsch, the *Jahresbericht ueber die Fortschritte und Leistung der Medicin*. In 1854-62 he published his Handbook of Special Pathology. His chief works are his "Lectures on Pathology," the first volume of which is on cellular pathology; the second, third, and fourth volumes on tumour formation. Virchow has also published numerous articles, not only within the province of medicine, but also on anthropology and the allied sciences. The following may be mentioned as being of special interest: "Four Lectures on Life and Disease;" "Observations on the Development of the Base of the Skull;" "An Essay on the Physical Development of the Germans;" "On the National Development and Significance of the Natural Sciences;" "The Freedom of Science in the Modern State," etc.

Almost as a student Virchow saw the absurdity of the "humoral pathology," and at the age of 30 he had already expounded the axioms of his "cellular pathology." If we actually realise what this means at a time when the structure of even the simplest tissue was but imperfectly known, we may understand the greatness of his mind. With a simple razor and a few chemical reagents, he analysed all the normal tissues, and in histology many discoveries still bear his name. At the same time he investigated all pathological structures. He thus became while still a young man the Father of modern pathology, and opened a new era of medical science. It is impossible to enumerate all Virchow's services in the many fields of medical science, but his work in hygiene and anthropology cannot be entirely passed over. He was one of the first on the Continent to see the importance of good public sanitary conditions, and many classical essays on hygiene by his pen are to be found in his *Gesammelte Abhandlungen*. His researches in anthropology are sufficiently well known, and he may fairly be considered one of the greatest living authorities on this branch of science. There is, perhaps, no one who has so extensive a knowledge of anthropology proper as he has, and each year he travels to study the customs and habits of the inhabitants of different countries.

Ever since he commenced his scientific career, Virchow has been a keen politician. He has always defended and fought for constitutional principles, being an ardent admirer of English freedom, and was thus always a great opponent of Bismarck, who at one time had to fear the ascendancy of his scientific rival. Later, with the establishment of a military government, Virchow lost all political power, but he kept true to his Liberal ideas.

Though a keen politician, Virchow did not neglect his duties as a teacher, which he performs most scrupulously. However late his public duties may have kept him out of bed, he is at his post

on the following morning at the laboratory, where he remains till 5 P.M., or later, unless important business at the Reichstag or the University demands his presence. At the laboratory he welcomes every worker kindly, and after determining the subject of investigation he grants him all possible assistance in the procuring of the necessary material. He lets them work quite independently, but is always ready to examine anything that is shown to him, and criticises it with perfect sincerity. He never influences any of his workers, and admits freely into his *Archives* any matter, though it be in direct opposition to his own views. His advice he gives kindly to anyone, meeting him with a pleasant smile and shake of the hand. He is not, however, a man of many words, and, on account of all the manifold claims on his time, cannot afford to be disturbed about trifles.

Calling on him at his rooms at the Pathological Institute, one has to wait one's turn behind a screen which hides the Professor from the eye of the interviewer. This gives one a chance of examining his sanctum, which, to an outsider, appears to be a perfect chaos. Beside his desk, which is covered with papers of every description, we notice a small tray with his scanty luncheon consisting of a small bottle of beer and two sandwiches; he is a most frugal man while at work. The greater part of his room is occupied by a large number of skeletons and skulls, the floor being simply covered with the latter, through which one has almost to wade to the small table on which stand his microscope and histological instruments. We find here two very old Hartnacks, one furnished with a low and the other with a high power. These are the only microscopes he uses, and lovely lenses these old glasses encased in rusty frames are. Besides we notice a glass of water, a few glass rods, needles, scissors, and a common razor, and his five bottles of acetic acid, sulphuric acid, iodine solution, salt solution, and caustic potash. For he examines almost everything unstained and fresh, and is extremely skilful in cutting sections with his razor. He uses no microtome, and at most a piece of amyloid liver, into which he squeezes a small piece of tissue, in this way embedding it, if it be too small to cut it with the free hand. He despises even the double knife, and boasts of being able to make a section through the pons as good as any celloidin specimen. On another table we notice a beautiful modern microscope (Seibert) with all the newest improvements, oil-immersion, etc.; but this is under a glass case and serves simply for show, being never used by the Professor. When showing him a histological specimen, it has to be taken to one of the Hartnacks and be described to him. After examining it carefully he at most may express his pleasure of seeing everything that has been described. He prefers to see an unstained specimen, except in cases of epithelial tumours, for which he allows staining.

In his dealing with men as a colleague or teacher, he is exceedingly fair, showing always his zeal for truth and unbiassed justice. At the same time he is very jealous of his own personal right, but, without any boast or pomp, being careful not to infringe on the rights of others. As he himself says, "the right of experience he places over and above any other right; and the conviction, that observation on correctly formed questions in each case must give an answer, has never tempted him to try the answer before the observation." The best characteristic of his great mind as a man may be formed in a few words quoted from his preface of the *Cellular Pathology*: "I insist on my right, and therefore I also acknowledge the right of others. This is my maxim in life, in politics, in science."

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

THE first committee meeting of the Medical Sickness, Annuity, and Life Assurance Society, since the vacation, was recently held at 38, Wimpole Street, W., Mr. ERNEST HART, chairman of the Society, presiding. There were present: Dr. J. Pickett, Mr. E. Bartlett, Dr. F. de Havilland Hall, Mr. J. Brindley James, Dr. G. E. Herman, Mr. F. Wallace, and Dr. M. Greenwood, jun.

It was stated that the membership continued to increase steadily, 17 new proposals having been received during July and August, bringing the total since the commencement up to 1,301. The sickness rate was stated to be a little heavier than was the case recently, but still well within that provided for by the tables. Claims were being paid on account of total disablement arising from locomotor ataxy, chronic myelitis, nervous breakdown,

rheumatic gout, cataract, scarlet fever, broncho-pneumonia, tumour of abdomen, typhlitis, congestion of larynx, tonsillitis, carbuncle, and lung disease; there were also two cases of severe sprain, and one of synovitis, resulting from accidents. This necessitated an expenditure of from £50 to £60 per week. Payment was authorised of £200, the amount due from the Life Assurance Fund, on the death of one member in South Devon. A payment of £30 19s. 10d. was also agreed to on the sudden death of a member in Dublin, being the return of a portion of the annuity premium paid, and it was stated this was the first payment of the kind under Table V, which makes special provisions for such returns. Although there was active and continuous expenditure, it was stated this was greatly exceeded by the income, and there could be no doubt that the quarter, after covering a great deal of useful work, would show a very substantial increase.

Full particulars of the Society, with proposal forms, etc., will be supplied (free of cost) by the Secretary, Mr. C. J. Radley, 26, Wynne Road, Brixton, London, S.W.

HOSPITALS AND MEDICAL SCHOOLS: IMPROVEMENTS IN BUILDINGS.

LONDON HOSPITAL.

The last improvement in the Medical College (which was entirely rebuilt in 1886), is a complete set of book-cases for the library, recently erected by the generosity of the staff, who have defrayed the cost by subscription. A new printed catalogue of the museum has also been published this year. In the hospital a new wing, embracing the following improvements, is now in process of building: 1. A new operating theatre to accommodate 200 students, with anæsthetising and surgeons' rooms adjoining. 2. A clinical theatre to hold 150. 3. Enlarged receiving and examining rooms, with a covered approach to the hospital. 4. A new chapel. 5. A waiting room, lavatory and cloak-room for students. 6. Increased accommodation for the resident medical officers. The foundation-stone of the new wing was laid on May 20th, 1890, by H.R.H. the Duke of Cambridge, the President of the hospital. This addition to the building will place the administrative part of the hospital in a very effective position, and will greatly facilitate the efficient teaching of clinical medicine and surgery.

LONDON SCHOOL OF MEDICINE FOR WOMEN.

The school buildings have been considerably enlarged, an adjacent house in Hunter Street having been taken and utilised for school purposes. On the upper storey there is a large well-lighted chemical laboratory. On the next floor, a laboratory for organic chemistry and a *materia medica* museum have been fitted up. The first floor is devoted to the museum and an occasional lecture room, and the library has been moved into a large room on the ground floor. These changes have enabled the Executive Council to provide improved accommodation for the anatomical department, and also for the students' common-room, dressing-rooms, etc. An assistant demonstrator of anatomy has been appointed in addition to the usual two demonstrators, and two demonstrators of chemistry. A librarian has also been appointed. At the Royal Free Hospital, in association with the school, several changes have been made in the staff. Dr. Cockle has resigned his post as physician, and has been appointed consulting physician. Mr. Henry Work Dodd, F.R.C.S., has been appointed assistant surgeon in addition to the staff, and Dr. Silk has been appointed anæsthetist, which is also a new appointment. Miss Russell has been appointed curator of the museum in succession to Miss Frances Harris.

MIDDLESEX HOSPITAL.

The site of the late *post-mortem* room was required for a chapel, which is now in course of erection, and accordingly the old mortuary building was pulled down, and in its place a new and enlarged building has been erected. The coffins are kept in the basement, which is connected with the hospital by an underground passage, well lighted, and lined by white glazed bricks. Above this is a plain mortuary chapel, where the bodies are viewed by their friends. Above this again is a spacious, well lighted and well ventilated *post-mortem* room, with glazed brick walls, mosaic floors, slate tables and slabs, and all the recent improvements in fittings and appliances. The bodies are taken to and from this room on a good lift. Opportunity was taken while making these alterations to improve part of the garden at the rear of the hospital, which forms so valuable a feature of this institution.

ST. MARY'S HOSPITAL.

The school-buildings have recently been much extended and improved by the addition of a new library, pathological, physiological, and hygienic laboratories, and special rooms for class teaching.

CATHOLIC UNIVERSITY, DUBLIN.

The medical school of this university has been extended and refitted; a new pharmaceutical and a new bacteriological laboratory have been added, and the teaching staff has been increased.

QUEEN'S COLLEGE, BIRMINGHAM.

Since last year a new anatomical museum has been opened. It is supplied with a large collection of frozen sections, anatomical, embryological and other models. A new and complete pathological laboratory has been constructed, as well as a students' common room. The Council have authorised the formation of a public health museum, which will be commenced forthwith.

UNIVERSITY OF EDINBURGH.

The M'Ewan Hall, begun in 1889, will probably be completed in 1892. This hall—the munificent gift of William M'Ewan, Esq., M.P., Edinburgh—completes the group of the University new buildings or School of Medicine. Mr. R. Rowand Anderson was the architect of this building, which stands on the ground formerly occupied by Park Street. The Greek theatre forms the basis of the design. The internal diameter of the semicircle is 134 feet, and the dimensions the other way, including the platform recess, is 107 feet, and the height from floor to ring of centre light is 90 feet. On the north-west corner, and connecting the hall with the present buildings, is placed the campanile tower, which is 32 feet square at the base, and rises to the height of 275 feet. The hall is capable of holding 3,000 people, and in designing it the architect has had in view the special object which it is intended to serve. In it degrees will be conferred, and examinations and all public academic ceremonials and concerts connected with the University will be held. Provision has been made for the accommodation of a great organ and an orchestra of over 300 performers. The dome-shaped roof is deeply panelled, and pierced at the base with circular lights, and has in the centre a skylight 25 feet in diameter. It will be constructed entirely of steel. From the floor to the roof the hall will be 90 feet in height, and with its imposing dimensions and tiers of stone pillars and arches it will be one of the most striking and handsome halls in the kingdom. The external elevation will conform to the early Italian of the rest of the buildings.

ANTIRABIC INSTITUTE AT NAPLES.—Recently published statistics show that at the Antirabic Institute of Naples, which is under the direction of Professor A. Cantani, from September 22nd, 1886, to January, 1888, and from July, 1888, to the end of June, 1890, the total number of patients treated was 430. In 149 cases the bites were inflicted by animals proved, by experiment, to be rabid; of these cases, 84 had been cauterised. Of 203 cases in which the evidence of rabies was purely clinical, 126 had been cauterised, and of 78 in which the animals' symptoms were suspicious, 48 had been cauterised. The number of deaths was 8, of which 3 were children severely bitten on the face, and brought for treatment twelve, fifteen, and eighteen days respectively after the injury. One of them was seized with hydrophobia during, and the others from two to three days after treatment. If these three cases are deducted, the total mortality was only 1.16 per cent.

BRAIN SURGERY IN NEW ZEALAND.—Dr. Colquhoun, of Dunedin, recently operated successfully in a case of tumour of the brain. The patient was a woman, aged 42, who suffered from fits with paralysis of the left side of the body. A slowly-growing tumour in the right Rolandic area was diagnosed, and on January 31st Dr. Colquhoun made a trefoil-shaped opening over the supposed site of the tumour by removing three pieces of bone with a three-quarter inch trephine. Through this the growth, which seemed to spring from the dura mater, was removed, a cavity three and a half inches in depth being left. The fragments of the tumour, which was a small spindle-celled sarcoma, weighed about five ounces. By the last week in May the patient had made an almost perfect recovery, having completely regained the use of her left side, though still conscious of a slight weakness in the left leg. Before the operation she had been subject to great mental disturbance with headaches, but she was never troubled with these symptoms after it.